A LETTER OF EXEMPTION HAS BEEN SUBMITTED TO SHEET INDEX MARYLAND DEPARTMENT OF THE ENVIRONMENT. (SEE MDE TRACKING NO. 200660797.) DESCRIPTION 1 COVER SHEET 2 EXISTING CONDITIONS 3 | SITE DEVELOPMENT PLAN & POND GRADING 4 | SPILLWAY PLAN 5 | SPILLWAY DETAILS 6 SEDIMENT CONTROL PLAN 7 | SEDIMENT CONTROL DETAILS 8 | FISHING PIER PLAN AND DETAILS 9 SOILS MAP

<u>GENERAL NOTES</u>

1. THE PURPOSE OF THE SITE DEVELOPMENT PLAN IS TO REMOVE THE ACCUMULATED SEDIMENTS IN JACKSON POND TO RESTORE THE POND TO ITS' ORIGINAL DEPTH, CONSTRUCT INFLOW FORBAY TO CONTROL FUTURE SEDIMENTS, CONSTRUCT NEW RISER AND DRAWDOWN STRUCTURE, SLIPLINE THE CMP PIPE SPILLWAY, AND TO CONSTRUCT A FISHING PIER. THE REMOVED SEDIMENT WILL BE DEPOSITED AT VKC 3/2 O.S. LOT 152. A WAIVER FOR THE SUBMISSION OF A SITE DEVELOPMENT PLAN FOR THE DEPOSITION OF SEDIMENT, WP 06-81, WAS APPROVED ON MARCH 24, 2006.

2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV IE; STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.

3. THE POND SHALL BE DRAINED PRIOR TO THE REMOVAL OF ANY SEDIMENTS. THE POND SHALL BE DRAINED AT A RATE THAT WILL LOWER THE WATER LEVEL A MAXIMUM OF SIX (6) INCHES PER DAY. SEE SPECIAL PROVISIONS FOR THE REQUIREMENTS RELATED TO DRAINING THE POND AND THE REMOVAL OF MARINE LIFE.

4. THE PLANS CONTAIN A SUGGESTED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR MAY CHOOSE AN ALTERNATE SEQUENCE SUBJECT TO APPROVAL BY THE ENGINEER AND HOWARD SOIL CONSERVATION DISTRICT.

5. THE LOCATIONS OF THE UTILITIES SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION AND DEPTH OF ANY UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEERING OFFICE, PHOENIX ENGINEERING, INC. AT (410) 247-8833 IN THE EVENT OF ANY DISCREPANCIES IN THE PLANS OR IN THE RELATIONSHIP OF FINISHED GRADES TO EXISTING GRADES, PRIOR TO BEGINNING ANY WORK.

7. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL

8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

9. CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

"MISS UTILITY"...... ...1(800) 257-7777 BALTIMORE GAS & ELECTRIC COMPANY(410) 685-0123

VERIZON TELEPHONE(800) 978-7532

AT&T CABLE LOCATION DIVISION(410) 539-9900 HOWARD COUNTY BUREAU OF

UTILITIES

HOWARD COUNTY CONSTRUCTION / INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO

...(410) 393-4974

10. ALSO SEE PREVIOUS FILE NUMBERS: PLAT #4208, PB 18, FOLIO 41-63, F 70-68, FDP 77-A-2, WP 06-081 (APPROVED ON MARCH 24, 2006).

11. THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FOR CONSTRUCTION.

12. TOPO TAKEN FROM FIELD RUN SURVEY PERFORMED BY C.B. MILLER DATED MAY 2005 & AUGUST 2006.

13. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE GRID COORDINATES, AS PER PB 18, FOLIO 41-63.

14. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE COUNTY RIGHT-OF-WAY, EXISTING PAVEMENT, CURBS AND GUTTERS AND UTILITIES AND TO THE PATHWAYS AT THE SITE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.

15. THIS PROPERTY IS ZONED N.T.-O.S. AS PER THE FEBRUARY 2, 2004 COMPREHENSIVE

16. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PER COUNCIL BILL 45-2003, AND THE ZONING REGULATIONS AMENDED BY COUNCIL BILL 75-2003.

17. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS OR 100 YEAR FLOODPLAIN.

18. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THIS PROPERTY WAS CREATED BEFORE THE DECEMBER 31, 1992 DEADLINE, IN ACCORDANCE WITH SECTION 16.1202(b)(1)(iii) OF THE FOREST CONSERVATION MANUAL.

19. THIS PLAN IS EXEMPT FROM PERIMETER LANDSCAPING BECAUSE IT IS ONLY TO REMOVE SEDIMENT FROM AN EXISTING POND. THE POND WILL NOT BE ENLARGED NOR WILL ANY NEW BUILDINGS BE CONSTRUCTED.

20. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

21. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNALINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY

22. EXISTING ONSITE WATER AND SEWER ARE PUBLIC IN THE PATAPSCO DRAINAGE AREA AND WERE BUILT UNDER CONTRACT 358 W&S.

23. EXISTING UTILITIES ARE BASED ON FIELD RUN TOPO SUPPLEMENTED BY AS-BUILT CONSTRUCTION PLANS.

24. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY WHITMAN REQUARDT & ASSOCIATES, DATED 1969, AND WAS APPROVED ON MAY 1970.

25. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.

26. MDE TRACKING #200660797, DAM SAFETY #05-MR-0100

JACHESONII

BRASS DISC SET 1.2' EAST OF A MACADAM PATH LOCATED BETWEEN LIGHTSPUN COURT AND JACKSON POND, AND 84.9' EAST OF AN 8" MAPLE TREE.

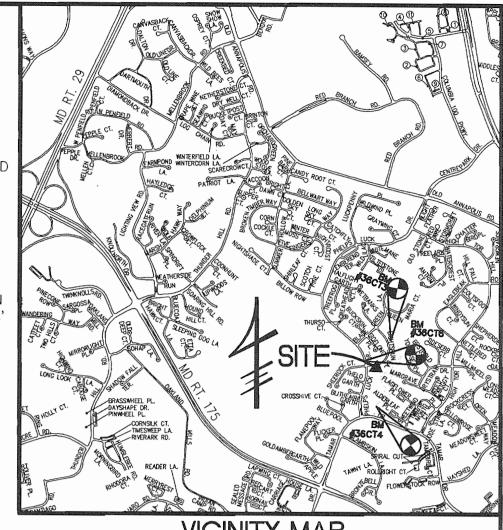
NORTHING 564399.232 EASTING 1363422.11

ELEV. 402.135 BRASS DISC LOCATED NORTH OF TAMAR DRIVE ON POND BERM, 102.4' WEST OF C&P BOX, 91.9' NORTHWEST OF AN 8" MAPLE TREE.

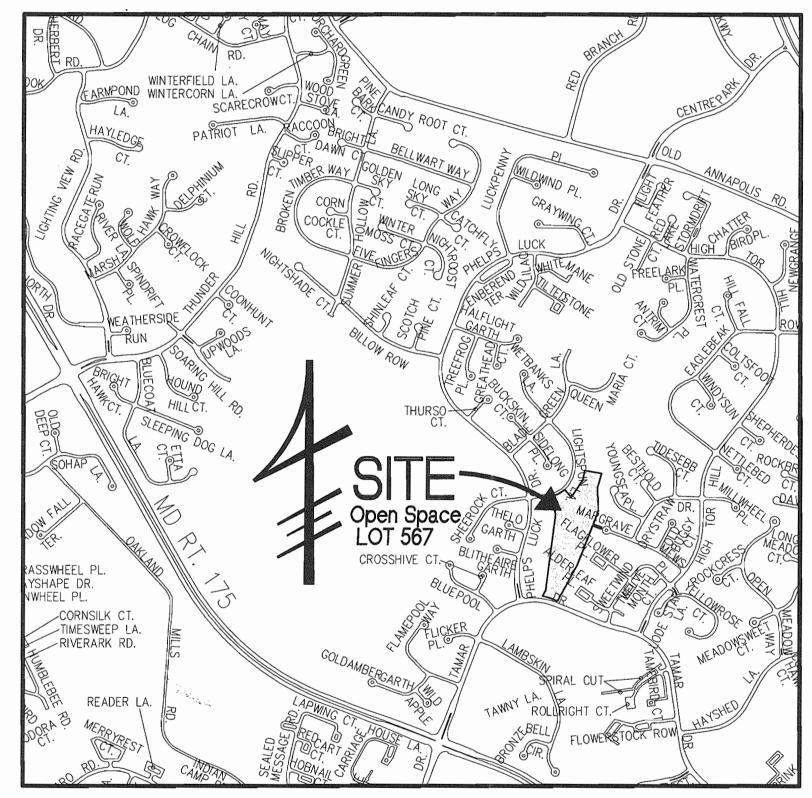
NORTHING 563687.911 EASTING 1363324.07

ELEV. 426.187 1/4" REBAR ON NORTHWEST SIDE OF THE INTERSECTION BETWEEN PHELPS LUCK DRIVE & SHEEROCK COURT, 7.3' BEHIND CURB AND 28" SOUTH OF A 24 MAPLE TREE

NORTHING 564164.653 EASTING 1362912.67



STEE BUBCHION DISTRICT HOWARD COUNTY, MARYLAND



<u>SITE ANALYSIS</u>

TOTAL AREA OF LOT 567 = 9.477 AC. OR 412,827 SQ. FT. TOTAL AREA OF THIS SUBMISSION = 9.477 AC. OR 412,827 SQ. FT.

ZONING: N.T.-O.S.

PROPOSED USE = OPEN SPACE-RECREATIONAL (UNCHANGED)

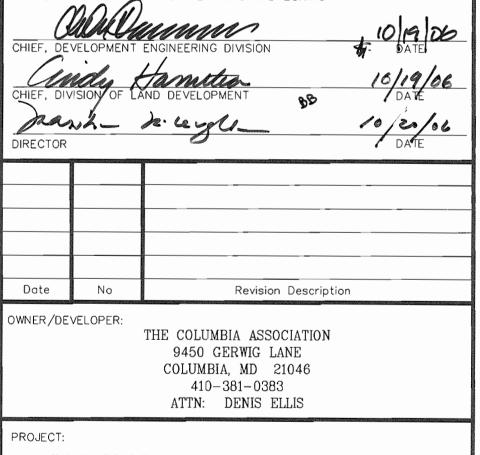
THE SOILS TYPES SHOWN ON THESE PLANS ARE AS SHOWN IN THE "HOWARD COUNTY SOILS SURVEY."

THERE ARE WETLANDS AND FLOODPLAINS AS SHOWN ON THIS SITE.

ALL EXISTING VEGETATION ON SITE IS IN THE FORM OF LAWN WITH SPARSE TREE

OPEN SPACE (GREEN AREA) TO REMAIN ON SITE = 412,827 SQ. FT. OR 100% OF

TOTAL AREA TO BE DISTURBED = 213,459 S.F. OR 4.9 ACRES TOTAL IMPERVIOUS AREA = 16,320 S.F. OR 0.37 ACRES



9-27.06

JOHN R. HEINRICHS

JACKSON POND RESTORATION VILLAGE OF LONG REACH

SECTION 1, AREA 1, O.S. LOT 567 5653 LIGHTSPUN LANE COLUMBIA, MD 21046 HOWARD COUNTY, MARYLAND

PREPARED BY: PHOENIX ENGINEERING, INC.

CONSULTING ENGINEERS 1420 JOH AVENUE, SUITE A BALTIMORE, MARYLAND 21227 (410) 247-8833 FAX 247-9397

VILLAGE OF LONG REACH SECTION 1 AREA 1 GRID 6 OPEN SPACE LOT 567 PARCEL: 289 CENSUS TRACT 6066.02 TAX MAP: 36 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

COVER SHEET

Scale: AS SHOWN Proj No: 05-028 Dote: September, 2006 ti01.dwg S.E.W.

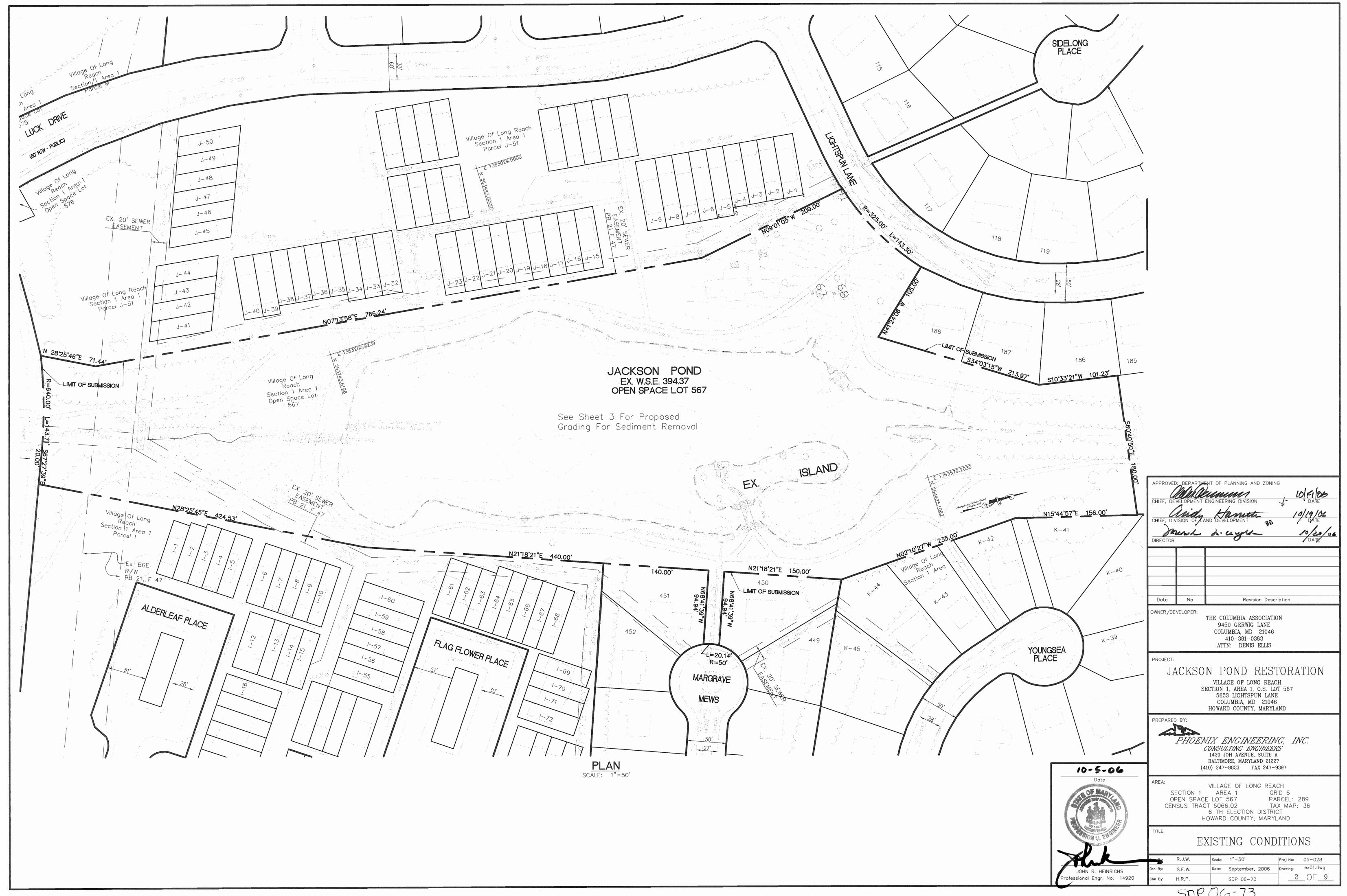
LOCATION MAP SCALE: 1'' = 1000'

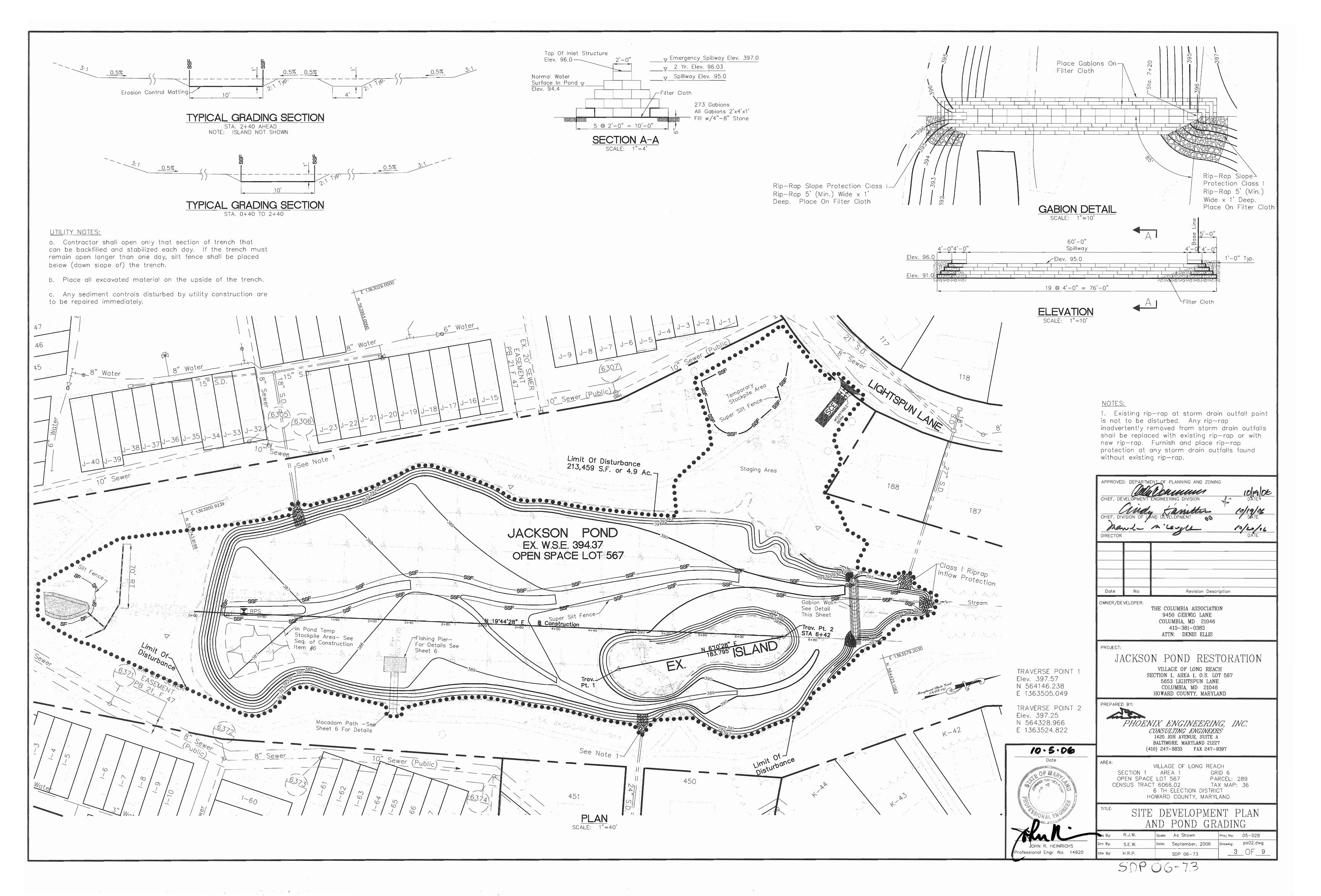
LEGEND

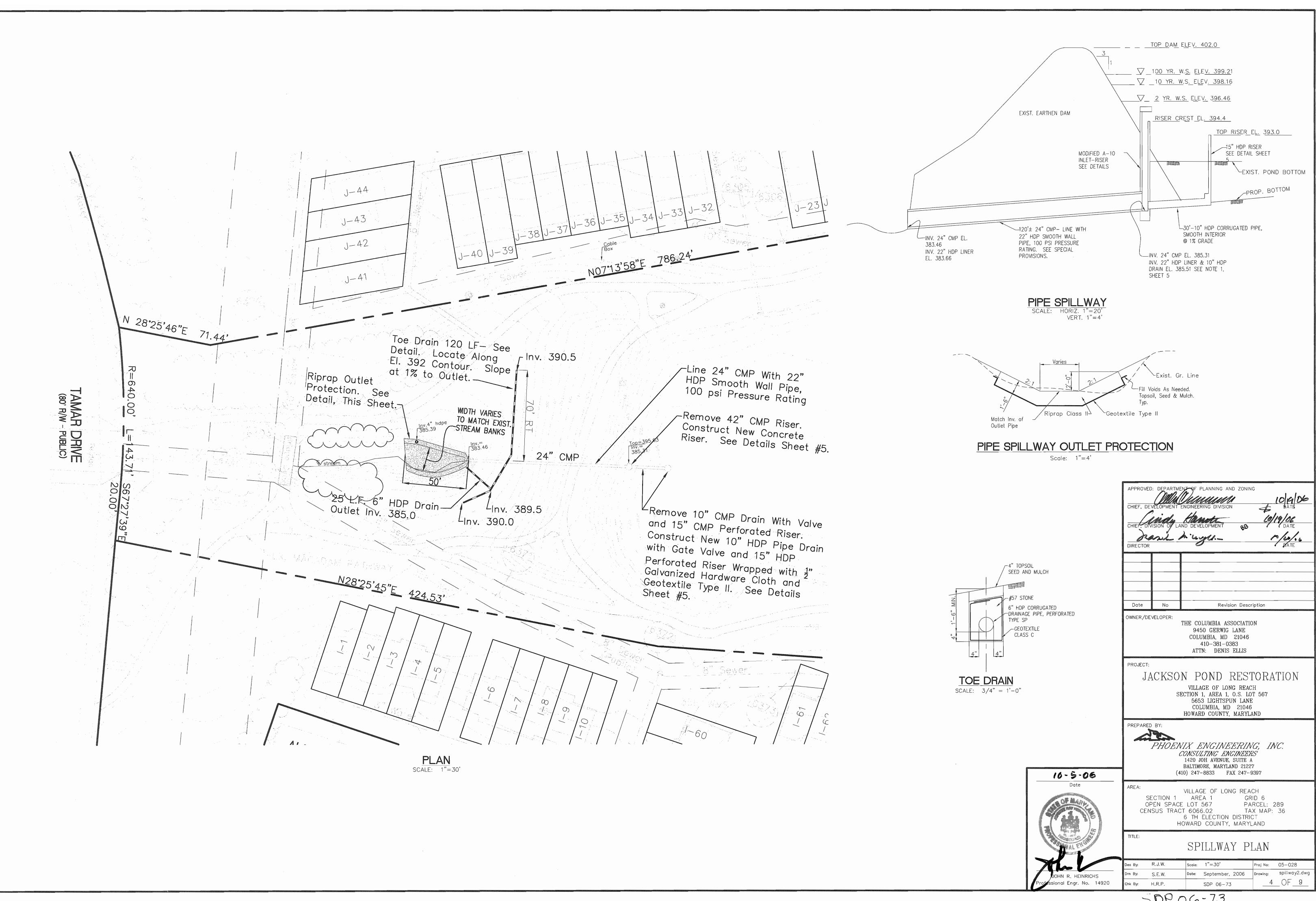
----188----- EX. CONTOUR PROP. CONTOUR 52 X 61 SPOT ELEVATION

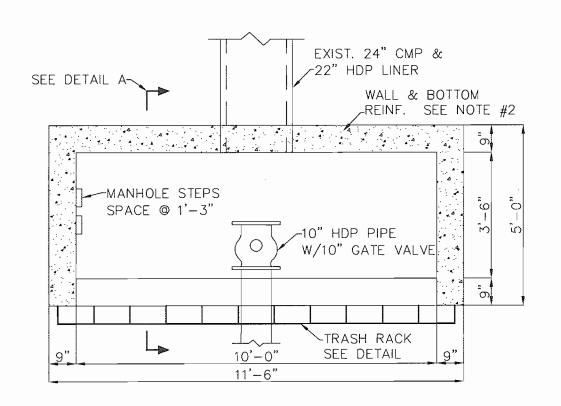
PROPERTY LINE

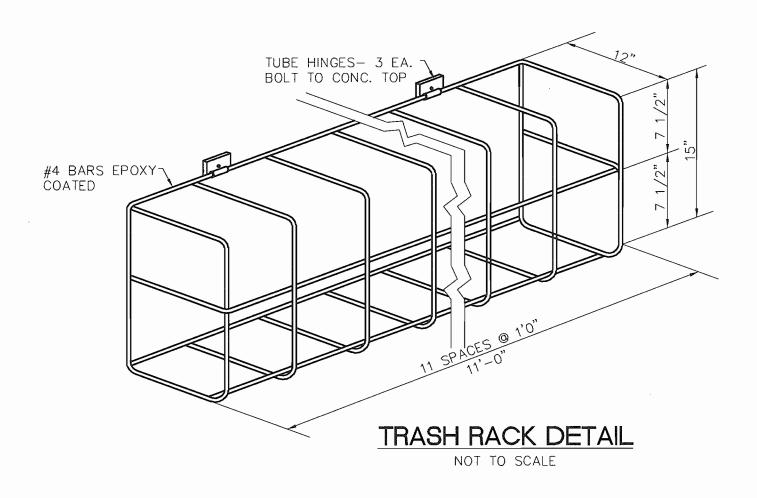
ADDRESS CHART STREET ADDRESS Open Space Lot 567 | 5653 Lightspun Lane PERMIT INFORMATION CHART Village Of Long Reach 1/1 289 BLOCK ZONE TAX/ZONE ELEC. DIST. CENSUS T Liber: 463 6 N.T.-O.S. MAP 36 6th 6066.02 WATER CODE SEWER CODE N/A

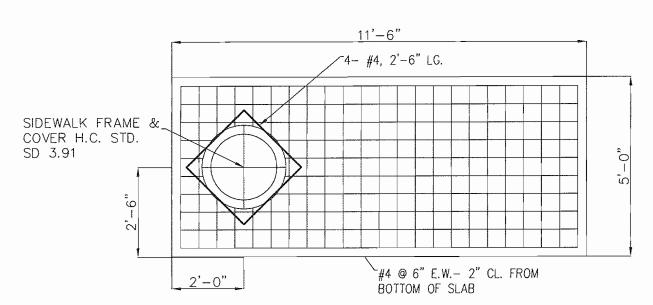




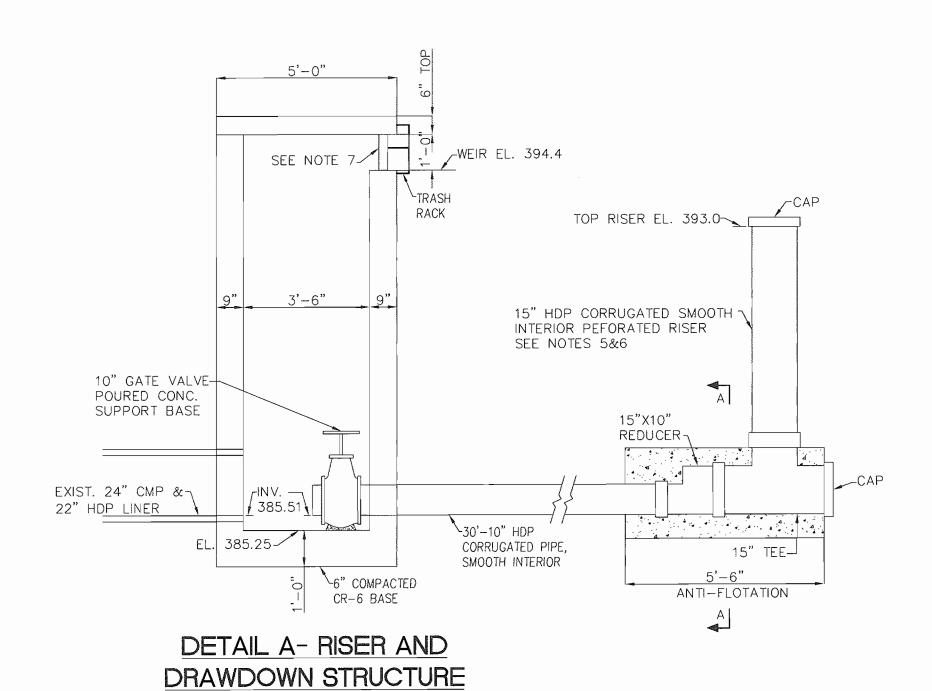




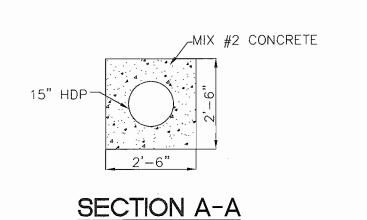




RISER AND DRAWDOWN STRUCTURE SCALE: 3/8" = 1'-0"



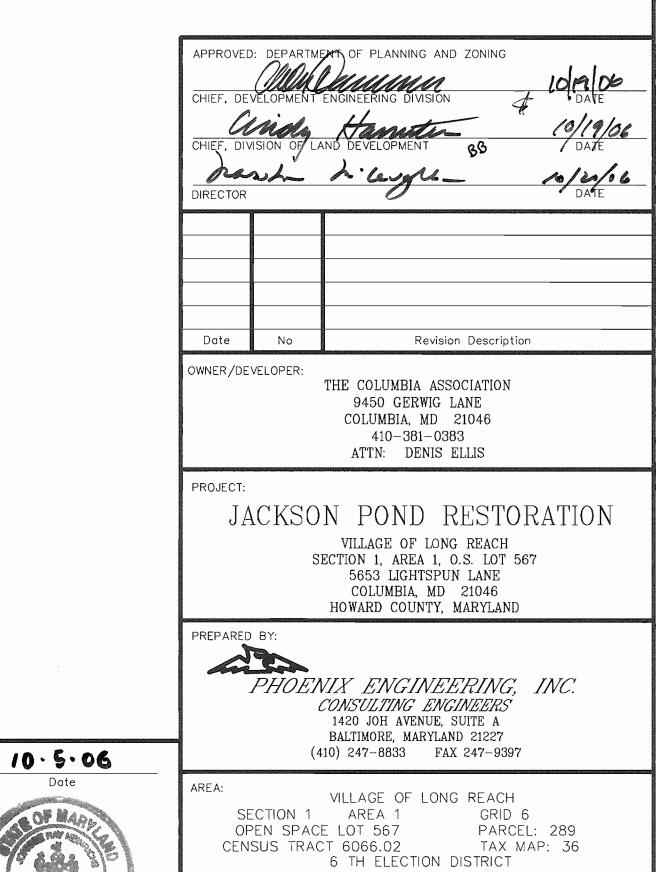
SCALE: 3/8" = 1'-0"



SCALE: 3/8" = 1'-0"

NOTES

- 1. The contractor shall verify the invert elevation of the 24" CMP at the riser prior to fabricating the riser structure. Should the elevation vary from that shown, the depth of the risre shall be adjusted to insure that the weir elevation will be at 394.40.
- 2. Concrete for the riser structure shall be Mix #3. Reinforcing shall conform to ASTM AG15, Grade 60 Wall and Base Reinforcing: #4 @ 10" o/c E.W. at center, continuous at corners and at base. All laps 1'-4" min.
- 3. The HDP pipe liner shall be CP Chem Performance Pipe smooth wall slipliner IPS sizing system, DR-17 100 psi pressure rating conforming to ASTM F-714 or approved equal.
- 4. The 10" HDP drain shall be Type S conforming to AASHTO Designation M-252-M-96. The 15" HDP perforated rise shall be Type SP conforming to AASHTO Designation M-294-M-98.
- 5. The standard perforations, rows of $6-\frac{3}{8}$ " dia. holes, shall be modified to slots $\frac{3}{8}$ " wide x $1\frac{1}{2}$ " lg. slots shall begin directly above the tee and extend to the top of the riser.
- 6. The riser shall be wrapped with $\frac{1}{2}$ " galvanized hardware cloth and geotextile Type II temporarilly while pond is being used for sediment control only. Remove filter cloth and hardware cloth when authorized by the sediment control inspector.
- 7. Provide 3" galvanized pipe support, painted grey, at the mid point of the throat. Fill with concrete.



SDP 06-73

S.E.W.

Chk By: H.R.P.

Date

JOHN R. HEINRICHS

Professional Engr. No. 14920

Scale: 1"=50'

HOWARD COUNTY, MARYLAND

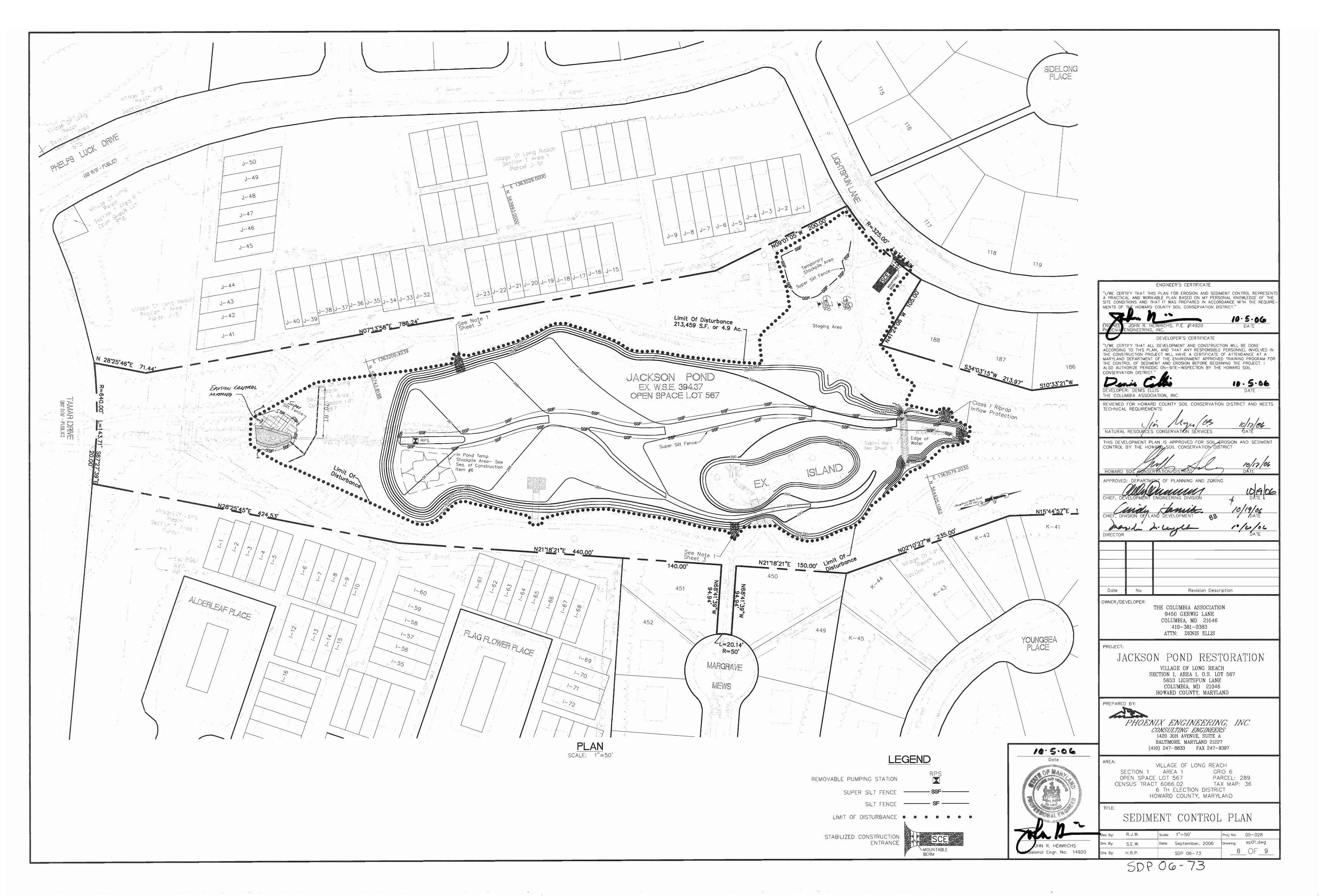
SPILLWAY DETAILS

SDP 06-73

Date: September, 2006 Drawing:

Proj No: 05-028

De02.dwg



SEDIMENT CONTROL NOTES 1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855) 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND 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 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS , TEMPORARY SEEDING AND MULCHING (SEC. G) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES. 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 7) SITE ANALYSIS TOTAL AREA OF SITE 213,459 SF 4.900 ACRES AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED OFFSITE WASTE/BORROW AREA LOCATION TO BE DETERMINED- BUT MUST BE A SITE WITH AN OPEN GRADING PERMIT GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR. 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER. PERMANENT SEEDING NOTES APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQUARE FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC 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.) 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH O LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31. SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS 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 TONS/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 TRAW 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 SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS. TEMPORARY SEEDING NOTES APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.). FOR RATE AND METHODS NOT COVERED. NOTE: FENCE POST SPACING CENTER TO CENTER

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 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 ERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD. APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (/O 10 90 LBS/1000 SQ F1) OF ONNOTIED STIDLE STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMPLISHED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

STANDARD AND SPECIFICATION **TOPSOILING**

DEFINITION

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

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATION GROWTH ON AREAS WITH LOW MOISTURE, LOW NUTRIENT LEVELS, LOW PH, OR THE PRESENCE OF OTHER MATERIALS TOXIC TO PLANTS.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS RECOMMENDED FOR SITES OF 2:1 OR FLATTER SLOPES WHERE:

- 1. THE TEXTURE OF THE EXPOSED SUBSOIL OR PERCENT MATERIAL IS NOT SUITABLE TO PRODUCE ADEQUATE VEGETATIVE GROWTH.
- 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.
- 3. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT
- 4. THE SOIL IS SO ACID THAT TREATMENT WITH LIMEDSTONE IS NOT FEASIBLE.

<u>SPECIFICATIONS</u>

SECTION # SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED.)

9.477 ACRES

0.00 ACRES

15,850 CU. YDS

0.75 ACRES

WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, WATERWAYS AND SEDIMENT BASINS,

GRADING: GRADES ON THE AREAS TO BE TOPSOILED WHICH HAVE BEEN PREMOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING: WHERE THE SUBSOIL IS EITHER HIGHLY ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS /ACRE (200-400 POLINDS PER 1 000 SO FT.) LIME SHALL RE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

TILLING: AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATLEY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY DISCING OR BY SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA OF THE SLOPE TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN THE SLOPE.

SECTION H TOPSOIL MATERIAL AND APPLICATION.

NOTE: TOPSOIL SALVAGED FROM THE EXISTING SITE MAY OFTEN BE USED BUT IT SHOULD MEET THE SAME STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. THE DEPTH OF TOPSOIL TO BE SALVAGED SHALL BE NO MORE THAN THE DEPTH DESCRIBED AS A REPRESENTATIVE PROFILE FOR THAT PARTICULAR SOIL TYPE AS DESCRIBED IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION

> MATERIALS: TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND OR OTHER SOIL AS APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST. IT SHALL NOT HAVE A MIXTURE OF CONTRASTING TEXTURED SUBSOIL AND CONTAIN NO MORE THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENT, GRAVEL, STICKS, ROOTS, TRASH OR OTHER EXTRANEOUS MATERIALS LARGER THAN 1-1/2 INCHES IN DIAMETER. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS OF BERMUDAGRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLES, OR OTHERS AS SPECIFIED. ALL TOPSOIL SHALL BE TESTED BY A RECOGNIZED LABORATORY FOR ORGANIC MATTER CONTENT, pH AND SOLUBLE SALTS A DH OF 60 TO 7.5 AND AN ORGANIC CONTENT OF NOT LESS THAN 6.0. IME SHALL BE APPLIED AND INCORPORATED WITH TOPSOIL TO ADJUST HE pH TO 6.5 OR HIGHER. TOPSOIL CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

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 TO PERMIT DISSIPATION OF TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS AS APRROVED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

GRADING: THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED AND COMPACTED O A MINIMUM OF FOUR (4) INCHES. 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 IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

SILT FENCE

Silt Fence Design Criterio

2. DAY 2-3 NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1855 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. 3. DAY 3-5 FIELD STAKE THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND THE SEDIMENT CONTROL PLAN. 4. DAY 5-10 INSTALL THE SCE AND THE SILT FENCE AT THE STOCKPILE AREA AS SHOWN ON THE PLANS. DRAIN THE POND AS DIRECTED BY THE MDE REPRESENTATIVE. SEE SPECIAL PROVISIONS AND GENERAL NOTES #3 & 5. DAY 10-25 #4 ON SHEET 1. 6. DAY 25-30 EXCAVATE THE POND BOTTOM CHANNELS AS SHOWN ON THE PLANS AND CONSTRUCT THE SUPER SILT FENCE AND THE EROSION CONTROL MATTING. EXCAVATE AN AREA AROUND THE PERFORATED RISER TO CONFINE THE INCOMING STREAM FLOW AND TO ALLOW PASSAGE OF THE WATER THROUGH THE PERFORATED RISER AND THE 10-INCH DRAWDOWN VALVE. THE EXCAVATED MATERIAL SHALL BE STOCKPILED WITHIN THE POND LIMITS. 7. DAY 30-45 ALLOW SUFFICIENT TIME FOR THE POND SEDIMENTS TO DEWATER AND DRY TO THE DEGREE NECESSARY TO SUPPORT GRADING EQUIPMENT. 8. DAY 45-122 a. EXCAVATE THE ACCUMULATED SEDIMENTS AND GRADE THE POND BOTTOM AND THE FOREBAY TO LINES AND GRADES AS SHOWN ON THE PLANS. NOTE: THE EXCAVATED MATERIAL SHALL BE DIRECTLY LOADED INTO TRUCKS AND HAULED TO AN APPROVED OFFSITE DISPOSAL AREA. EXCAVATED MATERIAL SHALL NOT BE STOCKPILED OUTSIDE OF THE POND LIMITS BUT MAY BE TEMPORARILY STOCKPILED WITHIN THE LIMITS OF THE POND. THE EXCAVATED MATERIAL SHALL BE SUFFICIENTLY DRY SO AS NOT TO CAUSE WATER TO DRAIN ONTO ROADS AND STREETS. b. INSTALL TEMPORARY PUMP STATION AND DIVERT STREAM FLOW TO A POINT DOWNSTREAM OF THE PIPE SPILLWAY. REMOVE THE EXISTING RISER AND DRAW-DOWN STRUCTURE. SLIPLINE PIPE SPILLWAY. CONSTRUCT NEW RISER AND DRAW-DOWN STRUCTURE. 9. DAY 122-125 CONSTRUCT THE GABION WEIR AT THE POND FOREBAY AND GRADE THE POND BANKS IN THE FOREBAY AREA AS SHOWN ON THE PLANS. 10. DAY 125-135 CONSTRUCT THE FISHING PIER, PLACE THE RIPRAP SLOPE PROTECTION AND THE CONNECTION TO THE ASPHALT PATH. 11. DAY 135-142 REPAIR ANY DAMAGE TO THE ASPHALT PATH SYSTEM AND THE ADJACENT AREAS. 12. DAY 142-144 STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES. WITHIN 30 DAYS OF COMPLETION, PROVIDE AN AS-BUILT SET OF PLANS TO MDE, ATTN: MR. VISTY DALAL 1800 WASHINGTON BLVD. BALTIMORE, MD 21230 13. DAY 144-145 CLOSE THE DRAWDOWN VALVE AND ALLOW THE POND TO FILL.

NON-TIDAL WETLANDS DIVISION. MDE TRACKING #200660797, DAM SAFETY #05-MR-0100

OBTAIN A GRADING PERMIT FROM HOWARD COUNTY AND ALL MDE PERMITS FROM THE DAM SAFETY DIVISION AND

SEQUENCE OF CONSTRUCTION (MDE TRACKING #200660797)

DAY 1

TO CONFINED SECTION PLAN VIEW TOP OF CHANNEL INVERT RIP-RAP 0% SLOPE FROM END C APRON SLOPE POSITIVE TO FILTER CLOTH 3' MINIMUM ELEVATION SIDE SLOPES TO VARY FROM 2 AT PIPE OUTLET TO THE EXISTING CHANNEL SLOPE AT THE END OF THE APRON FILTER CLOTH LINING MUST EXTEND AT LEAST 6" FROM EDGE OF RIP-RAP MINIMUM DEPTH OF RIP-RAP-MAXIMUN DEPTH OF FLOW. (DOWNSTREAM NORMAL DEPTH OR DISCHARGE DEPTH WHICHEVER AND BE EMBEDDED AT LEAST 4" AT SIDES OF FILTER CLOTH-S GREATER) THE RIP-RAP SECTION A-A NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE F - 18 - 9 EROSION CONTROL MATTING

DETAIL 26 - ROCK OUTLET PROTECTION II

DETAIL 30 - EROSION CONTROL MATTING CROSS-SECTION UNDISTURBED

STABILIZED CONSTRUCTION ENTRANCE

Construction Specification

2. Width - 10' minimum, should be flared at the existing road to provide a turning

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. ** The plan approval authority may not require single family

5. Surface Water — all surface water flawing 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

mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has

to 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

4. Stone — crushed aggregate (2" to 3"), or reclaimed or recycled cancrete

equivalent shall be placed at least 6" deep over the length and width of the

. Length – minimum of 50^{r} (30' for single residence lot).

radius.

entrance.

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

residences to use geotextile.

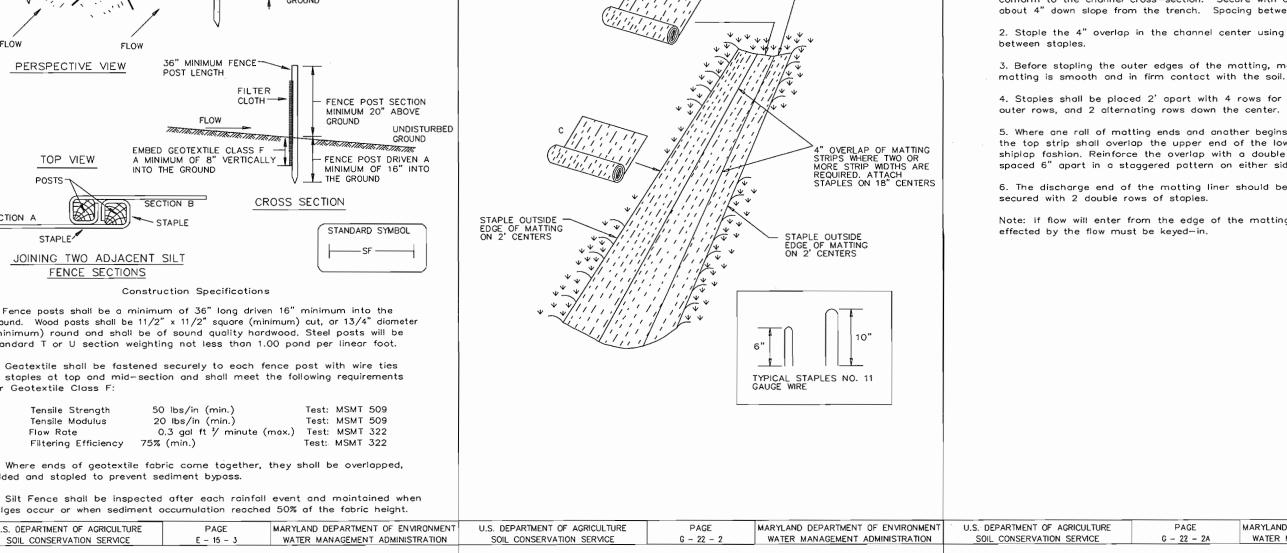
Construction Specifications

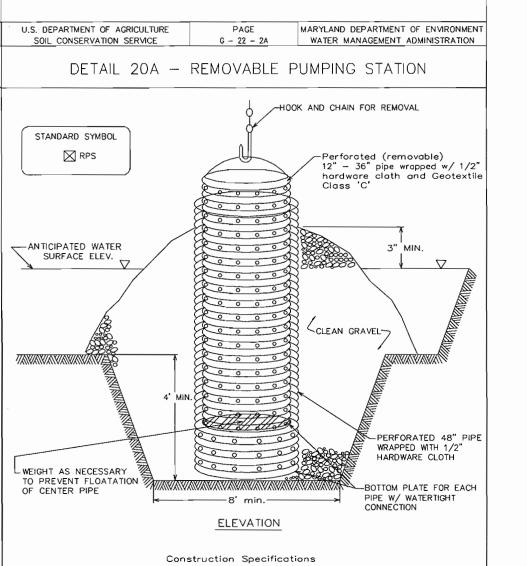
1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6". 2. Staple the 4" overlap in the channel center using an 18" spacing

3. Before stopling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil. 4. Staples shall be placed 2' apart with 4 rows for each strip, 2

5. Where ane rall of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the motting liner should be similarly secured with 2 double rows of staples. Note: If flow will enter from the edge of the matting then the area





OF MAD

ENGINEER'S CERTIFICATE I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENT A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIRE HOPARD COUNTY SOIL CONSERVATION DISTRICT." MENTS OF 10-5-06 OHN R. HEINRICHS, P.E. #14920 NGINEERING, INC DEVELOPER'S CERTIFICATE I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FO THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE-INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT. 10-5-06 THE COLUMBIA ASSOCIATION INC REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS 65. 10/17/06 NATURAL RESOURCES CONSERVATION SERVICES THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT Date Revision Description OWNER/DEVELOPER: THE COLUMBIA ASSOCIATION 9450 GERWIG LANE COLUMBIA, MD 21046

ROCK OUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, ar gabion shall be

approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading

tearing. Any damage other than an occasional small hole shall

in the subgrade shall be compacted to a density of

limits when installed respectively in the rip-rop or filter.

3. Geotextile shall be protected from punching, cutting, or

be repaired by placing another piece of geotextile over the

4. Stone for the rip-rap or gabion outlets may be placed by

displacement of underlying materials. The stone for rip-rap

or gobion outlets shall be delivered and placed in a manner

that will ensure that it is reasonably homogeneous with the

smaller stones and spalls filling the voids between the larger

to the filter blanket or geotextile. Hand placement will be

required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the

existing ground. If the stone is placed too high then the

flow will be forced out of the channel and scour adjacent to

MARYLAND DEPARTMENT OF ENVIRONMENT

F - 18 - 9A WATER MANAGEMENT ADMINISTRATION

stones. Rip-rap shall be placed in a manner to prevent damage

thickness in one operation and in such a manner as to avoid

equipment. They shall be constructed to the full course

damaged part or by completely replacing the geotextile. All

overlaps whether for repairs or for joining two pieces of

geotextile shall be a minimum of one faot.

the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

prepared to the required lines and grades. Any fill required

JACKSON POND RESTORATION

VILLAGE OF LONG REACH SECTION 1, AREA 1, O.S. LOT 567 5653 LIGHTSPUN LANE COLUMBIA, MD 21046

HOWARD COUNTY, MARYLAND

410-381-0383

ATTN: DENIS ELLIS

PREPARED BY: A S

PROJECT:

10.5.06

HEINRICHS

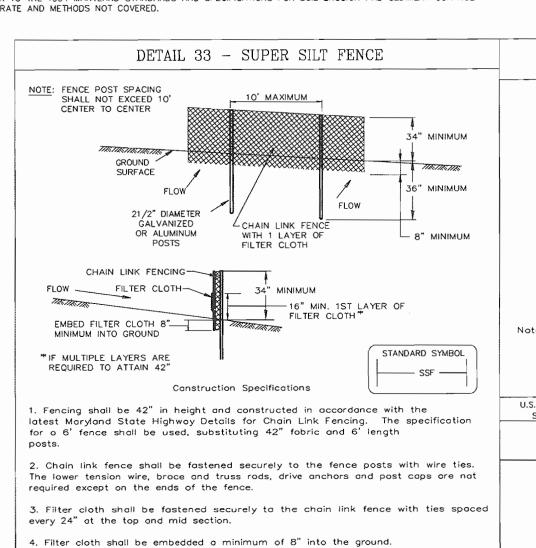
sional Engr. No. 14920

PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 1420 JOH AVENUE, SUITE A BALTIMORE, MARYLAND 21227 (410) 247-8833 FAX 247-9397

VILLAGE OF LONG REACH SECTION 1 AREA 1 GRID 6 OPEN SPACE LOT 567 PARCEL: 289 CENSUS TRACT 6066.02 TAX MAP: 36 6 TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

Proj No: 05-028 R.J.W. Scale: AS SHOWN De01.dwg S.E.W. Date: September, 2006 Drawing: 7 OF 9 SDP 06-73



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

6. Maintenance shall be performed as needed and silt buildups remaved when "bulges'

0.3 gal/ft /minute (max.) Test: MSMT 322

Test: MSMT 509

Test: MSMT 322

Test: MSMT 509

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

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

staples at top and mid section and shall meet the following requirements for

50 lbs/in (min.)

20 lbs/in (min.)

PAGE

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develop in the silt fence, ar when silt reaches 50% of fence height

by 6" ond folded.

Geotextile Class F:

Tensile Strength

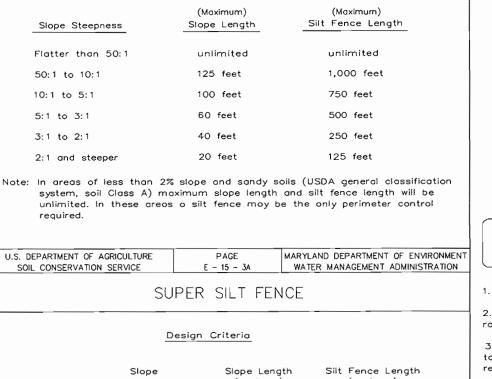
Tensile Modulus

U.S. DEPARTMENT OF AGRICULTURE

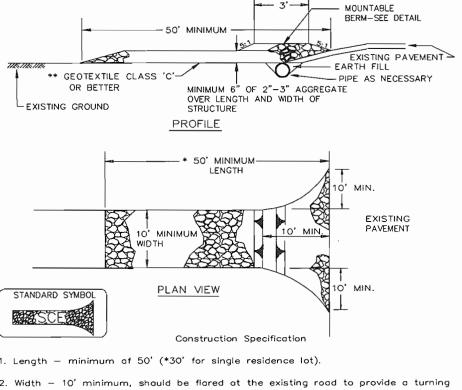
SOIL CONSERVATION SERVICE

Filtering Efficiency 75% (min.)

Flow Rate



	<u>Design Criteria</u>		
Slope	Slope Steepness	Stope Len (maximum	
0 - 10%	0 - 10:1	Unlimite	d Unlimited
10 - 20%	10:1 - 5:1	200 fee	t 1,500 feet
20 - 33%	5:1 - 3:1	100 fee	t 1,000 feet
33 - 50%	3:1 - 2:1	100 fee	t 500 feet
50% +	2:1 +	50 feet	250 feet
S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE		PAGE H - 26 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



DETAIL 22 - SILT FENCE

POST LENGTH

EMBED GEOTEXTILE CLASS E

Construction Specifications

. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood pasts shall be 11/2" x 11/2" square (minimum) cut, ar 13/4" diameter

minimum) round ond shall be of sound quality hardwood. Steel posts will be

standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geatextile 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 lbs/in (min.)

20 lbs/in (min.)

3. Where ends of geotextile fabric come together, they shall be overlapped

4. Silt Fence shall be inspected after each rainfall event and maintained when

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

bulges occur or when sediment occumulation reached 50% of the fabric height.

INTO THE GROUND

SECTION B

STAPLE

JOINING TWO ADJACENT SILT FENCE SECTIONS

for Geotextile Class F:

Tensile Strength

Tensile Modulus

U.S. DEPARTMENT OF AGRICULTURE

Filtering Efficiency 75% (min.)

folded and stapled to prevent sediment bypass.

Flow Rate

A MINIMUM OF 8" VERTICALLY

GROUND

CLOTH-

CROSS SECTION

0.3 gal ft ½ minute (max.) Test: MSMT 322

THE THE THE THE THE THE THE

10' MAXIMUM CENTER TO

PERSPECTIVE VIEW

36" MINIMUM LENGTH FENCE POST

— 16" MINIMUM HEIGHT OF

8" MINIMUM DEPTH IN

- FENCE POST SECTION

TRANSTRANSTRANS

STANDARD SYMBOL

_____SF ____

Test: MSMT 509

Test: MSMT 509

- FENCE POST DRIVEN A

MINIMUM OF 16" INTO

GROUND

MINIMUM 20" ABOVE

DRIVEN A MINIMUM OF 16" INTO

3. Geatextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single fomily residences to use geotextile.

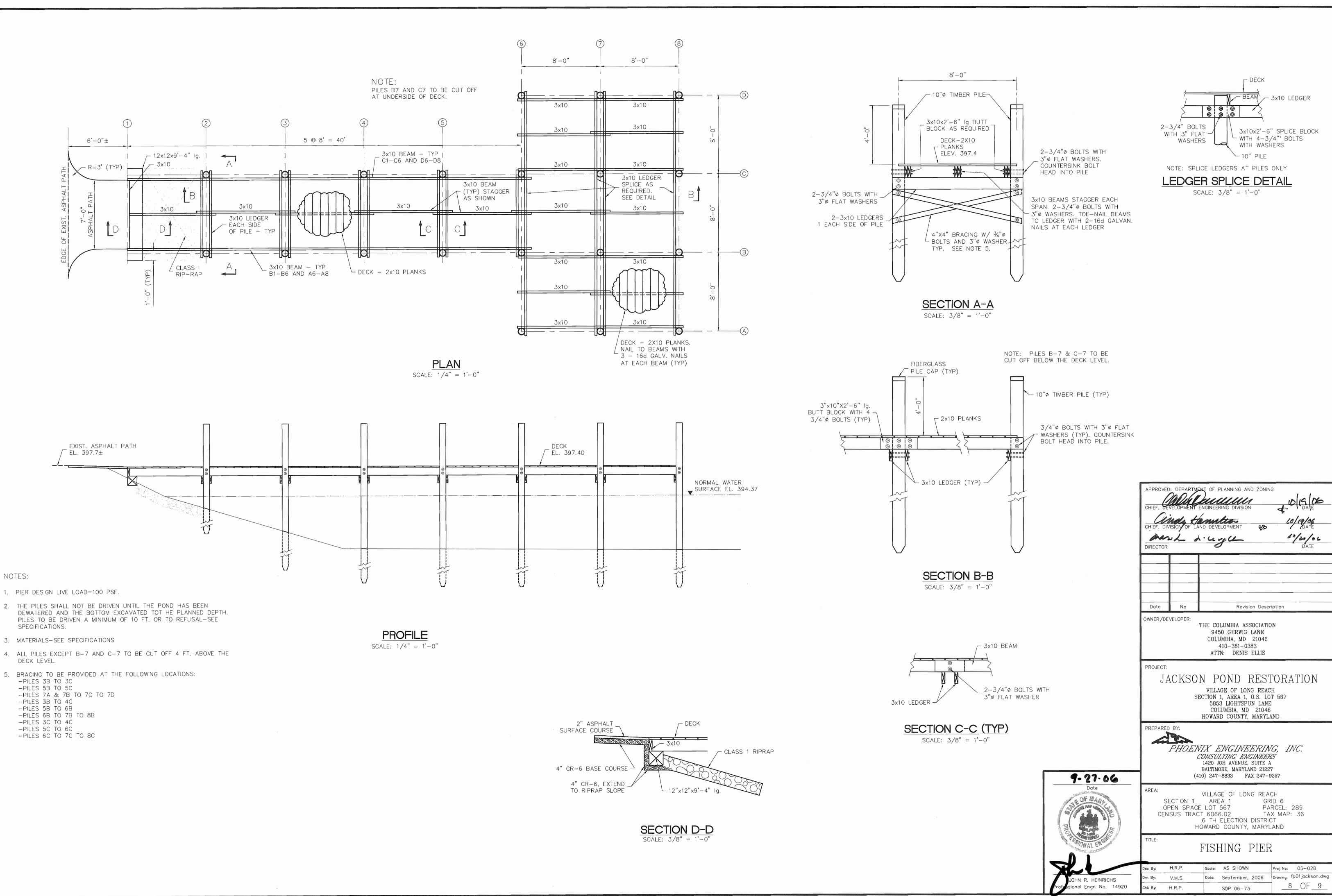
entronce. 5. Surface Water — all surface water flowing to or diverted toward construction

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4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled cancrete equivalent shall be placed at least 6" deep over the length and width of the

where construction traffic enters ar leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

1. The outer pipe should be $48^{\prime\prime}$ dia. or shall, in any case, be at least $4^{\prime\prime}$ greater in diameter than the center pipe. The outer pipe shall be wrapped with $1/2^{\prime\prime}$ hardware cloth to prevent backfill material from entering the perforations. 2. After installing the outer pipe, backfill around outer pipe with 2" aggregate 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" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped ogain with Geatextile Class C 4. The center pipe should extend 12" to 18" above the anticipated water surface MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMEN D - 12 - 5 WATER MANAGEMENT ADMINISTRATION F - 17 - 3A WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE



SDP 06-73

