NOTE: THE PURPOSE OF THIS PLAN IS TO REPLACE THE

MEDICAL HOSPITAL AS FUTURE.

1. General Site Data

2. Area Tabulation:

3. Open Space Data:

4. Parking Space Data

A. Present Zonina: RR-DEO

A. Total project area: 5.00 Ac±

C. Impervious Coverage:

A. Total project area: N/A

8. Open Space Provided: N/A

6. Animal Medical Hospital Building

Kennel/Grooming Building

SITE ANALYSIS DATA

C. Private water and sewer to be utilized.

SWM POND WITH THE NEW CHAPTER 5 STANDARDS

AND REGULATIONS, ENLARGE THE KENNEL/GROOMING BUILDING BY 20' IN LENGTH AND LABEL THE ANIMAL

B. Proposed use of site or structures: Animal Medical Hospital; Dog Kennel And Pet Grooming Establishment

A. The Number of vehicle parking spaces required in accordance with the Board of Appeals (BA 06-007c)

decision and order dated January 17, 2007 = 32 and reserve space for 15 additional spaces if needed in the future.

B. Total number of parking spaces provided on site: (Including handicap Parking) = 32 and 2 trailer parking spaces

B. Area of this plan submission: 5.00 Ac. + is the limit of submission and grading

Proposed Paved Areas (Parking and Walkways) - 45,459 Sq.Ft.

Building No.2 Coverage: 3,744 Sq.Ft. Kennel/Grooming Building Building Coverage: 14,544 Sq.Ft or 6.67% for the 5.00 Ac. Parcel

1st Floor Use Animal Medical Hospital 10,800 Square Feet

1st Floor Use Kennel/Grooming Area 2.744 Square Feet

Building No.1 Coverage: 10,800 Sq.Ft Hospital Building

disturbance for the construction of the animal medical hospital and associated parking.

C. Number of Handicaped parking spaces provided: (Including Handicap Van Spaces) = 2

2nd Floor Use Storage And Mechanical Equipment Area 1,600 Square Feet

SITE DEVELOPMENT PLAN ANIMAL MEDICAL HOSPITAL AT GLENWOOD

GREEN MEADOWS LOT 5

TAX MAP No. 14 GRID No. 11 P/O PARCEL Nos. 217



VICINITY MAP

5CALE: 1" = 2000ADC MAP 9

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



General Notes

- 1. All construction shall be accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if
- 2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five working days prior to start of
- The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any digging and excavation work.
- P/O Parcel 217 Zoning: The subject property is zoned RR-DEO per the 2-2-04 Comprehensive Zoning Plan and the "Comp Lite" Zoning Amendments effective
- 7-28-06. Election District: FOURTH
- Section/Area: N/A Site Area: 5.00 Ac. ±
- 5. Traffic control devices, markings and signing shall be in accordance with the latest edition of the manual on Uniform Traffic Control Devices (MUTCO). All street and regulatory signs shall be in place prior to placement of any asphalt.
- 6. All plan dimensions are to the face of curb or face of building unless otherwise noted. Dimensions are measured perpendicular or radial between items unless otherwise noted.
- 7. Existing topography and features were derived from a field run monumented boundary survey by Fisher, Collins and Carter Inc. and Harford Aerial Surveys inc. on or about October 2005 and November 2006.
- 8. Coordinates are based on NAD 83 Maryland Coordinates System as projected by Howard County Geodetic Control Stations
 - 14E1 N 596,213.62 E 1,301,991.89 ELEV. 590,335 14FB N 595,657.26 E 1,306,552.16 ELEV. 619.050
- 9. Private water and sewer is to be utilized for this project. 10. The required Environmental Site Design volume is provided on-site by 2 micro bio-retention facilities, 2 submerged gravel wetland facilities and a
- non-rooftop disconnection credit. The Stormwater Management Facilities will be privately owned and maintained 11. All on-site storm drains under this site development plan are private.
- 12. The existing utilities shown hereon were derived from available public records. The contractor must dig test pits by hand at all utility crossings and connection points to verify the exact location.
- 13. All proposed ramps shall be in accordance with current A.D.A. Standards Accessibility Guidelines. Maximum sidewalk cross slope shall be two percent. Provide a (5'x5') five foot by five foot level landing (max. slope 2%) at the top and bottom of all ramps and building entrances and exits. Handrails shall be provided on all ramps in accordance with section 4.8.5 of the A.D.A. Standards Accessibility Guidelines.
- 14. All driveways and parking are privately owned and maintained. 15. Any damage to County and or State owned right-of-way to be corrected at the contractor's expense.
- 16. Trench bedding for storm drains structures shall be in accordance with Howard County Standard G2.01 Class C Bedding unless otherwise noted. 17. Gutter pan of curbs shall be pitched to conform to the adjacent drainage patterns of the adjoining paving for vehicular use. See detail on Sheet
- 18. For details of building profile, parking, road section, handicap, curb and gutter see Sheet 7. 19. There are no known grave sites or cemeteries on this site based on a visual site visit and based on an examination of the Howard County
- 20. This Project is recorded among the land records in Howard County, Maryland as Plat No. 19072. 21. Other topics related to this site:
 - Soils Analysis prepared by: Penniman and Browne dated March 27, 2007.
- Traffic Study for this project was prepared by the Mars Group dated May 2007. 22. All outside lighting shall comply with Zoning Regulations Section 134 which requires lights to be installed to direct/reflect light downwards and inwards on the site and away from all public streets and residential areas and the light trespass onto any adjoining property zoned RR-DEO shall
- 23. The buildings shall be equipped with an automatic fire prevention sprinkler system.
- 24. There are no streams, stream buffers, flood plain, wetlands, wetlands buffers, steep slopes (25% slopes or greater) and forest conservation easement areas within Green Meadows Subdivision Lot 5.
- 25. Previous DPZ file numbers VP70-21, VP70-67, F70-119, F03-107, F07-206, F07-142, BA 06-007c and F-00-100.
- 26. This area designates a private sewerage easement of 10,000 square feet as required by the Maryland State Department of the Environment for individual sewerage disposal. Improvements of any nature in this area are restricted until public sewerage is available. These easements shall become null and void upon connection to a public sewerage system. The County Health Officer shall have the authority to grant adjustments to the private sewerage easement. Recordation of a modified sewerage easement shall not be necessary. Adjustments to the septic easement area is not permitted without additional testing.
- 27. The lot shown hereon complies with the minimum ownership width and lot area as required by the Maryland State Department of the Environment. 28. Existing wells and/or sewerage easements within 100 feet of the property have been shown from the best available information. 29. Percolation tests were done in April 2006, A524359
- 30. All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap
- 31. This SDP is subject to the Amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 45-2003 and the Amended Zoning Regulations per Council Bill No. 75-2003. Development or construction on this property must comply with setback and buffer
- regulations in effect at the time of submission of the site development plan, waiver petition application or building/grading permit applications. 32. This plan is subject to Board Of Appeals BA Case No. 06-007C. The decision and order by the Howard County Board of Appeals was approved on January 17, 2007 for a conditional use for an animal hospital and a dog kennel and pet grooming establishment in an RR-DEO zoned property
- subject to the following conditions: 1. The conditional uses shall be conducted in conformance with and shall apply only to the proposed animal hospital, kennel, and pet grooming facility as described in the petition and as depicted on the Conditional Use Plan for the "Second Amended Conditional Use Plan for Animal Hospital - AMH Equine Services", submitted to the Board on October 26, 2006 as Petitioner's Exhibit No. 4, as amended, and not to any activities, uses,
- 2. The Petitioner shall provide 32 parking spaces and reserve space for an additional 15 spaces on the plan.
- 3. The south landscape buffer shall be the equivalent of a Type D (screen) landscape buffer.
- 4. The Petitioner shall comply with all applicable federal, state, and county laws and regulations. 33. The forest conservation requirements per Section 16.1200 of the Howard County Code and the Forest Conservation Manual for this subdivision will be fullfilled by providing the afforestation requirement of 1.00 acre at The Mirabile Property shown on Sheet 21. Surety required: \$0.50/5F x 43560
- 34. On July 23, 2007, Howard County Department of Planning and Zoning approved the following alternative compliance requests: To Design Manual 1, Section 5.2.5.F, to allow the use of specific impervious cover to determine the proposed RCN. Approved based on the proposed construction has
- much less density than the proposed zoning. Section 5.2.7.A.4. to allow wet pond built without pond drain. Approved based on the fact that the pond is privately owned and maintained. Section 5.2.4.1, to allow less than 25' distance from the riprap outfall or the toe of embankment slope to downstream property line. Approved
- based on the downstream owner agreed and provided a letter indicating that they have no problem with less than 25' distance from the riprap of outfall or the toe of embankment slope to downstream property line.
- Adding a note in bold text on the SDP plan: 'Any further construction and/or subdivision (including where LOD is less than 5,000 SF) shall require additional SWM and revaluation of CPV criteria for entire lot. 35. On July 31, 2007, Howard County Department of Planning and Zoning denied the following alternative compliance requests: To Design Manual,
- Section 5.2.4.G, Trees shall not be allowed to grow on the dam and within 15' of the toe of the pond dam, or within 25' of the principal spillway. The denial is based principally on the fact that (1) the proposed pond is a MD378 facility. (2) "15' no woody zone" is essential for
- 36. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual. Required Landcape surety for the 31 shade trees and 88 evergreen trees in the amount of \$22,500.00 has been posted as a part of the developer's
- 37. The Knox Box location shown on sheet 3 shall be placed to the right of the main entrance at a range of 4-5 feet in height and no more than
- 6 feet laterally from the door. The Knox Box shall be electronically supervised to notify the owner that it is being accessed and intergrated with 38. The Animal Medical Hospital Building and the Kennel/Grooming Building will have a complete automatic fire suppression system designed in
- accordance with NFPA#13. The water supply tank shall be installed in accordance with the August 2007 draft of Howard County Specifications for nderground Water Storage Tanks for Fire Protection.
- 39. That the two (2) year time period for obtaining a building permit and the three (3) year time period for the completion of substantial construction of the conditional use, as required by section 131.13 of the Howard County zoning regulations be and the same is herely extended until January 17, 2012 and January 17, 2013, respectively.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2012."

STREET ADDRESS

Address Chart

BUILDING NO.

HO5PITAL

N/A

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

TITLE SHEET



5. Maximum number of employees per day: 12

REVISED SHE ANALYSIS DATA 2/25/11

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL AT GLENWOOD

2465 MARYLAND ROUTE 97 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

. KENNEL SECTION/AREA PARCEL LOT ANIMAL MEDICAL HOSPITAL P/0 217 5 DOG KENNEL AND PET GROOMING ESTABLISHMENT TAX MAP | ELEC. DIST. CENSUS TR 6040.0 FOURTH RR-DEO WATER CODE

2890 McKENDREE ROAD

2892 McKENDREE ROAD

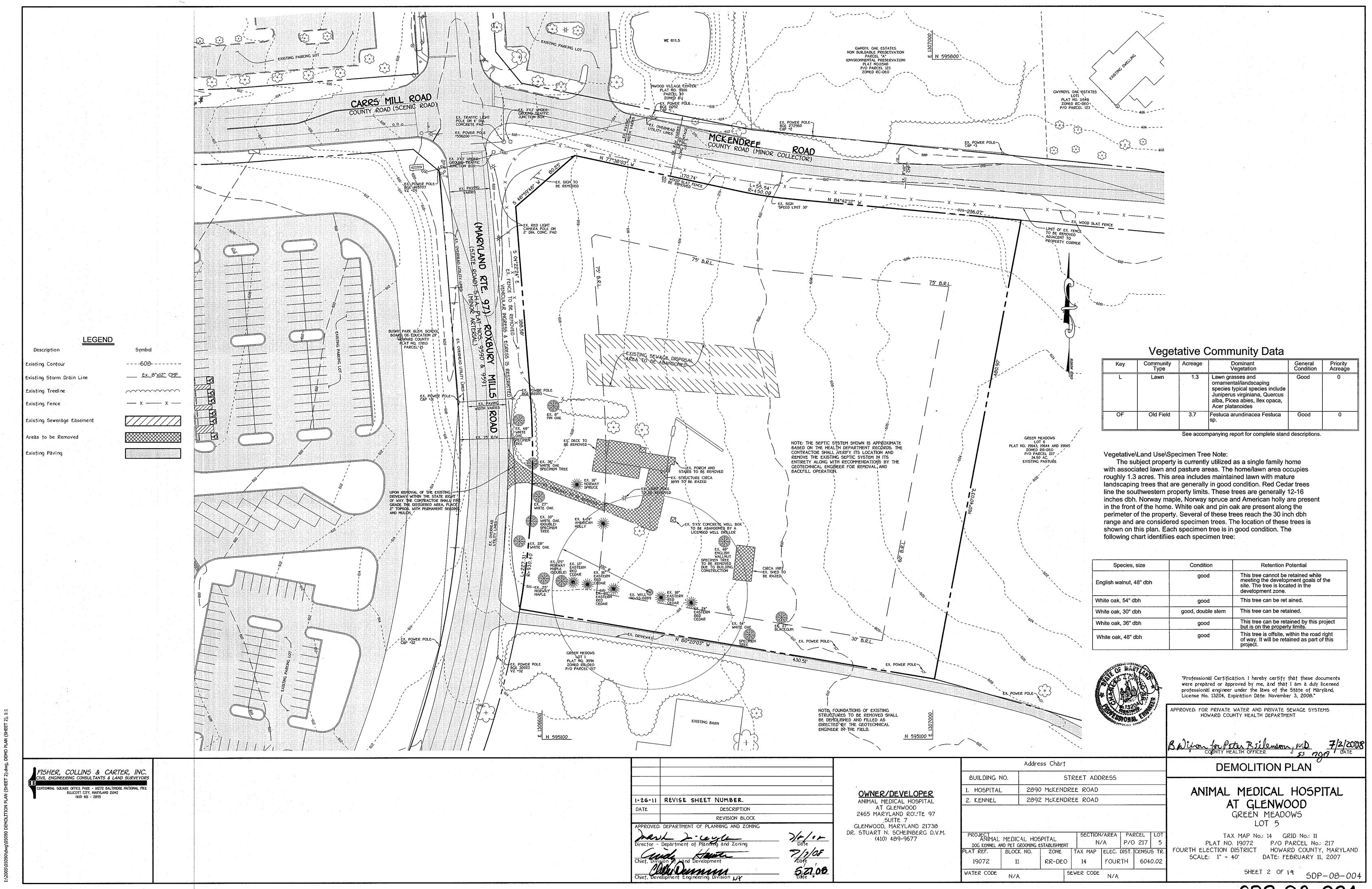
ANIMAL MEDICAL HOSPITAL

AT GLENWOOD

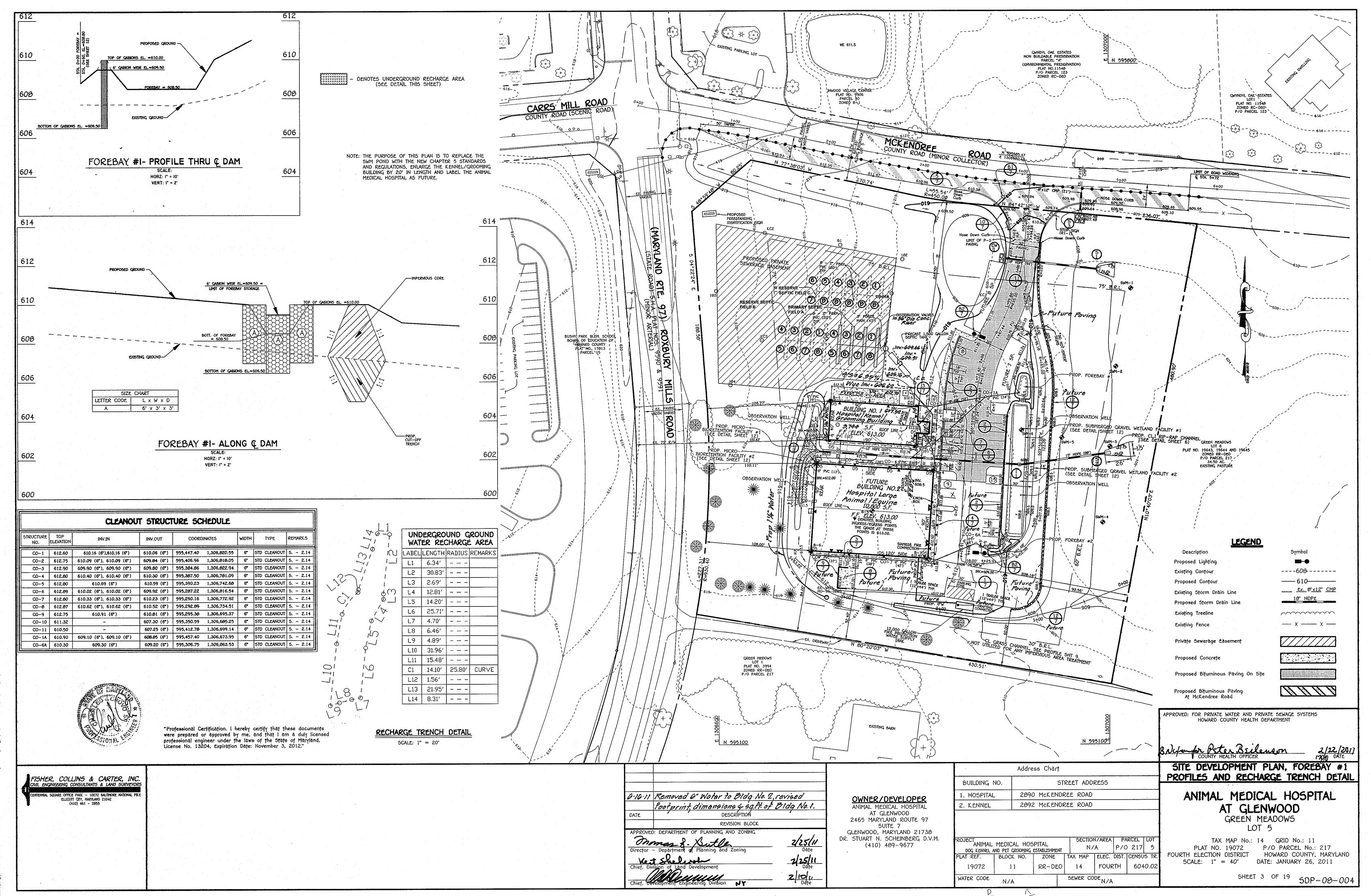
GREEN MEADOWS LOT 5

TAX MAP No.: 14 GRID No.: 11 P/O PARCEL No.: 217 PLAT NO. 19072 HOWARD COUNTY, MARYLAND FOURTH ELECTION DISTRICT DATE: JANUARY 26, 2011 SCALE: AS SHOWN

SHEET 1 OF 19 5DP-08-004



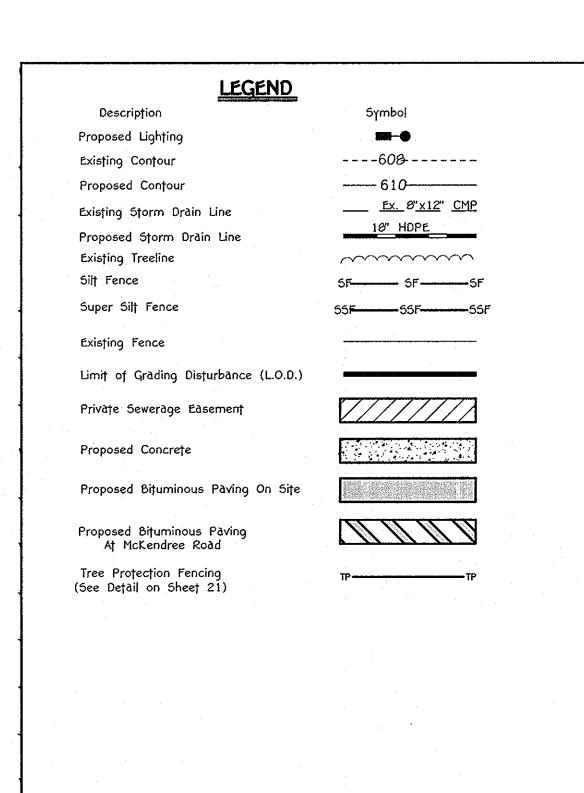
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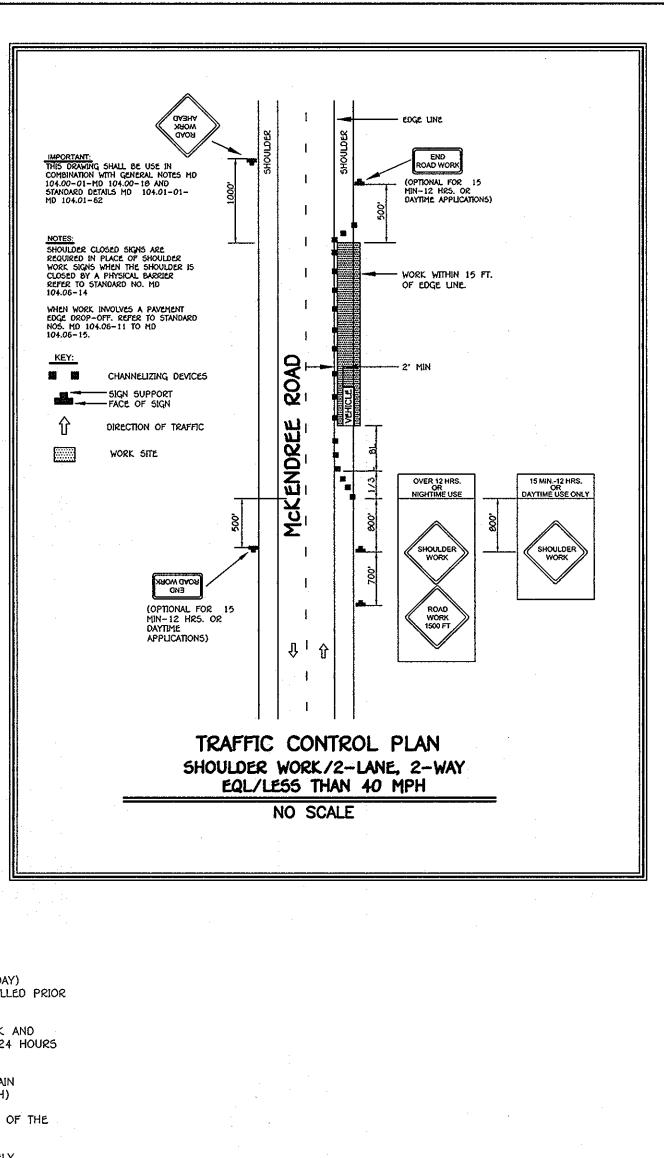


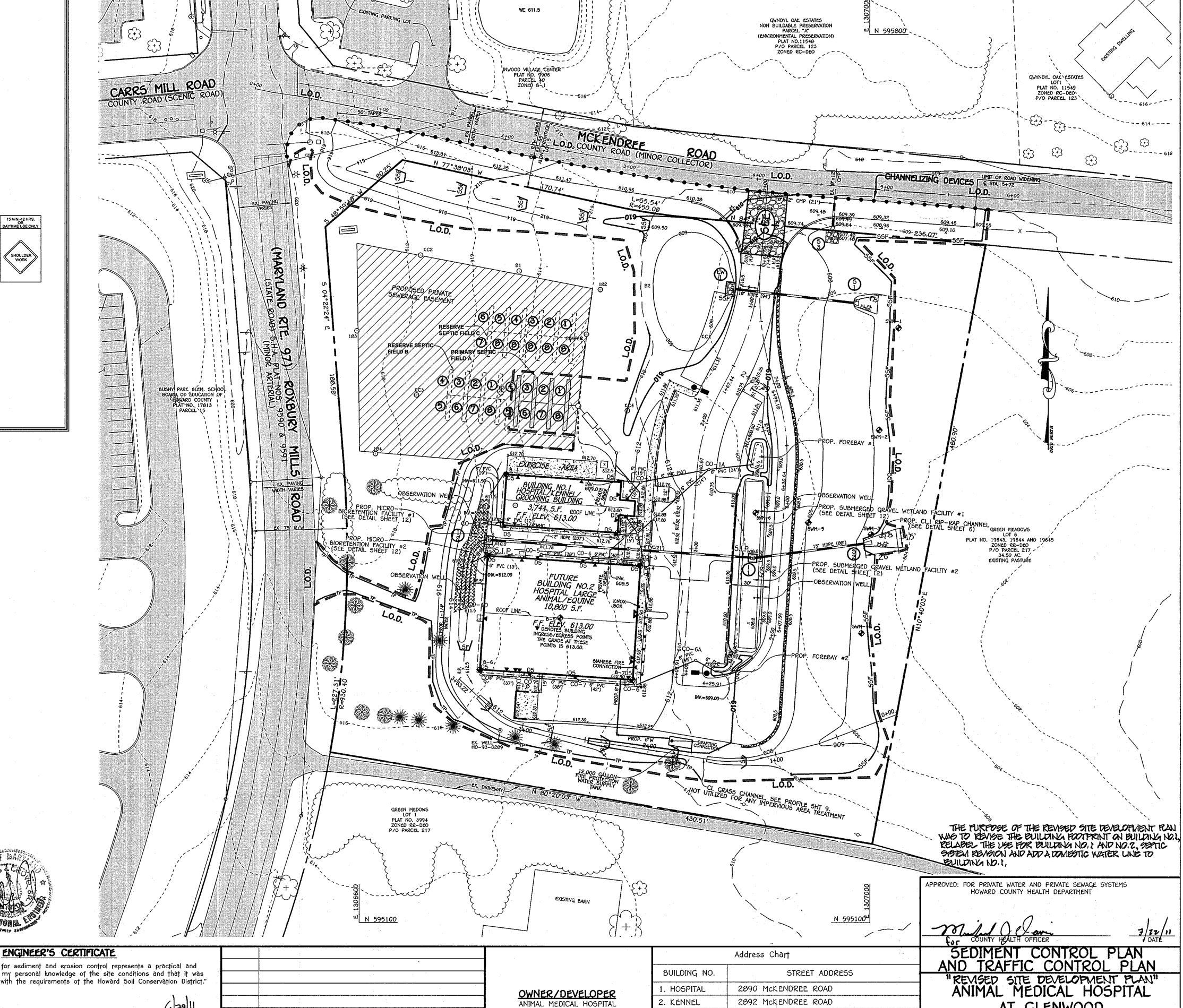
SEQUENCE OF CONSTRUCTION

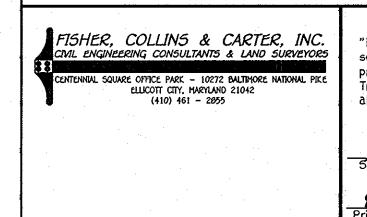
- OBTAIN GRADING PERMIT AND DEMOLITION PERMIT FOR THE EXISTING STRUCTURES. (1 DAY) INSTALL TREE PROTECTION FENCING AS SHOWN ON THIS PLAN. FENCING SHALL BE INSTALLED PRIOR TO SITE GRADING.
- NOTIFY "MISS UTILITY" (1-800-257-7777) AT LEAST 40 HOURS BEFORE STARTING WORK AND BEFORE STARTING WORK.
- INSTALL ALL SEDIMENT CONTROL DEVICES (S.C.E., SILT FENCE, SUPER SILT FENCE). OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. (1 MONTH)
- CONSTRUCT AND IMMEDIATELY STABILIZE THE PROPOSED SWALE ALONG THE SOUTH EDGE OF THE
- 5. DEMOLISH AREAS SHOWN ON SHEET 2. ALL DEMOLISHED MATERIALS SHALL BE COMPLETELY REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. (3 WEEKS)
- GRADE SITE TO THE PROPOSED GRADES AND IMMEDIATELY STABILIZE ALL SLOPES UPON COMPLETION OF GRADING WITH TEMPORARY SEEDING. AS FILL PROGRESSES, SUPER SILT FENCE MUST BE INSPECTED AND REPAIRED IF NECESSARY UPON WEEKLY REVIEW BY HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. (2 MONTHS)
- BEGIN CONSTRUCTION OF BUILDINGS. (8 MONTHS)
- CONSTRUCT WATER, SEWER AND STORM DRAIN SYSTEM AND INLET PROTECTION WITH THE EXCEPTION OF THE MICRO BIO-RETENTION FACILITIES AND SUBMERGED GRAVEL WETLAND. THE PIPE ENTRANCE TO THE RECHARGE STONE TRENCH AT INLET I-2 AND I-1 SHALL BE BLOCKED AND WATERTIGHT. (4 WEEKS)
- 9. INSTALL CURB AND GUTTER. (1 WEEK)
- 10. CONSTRUCT ALL (4) FOUR SWM FACILITIES; 2-MICRO BIO-RETENTION FACILITIES, 2-SUBMERGED GRAVEL WETLANDS AND BLOCK (WATERTIGHT) ENTRANCE TO THESE FACILITIES IN I-1 AND
- 11. PAVE PARKING LOT, ROADWAYS, AND MCKENDREE ROAD WIDENING. (1 MONTH)
- 12. COMPLETE CONSTRUCTION OF BUILDINGS, SIDEWALK, AND EXERCISE AREA. (1 MONTH)
- 13. STABILIZE ALL DISTURBED AREAS WITH SEED AND MULCH IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (1 WEEKS)
- 14. INSPECT STORM DRAIN SYSTEM AND FLUSH/CLEAN AS NECESSARY TO ENSURE NO REMAINING
- 15. FOLLOWING SUCCESSFUL STABILIZATION (i.e., ESTABLISHED VEGETATION OR PAVING) OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES. THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. UNBLOCK ENTRANCES TO MICRO BIO-RETENTION AND SUBMERGED GRAVEL WETLAND FACILITIES IN I-1 AND I-2. (1 WEEK)

SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM THE SEDIMENT BASINS WHEN CLEAN OUT ELEVATIONS ARE REACHED, ALL SEDIMENTS MUST BE PLACED UPSTREAM OF ANY APPROVED BASIN.

> "Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2012."







DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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. also authorize periodic on-site inspection by the Howard Soil Conservation District."

6/22/1/ Dat Stuart Scheinberg

These plans have been reviewed For The Howard Soil Conservation District and meet the

"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

CHARLES J. CROVOSR Printed Name Of Engineer This development plan is approved for soil erosion and sediment control by the Howard

DATE DESCRIPTION REVISION BLOCK monos 2/27/1 7-26-11 7.14-11 Chief, Development Engineering Division NY

AT GLENWOOD

2465 MARYLAND ROUTE 97 SUITE 7 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

SECTION/AREA PARCEL LOT "ANIMAL MEDICAL HOSPITAL P/O 217 5

RR-DEO

TAX MAP | ELEC. DIST. CENSUS TR

FOURTH

SEWER CODE N/A

6040.02

DOG KENNEL AND PET GROOMING ESTABLISHMENT

BLOCK NO.

WATER CODE

`_____\

"REMSED SITE DEVELOPMENT PLAN"
ANIMAL MEDICAL HOSPITAL AT GLENWOOD
GREEN MEADOWS LOT 5

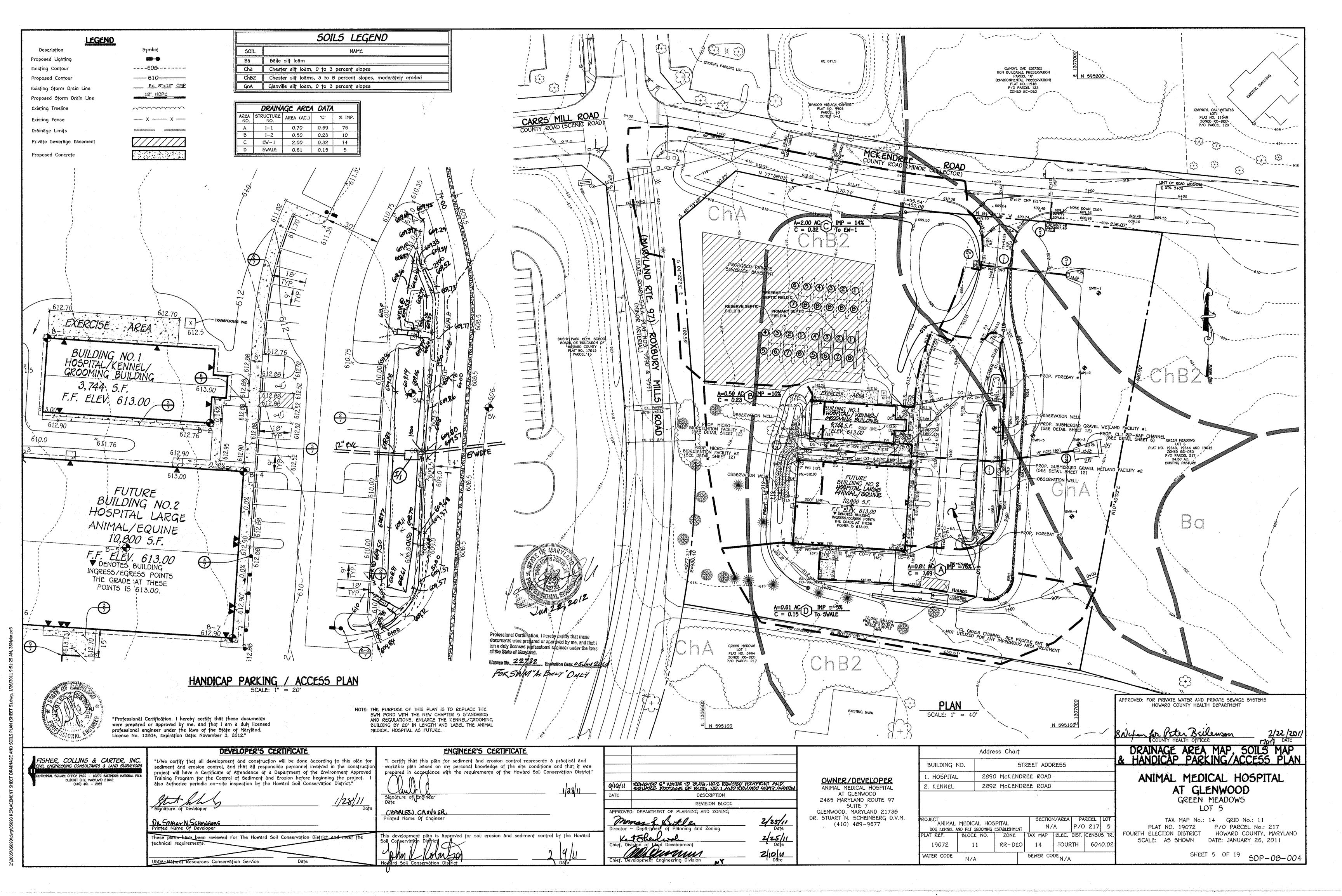
TAX MAP No.: 14 GRID No.: 11 P/O PARCEL No.: 217 PLAT NO. 19072 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 40' DATE: JANUARY 26, 2011

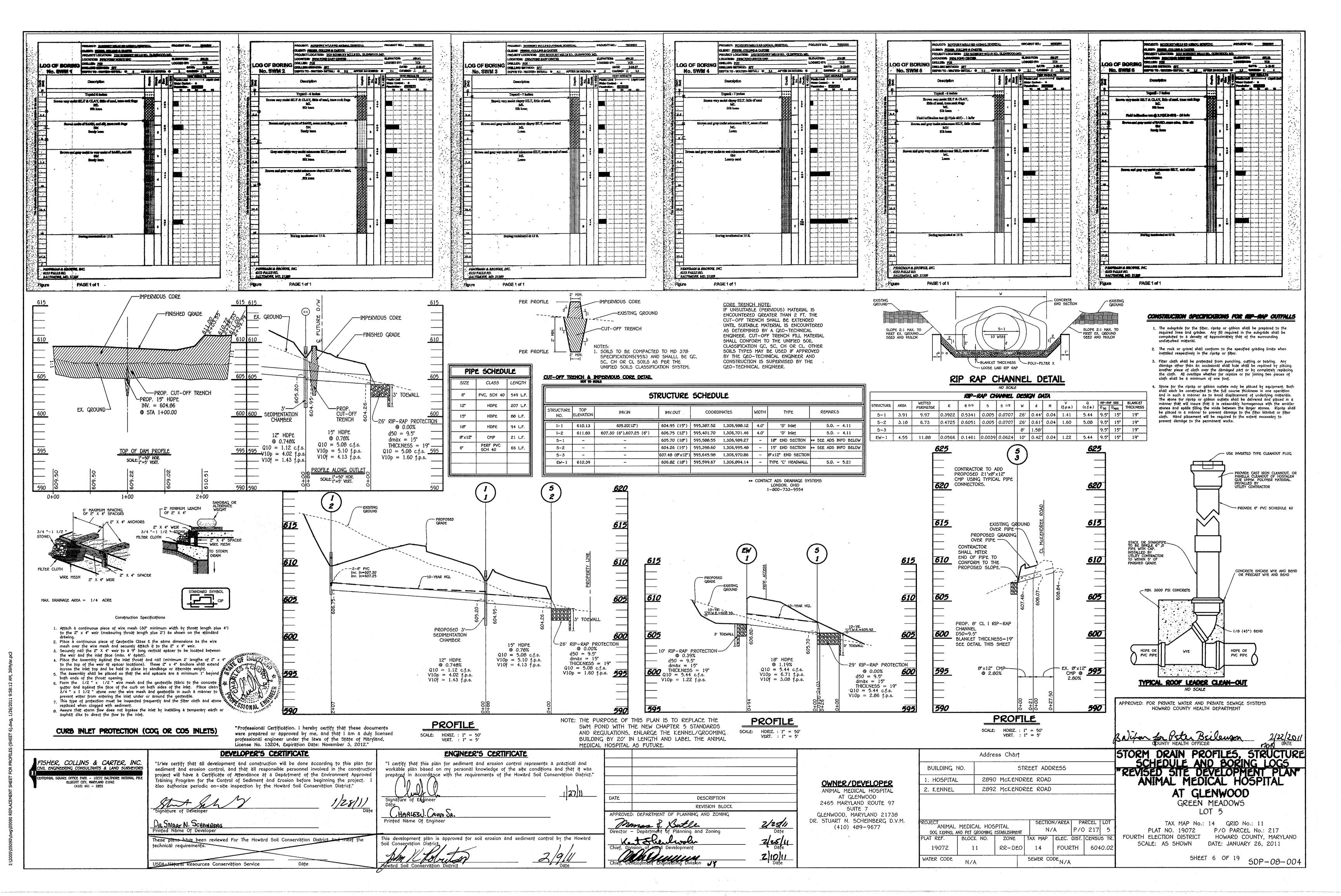
SHEET 4 OF 19 SDP-08-004

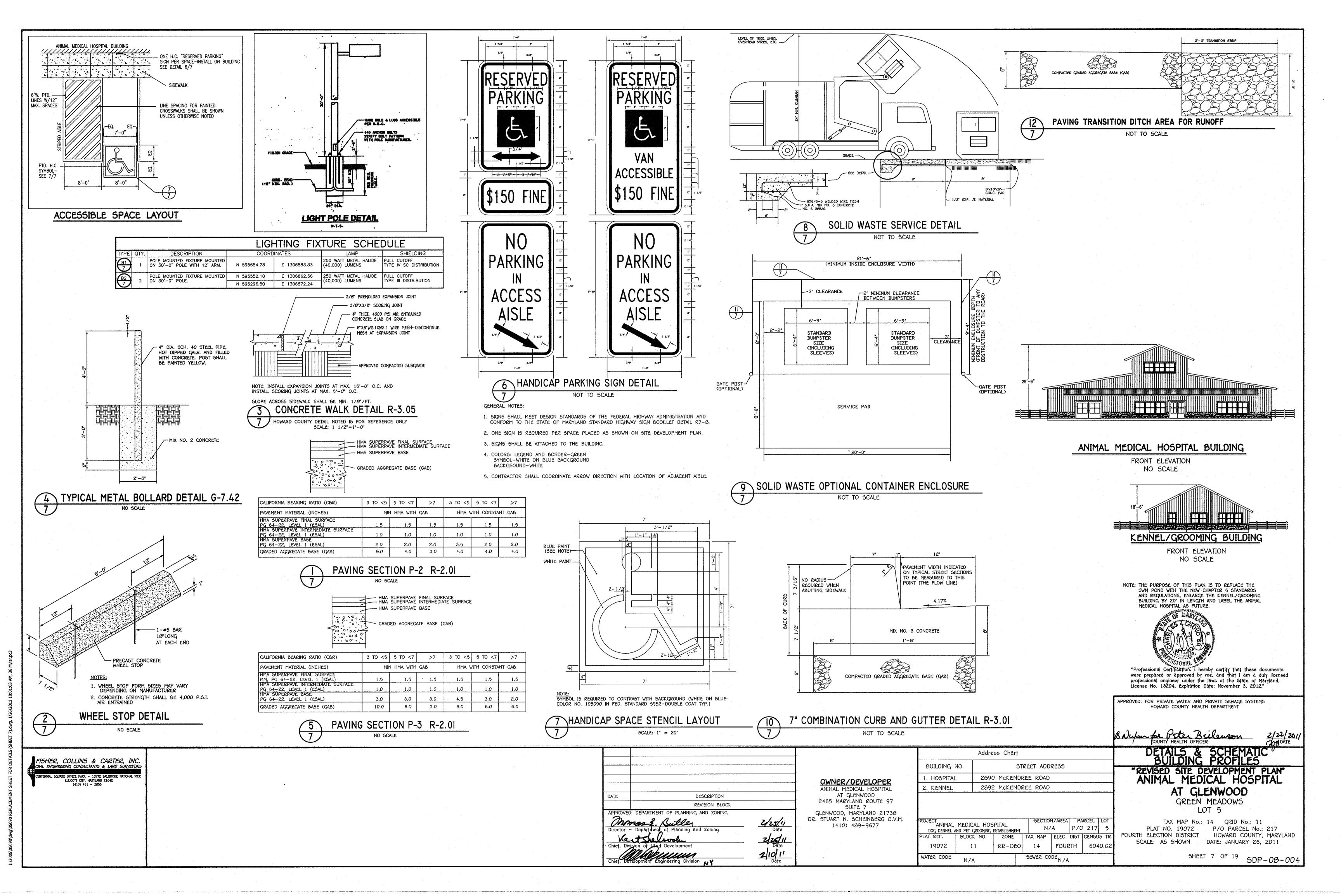
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technical requirements: USDA-Natural Resources Conservation Service







20.0 STANDARDS AND SPECIFICATIONS VEGETATIVE STABILIZATION

DEFINITION Using vegetation as cover for barren soil to protect it from forces that cause erosion PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized Note: Once excavation has begun the operation should be continuous from grubbing through the completion of with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of run-off to downstream areas, and improving wildlife habitat and visual resources. CONDITIONS WHERE PRACTICE APPLIES This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding

areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration O(up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc. EFFECTS ON WATER QUALITY AND QUANTITY Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff,

infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help project groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishme to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS Install erosion and sediment control structures (either temporary of permanent) such as diversions, Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites

having disturbed area over 5 acres.
Soil Amendments (Fertilizer and Lime Specifications) Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90—100% will pass through a #20 mesh sieve.

Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

Seedbed Preparation
i. Temporary Seeding
a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or surpapie agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. Permanent Seeding

Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.

Soluble saits shall be less than 500 parts per million (ppm). The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (<30% sil

plus clay) would be acceptable.

4. Soil shall contain 1.5% minimum organic matter by weight.

5. Soil must contain sufficient pore space to permit adequate root penetration.

6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil

sliding down a slope.

Apply soil amendments as per soil test or as included on the plans.

Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant — The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen—fixing bacteria prepared specifically for the species. Inoculant shall not be used later than Definition the date indicated on the container. Add fresh inoculant as directed on package. Use four times the lacement of topsoil over a prepared subsoil prior to establishment of recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible lacement of topsoil over a prepared subsoil prior to establishment of until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective rmanent vegetation.

Methods of Seeding
i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast

Or drop seeding or a cultipacker seeder.

To provide a suitable soil medium for vegetative growth. Soils of If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac.

Lime — use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Or Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

Mulch Specifications (In order of preference)

Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, a not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed as specified in the Maryland Seed Law. . Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform

WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

WCFM, including dye, shall contain no germination or growth inhibiting factors.

WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed

in contact with the soil without inhibiting the growth of the grass seedlings. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic. f. WCFM must conform to the following physical requirements: fiber length to
approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash
content of 1.6% maximum and water holding capacity of 90% minimum.
Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
Mulching Seeded Areas — Mulch shall be applied to all seeded areas immediately after seeding.

If grading is completed outside of the seeding season, mulch along shall be applied as prescribe in this section and maintained until the seeding season returns and seeding can be performed accordance with these specifications. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre.

shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed the strain of the following methods (listed the strain to minimize loss by wind or water. This may be done by one of the following methods (listed the strain to minimize loss by wind or water.

application to minimize loss by wind or water. This may be done by one of the following methods (listed by reference), depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the confour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber per 100 gallons of water. iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders — such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax

. Terra Tack AR or other approved equal may be used at rates recommended by the nanufacturer to anchor mulch. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recomdations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long Incremental Stabilization - Cut Slopes All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15

Construction sequence (Refer to Figure 3 below):

Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.

Perform Phase 1 excavation, dress, and stabilize.

Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary. Perform final phase excavation, dress and stabilize. Overseed previously seeded

completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Incremental Stabilization of Embankments - Fill Slopes Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches
15", or when the grading operation ceases as prescribed in the plans.
iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to

of the embankment to intercept surface runoff and convey it down the slope in a non-erosive a sediment trapping device.

Construction sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place Phase 1 embankment, dress and stabilize.

c. Place Phase 2 embankment, dress and stabilize.

d. Place That are ambankment dress and stabilize.

Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion

of grading and placement of topsoil (if required) and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization. SECTION 2 - TEMPORARY SEEDING Vegetation — annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover. Permanent Seeding is required.

A Seed mixtures - Temporary Seeding i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.

ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding

5	eed Mixture (Hardiness Zone From Table 26	s <u>-pg</u>)			Fertilizer Rate	Lime Rate
No.	Species	Application Rate (lb/ac	Seeding Dates	Seeding Depths	(10-10-10)	Bine Raje
1	RYE	140	3/15 - 5/3 8/1 - 10/3)1,)1" - 2	600 lb/ac	2 tons/ac
2	BARLEY OR RYE PLUS FOXTAIL MILLOT	150	6/1 - 7/3	1 1"	(15 b/1000sf)	(100 lb/1000s)

Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas

A. Seed mixtures - Permanent Seeding i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass. ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the

iii. For areas receiving low maintenance, apply ureaform tertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed a the time of seeding.

	From Table 25			1)			Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	, A L , 0
1	TALL FESCUE (05%) KENTUCKY BLUEGRASS (5%) PERENNIAL RYEGRASS (10%)	125 15 10	3/15 - 6/1 8/1 - 10/	1" - 2"	(2.0 lb/	(4 lb/	175 lb/ac (4 lb/	(100 lb/
2	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/15 - 6/1 8/1 - 10/	'1" - 2	1000sf)	1000sf)	1000sf)	1000sf)

rates recommended by the soil testing agency shall be written in.

TOPSOIL SPECIFICATIONS

III. For sites having disturbed areas over 5 acres: i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be

Slope Steepness

Flatter than 50:1

50:1 to 10:1

10:1 to 5:1

5:1 to 3:1

3:1 to 2:1

2:1 and steeper

perimeter control required.

unlimited

125 feet

100 feet

60 feet

40 feet

20. feet

Note: In areas of less than 2% slope and sandy soils

(USDA general classification system, soil Class A)

NOTE: FENCE POST SPACING

- CENTER TO CENTER

116116116-

SHALL NOT EXCEED 10'

TISTISTISTIS Y

GROUND '

SURFACE

CHAIN LINK FENCING

EMBED FILTER CLOTH &

MINIMUM INTO GROUND

* IF MULTIPLE LAYERS ARE

REQUIRED TO ATTAIN 42"

required except on the ends of the fence.

every 24" at the top and mid section.

FILTER CLOTH

21/2" DIAMETER

GALVANIZED

OR ALUMINUM

maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only

unlimited

1,000 feet

750 feet

500 feet

250 feet

125 feet

SUPER SILT FENCE

10' MAXIMUM

CHAIN LINK FENCE

WITH 1 LAYER OF

FILTER CLOTH

Construction Specifications

. Fencing shall be 42" in height and constructed in accordance with the

for a 6' fence shall be used, substituting 42" fabric and 6' length

4. Filter cloth shall be embedded a minimum of 8" into the ground.

latest Maryland State Highway Details for Chain Link Fencing. The specification

2. Chain link fence shall be fastened securely to the fence posts with wire ties.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced

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

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

The lower tension wire, brace and truss rods, drive anchors and post caps are not

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used. with soil sterilants orchemicals used for weed control until sufficient time has elapsed dissipation of phyto-toxic materials. (14 days min.)

Note: Topsoil substitutes or amendments, as recommended by a approval authority, may be used in lieu of natural topsoil. ii. Place topsoil (if required) and apply soil amendments as Stabilization - Section I - Vegetative specified in 10.0 Vegetative II. For the purpose of these Standards and Specifications, areas having

Topsoil Application When topsoiling, maintain needed erosion and sediment control practices such as diversions. Grade Stabilization Structures, Earth Dikes Slone Silt Fence and Sediment Trans and Basins

established, shall be maintained, albeit 4" - 8" higher in elevation. iii. Topsoil shall be uniformly distributed in a 4'' - 8'' layer and thickness of 4". Spreading shall be lightly compacted to a minimum 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

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: sites having disturbed areas under 5 acres amendments and shall

person are permitted (at the time of acquisition of the compost) or persons that by the Maryland Department of the Environment under b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, 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 c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet. iv. Composted sludge shall be amended with a potassium fertilizer

BLAZE ORANGE PLASTIC MESH HIGHLY VISIABLE FLAGGING -----GEOTEXTILE CLASS E PLAN/CUT AWAY VIEW --- 3/4" - 11/2" STONE ---- INLET GRATE 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 DEVICE. ROOT DAMAGE SHOULD BE AVOIDED. PROTECTIVE SIGNAGE MAY ALSO BE USED. GEOTEXTILE CLASS - 6" OVERLAP STANDARD SYMBOL TREE PROTECTION DETAIL CROSS SECTION AGIP NOT TO SCALE MAX. DRAINAGE AREA = 1/4 ACRE Silt Fence Design Criteria Construction Specifications (Maximum) (Maximum) Silt Fence Lenath Slope Length

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place. 2. Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and

AT GRADE INLET PROTECTION

4" MINIMUM

36" MINIMUM

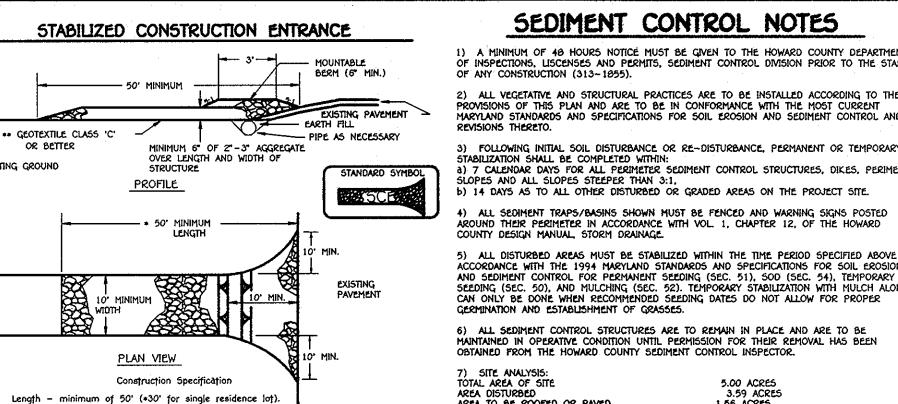
STANDARD SYMBO

FLOW

NOTE: THE PURPOSE OF THIS PLAN IS TO REPLACE THE SWM POND WITH THE NEW CHAPTER 5 STANDARDS AND REGULATIONS. ENLARGE THE KENNEL/GROOMING BUILDING BY 20' IN LENGTH AND LABEL THE ANIMAL MEDICAL HOSPITAL AS FUTURE.

FLOW

SECTION A



Width - 10' minimum, should be flared at the existing road to provide a turning 3. Geotextile fabric (fifter cloth) shall be placed over the existing ground prior

OR BETTER

EXISTING GROUND

SILT FENCE

36" MINIMUM FENCE

FLOW

18/18/18/18

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the

ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4"

will be standard T or U section weighting not less than 1.00 pond per linear

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 for

0.3 gal ft / minute (max.)

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 bulges occur or when sediment accumulation reached 50% of the

BUILDING NO.

50 lbs/in (min.)

20 lbs/in (min.)

75% (min.)

folded and stapled to prevent sediment bypass

diameter (minimum) round and shall be of sound quality hardwood. Steel posts

POST LENGTH

EMBED GEOTEXTILE CLASS F

INTO THE GROUND

SECTION B

A MINIMUM OF 8' VERTICALLY

10' MAXIMUM CENTER TO

FLOW

-- CENTER

PERSPECTIVE VIEW

TOP VIEW

STAPLE .

JOINING TWO ADJACENT SILT.

Geotextile Class F:

Filtering Efficiency

Tensile Strength

Tensile Modulus

Flow Rate

FENCE SECTIONS

to placing stone. **The plan approval authority may not require single family esidences to use geotextile. 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

 Surface Water - 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 mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe hi 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.

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

6. Location - A stabilized construction entrance shall be located at every point

36" MINIMUM LENGTH FENCE POST

16" MINIMUM HEIGHT OF

FENCE POST SECTION

- FENCE POST DRIVEN A

MINIMUM OF 16" INTO

STANDARD SYMBOL

UNDISTURBED

GROUND

MINIMUM 20" ABOVE

GROUND

THE GROUND

GEOTEXTILE CLASS F

- 8" MINIMUM DEPTH IN

DRIVEN A MINIMUM OF 16" INTO

GROUND

CROSS SECTION

Test: M5MT 509

Test: M5MT 509

Test: M5MT 322

Test: MSMT 322

Address Chart

STREET ADDRESS

GROUND

FILTER

CLOTH -

SEDIMENT CONTROL NOTES

) A MINIMUM OF 40 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIMISION PRIOR TO THE STAR OF ANY CONSTRUCTION (313-1855 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 FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY TABILIZATION SHALL BE COMPLETED WITHIN: a) 7 Calendar Days for all perimeter sediment control structures, dikes, perimet Slopes and all slopes steeper than 3:1, b) 14 days as to all other disturbed or graded areas on the project site

ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL STORM DRAINAGE 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE I CCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION

SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONI 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.

TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED 5.00 ACRES 3.59 ACRES 1.56 ACRES 3000 CU.YD5. 3000 CU.YD5.

ONSITE BORROW AREA LOCATION

) 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 CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

N/A CU.Y05.

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 OF that which shall be back-filled and stabilized within one working day, whichever

EDGE OF ROADWAY OR TOP OF EARTH DIKE 2" X 4" FRAMING 6" MINIMUM -NOTCH ELEVATION * * 3 FLOW EXCAVATE, BACKFILL AND COMPACT EARTH POST DRIVEN INTO GROUND STANDARD SYMBOL WIRE MESH

GEOTEXTILE CLASS E MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth

dike should be at least 6" higher than the top of the frame. 7. The structure must be inspected periodically and after each

rain and the geotextile replaced when it becomes cloqued.

STANDARD INLET PROTECTION



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204. Expiration Date: November 3, 2008."

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

BNiper for Poter Beilenson

SEDIMENT CONTROL NOTES AND DETAILS

"REVISED SITE DEVELOPMENT PLAN" ANIMAL MEDICAL HOSPITAL

AT GLENWOOD GREEN MEADOWS LOT 5

TAX MAP No.: 14 GRID No.: 11 PLAT NO. 19072 P/O PARCEL No.: 217 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: JANUARY 26, 2011 SCALE: AS SHOWN

compliance with the following: concern have low moisture content, low nutrient levels, low pH, prescribed to raise the pH to 6.5 or higher. materials toxic to plants, and/or unacceptable soil gradation.

b. Organic content of topsoil shall be not less than 1.5 percent by d. No sod or seed shall be placed on soil which has been treated

to permit qualified agronomist or soil scientist and approved by the appropriate

Stabilization Methods and Materials.

Grades on the areas to be topsoiled, which have been previously

operations shall be corrected in order to prevent the formation of depressions or water pockets. iv. 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

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe for conform to the following requirements. a. Composted sludge shall be supplied by, or originate from, a

> Silt Fence Length Slope Length (maximum) Steepness (maximum Unlimited 0 - 10:1 Unlimited 0 - 10% 10 - 20% 10:1 - 5:1 200 feet 1,500 feet 20 - 33% 1,000 feet 5:1 - 3:1 500 feet 33 - 50% 3:1 - 2:1 100 feet 50% + 2:1 + 50 feet 250 feet

develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties of staples at top and mid section and shall meet the following requirements for Geotextile Class F: Tensile Strength 50 lbs/in (min.) Test: MSMT 509 20 lbs/in (min.) Test: MSMT 509 Tensile Modulus 0.3 gal/ft /minute (max.) Test: MSMT 322 Flow Rate Filtering Efficiency 75% (min.) Test: M5MT 322 Design Criteria

applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate ENGINEER'S CERTIFICATE

1/27/4

This development plan is approved for soil erosion and sediment control by the Howard

DATE DESCRIPTION REVISION BLOCK Director - Department of Planning

2/25/11 24/4

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL AT GLENWOOD 2465 MARYLAND ROUTE 97 SUITE 7

ANIMAL MEDICAL HOSPITAI BLOCK NO. ZONE 19072

2890 McKENDREE ROAD HOSPITAL 2892 McKENDREE ROAD . KENNEL GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan for 'I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved prepared in accordance with the requirements of the Howard Soil Conservation District." Training Program for the Control of Sediment and Erosion before beginning the project. also authorize periodic on-site inspection by the Howard Soil Conservation District." 728/11 Date CHARVES J. CROVO SR

Printed Name Of Engineer These plans have been reviewed For The Howard Soil Conservation District and meet the

2/10/U Date

PARCEL LO N/A P/O 217 5 DOG KENNEL AND PET GROOMING ESTABLISHMENT TAX MAP | ELEC. DIST. CENSUS TR 6040.0 RR-DEO 14 FOURTH WATER CODE

Seed Specifications

ENGINEERING CONSULTANTS & LAND SURVEYORS huare office park – 10272 baltimore national piki ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055

FISHER. COLLINS & CARTER. INC.

DR STURRY N. SCHEINBERG

technical requirements

JSDA-Natural Resources Conservation Service

Conditions Where Practice Applies

adequate to produce vegetative growth.

and plant growth.

following:

others as specified.

in the following procedures.

Stabilization Methods and Materials.

1. This practice is limited to areas having 2:1 or flatter slopes where:

b. The soil material is so shallow that the rooting zone is not deep

enough to support plants or furnish continuing supplies of moisture

c. The original soil to be vegetated contains material toxic to plant

d. The soil is so acidic that treatment with limestone is not feasible.

adequate stabilization. Areas having slopes steeper than 2:1 shall have

shallopes steeper than 2:1 require special consideration and design for

Construction and Material Specifications

1. Topsoil salvaged from the existing site may be used provided that

meets the standards as set forth in these specifications. 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

II. Topsoil Specifications - Soil to be used as topsoil must meet the

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy

clay loam, loamy sand. Other soils may be used if recommended by

contrasting textured subsoils and shall contain less than 5% by volume

of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash,

. Topsoil must be free of plants or plant parts such as Bermuda

grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or

... iii. Where the subsoil is either highly acidic or composed of heavy

(200-400 pounds per 1,000 square feet) prior to the placement of

i. Place topsoil (if required) and apply soil amendments as

Stabilization - Section I - Vegetative specified in 10.0 Vegetative

clays, ground limestone shall be spread at a rate of 4-8 tons/acre

topsoil. Lime shall be distributed uniformly over designated areas and

worked into the soil in conjunction with tillage operations as described

an agronomist or soil scientist and approved by the appropriate

approval authority. Regardless, topsoil shall not be a mixture of

or other materials larger than 1 1/2" in diameter.

II. For sites having disturbed areas under 5 acres:

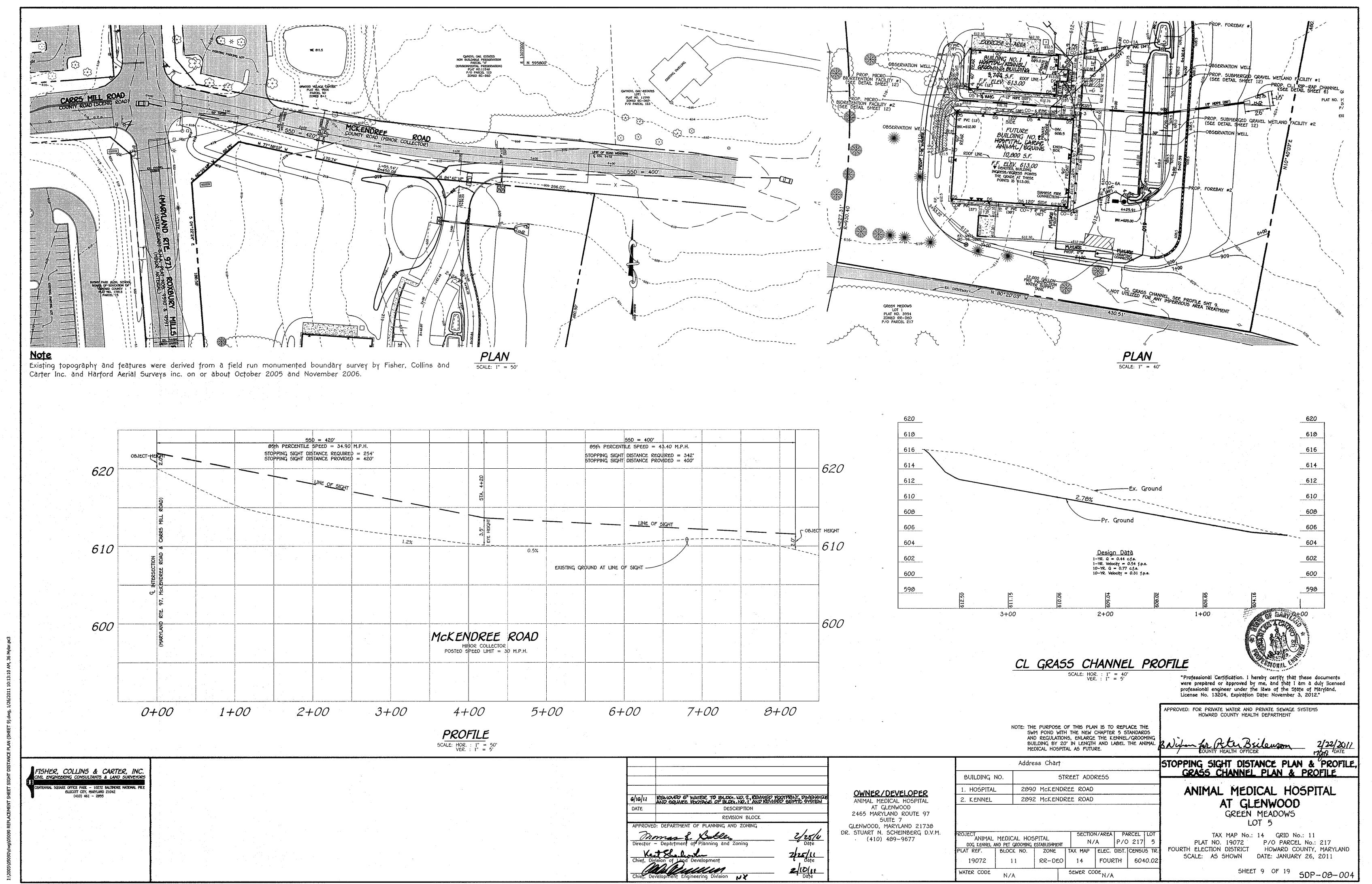
USDA-SCS in cooperation with Maryland Agricultural Experimental

the appropriate stabilization shown on the plans.

a. The texture of the exposed subsoil/parent material is not

SEWER CODE N/A

SHEET 8 OF 19 5DP-08-004



	SCHEDULE A — PERIMETER LANDSCAPING										
	CATEGORY		LINEAR FEET OF		CREDIT FOR WALL.	NUMBER	OF PLANTS	REQUIRED	ŇUMBER	OF PLANTS	PROVIDED
Perimetei	(PROPERTIES/ ROADWAYS)	TYPE	FRONTAGE	existing vegetation (yes, no, linear feet) (describe below if needed)	fence or berm (yes, no, linear feet) (describe below if needed)	SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	NON-RES. TO ROAD	8	415.891	YES, NOTE #1	NO	B	10	-	2	8	-
P-2	NON-RES. TO RES.	D	430.51*	YES, NOTE #2	NO .	7	43	_	-3	36	-
P-3	Non-res. to res.	С	480.89'	NO	NO	12	24	~	10	28	_
P-4	NON-RES. TO ROAD	В	542.60'	NO	NO	14	14	-	14	14	-

ARE SUBSTITUTING 4 ADDITIONAL GREEN TREES IN PLACE OF 2 SHADE

NOTE #1: EXISTING VEGETATION TO REMAIN INCLUDES 6 SHADE TREES AND 2 EVERGREEN TREES. NOTE #2: EXISTING VEGETATION TO REMAIN INCLUDES 4 SHADE TREES AND 5 EVERGREEN TREES.

SCHEDULE B PARKING LOT INTERNAL LANDS	CAPING
NUMBER OF PARKING SPACES	32
NUMBER OF TREES REQUIRED (1:20 Spaces)	2
NUMBER OF TREES PROVIDED:	
SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	2 -

		LANDSCAPE L	EGEND	
SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
QP()	13	ACER PALMATUM AUTROPURPEUM JAPANESE REO MAPLE	1 ¹ 2 -2 CAL	ORNAMENTAL
τc⊕	6	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	2 ¹ 2 - 3" CAL.	SHADE
QR O	7	QUERCUS RUBRA RED OAK	212-3- CAL.	SHADE
AR(Y)	5	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	212-3" CAL	5HADE
10	25	ILEX OPACA AMERICAN HOLLY	HEICHT 6' - 8'	evergreen
P5 業	47	PINUS STROBUS EASTERN WHITE PINE	HEICHL 6. – 8.	evergreen
ம 🎇	16	CUPPRESSOCYPARIS LEYLANDI/LEYLAND CYPRESS	5' - 6' HEIGHT	evergreen

NOTE: TREE TYPES ARE ONLY AN RECOMMENDATION, THESE MAY BE REVISED TO A COUNTY APPROVED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL. "THIS PLAN HAS" BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL." REQUIRED LANDSCAPE SURETY FOR THE 31 SHADE AND 80 EVERCREEN TREES HAS BEEN POSTED AS A PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$22,500.00.

DEVELOPER'S / BUILDER'S CERTIFICATE

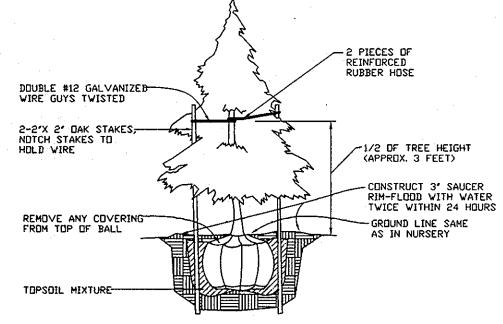
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT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

SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3

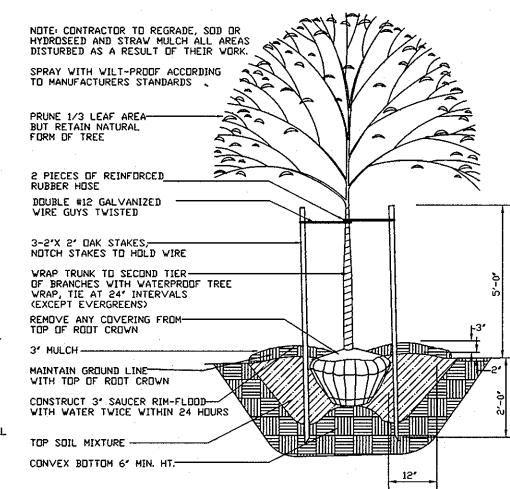
"AT THE TIME OF PLANT INSTALLATION, ALL TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM the department of planning and zoning, any deviations from the approved landscape plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or REVISIONS ARE MADE TO THE ROAD DRAWING PLANS".

"THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENACE OF THE REQUIRED PERIMETER LANDSCAPING, ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REQUIATIONS. ALL THE OTHER REQUIRED

NOTE: THE PURPOSE OF THIS PLAN IS TO REPLACE THE SWM POND WITH THE NEW CHAPTER 5 STANDARDS AND REGULATIONS, ENLARGE THE KENNEL/GROOMING BUILDING BY 20' IN LENGTH AND LABEL THE ANIMAL MEDICAL HOSPITAL AS FUTURE.



EVERGREEN PLANTING DETAIL



TREE PLANTING DETAIL

landscaping shall, be permanently maintained in good condition, and when necessary, repaired or replaced". PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT,

CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 40 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE

PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE OR BLAZE ORANGE SAFETY FENCE AT THE DRIP LINE.

BID SHALL BE BASE ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.

PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE.

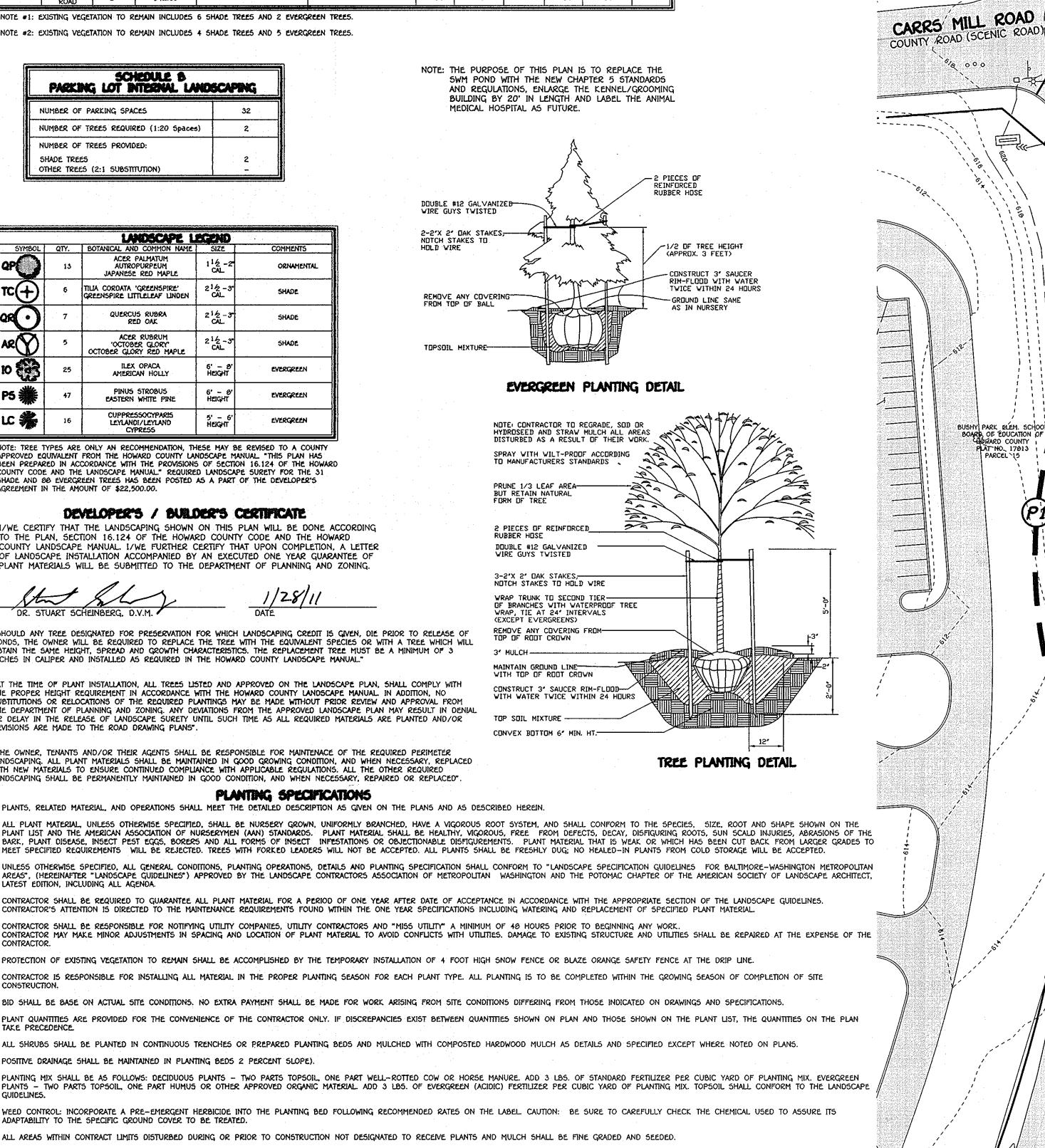
ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS. POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE).

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.



6.16.11 Kemoved G"W to Bldg No. 2; revised footprint sq. At. of Bldg No. 1 ; revised septic system. DATE DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING 2/25/11 Date

OBSERVATION WELL

LOT 1 PLAT NO. 3994 ZONED RR-DEO P/O PARCEL 217

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL

WE 611.5

MCKENDREE

Sin 36" Dia Conc.

EXERCISE IN AREA

BUILDING NO.28

10,800 5.F.

Animal/Equine

COUNTY ROAD (MINOR COLLECTOR)

AT GLENWOOD 2465 MARYLAND ROUTE 97 SUITE 7 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

					E ROAD	NOR	McKEN	2890	IOSPITAL	1. HOSPI
					E ROAD	NOR	McKEN	2892	ENNEL.	2. KENNE
		0051	1 0	1,1051		•				201507
	LOT 5	RCEL 217	1		5ECTION				ANIMAL MED	
					137	:NT	STABLISHME	et grooming	G KENNEL AND PE	
FOU	S TR.	CENSU	DIST.	ELEC.	TAX MAP		ZONE	OCK NO.	REF. BLC	PLAT REF.
	0.02	604		FOUR	14	.	RR-DE	1 1	9072	19072
				DE _{N/A}	SEWER CO				S CODE N	WATER COD

STREET ADDRESS

NON BUILDABLE PRESERVATION
PARCEL "A" (ENVIRONMENTAL PRESERVATION)
PLAT NO.11548 P/O PARCEL 123

, manual and a second

(SEE DETAIL ISHEET

-PROP. SUBMERGED GRAVEL WETLAND F. (SEE DETAIL SHEET 12)

LANDSCAPE PLAN

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

Proposed Lighting

Existing Contour

Proposed Contour

Existing Treeline

Existing Fence

Existing Paving

Proposed Concrete

Existing Storm Ordin Line

Existing Sewerage Easement

ANIMAL MEDICAL HOSPITAL AT GLENWOOD

Professional Certification. I hereby certify that these

under the laws of the State of Maryland, License No.

documents were prepared or approved by me, and that I am a duly licensed professional engineer

13204, Expiration Date: November 3, 2012."

TAX MAP No.: 14 GRID No.: 11 PLAT NO. 19072 P/O PARCEL No.: 217 URTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 40' DATE: JANUARY 26, 2011

SHEET 10 OF 19 5DP-08-004

· EF3 _ tts

,^======

Symbol

----610----

----608 -----

<u>Ex. 8"x12" CMP</u>

---- x ----- x ----

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES.

FISHER, COLLINS & CARTER, INC.

DUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042

IVIL ENGINEERING CONSULTANTS & LAND SURVEYOR:

NOTE: A TYPE "D" BUFFER

Address Chart

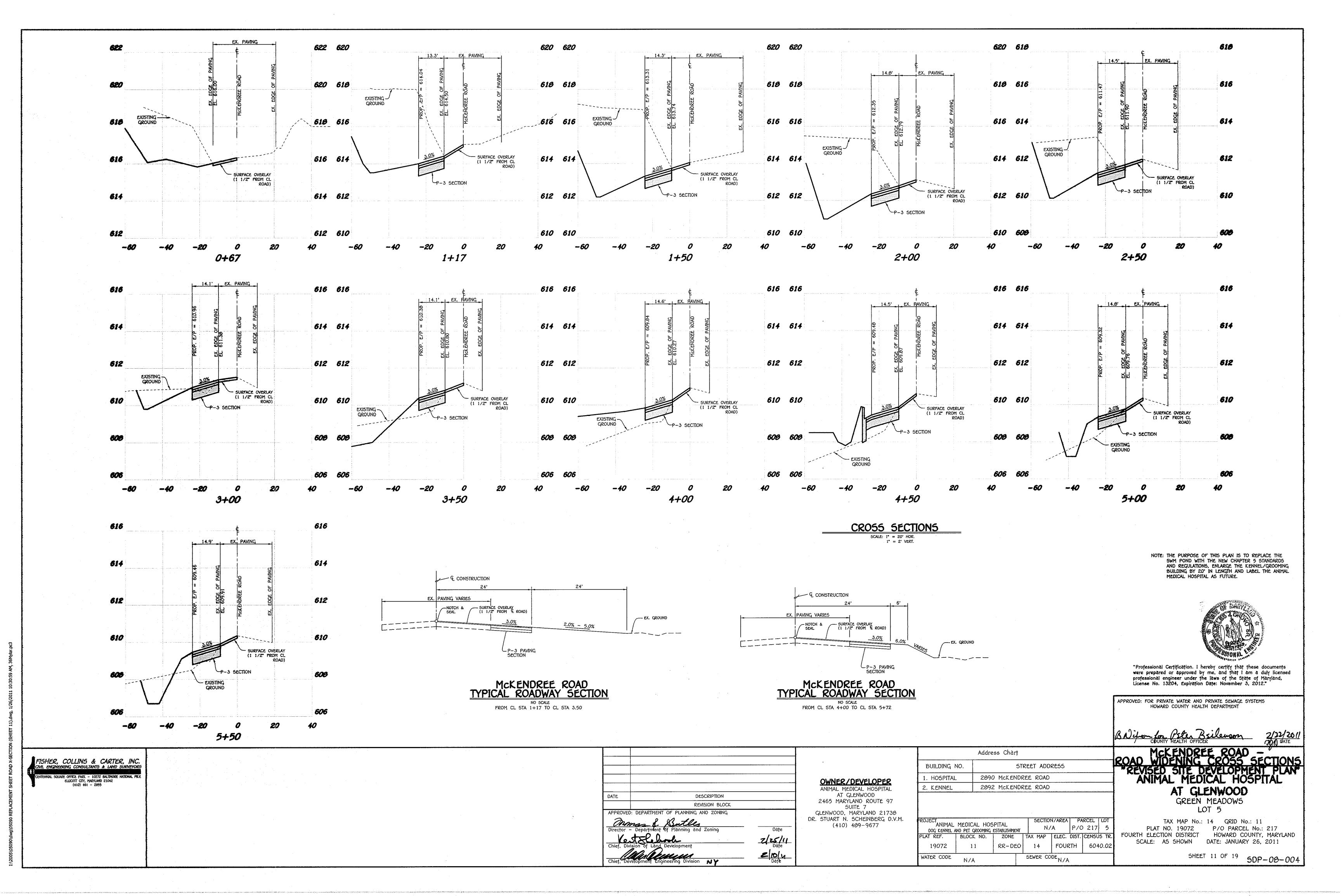
FOR PERIMETER P-2 IS

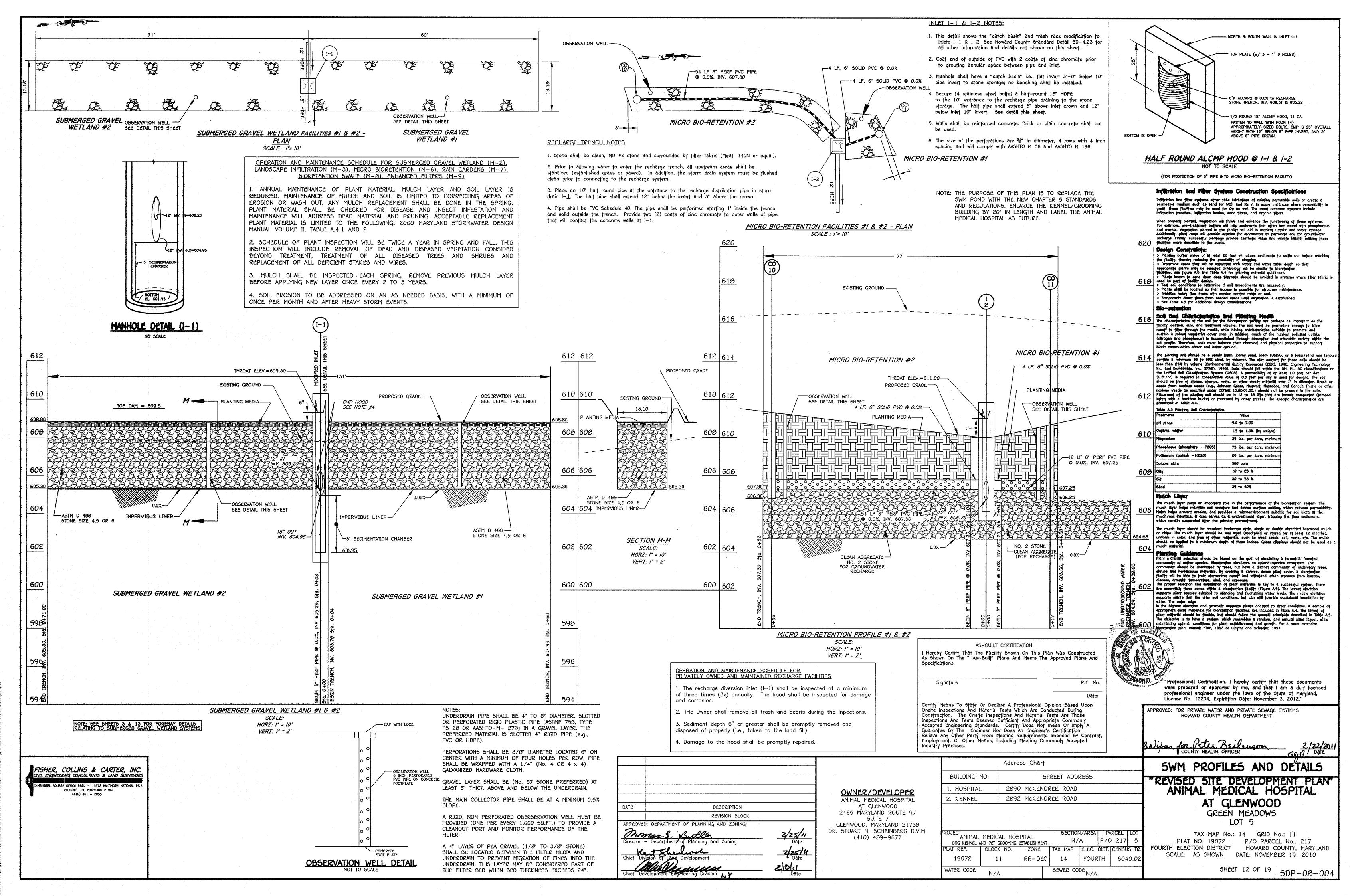
required as per ba

CASE NO.06-007C.

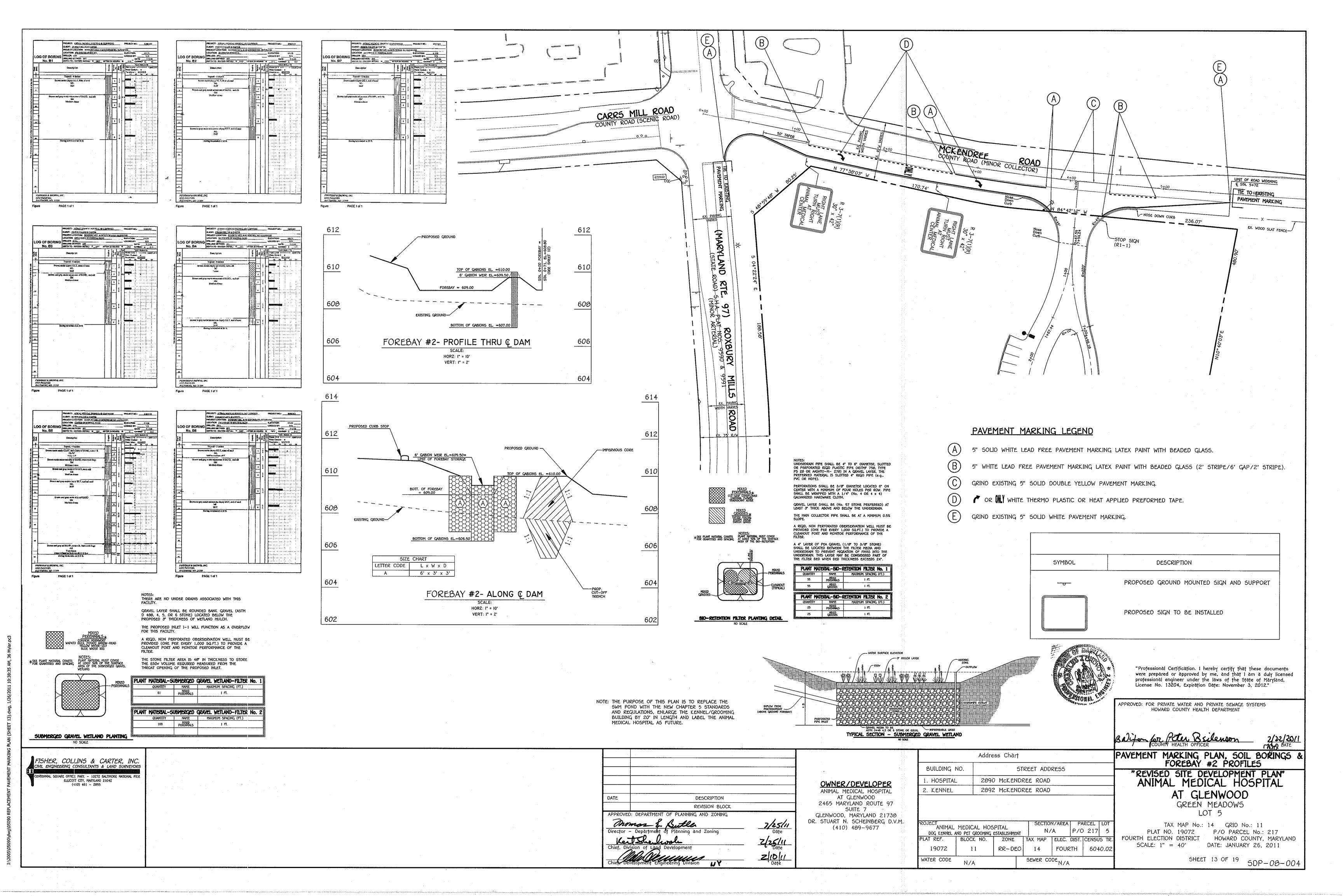
BUILDING NO.

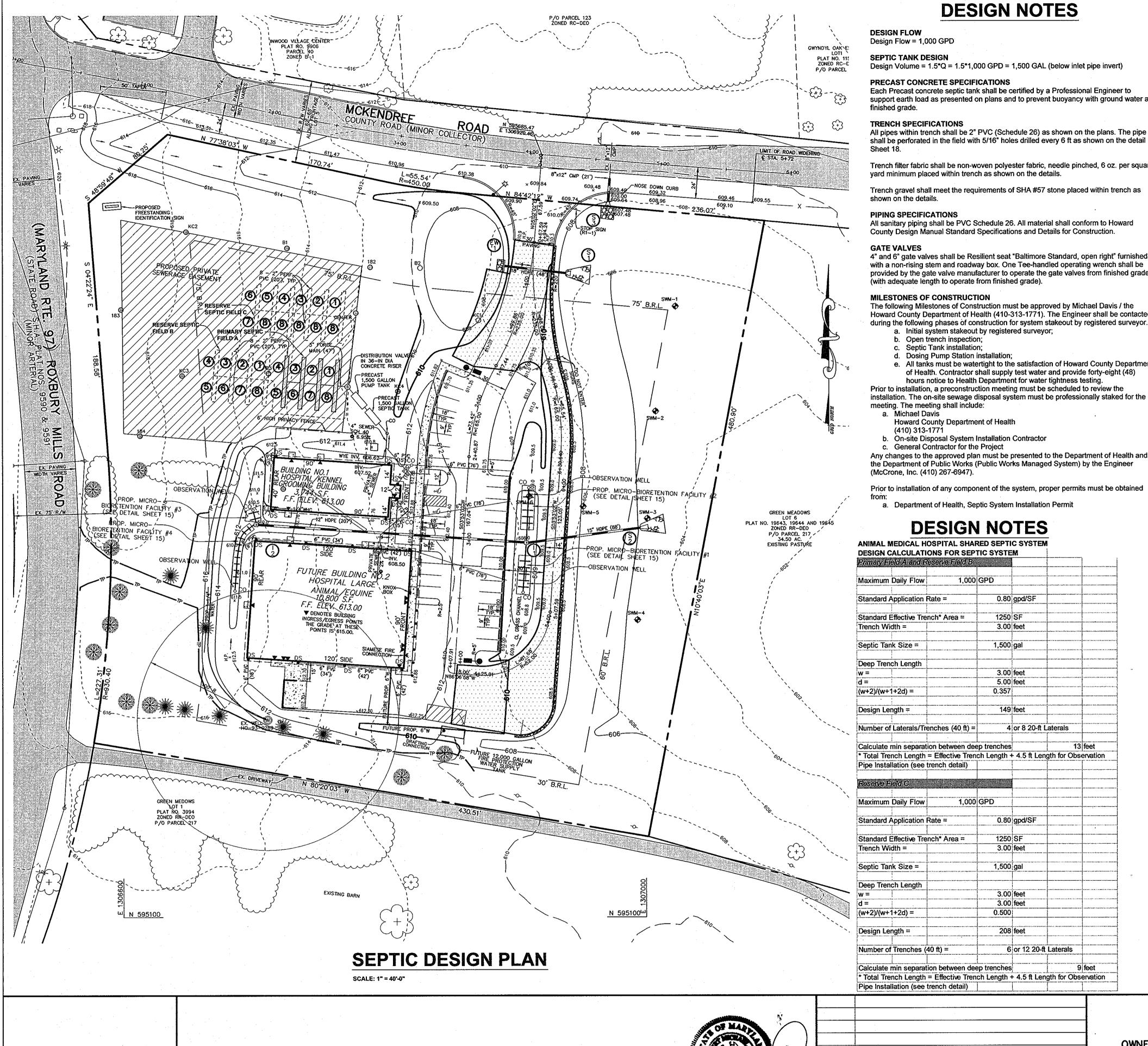
INV.=609,00 →





\$\05090\dwa\05090 Replacement Sheets SWM PLAN (SHEET 12-15).dwa. 1/26/2011 10:34:15 AM 36





DESIGN NOTES

DESIGN FLOW Design Flow = 1,000 GPD

SEPTIC TANK DESIGN

Design Volume = 1.5*Q = 1.5*1,000 GPD = 1,500 GAL (below inlet pipe invert)

PRECAST CONCRETE SPECIFICATIONS

Each Precast concrete septic tank shall be certified by a Professional Engineer to

support earth load as presented on plans and to prevent buoyancy with ground water at

All pipes within trench shall be 2" PVC (Schedule 26) as shown on the plans. The pipe shall be perforated in the field with 5/16" holes drilled every 6 ft as shown on the detail

Trench filter fabric shall be non-woven polyester fabric, needle pinched, 6 oz. per square yard minimum placed within trench as shown on the details.

Trench gravel shall meet the requirements of SHA #57 stone placed within trench as

PIPING SPECIFICATIONS

All sanitary piping shall be PVC Schedule 26. All material shall conform to Howard County Design Manual Standard Specifications and Details for Construction. **GATE VALVES** 4" and 6" gate valves shall be Resilient seat "Baltimore Standard, open right" furnished

provided by the gate valve manufacturer to operate the gate valves from finished grade

(with adequate length to operate from finished grade). **MILESTONES OF CONSTRUCTION** The following Milestones of Construction must be approved by Michael Davis / the

Howard County Department of Health (410-313-1771). The Engineer shall be contacted during the following phases of construction for system stakeout by registered surveyor.

- a. Initial system stakeout by registered surveyor;
- b. Open trench inspection: c. Septic Tank installation;
- d. Dosing Pump Station installation;
- e. All tanks must be watertight to the satisfaction of Howard County Department of Health. Contractor shall supply test water and provide forty-eight (48) hours notice to Health Department for water tightness testing.
- Prior to installation, a preconstruction meeting must be scheduled to review the installation. The on-site sewage disposal system must be professionally staked for the meeting. The meeting shall include:
- a. Michael Davis Howard County Department of Health
- (410) 313-1771 b. On-site Disposal System Installation Contractor
- c. General Contractor for the Project

Any changes to the approved plan must be presented to the Department of Health and the Department of Public Works (Public Works Managed System) by the Engineer (McCrone, Inc. (410) 267-6947).

Prior to installation of any component of the system, proper permits must be obtained

a. Department of Health, Septic System Installation Permit

DESIGN NOTES

	d A and F	eserve Field B				
Maximum D	aily Flow	1,000	GPD			
Standard Ap	oplication	Rate =	0.80	gpd/SF		
Standard Ef	fective Tre	nch* Area =	1250	SF		
Trench Widt	th =		3.00	feet		
Septic Tank	Size =		1,500	gal		
Deep Trench	h Length					
w =			3.00	feet		
d =			5.00	feet		
(w+2)/(w+1+	+2d) =		0.357			
Design Leng	ath =		149	feet		
						y des genificans génerales de spinolement contra de
Number of L	_aterals/Tr	enches (40 ft) =	4	or 8 20-ft L	aterals	
i						
Calculate m	in separat	ion between dee	p trenches		13	feet
		ion between dee = Effective Tren				
* Total Trend	ch Length	ion between dee = Effective Tren trench detail)				
* Total Trend	ch Length	= Effective Tren				
* Total Trend	ch Length ation (see	= Effective Tren				
* Total Trend Pipe Installa Reserve Fie	ch Length ation (see	= Effective Trentrench detail)	ch Length			
* Total Trend Pipe Installa	ch Length ation (see	= Effective Trentrench detail)	ch Length			
* Total Trend Pipe Installa Reserve Fie	ch Length ation (see old © Daily Flow	= Effective Trentrench detail)	ch Length			
* Total Trend Pipe Installa Reserve Pie Maximum D	ch Length ation (see	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80	4.5 ft Leng		
* Total Trend Pipe Installa Reserve Pie Maximum D Standard Ap	ch Length ation (see	= Effective Trentrench detail)	GPD 0.80	gpd/SF		
* Total Trend Pipe Installa Reserve Pie Maximum D	ch Length ation (see	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80	gpd/SF		
* Total Trend Pipe Installa Reserve Pie Maximum D Standard Ap	ch Length ation (see plot © paily Flow oplication ffective Tre th =	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80	gpd/SF SF feet		
* Total Trend Pipe Installa Reserve Fie Maximum D Standard Ap Standard Ef Trench Widt Septic Tank Deep Trencl	ch Length ation (see	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80 1250 3.00	gpd/SF SF feet		
* Total Trend Pipe Installa Reserve Fie Maximum D Standard Ap Standard Ef Trench Widt Septic Tank	ch Length ation (see	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80 1250 3.00 3.00	gpd/SF SF feet		
* Total Trend Pipe Installa Reserve Fie Maximum D Standard Ap Standard Ef Trench Widt Septic Tank Deep Trencl w = d =	ch Length ation (see old © old © old © old © old	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80 1250 3.00 3.00 3.00	gpd/SF SF feet gal feet feet		
* Total Trend Pipe Installa Reserve Free Maximum D Standard Ap Standard Ef Trench Widt Septic Tank Deep Trencl w =	ch Length ation (see old © old © old © old © old	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80 1250 3.00 3.00	gpd/SF SF feet gal feet feet		
* Total Trend Pipe Installa Reserve Fie Maximum D Standard Ap Standard Ef Trench Widt Septic Tank Deep Trencl w = d =	ch Length ation (see ation (see ation) (see ation) ation (see ation) ation ati	= Effective Trentrench detail) 1,000 Rate =	GPD 0.80 1250 3.00 1,500 3.00 0.500	gpd/SF SF feet gal feet feet		

TRENCH INVERT **ELEVATIONS CHART**

Trench Number	Ground Bev., ft	Trench lov.,	Good Soil Top Elev., ft		Trench Bottom, ft	Trench Depth, ft
Primary Field A Trench #1	612.00	610.50	609.00	598.00	604.00	8.00
Primary Field A Trench #2	612.50	610.50	609.50	598.50	604.50	8.00
Primary Field A Trench #3	613.00	610.50	610.00	599.00	605.00	8.00
Primary Field A Trench #4	613.50	610.50	610.50	599.50	605.50	8.00
Primary Field A Trench #5	613.50	610.50	610.50	599.50	605.50	8.00
Primary Field A Trench #6	613.00	610.50	610.00	599.00	605.00	8.00
Primary Field A Trench #7	612.50	610.50	609.50	598.50	604.50	8.00
Primary Field A Trench #8	612.00	610.50	609.00	598.00	604.00	8.00
Reserve Field B Trench #1	614.80	613.30	611.80	600.80	606.80	8.00
Reserve Field B Trench #2	615.50	613.30	612.50	601.50	607.50	8.00
Reserve Field B Trench #3	616.20	613.30	613.20	602.20	608.20	8.00
Reserve Field B Trench #4	616.50	613.30	613.50	602.50	608.50	8.00
Reserve Field B Trench #5	616.50	613.30	613.50	602.50	608.50	8.00
Reserve Field B Trench #6	616.20	613.30	613.20	602.20	608.20	8.00
Reserve Field B Trench #7	615.50	613.30	612.50	601.50	607.50	8.00
Reserve Field B Trench #8	614.80	613.30	611.80	600.80	606.80	8.00
Reserve Field C Trench #1	612.00	610.50	607.00	600.00	604.000	8.00
Reserve Field C Trench #2	612.50	610.50	607.50	600.50	604.500	8.00
Reserve Field C Trench #3	613.00	610.50	608.00	601.00	605.000	8.00
Reserve Field C Trench #4	613.50	610.50	608.50	601.50	605.500	8.00
Reserve Field C Trench #5	614.80	610.50	609.80	602.80	606.800	8.00
					607.500	8.00
Reserve Field C Trench #6	615.50	610.50	610.50	603.50		
Reserve Field C Trench #7	615.50	610.50	610.50	603.50	607.500	8.00
Reserve Field C Trench #8	614.80	610.50	609.80	602.80	606.800	8.00
Reserve Field C Trench #9	613.50	610.50	608.50	601.50	605.500	8.00
Reserve Field C Trench #10	613.00	610.50	608.00	601.00	605.000	8.00
Reserve Field C Trench #11	612.50	610.50	607.50	600.50	604.500	8.00
Reserve Field C Trench #12	612.00	610.50	607.00	600.00	604.000	8.00

TEST RESULTS

CENTER - 1" IN (5) MIN.-GOOD SOILS FROM 5' TO 12'-0"

- 1" IN (7) MIN.-GOOD SOILS FROM 7' TO 13'-5"

- 1" IN (9) MIN.-GOOD SOILS FROM 3' TO 14'-0"

BUILDING NO.

HOSPITAL

. KENNEL

STRUCTURES ELEVATIONS CHART

PUMP STATION CALCULATIONS

DESIGN FLOW (BASED ON CALCULATIONS SHOWN ON SHEET 18)

MINIMUM PUMPING CYCLE IS 7 MINUTES

SIZE WET WELL FOR 6 CYCLES/HR t =

VOLUME PER FOOT OF WET WELL =

DIST BETW. PUMP OFF & LEAD ON=

THE SHORTEST OPERATING CYCLE OCCURS WHEN SEWAGE IS

FLOWING INTO THE WET WELL AT ONE HALF OF PUMP CAPACITY.

OPERATING DEPTH REQUIRED=

WETWELL LENGTH =

WETWELL WIDTH =

CHECK CYCLE TIME

Q OUT=

VOLUME=

TIME TO FILL WETWELL=

TIME TO EMPTY WETWELL=

TOTAL TIME EACH CYCLE=

INVERT OF INCOMING SEWER=

STORAGE CAPACITY = 1,000 GAL

ALARM ELEVATION=

PUMP 2 ON ELEVATION=

PUMP 1 ON ELEVATION=

SHUT OFF ELEVATION=

BOTTOM ELEVATION=

GROUND ELEVATION

BOTTOM ELEVATION=

VI. DETERMINE TANK DEPTH

Q IN=

DESIGN

SIZEWET WELL

ANIMAL MEDICAL HOSPITAL AT GLENWOOD PUMP STATION

21.39 CU FT

12.25 FT

4.25 FT

6.00 IN

0.5 FT

64 GPM

32 GPM

195 GAL

6.09 MIN

6.09 MIN

604.66 FT

2.60 FT

602.34 FT

601.84 FT

601.34 FT

600.84 FT

599.83 FT

611.50 FT

599.83 FT

11.67 FT

3 IN FORCE MAIN

64 GPM

0.14 CFS

0.05 S F

2.90 FPS OK

1.02 FT

12.17 MIN OK

4.93 CYCLES/HOUR

389 GAL/VF

0.41 VF USE

64 GPM

V=WETWELL VOLUME (GAL)

Q=INFLOW TO WETWELL (GPM)

D=RATED PUMP DELIVERY (GPM)

t=TIME BETWEEN PUMP STARTS (MIN)

USE

10 MINUTES

Structure	Ground Elev., ft	Pipe Length, ft	Slope	inv. In	Inv. Out
Building					609.00
		110.62	0.028		1.
Septic Tank	611.00			605.16	604.91
		3.00	0.015		
Pump Tank	611.50			604.66	N/A

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

THE PURPOSE OF THIS PLAN IS TO REVISE THE GEPTIC SYSTEM,

2890 McKENDREE ROAD

2892 McKENDREE ROAD

STREET ADDRESS

Address Chart

SEPTIC SYSTEM DESIGN PLAN

"REVISED SITE DEVELOPMENT PLAN" ANIMAL MEDICAL HOSPITAL AT GLENWOOD

GREEN MEADOWS

LOT 5 TAX MAP No.: 14 GRID No.: 11 P/O PARCEL No.: 217 HOWARD COUNTY, MARYLAND FOURTH ELECTION DISTRICT SCALE: 1" = 40'DATE: FEBRUARY 11, 2007

SDP-08-004

these documents were prepared or approved by m and that I am a duly licensed professional engineer

under the laws of the State of Maryland, License

No. 17737, Expiration Date:3/29/12.

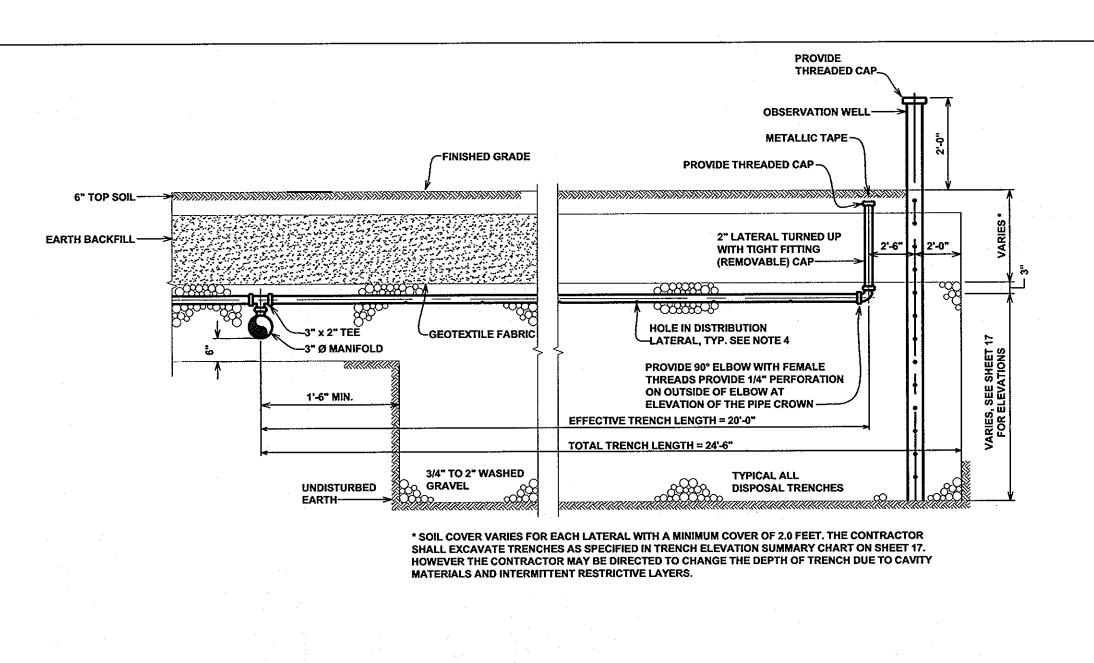
4/18/11 REPLACEMENT SHEET DESCRIPTION REVISION BLOCK PROVED: DEPARTMENT OF PLANNING AND ZONING 7/27/11 7-26-11 フ・ノソ・ハ hief, Development Engineering Division

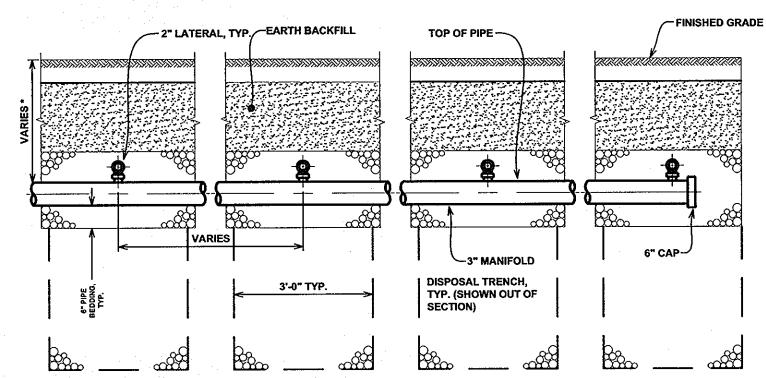
OWNER/DEVELOPER AT GLENWOOD 2465 MARYLAND ROUTE 97 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M.

(410) 489-9677

PROJECT ANIMAL MEDICAL HOSPITAL DOG KENNEL AND PET GROOMING ESTABLISHMENT BLOCK NO. RR-DEO FOURTH SEWER CODE N/A WATER CODE

ANNAPOLIS . CENTREVILLE . DOVER . ELKTON . SALISBUR





* SOIL COVER VARIES FOR EACH MANIFOLD WITH A MINIMUM COVER OF 3.0 FEET.

1. PROVIDE 2" THREADED CAPS AT ENDS OF ALL DISTRIBUTION LATERALS.

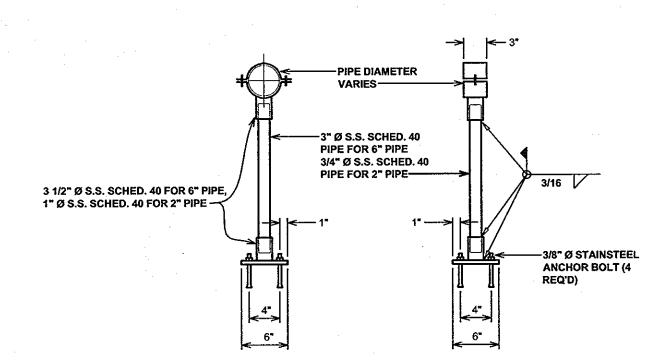
2. MANIFOLD PIPE AND DISTRIBUTION LATERALS TO BE INSTALLED ON LEVEL GRADE, ELEVATIONS PER TRENCH ELEVATION SUMMARY CHART ON SHEET 17.

3. BOTTOM OF TRENCH TO BE EXCAVATED ON LEVEL GRADE.

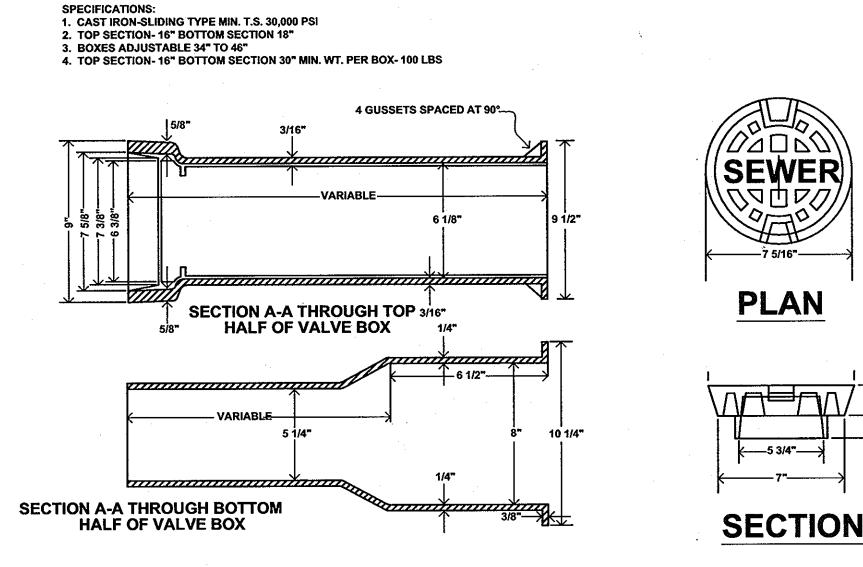
4. CONTRACTOR TO DRILL HOLES IN DISTRIBUTION LATERALS DOWNWARD AS SPECIFIED IN LATERAL SIZING SUMMARY ON THIS SHEET EXCEPT FOR LAST HOLE AS NOTED ON TYPICAL LATERAL SECTION.

5. FOR TESTING THE CONTRACTOR TO PROVIDE FOUR THREADED CAP FITTINGS WITH A PRESSURE GAGE WHICH READS BETWEEN 0 AND 60 FEET.

6. THE CONTRACTOR TO INSTALL ISOLATION VALVE ON EACH LATERAL.

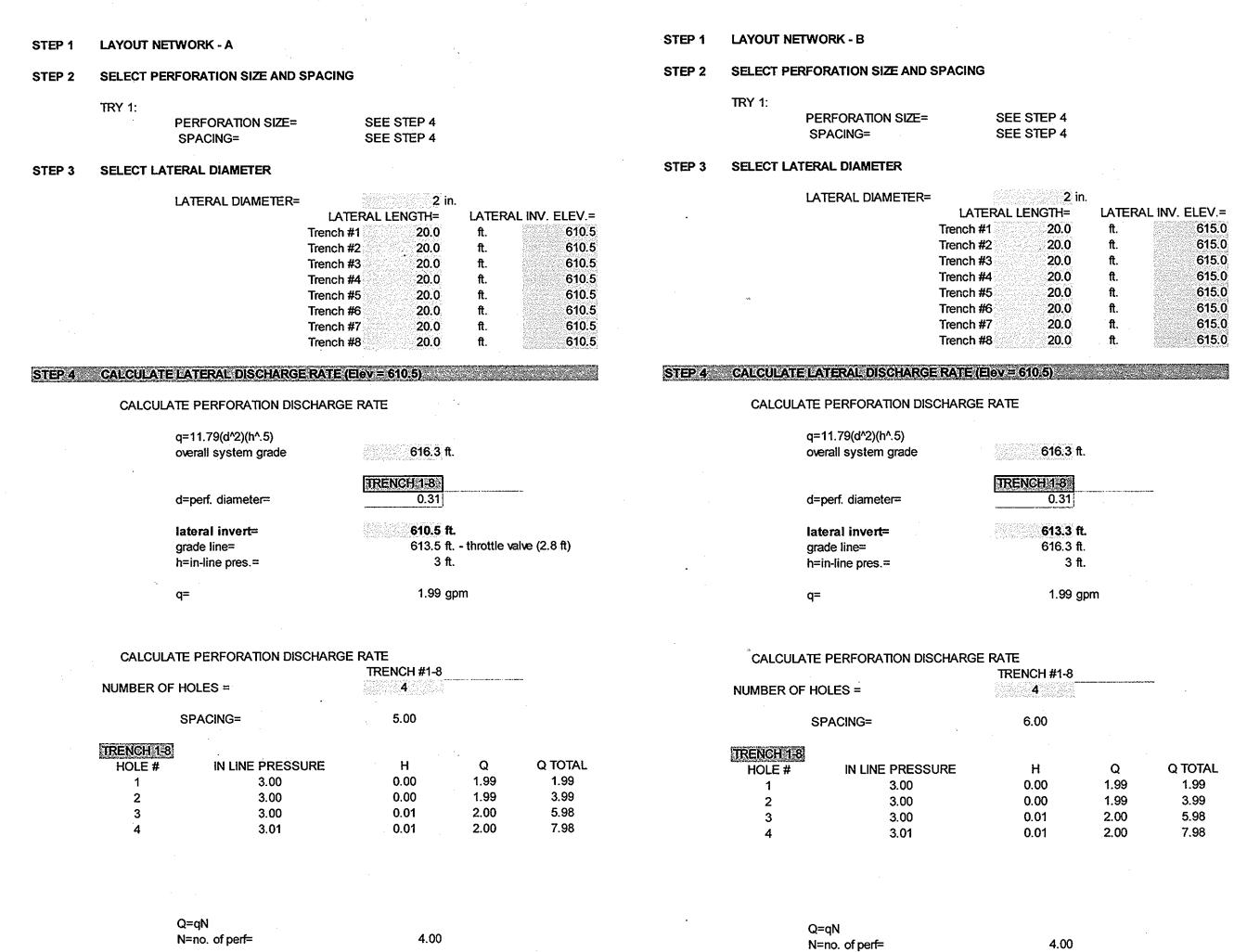


PIPE SUPPORT DETAIL



ADJUSTABLE VALVE BOX ROUND HEAD SLIDING TYPE

NOT TO SCALE

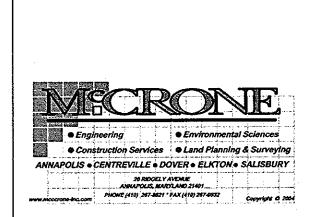


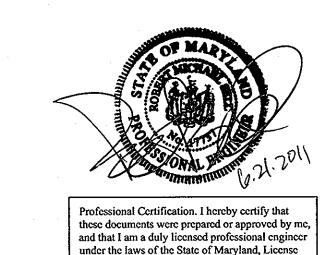
STEP 2 SELECT PERFORATION SIZE AND SPACING **TRY 1**: PERFORATION SIZE= SEE STEP 4 SEE STEP 4 SPACING= STEP 3 SELECT LATERAL DIAMETER LATERAL DIAMETER= LATERAL LENGTH= LATERAL INV. ELEV.= 20.0 Trench #1 610.5 Trench #2 20.0 610.5 Trench #3 20.0 610.5 20.0 Trench #4 610.5 Trench #5 Trench #6 20.0 610.5 610.5 Trench #7 20.0 610.5 Trench #8 20.0 610.5 Trench #9 610.5 20.0 Trench #10 610.5 Trench #11 20.0 610.5 Trench #12 20.0 STEP 4 CALCULATE LATERAL DISCHARGE RATE (Elev = 610.5) CALCULATE PERFORATION DISCHARGE RATE q=11.79(d^2)(h^.5) 616.3 ft. overall system grade TRENCH 1-12 d=perf. diameter= lateral invert= 610.5 ft. 613 ft. - throttle valve (3.3 ft) grade line= 2.5 ft. h=in-line pres.= 1.79 gpm CALCULATE PERFORATION DISCHARGE RATE TRENCH #1-12 NUMBER OF HOLES = 3 10.00 SPACING= TRENCH 1-1 Q TOTAL HOLE # IN LINE PRESSURE 0.00 1.79 1.79 2.50 1.79 3.58 2.50 0.00 2.51 0.01 1.79 5.38 3.00 N=no. of perf=

Flow per Lateral=

Total Flow=

STEP 1 LAYOUT NETWORK - C

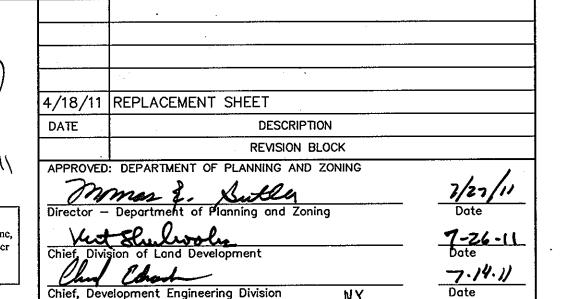




No. 17737, Expiration Date:3/29/12.

Flow per Lateral=

Total Flow=



Chief, Development Engineering Division

7.98 gpm

64.00 gpm

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL AT GLENWOOD 2465 MARYLAND ROUTE 97 SUITE 7 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

Flow per Lateral=

"REVISED SITE DEVELOPMENT PLAN" ANIMAL MEDICAL HOSPITAL 2890 McKENDREE ROAD 1. HOSPITAL 2892 McKENDREE ROAD 2. KENNEL AT GLENWOOD PROJECT ANIMAL MEDICAL HOSPITAL SECTION/AREA PARCEL LO P/O 217 DOG KENNEL AND PET GROOMING ESTABLISHMENT FOURTH ELECTION DISTRICT TAX MAP | ELEC. DIST. | CENSUS TR. PLAT REF. BLOCK NO. ZONE SCALE: 1" = 40'FOURTH 6040.02 19072 RR-DEO 14

THE PURPOSE OF THIS PLAN 15 TO REVISE THE SEPTIC SYSTEM.

STREET ADDRESS

SEWER CODE N/A

7.98 gpm

Address Chart

64.00 gpm

BUILDING NO.

WATER CODE

GREEN MEADOWS LOT 5 TAX MAP No.: 14 GRID No.: 11 PLAT NO. 19072 P/O PARCEL No.: 217 HOWARD COUNTY, MARYLAND DATE: FEBRUARY 11, 2007 SHEET 15 OF 19 SDP-08-004

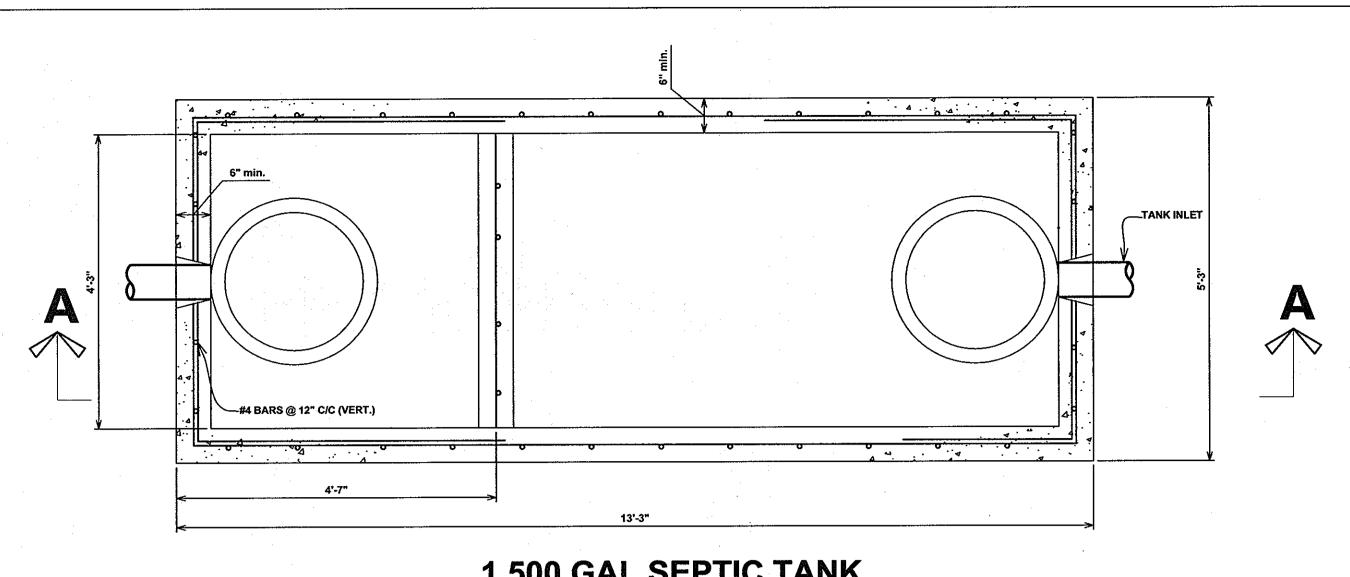
5.38 gpm

65.00 gpm

PTIC TRENCH DESIGN

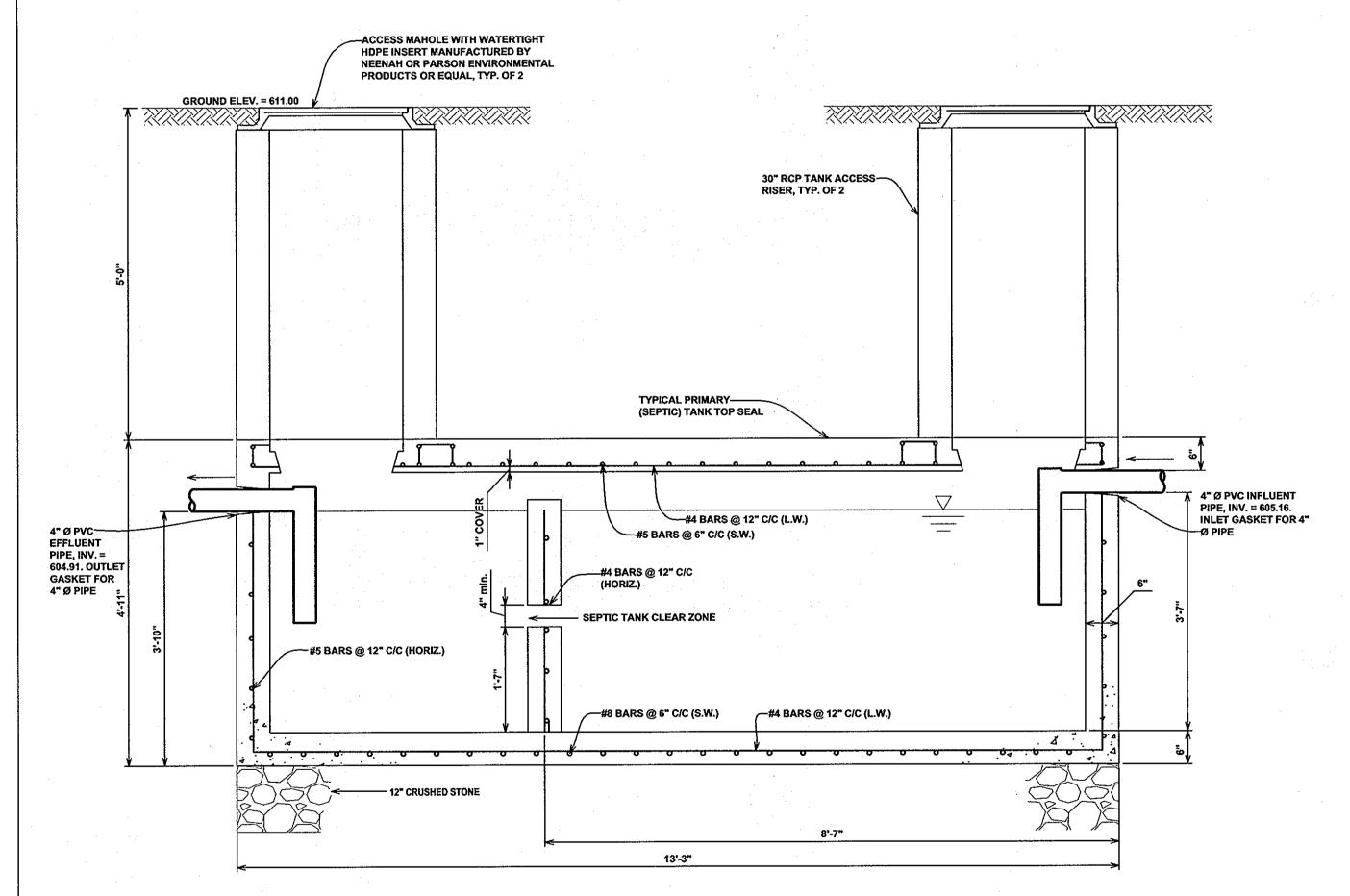
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT



1,500 GAL SEPTIC TANK PLAN

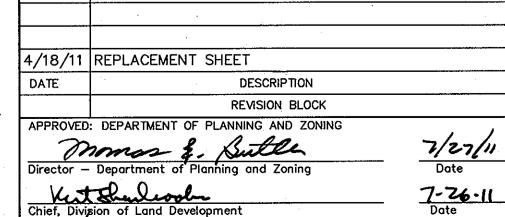
SCALE: 3/4" = 1'-0"



1,500 GAL SEPTIC TANK **SECTION A-A**

SCALE: 3/4" = 1'-0"

No. 17737, Expiration Date:3/29/12.



OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL AT GLENWOOD 2465 MARYLAND ROUTE 97 SUITE 7 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M.

(410) 489-9677

1. HOSPITAL 2. KENNEL

Address Chart BUILDING NO. STREET ADDRESS 2890 McKENDREE ROAD 2892 McKENDREE ROAD

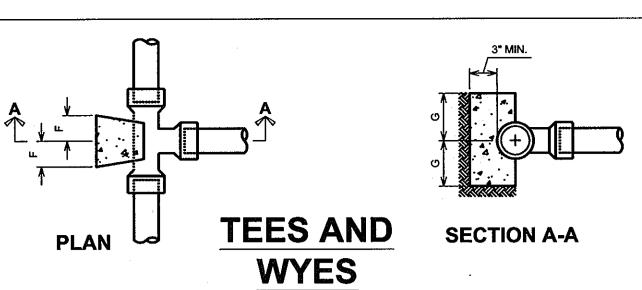
PROJECT MEDICAL HOSPITAL P/O 217 DOG KENNEL AND PET GROOMING ESTABLISHMENT PLAT REF. | BLOCK NO. TAX MAP ELEC. DIST. CENSUS TR. RR-DEO FOURTH SEWER CODE N/A WATER CODE

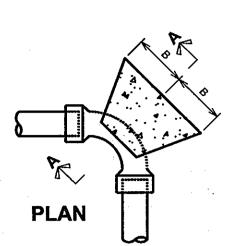
SEPTIC TANK DESIGN "REVISED SITE DEVELOPMENT PLAN" ANIMAL MEDICAL HOSPITAL AT GLENWOOD

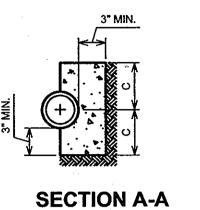
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

GREEN MEADOWS

TAX MAP No.: 14 GRID No.: 11 P/O PARCEL No.: 217 PLAT NO. 19072 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: FEBRUARY 11, 2007 SCALE: 1" = 40







SEPTIC TANK NOTES:

1. THE CONTRACTOR SHALL PROVIDE EFFLUENT FILTER FOR SEPTIC

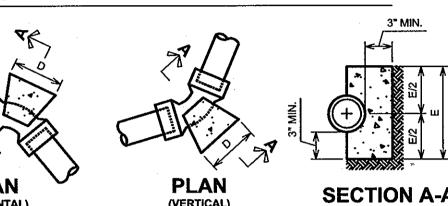
A300-12x36-VC AS MANUFACTURED BY ZABEL OR MODEL FTS1254-36M

PRECAST, FREDERICKSBURG, VA (540-295-1566) OR APPROVED EQUAL.

EXPECTED FLOW; THE EFFLUENT FILTER SHALL BE MODEL

3. SEPTIC TANK SHALL BE AS MANUFACTURED BY OLDE CASTLE

90° HORIZONTAL BENDS



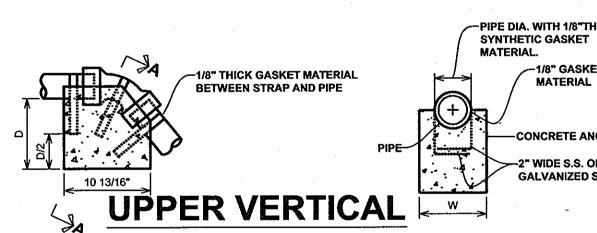
90° HORIZONTAL BENDS

	BUTTRESS DIMENSIONS						
PIPE SIZE	В	С	D	E	F	G	
1 1/2" OR 2"	4 1/2"	4 1/2"	5"	9"	4 1/2"	4"	
2*	5*	5**	7"	7"	5"	5"	
2 1/2"	5"	5**	7**	7"	5"	5"	
3"	6"	6"	9"	9"	6"	6"	

NOTES: 1. FC=3000 P.S.I. @ 28 DAYS 2. CARRY ALL BEARING SURFACES TO UNDISTURBED GROUND OR FIRM SUBGRADE.
3. BUTTRESS SIZED FOR 160 P.S.I. AND SOIL WITH C = 2000 P.S.I.

11 1/4°, 22 1/2°, 45° HORIZONTAL AND LOWER VERTICAL BENDS

NOT TO SCALE



BEND

11 1/4°

22 1/2°



2", 2-1/2"

12 15 20

20

12

20

20

フ・ノタ・ハ

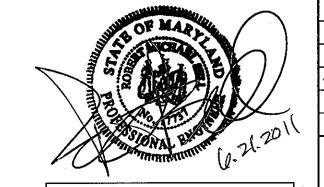
1 1/4", 1 1/2"

15

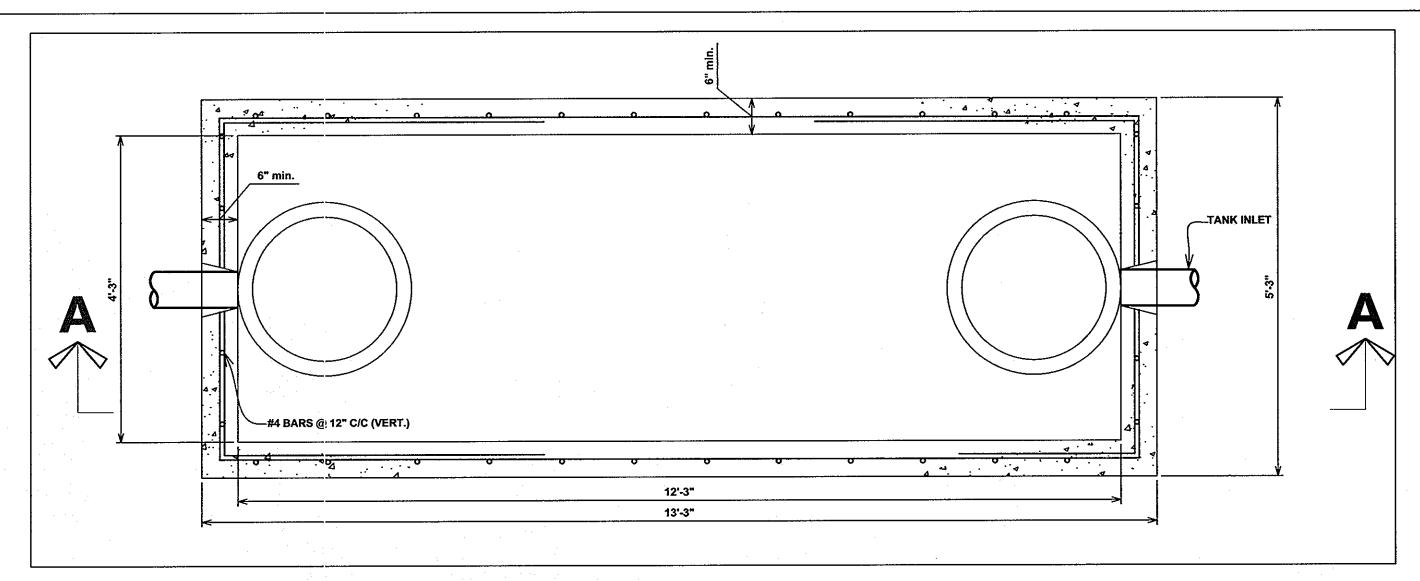
/ m	ATERIAL.
 < > 	-1/8" GASKET MATERIAL
PIPE	CONCRETE ANCHOR
	2" WIDE S.S. OR
	GALVANIZED STRAPS
L w	. 1/6
N INCHES	

THE PURPOSE OF THIS PLAN IS TO REVISE THE SEPTIC SYSTEM.

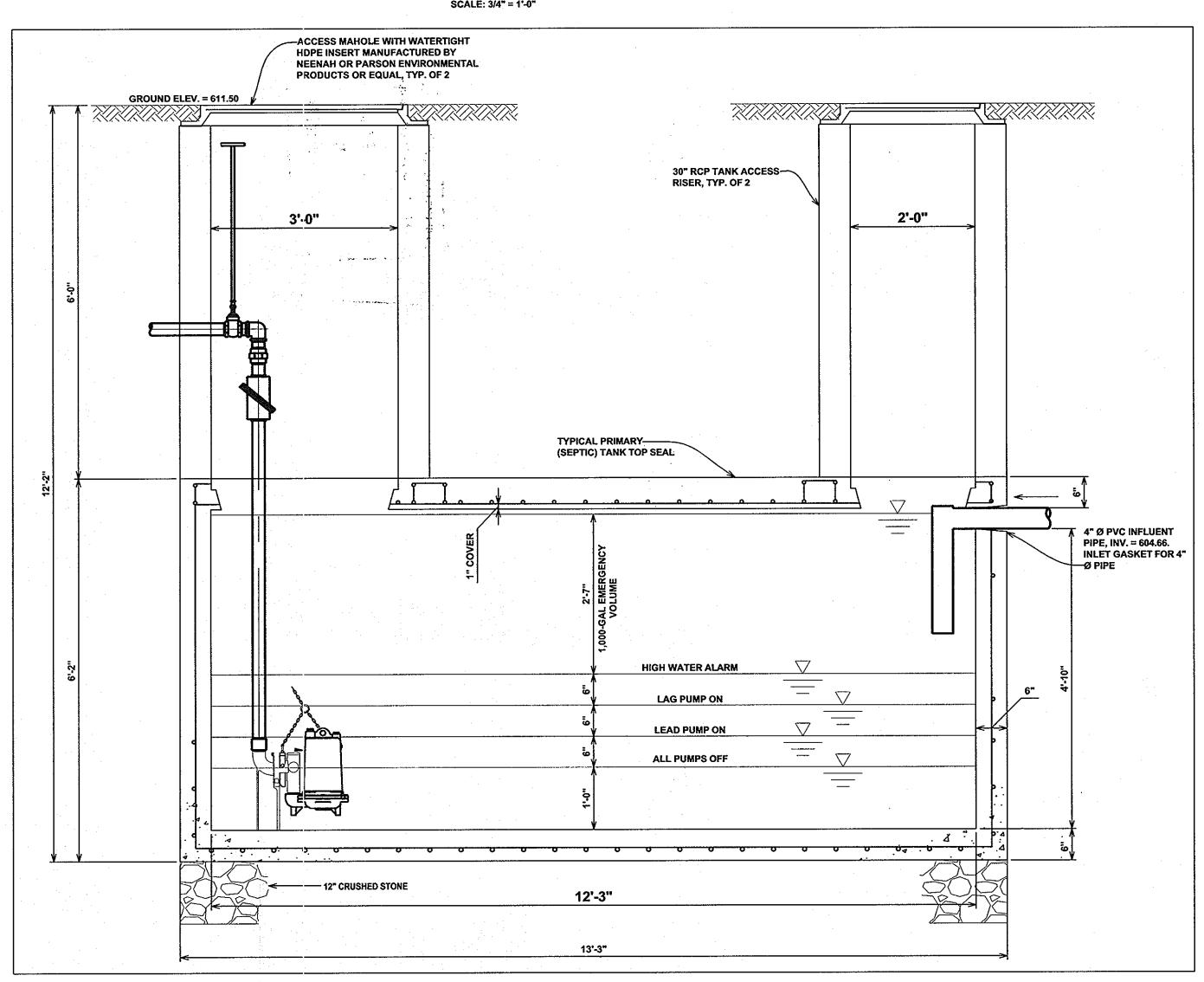




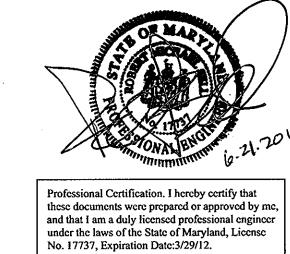
these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License



1,500 GAL PUMP TANK PLAN



1,500 GAL PUMP TANK SECTION



4/18/11 REPLACEMENT SHEET DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING 7-26-11 Date

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL AT GLENWOOD 2465 MARYLAND ROUTE 97
- SUITE 7 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

Address Chart BUILDING NO. STREET ADDRESS 2890 McKENDREE ROAD 1. HOSPITAL 2892 McKENDREE ROAD 2. KENNEL PROJECT ANIMAL MEDICAL HOSPITAL P/0 217

DOG KENNEL AND PET GROOMING ESTABLISHMENT BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS TR. RR-DEO 14 FOURTH 6040.02 19072 SEWER CODE N/A WATER CODE

THE PURPOSE OF THIS PLAN IS TO REVISE THE SEPTIC SYSTEM.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

SEPTIC SYSTEM PUMP STATION

"REVISED SITE DEVELOPMENT PLAN" ANIMAL MEDICAL HOSPITAL

AT GLENWOOD GREEN MEADOWS LOT 5

TAX MAP No.: 14 GRID No.: 11 PLAT NO. 19072 P/O PARCEL No.: 217 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 40' DATE: FEBRUARY 11, 2007

SHEET 17 OF 19 SDP-08-004

NOTES:

REMOVAL.

30.00

r 20.00

TO INSTALLATION OF WET WELL.

1) CONTRACTOR SHALL VERIFY THE SOIL BEARING CAPACITY PRIOR

2) CONTRACTOR SHALL PROVIDE EXTRA CABLE LENGTH TO ENABLE THE HOIST WINCH TO BE THREADED WITH THE CABLE FOR PUMP

/Pump Curve

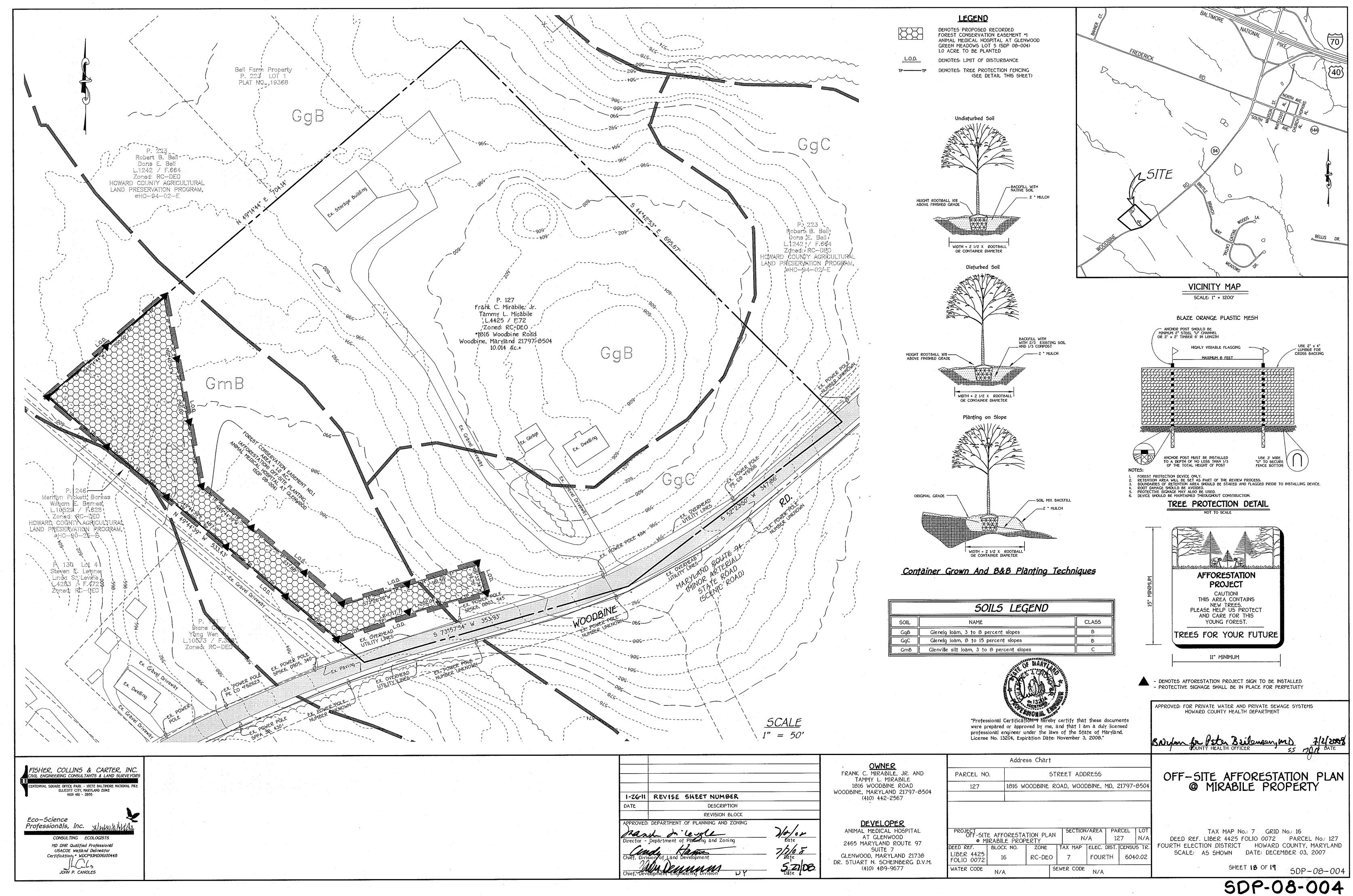
Animal Medical Hospital Pump Station Myers Duplex Pumps Model 3MW15DM4-23 Imp. 5.5", 1.5 hp, 230 V

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Flowrate, GPM

Design Point = 64 GPM
@ 21 ft TDH

7./4.11 Date

ANNAPOLIS . CENTREVILLE . DOVER . ELKTON . SALISBURY



OPTION 1

Qty	Species	Size	Spacing	Total FCA Units
28	Acer rubrum - Red maple	1" cal.	15' o.c.	
28	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
28	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	1
28	Platanus occidentalis - Sycamore	1" cal.	15' o.c.	
28	Quercus alba - White oak	1" cal.	15' o.c.	
140	Total 1" caliper trees x 3.5	units/tree = F0	CA unit credit	490
15	Acer rubrum - Red maple	2-3' whip	11' o.c.	
15	Acer saccharinum - Silver maple	2-3' whip	11' o.c.	
25	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
10	Platanus occidentalis - Sycamore	2-3' whip	11' o.c.	
10	Prunus serotina - Black Cherry	2-3' whip	11' o.c.	
10	Quercus alba - White oak	2-3' whip	11' o.c.	
20	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
105	Total whip plantings x 2 u	nits/tree = FCA	unit credit	210
		Tota	al Unit Credit	700

OPTION 2

Qty	Species	Size	Spacing	Total FCA Units
40	Acer rubrum - Red maple	1" cal.	15' o.c.	
40	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
40	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
40	Platanus occidentalis - Sycamore	1" cal.	15' o.c.	
40	Quercus alba - White oak	1" cal.	15' o.c.	
200	Total 1" caliper trees x 3.5	units/tree =	FCA unit credit	700
Total Unit Credit				700

OPTION 3

Qty	Species	Size	Spacing	Total FCA Units	
16	Acer rubrum - Red maple	1" cal.	15' o.c.		
16	Acer saccharinum - Silver maple	1" cal.	15' o.c.		
16	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.		
16	Platanus occidentalis - Sycamore	1" cal.	15' o.c.		
16	Quercus alba - White oak	1" cal.	15' o.c.		
80	Total 1" caliper trees x 3.5	units/tree = F0	CA unit credit	280	
30	Acer rubrum - Red maple	2-3' whip	11' o.c.		
30	Acer saccharinum - Silver maple	2-3' whip	11' o.c.		
40	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	·	
25	Platanus occidentalis - Sycamore	2-3' whip	11' o.c.		
30	Prunus serotina - Black Cherry	2-3' whip	11' o.c.		
30	Quercus alba - White oak	2-3' whip	11' o.c.		
25	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.		
210	Total whip plantings x 2 ur	nits/tree = FCA	unit credit	420	
Total Unit Credit					

Planting Notes:

Three planting options are provided so allow flexibility for the property owner. Only one planting option schedule needs to be followed.

Planting density based spacing requirements:1" caliper trees @ 15' on center, whips with shelter @ 11' on center.

1" caliper trees should be staggered along the perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.

Planting may be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate

Multiflora rose/heavy brush removal/control may be required prior to installation of planting. All whips are required to be installed with tree shelters per Howard County FCA requirements.

Planting units defined by the spacing requirements established in the FCA Manual. One plant unit is defined as 1 seedling or whip without shelter. The Manual states that 700 seedlings/whips without shelters are required per acre, or 350 whips w/shelters, or 200 1" caliper trees, or 100 2" caliper trees. By conversion it has been determined that a seeding or whip without shelter = 1 unit, whip with shelter = 2 units, 1"caliper tree = 3.5 units and 2" caliper tree =7 units. The use of plant units simplifies the plant density calculations when mixing stock size.

CONSTRUCTION PERIOD PROTECTION PROGRAM A. Forest Protection Techniques

1. Soil Protection Area (Critical Root Zone)

C. Storage Facilities/Equipment Cleaning

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface.

The limit of disturbance (LOD) line depicted on the plan shows the proposed extent of construction activities. Eco-Science Professionals, or another qualified professional designated by the developer, will assist in the field flagging of the LOD to ensure that the Critical Root Zone for the Forest Retention Area is determined in accordance with the In-Field Edge Determination Guidelines in Appendix B. Eco-Science

Professionals, or another qualified professional, will also assess the condition of the new forest edge to determine if selective thinning or pruning is needed to improve the condition of the edge. Fencing and Signage

All forest retention areas will be protected from unauthorized intrusion by appropriate signage and fencing. Signage and fencing will be installed prior to any construction activity. Eco-Science Professionals or another qualified professional will supervise installation of these devices. Fencing will placed along all LOD lines that occur within 35 feet of existing treelines. Signage will be placed along the edge of the FCE every 50-100 feet. Fencing will consist of blaze orange mesh fence or super silt fence. See Forest Conservation Plan for standard specifications.

Upon staking of limits of disturbance and installation of all signage, a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all tree protection measures outlined in the FCP are in place, that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas shown within the limit of disturbance. Cleaning of equipment will be prohibited from all forest retention areas. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into wetlands, streams and other environmentally sensitive areas.

D. Sequence of Construction

The following timetable represents the proposed timetable for construction of the proposed project. The construction start date for this project has not been formalized. The actual project start date is predicated on the issuance of all necessary permits and approvals for the project. The items outlined in the Forest Conservation Plan will be enacted upon commencement of the project. Below find a sequence of construction.

1. Install all tree protection signage, fencing, and sediment control devices.

2. Hold pre-construction meeting between developer, contractor and County inspector.

3. Grade site and construct improvements. Stabilize all disturbed areas in accordance with grading plan.

4. Remove sediment control. Replace any forest retention signage in poor condition.

5. Hold post-construction meeting with County inspectors to assure compliance with FCP. E. Construction Monitoring

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan. This will include inspections to ensure that signage is properly maintained and that no unauthorized intrusions have been made into forest retention areas.

F. Activities Permitted During Construction The forest conservation plan will allow the following activities within forest resources during the construction phase of the project:

1. Passive recreation (birdwatching, hiking, etc.) These activities will not damage or negatively impact the forest resources on the property.

G. Post-Construction Meeting

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that all Forest Conservation Easement areas have been properly retained and that all post construction protection measures (permanent signage) have been installed.

POST-CONSTRUCTION MANAGEMENT PLAN

The post-construction management plan will further ensure that all Forest Conservation Easement Areas are maintained. The developer will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property:

A. Signage Signage indicating the limits of the forest retention areas shall be maintained and shall be in place for perpetuity.

Project Notes - Animal Medical Hospital at Glenwood

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.

2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants. 3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater. 4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted

by Howard County DPZ. 5. No stockpiles, parking areas, equipment-cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements. 6. Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries

that occur within 15 feet of the proposed limits of disturbance. 7. The Forest Conservation Act requirements for this project include 1.0 acre of afforestation. The afforestation obligation for this project shall be met through reforestation on the Mirabile Property subdivision.

Mirabile Property

Offsite Planting Area Existing Condition Note:

The offsite afforestation area is currently maintained as field. The overall property is used as a single-family residence with associated uses. A small barn is located in the rear of the property. Landscaping is present around the home, lawn and barn areas. The planting area is mowed field. The planting area contains a grassed swale that conveys overland surface flows from the adjacent uplands. No wetlands, streams or forest are present on the site.

Planting/Soil Specifications

- 1. Installation of bareroot/plug plant stock shall take place between March 15 April 20; b&b/container stock March 15 -May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.
- 2. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- 3. Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
- 4. Fe tilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plant shall be fertilized with Osmocote 8-6-12.
- 5. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.
- 6. The contractor shall remove all non-organic debris associated with the planting operation from the site.

Sequence of Construction

- 1. Sediment control shall be installed in accordance with general construction plan for site.
- 2. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- 3. Upon completion of the planting, signage shall be installed as shown.
- 4. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

- 1. Maintenance of plantings shall last for a period of (3) years.
- 2. Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.
- 3. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide. Old field successional species will be retained.
- 4. Plants shall be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
- 5. Dead branches will be pruned from plantings.

Guarantee Requirements

1. A 75 percent survival rate of forestation plantings will be required at the end of two growing seasons. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. Wild trees arising from natural regeneration may be counted up to 50 percent towards the total survival number if they are healthy, native species at least 12 inches tall.

Education of New Occupants

1. The developer shall provide educational information to all property owners within the new development/home about the proper use of forest conservation areas.

Final Inspection and Release of Obligations

1. At the end of the post-construction management and protection period the developer shall submit a certification to the County that all forest conservation areas have remained intact or have been restored to appropriate condition, that the stipulated survival rates have been achieved, and that any permanent protection measures required by the plan are in place. Upon review and acceptance, the County will inform the developed of their release the development of future obligations related to the Forest Conservation Act.

FOREST CONSERVATION WORKSHEET

Project: Mirable Property Offsite Planting Site **

Date: November 30, 2007

	NET TRACT AREA		•	Acres
Α.	Total tract area			10.0
B.	Area within 100 Year Floodplain			
C.	Area to remain in agricultural pro	duction	:	
D.	Net Tract Area			10.0
LANE ARA	USE CATEGORY: (from table 3.2.: MDR IDA HDR MP X			
E.	Afforestation Threshold	(percentage)	20%	2.0
F.	Conservation Threshold	(percentage)	25%	2.5
EXIS	STING FOREST COVER:			
G.	Existing forest cover (excluding flo	oodplain)		0
Н.	Area of forest above afforestation	threshold		0
1.	Area of forest above conservation	n threshold		0
BRI J.	Forest retention above threshold	with no mitigation		
		Break-	even Point	
K.	Clearing permitted without mitiga	ation		
PRO	POSED FOREST CLEARING			
L.	Total area of forest to be cleared	or Retained Outside FCI		
M.	Total area of forest to be Retaine	d in FCE		
PLA	NTING REQUIREMENTS			
N.	Reforestation for clearing above			
P.	Reforestation for clearing below			
Q.	Credit for retention above conservation	vation threshold		
R.	Total reforestation required			
<u>S.</u>	Total afforestation required			2.0**
T.	Total reforestation and afforestat	ion required		2.0**

** The proposed planting on the Mirable Property is not subject to the Forest Conservation obligations. If future development activities are pursued which require FCA compliance, that activity would be required to meet the 2.0 acre afforestation obligation.

Typical Planting Layout

Lt		Ps		Lt	-	Ar
	As		Ро		Lt	
Qa		Vp		Ar		As
	Lt		Ps		Ро	
Ar		As		Lt		Lt

This diagram shows a typical dispersal of species within planting area. The spacing shall be in accordance with the approved planting schedule. Where the size of the planting stock varies, the planting units shall be installed at averaged spacing to provide approximately uniform coverage.

Project: Animal Medical Hospital at Glenwood

FOREST CONSERVATION WORKSHEET

Version 1.0

Date: June 22, 2007

	TRACT AREA	: - '.		Acres
A. Total	tract area			5.0
B. Area	within 100 Year Floodplain			
C. Area	to remain in agricultural pro-	duction		0
D. Net 1	ract Area			5.0
	CATEGORY: (from table 3.2.1 IDR IDA HDR MP		and the second second	, er
E. Affor	estation Threshold	(percentage)	20%	1.0
F. Cons	ervation Threshold	(percentage)	25%	1.3
	FOREST COVER: ing forest cover (excluding flo	odplain)	· · · · · · · · · · · · · · · · · · ·	0
	of forest above afforestation			0
	of forest above conservation			. 0
I Fara	st retention above threshold v	*14 *1* * **		
J. Fores	stretention above threshold		avon Point	
	ring permitted without mitiga	Break-	even Point	
K. Clear PROPOSE		Break-dion or Retained Outside FCE		0
PROPOSE L. Total M. Total PLANTING	ing permitted without mitigated FOREST CLEARING area of forest to be cleared area of forest to be Retained REQUIREMENTS	Break-otion or Retained Outside FCE in FCE		
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"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2008."

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

AFFORESTATION NOTES

ANIMAL MEDICAL HOSPITAL AT GLENWOOD

GREEN MEADOWS TAX MAP No.: 14 GRID No.: 11 PLAT NO. 19072 P/O PARCEL No.: 217

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: FEBRUARY 11, 2007

FISHER, COLLINS & CARTER, INC. VIL ENGINEERING CONSULTANTS & LAND SURVEYOR . SOUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042 Eco-Science Professionals, Inc. XIWWILLEY CONSULTING ECOLOGISTS MD DNR Qualified Professional USACOE Wetland Delineator Certification, * WDCP93MD06100448 JOHN P. CANOLES

1-26-11 REVISE SHEET NUMBER DATE DESCRIPTION REVISION BLOCK

AT^{*} GLENWOOD SUITE 7

OWNER/DEVELOPER ANIMAL MEDICAL HOSPITAL

2465 MARYLAND ROUTE 97 GLENWOOD, MARYLAND 21738 DR. STUART N. SCHEINBERG D.V.M. (410) 489-9677

HOSPITAL KENNEL

WATER CODE

Address Chart BUILDING NO. STREET ADDRESS 2890 McKENDREE ROAD. 2892 McKENDREE ROAD

PROJECT ANIMAL MEDICAL HOSPITAL P/O 217 DOG KENNEL AND PET GROOMING ESTABLISHMENT TAX MAP ELEC. DIST. CENSUS TR BLOCK NO. ZONE FOURTH 19072 RR-DEO

SEWER CODE N/A