

LAYOUT _____ INSP 4 _____
INSP 2 _____ INSP 5 _____
INSP 3 _____ INSP 6 _____

ISSUE DATE: 1/03/2005

APPROVAL DATE: 2/22/2005

PERMIT-LPD

P 521636

A 519038

SEPTIC SYSTEM
INDEXED

ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH

Hatfields Equipment

IS PERMITTED TO INSTALL ALTER

ADDRESS: 13785 Burntwoods Road, Glenelg PHONE NUMBER: 410-531-6773

SUBDIVISION Williams Property LOT 14

ADDRESS: 11205 Old Frederick Road PROPERTY OWNER: Cornerstone Homes, Inc.

ENVIROSERVER ES 6 (nitrogen pretreatment unit)

PUMP CHAMBER CAPACITY (GALLONS): 1500 Top Seamed

Control Box with elapsed time meter and event counter. High water alarm on a separate circuit & located in the house.

Low Pressure Dosing Septic System - see detailed design plans by S/E Engineering, Inc., dated June, 2004.

| | |
|-----------|--|
| LOCATION: | 1.2 loading rate with 3' wide trenches, pipe at 1-1/2 feet with bottom at 2 feet. Total linear feet of trenches required = 300 feet |
| NOTES: | Call for layout inspection prior to beginning construction. A test of the pump system & distribution piping is required prior to covering the system. Nitrogen pretreatment system must be installed and I&A agreement signed prior to release of U&O. <u>2/22/05</u> |

PLANS APPROVED: John A. Boris P.A.Y 1-3-05

DATE: 8/9/2004

NOTES: PERMIT VOID AFTER 2 YEARS
CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
WATERTIGHT SEPTIC TANKS REQUIRED
ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL UNLESS SPECIFICALLY AUTHORIZED
MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED
CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE REGULATIONS, GUIDELINES AND THE TERMS OF THIS PERMIT

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT ALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM

BUILDING PERMIT SIGNED

AND RETURNED

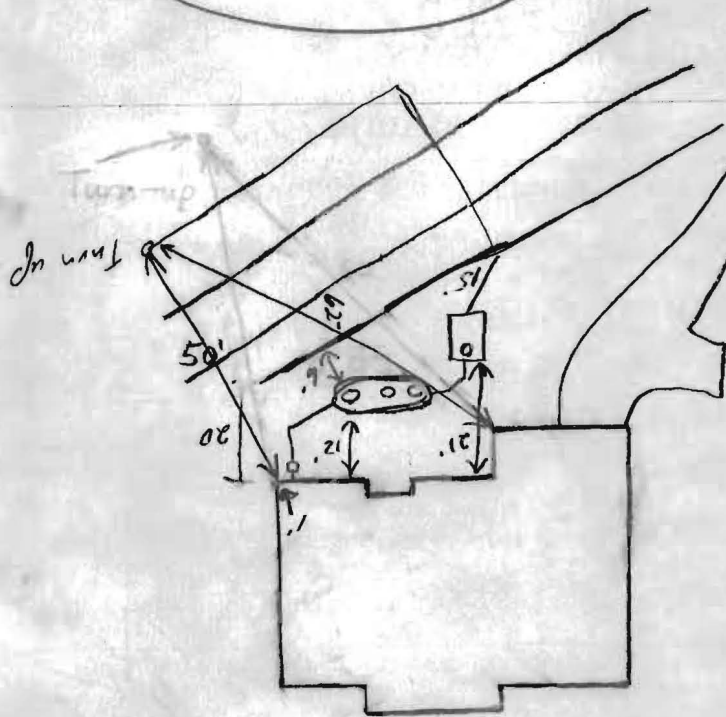
12-2704 B00151629-LP TANK

A519038

Old Frederick Rd

NOT TO SCALE

Public Water



Old Frederick

ROAD

| | | |
|--------------------|-------|--------|
| WIDTH | INLET | BOTTOM |
| NUMBER OF TRENCHES | | |
| TOTAL LENGTH | | |
| ABSORPTION AREA | | |

| | |
|-------------------------|------------------------|
| SEPTIC TANK DATA | |
| SEPTIC TANK 1 LEVEL | <u>Covered</u> |
| CAPACITY | <u>1700</u> GAL |
| SEAM LOC | <u>N/A</u> |
| TANK LID DEPTH | <u>2.5'</u> |
| BAFFLES | <u>Yes</u> |
| BAFFLE FILTER | <u>Yes</u> |
| MANHOLE LOC | <u>Front, Middle +</u> |
| 6" PORT LOC | <u>N/A</u> Rear |
| WATERTIGHT TEST | <u>No</u> |
| SEPTIC TANK 2 LEVEL | <u>Covered</u> |
| CAPACITY | <u>1500</u> GAL |
| SEAM LOC | <u>Top</u> |
| TANK LID DEPTH | <u>2.5'</u> |
| BAFFLES | <u>Front</u> |
| BAFFLE FILTER | <u>No</u> |
| MANHOLE LOC | <u>Rear</u> |
| 6" PORT LOC | <u>Front</u> |
| WATERTIGHT TEST | <u>No</u> |
| PUMP OPERATIONAL | <u>Yes</u> |
| ALARM OPERATIONAL | <u>Yes</u> |

PRE-CONSTRUCTION 1/13/05 - SRA stake, driveway in SRA, needs to be moved, intro unit & pump tank set, 1st trench installed.

INSTALLATION OK to continue (50) 2/7/05 Hatfields only installed 1 turn-up on system. If a turn-up was installed on other side of system it would be on edge of driveway. Pump and alarm working. E.S. unit is circulating air and water. Alarm working on E.S. unit although it is too quiet to be useful.

(I & A) AGREEMENT RECORDED IN LAND RECORDS ON _____

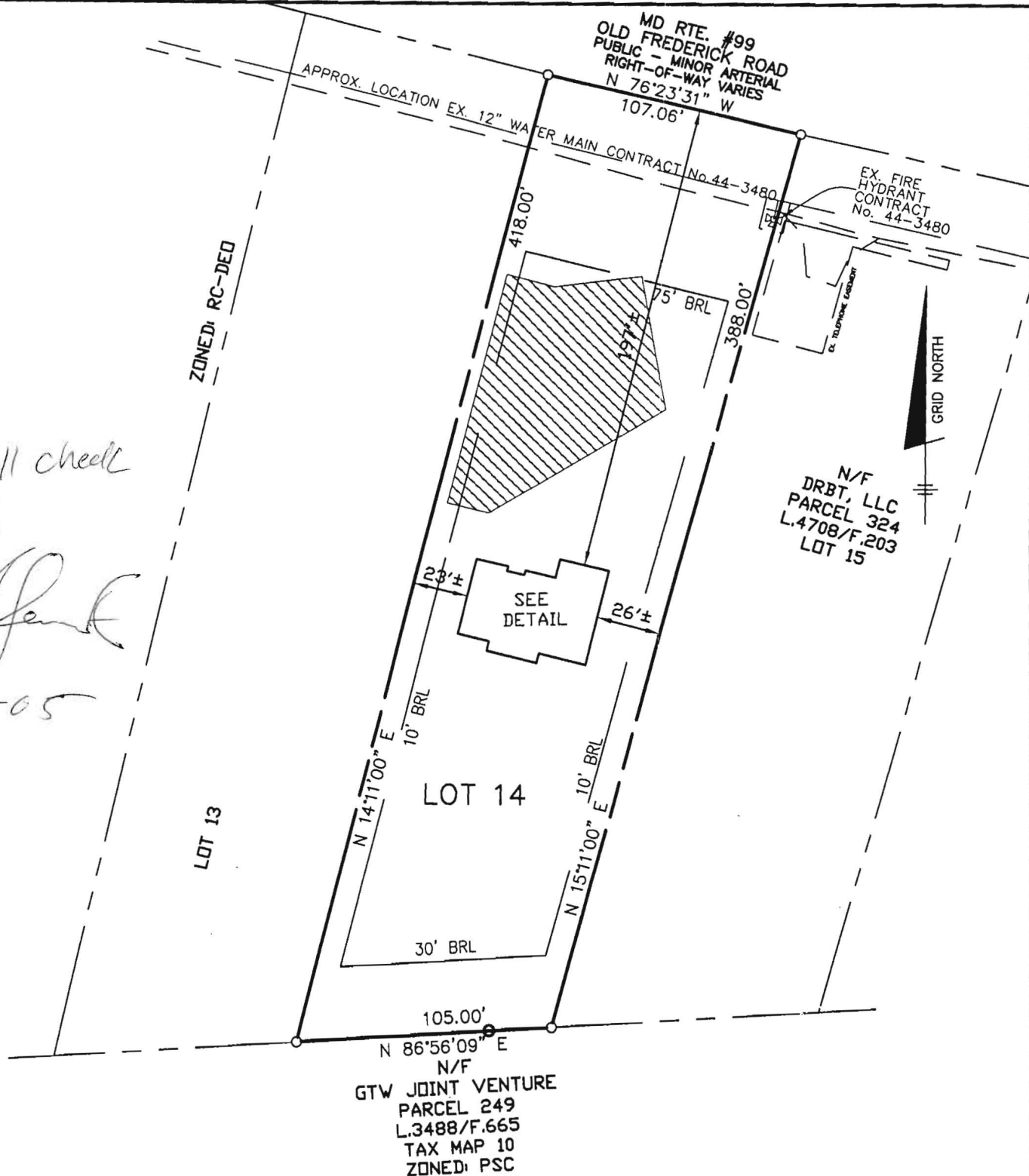
(date)

Everything covered (BB)

2/22/05

FINAL INSPECTOR _____

DATE OF APPROVAL _____

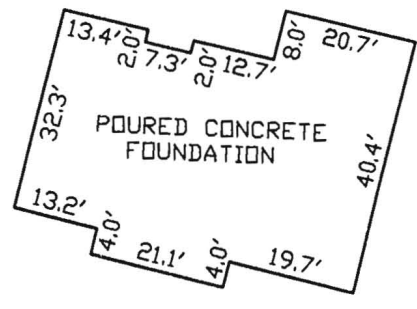


Wall check
OK
[Signature]
1-3-05

TOP OF FOUNDATION WALL ELEVATION = 478.0'

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THAT THE DIMENSIONS OF THE BUILDING WALLS SHOWN HEREON ARE CORRECT; THAT THEY ARE BASED ON A FIELD RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. ON 10/04/04 ; AND THAT THE PROPERTY OUTLINE SHOWN HEREON IS BASED ON THE PLAT PREPARED BY BENCHMARK ENGINEERING, INC. ENTITLED " WILLIAMS PROPERTY LOT 14 ", AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY AS PARCEL 68 LIBER 1044 FOLIO 416.



~FOUNDATION DETAIL~
SCALE: 1" = 30'

[Signature: David M. Harris]
DAVID M. HARRIS
REGISTERED PROFESSIONAL LAND SURVEYOR
MD REG. No. 10978
FOR BENCHMARK ENGINEERING, INC.
MD REG. No. 351
RECORD PARCEL 68 LIBER 1044 FOLIO 416
FEMA FIRM No. 240044 0010 B
ZONE: C
DATED: 12/04/86



WALL CHECK
WILLIAMS PROPERTY
TAX MAP 10 PARCEL 68
LOT No. 14

11205 OLD FREDERICK ROAD
3RD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 60' DATE: 10/04/04

BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418
ELLCOTT CITY, MARYLAND 21043
phone: 410-485-8105 • fax: 410-485-8844
email: Benchmark@coole.com



3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(410) 313-1771 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

February 23, 2005

Cornerstone Homes, Inc.
9695 Norfolk Avenue
Laurel, MD 20723

SENT VIA FAX TO 410-792-2567

RE: Williams Property, Lot 14
11205 Old Frederick Road
Marriottsville, MD 21104
BP# B00149136
PUBLIC WATER

Dear Sir/Madam:

This is to advise you that the septic system for the above referenced property has been installed and inspected. **Final approval of the septic system was granted on 02/22/2005.**

The property is served by public water and is therefore exempt from the Health Department water sampling requirements.

By issuance of this letter, this office recommends release of the Use and Occupancy permit for the referenced property.

Approving Authority,

John Boris, R. S.
Well & Septic Program

mlb
cc: Building Inspector's Office
File

FILE INQUIRY FORM

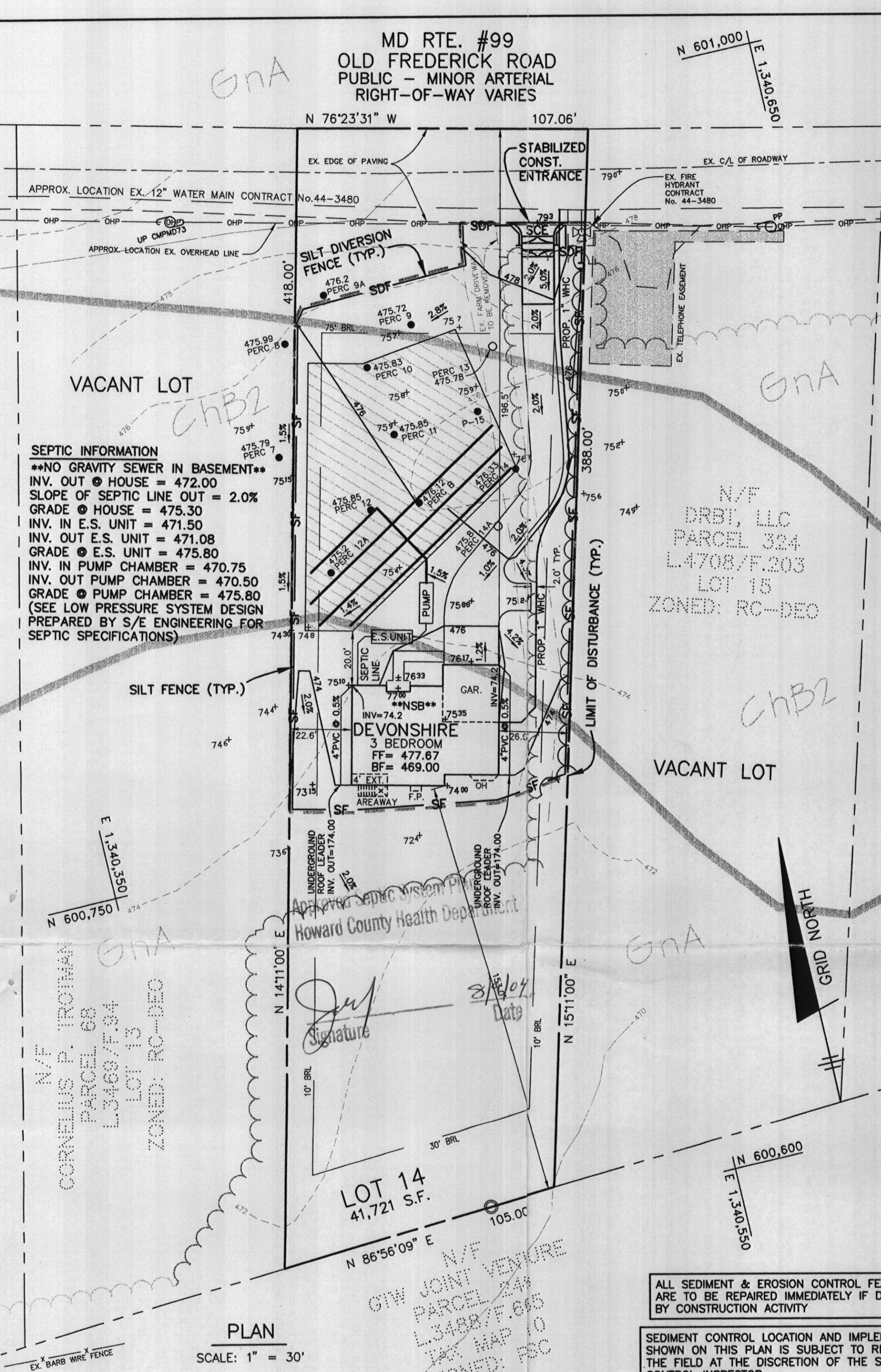
Property Address: _____

~~Plan looks o.k. but system design is for 300'd LPD trench for a 3 bdrm house. Need a system design that can work prior to perc cert signature. Left voice mail message w/ Chris Maligari w/ regards to system design. 3' wide bottom area only w/ only a 2' deep trench. Elevations to be based on lowest hole for trench depth.~~

6/29/04

Reviewed LPD design as shown is approvable. Informed Bob Skesky that plan is O.K. and the process is as follows: 1) submit perc cert plan w/ revisions discussed on 4/15/04 w/ Mr. Hinkle 2) Once perc cert is signed, well permit may be issued. 3) Once well completion report is obtained, building permit can be signed. Note: It must be noted on perc cert and building permit that design is only for a 3 bdrm house.

JAB



SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASIN SHALL BE INSTALLED IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DOES NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
TOTAL AREA OF SITE: 0.96 ACRES
TOTAL AREA DISTURBED: 0.48 ACRES
AREA TO BE ROOFED/PAVED: 0.11 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 0.37 ACRES
TOTAL CUT: 11,000 CU YDS
TOTAL FILL: 11,000 CU YDS
OFF-SITE STOCKPILE: SEE SITE STOCKPILE
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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 DISTURBING OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MAILED.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH IN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE AREA WITH AN APPROVED SEEDING PLAN.
- EARTHWORK NUMBERS ARE APPROXIMATE FOR S&E PURPOSES ONLY; CONTRACTOR TO PROVIDE THEIR OWN EARTHWORK COMPUTATIONS IF NECESSARY.

TEMPORARY SEEDBED PREPARATION

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SD WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (0.7 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 215 GALLONS PER ACRE (8 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 1:1 OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIE OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS PER ACRE 0-0-0 UREA-FORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23.8 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SD WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WENIG LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28 PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELLS ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 215 GALLONS PER ACRE (8 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 1:1 OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

2.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose
To provide a suitable medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible. If, for the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be provided that it 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 USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, silt, coarse fragments, roots, sticks, trash, or other materials larger than 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestones shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
 - For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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 prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dispersion of phytotoxic materials.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope St. Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 5" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation. 0-2:1-2
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of application of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - 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 prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

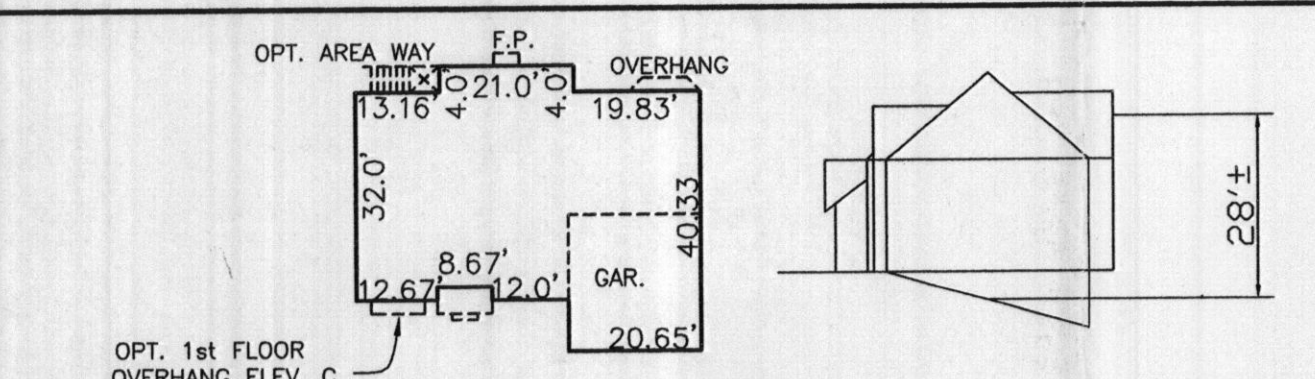
References: Guideline Specifications, Soil Preparation and Soddng, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

SOILS LEGEND

| MAP SYMBOL | SOIL TYPE | MAPPING UNIT |
|------------|-----------|---|
| ChB2 | B | CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED |
| GnA | C | GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES |

TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND (ISSUED JULY 1968) MAP NO. 31

* INDICATES HYDRIC SOILS

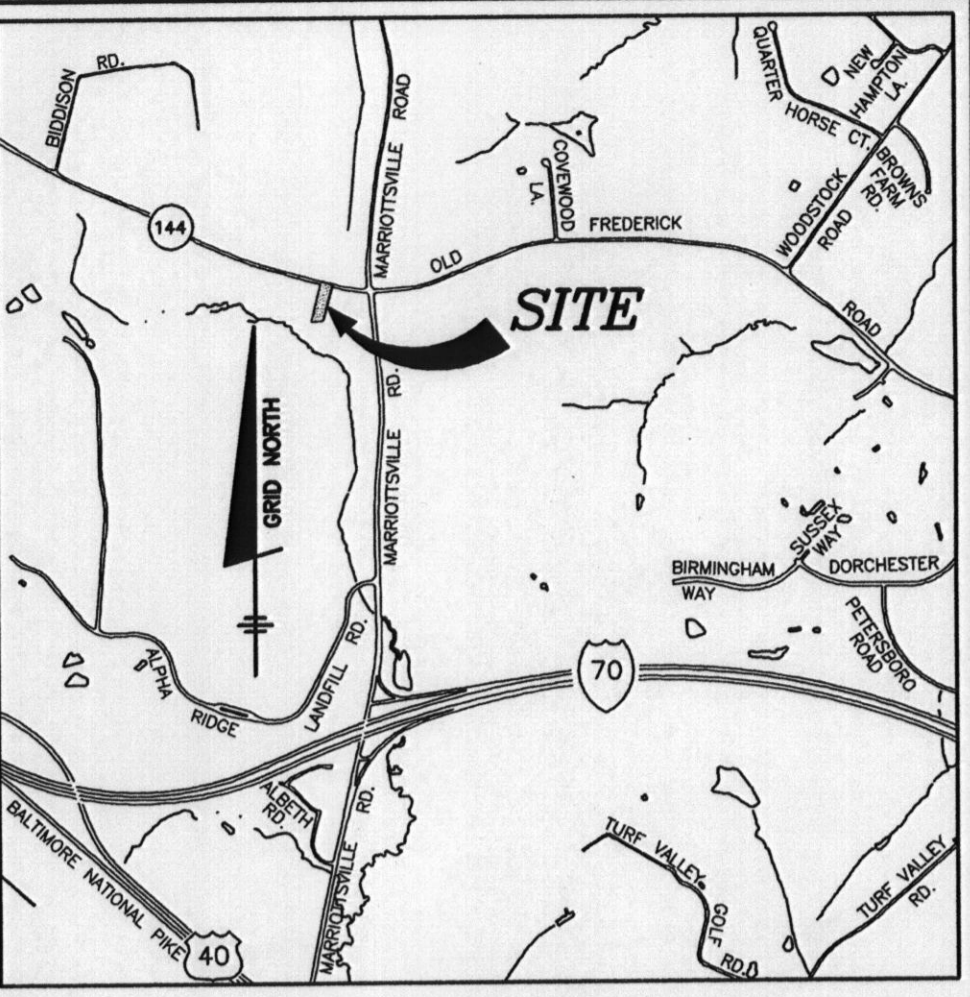


LEGEND

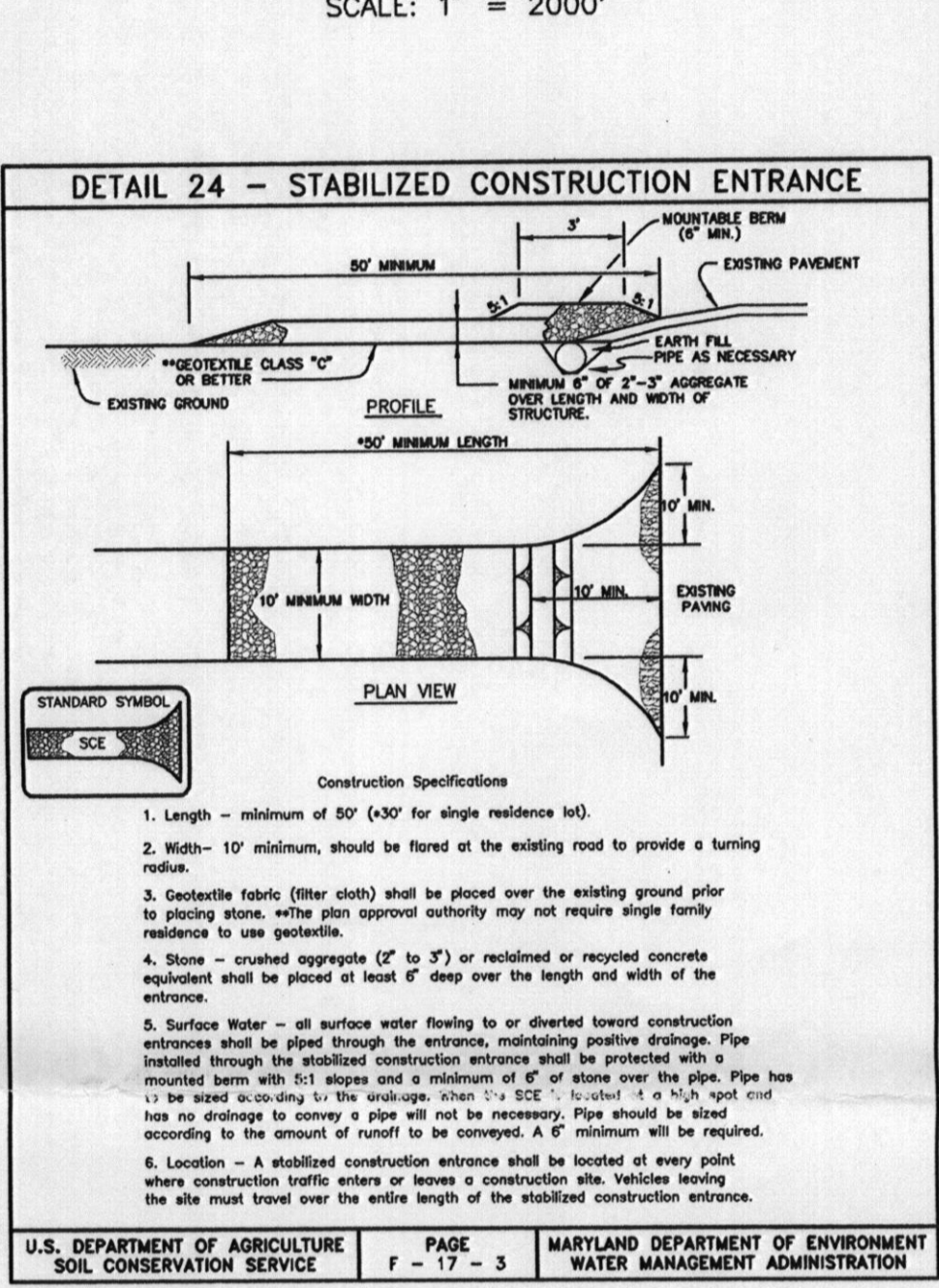
| | |
|----------------------------------|-------|
| SOILS CLASSIFICATION | AbC1 |
| SOILS DELINEATION | --- |
| EXISTING CONTOURS | 999 |
| PROPOSED CONTOURS | 999 |
| EXISTING WOODS LINE | --- |
| PROPOSED WOODS LINE | --- |
| PROPOSED STRUCTURE | --- |
| LIMIT OF DISTURBANCE | --- |
| STABILIZED CONSTRUCTION ENTRANCE | --- |
| SILT FENCE | SF |
| SILT FENCE DIVERSION | SDF |
| PERC. TEST - FAILED | ○ |
| PERC. TEST - PASSED | ● |
| PRIVATE SEWERAGE EASEMENT | --- |
| EX. FIELD-SHOT ELEVATION | +999 |
| PROP. ELEVATION | +9999 |

P-1 PAVING DETAIL
NOT TO SCALE

1" BITUMINOUS CONCRETE SURFACE
3" BITUMINOUS CONCRETE BASE
FULL DEPTH BIT. CONC. ALTERNATIVE

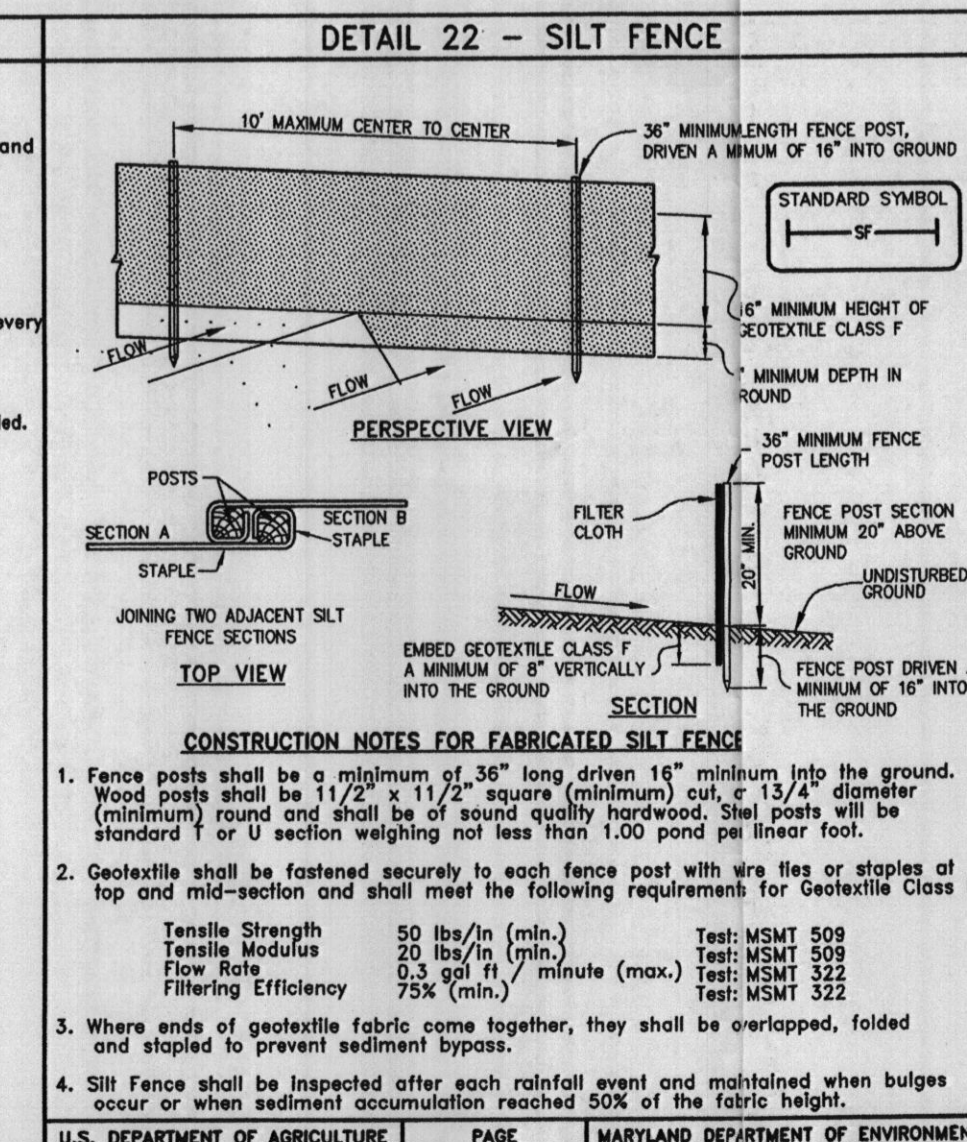
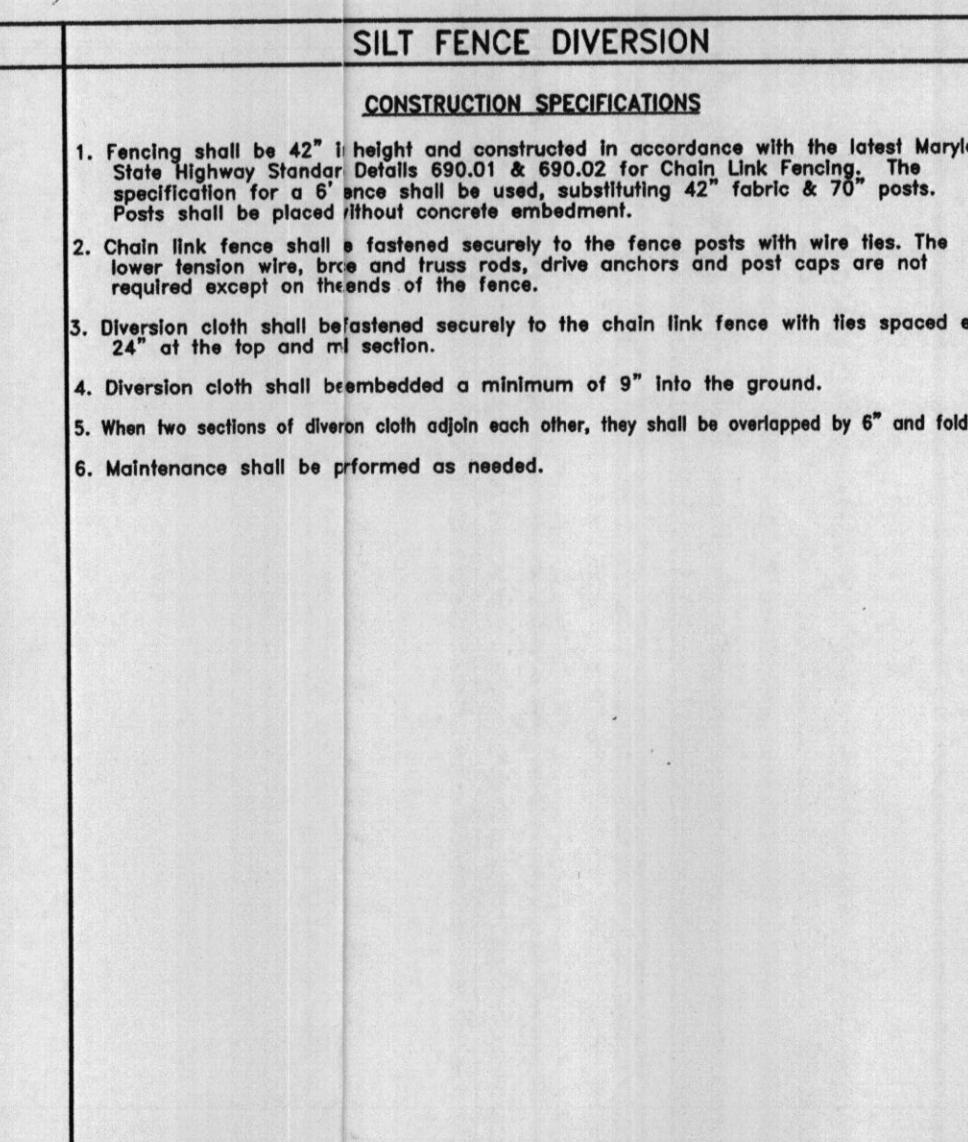
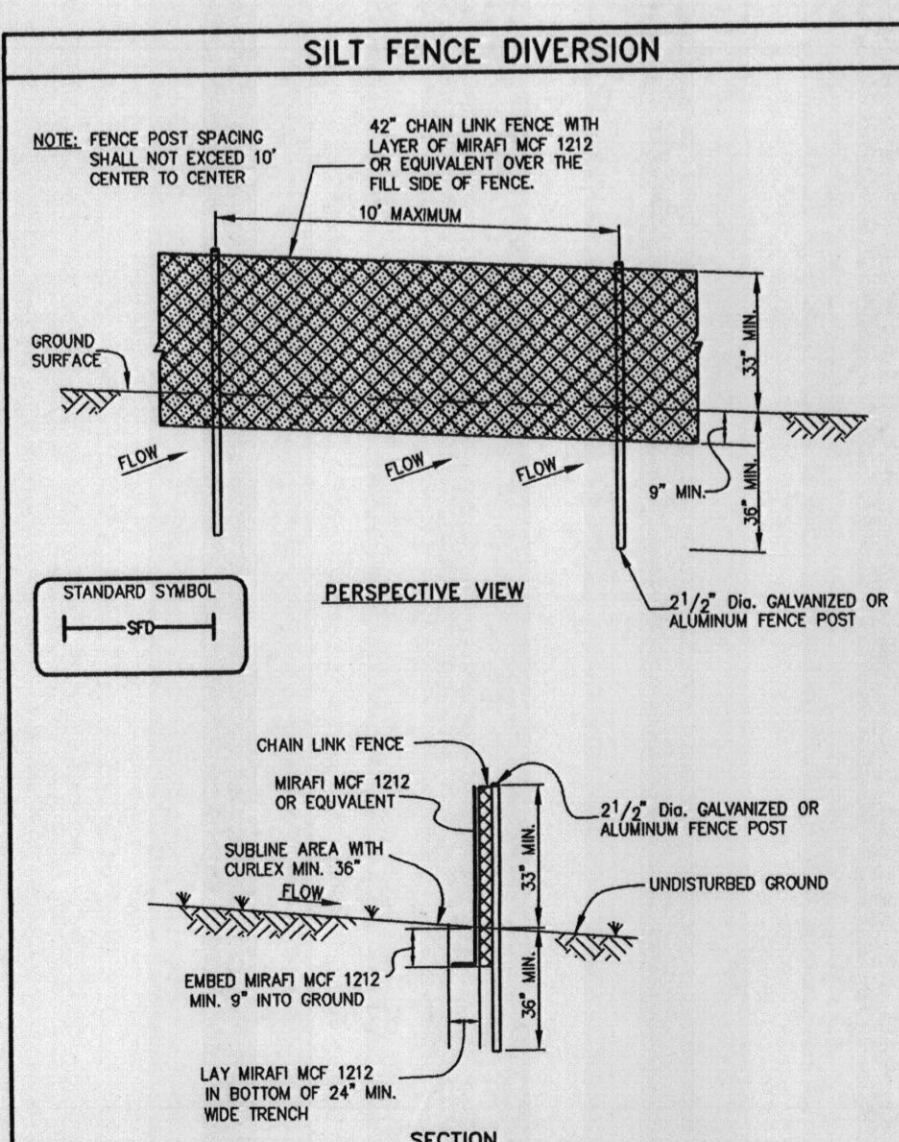


DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



SEQUENCE OF CONSTRUCTION - SINGLE LOT

| DAY | ACTIVITY |
|-----------|--|
| DAY 1 | OBTAIN GRADING PERMIT. |
| DAY 2 | CONTRACTOR TO IDENTIFY AND MARK ANY AND ALL HAZARDOUS CONDITIONS ON SITE. |
| DAY 3 | CLEAR & GRUB FOR SEDIMENT CONTROL DEVICES |
| DAY 4 | INSTALL SEDIMENT CONTROL DEVICES |
| DAY 5 | UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, BEGIN GRADING OF SITE. |
| DAY 6-10 | GRADE SITE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES. |
| DAY 11 | INSTALL EROSION CONTROL MATTING IN THE DITCHES AND SWALES, IF APPLICABLE. |
| DAY 12-80 | CONSTRUCT HOUSE, INSTALL DRIVEWAY AND UTILITIES. SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION. |
| DAY 61-63 | STABILIZE ANY REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDBED NOTES. |
| DAY 64-65 | UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE THE SITE. |



SILT FENCE

SILT FENCE DESIGN CRITERIA

| Slope Steepness | (Maximum) Slope Length | (Maximum) Silt Fence Length |
|-------------------|------------------------|-----------------------------|
| Flatter than 50:1 | unlimited | unlimited |
| 50:1 to 10:1 | 125 feet | 1,000 feet |
| 10:1 to 5:1 | 100 feet | 750 feet |
| 5:1 to 3:1 | 60 feet | 500 feet |
| 3:1 to 2:1 | 40 feet | 250 feet |
| 2:1 and steeper | 20 feet | 125 feet |

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

Pam Hinkle
DEVELOPER
6/18/04
DATE

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

Donald Mason
ENGINEER - DONALD A. MASON, P.E. # 21443
6/18/04
DATE

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

Jim Myler
NATURAL RESOURCES CONSERVATION SERVICE
6/21/04
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

John K. Robertson
HOWARD SOIL CONSERVATION DISTRICT
6/21/04
DATE

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: www.bei-civilengineering.com

Donald Mason
PROFESSIONAL ENGINEER

6/18/04

DEVELOPER: CORNERSTONE HOMES, INC.
9695 NORFOLK AVENUE
LAUREL, MD 20723
PHONE: 410-792-2565

PROJECT: WILLIAMS PROPERTY LOT 14

LOCATION: TAX MAP 10 - GRID 22
PARCEL 66 - L1044/F.416
3RD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

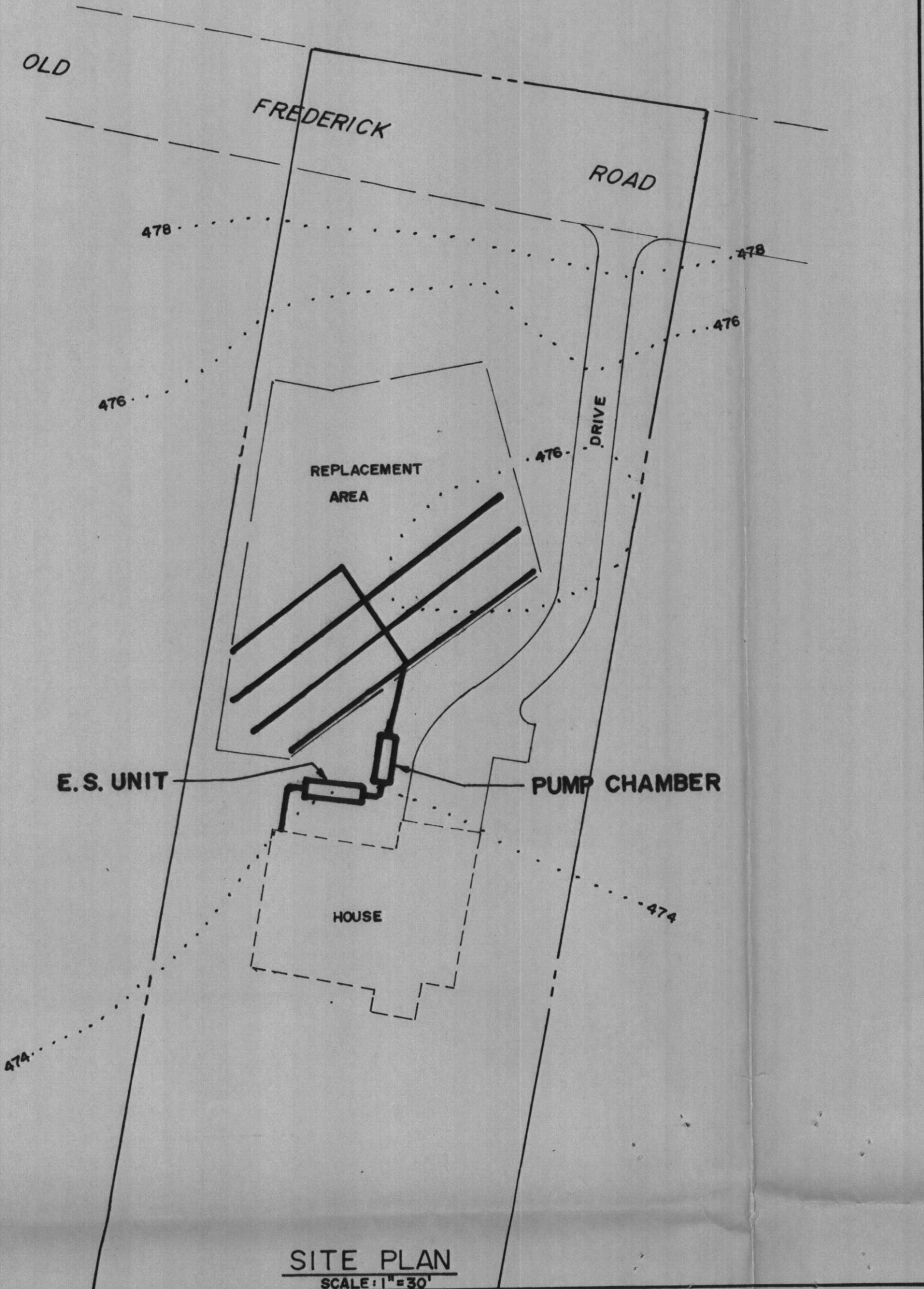
TITLE: GRADING AND SEDIMENT & EROSION CONTROL PLAN

DATE: JUNE 18, 2004 PROJECT NO. 1689

SCALE: AS SHOWN DRAWING 1 OF 1

Design: CAM/MCR Draft: EDD/MCR Check: CAM

GP-04-110

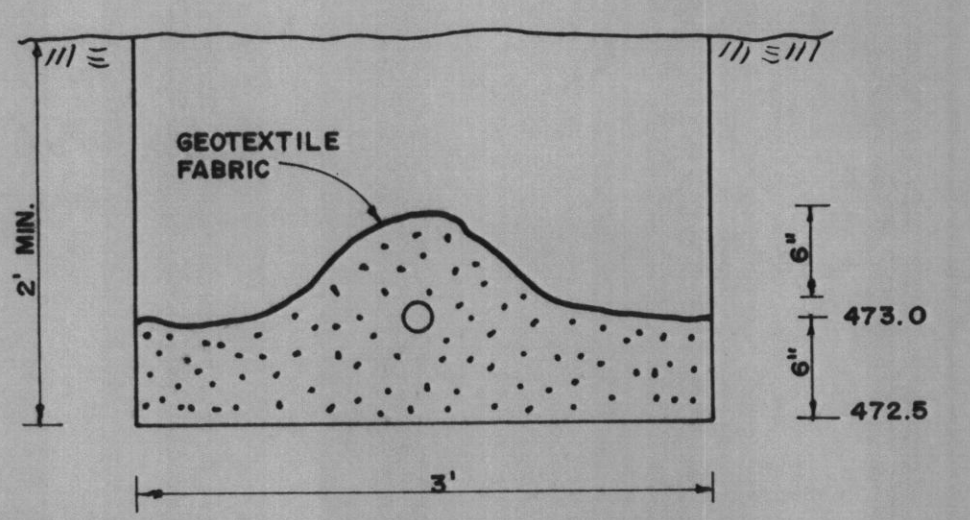
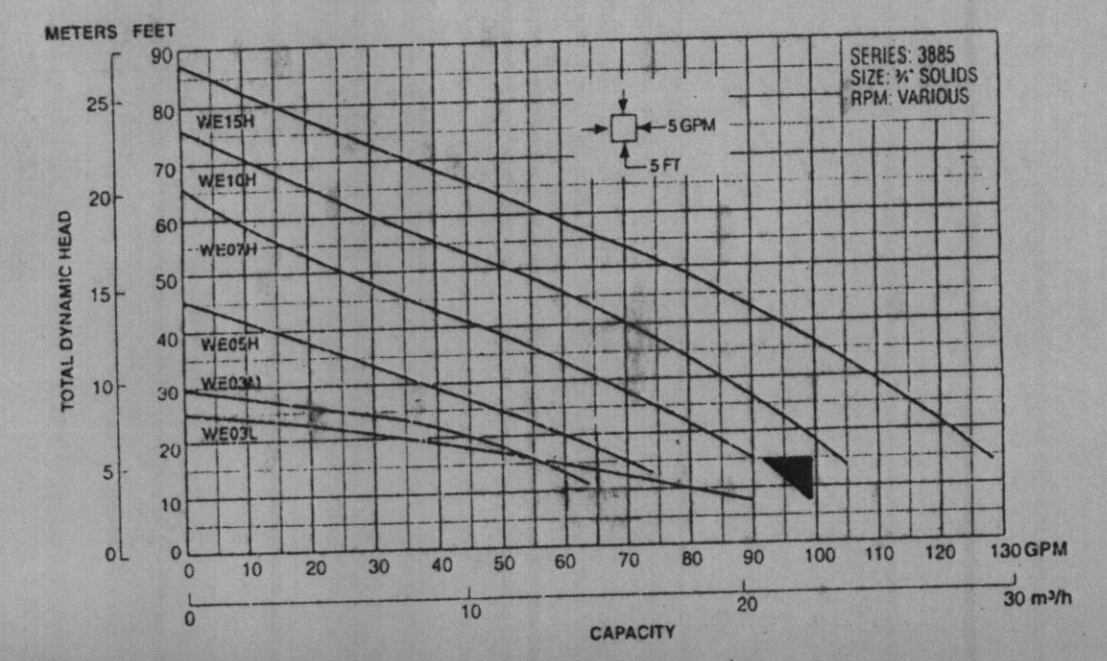
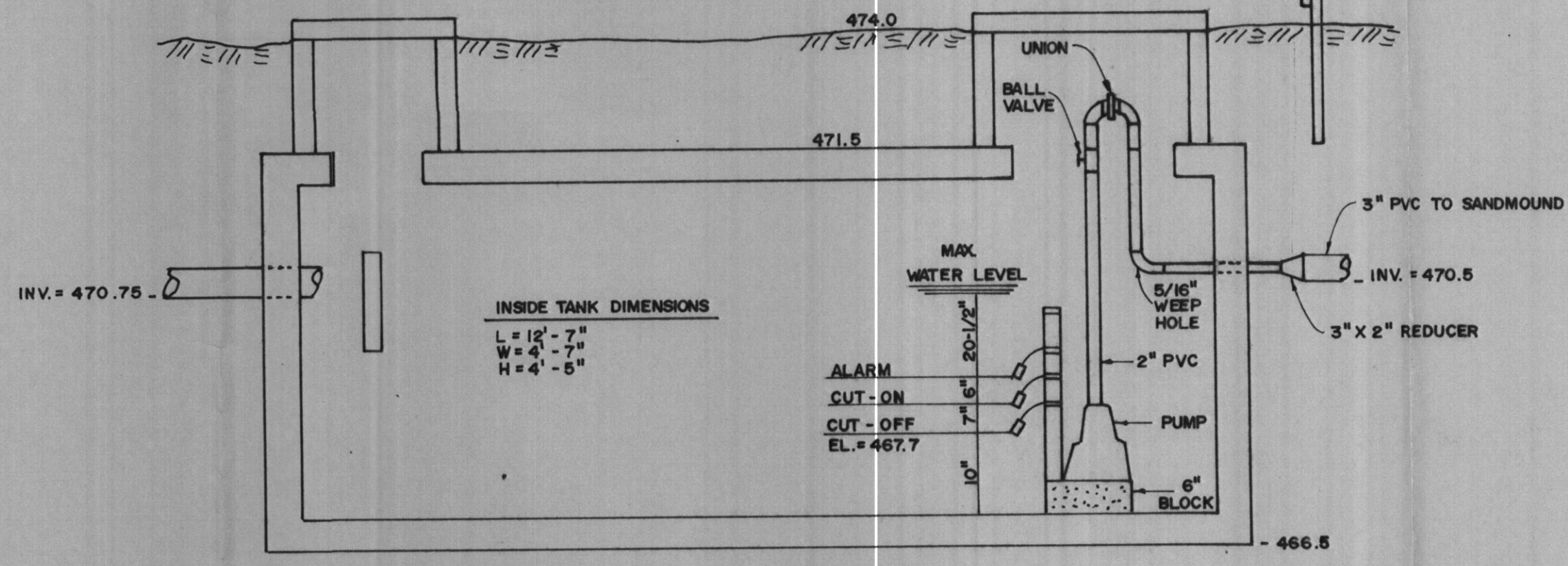


DESIGN CRITERIA

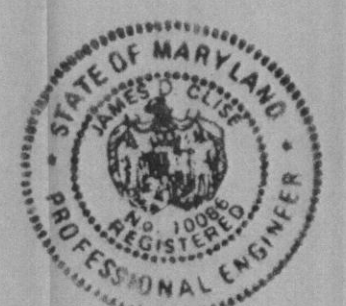
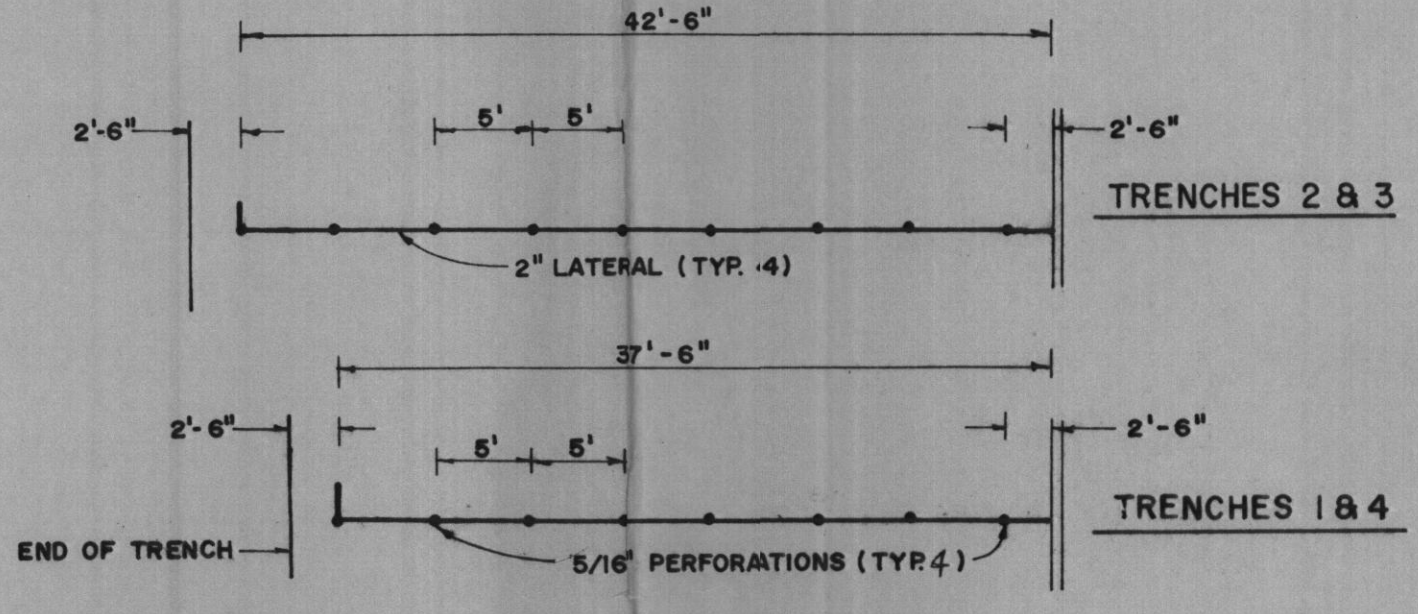
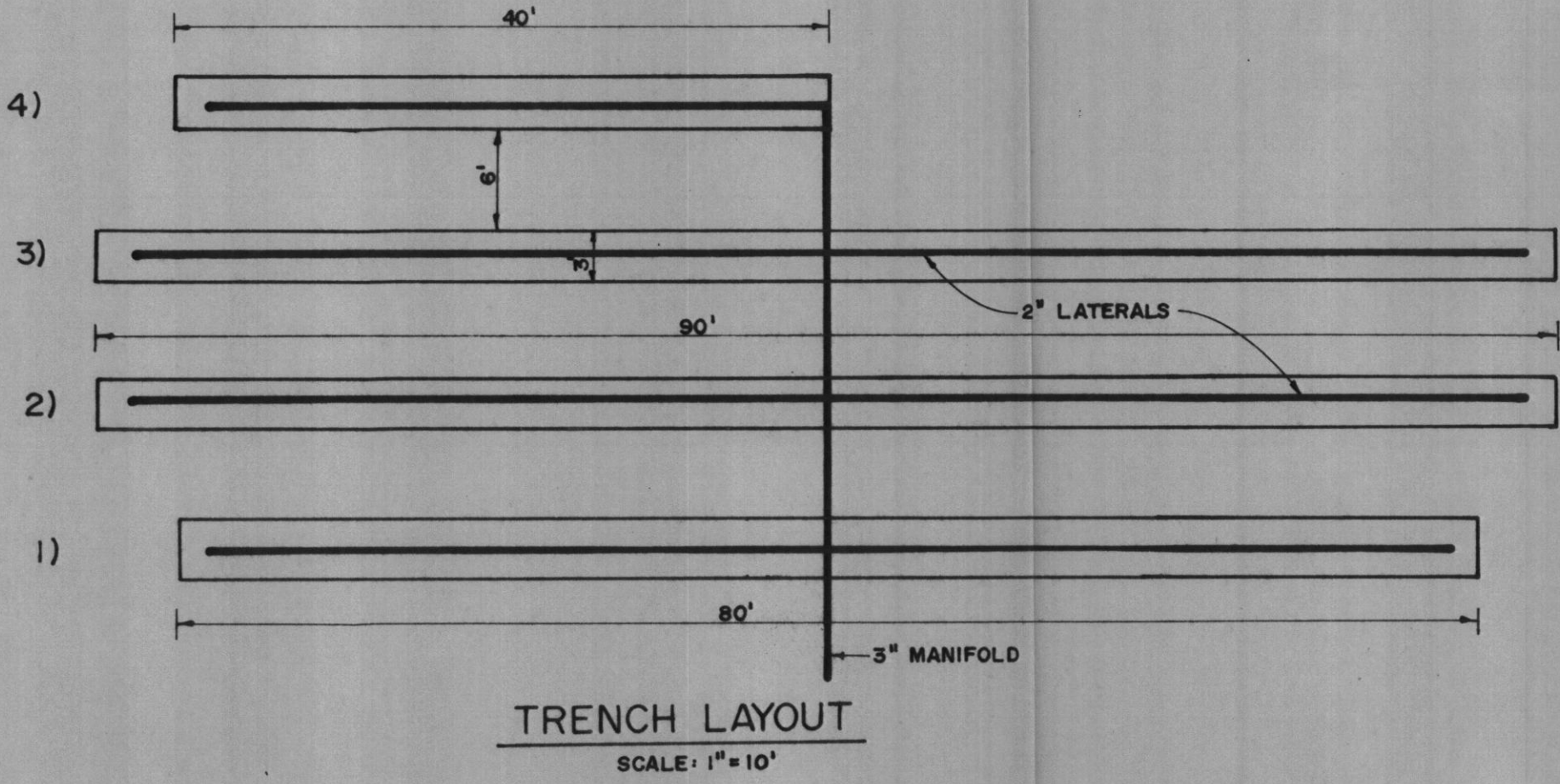
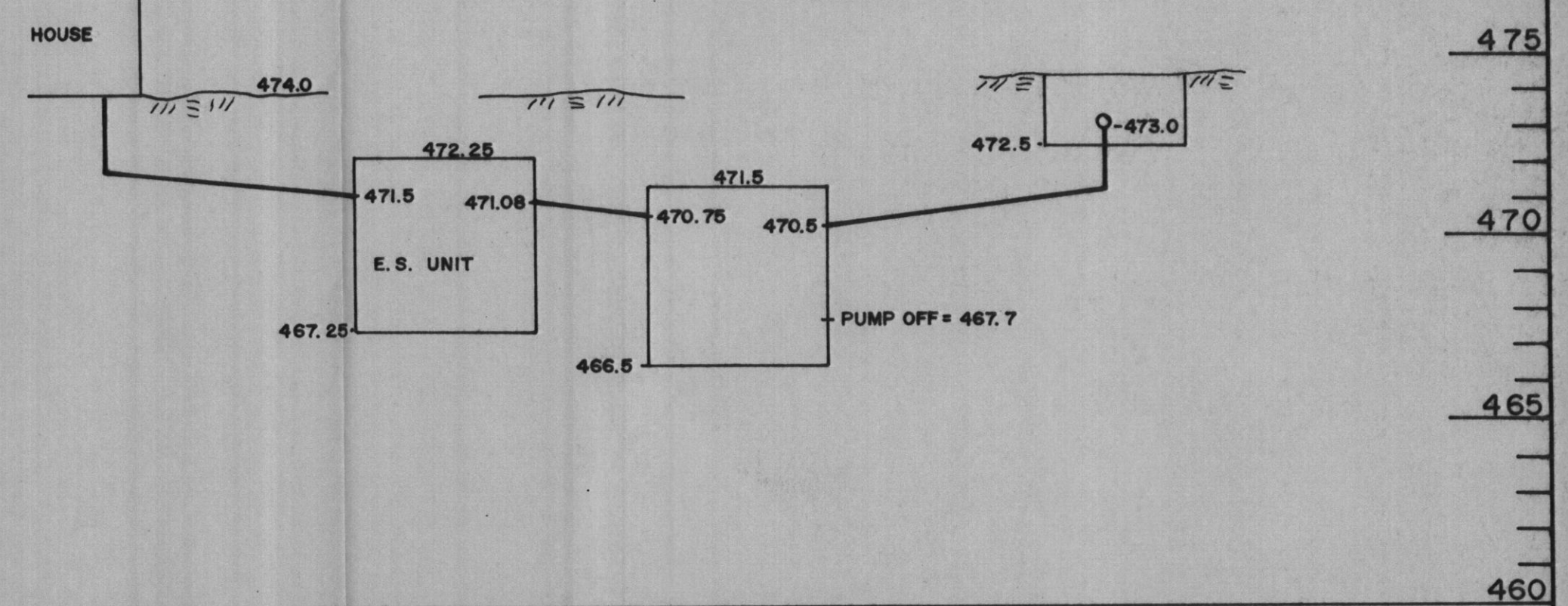
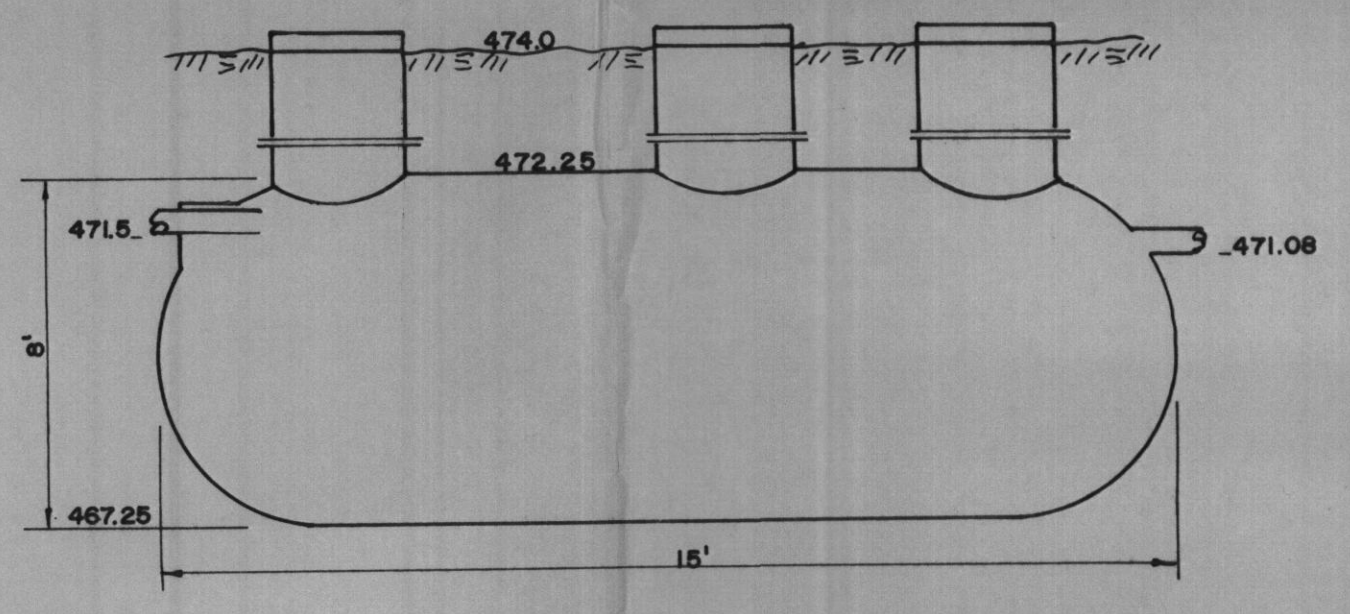
3 Bed Rooms x 150 = 450 GPD
 Loading Rate: 0.5 GPD/Sq Ft = 900 Sq Ft
 900 Sq Ft / 3' Trench Width = 300 Linear Feet
 4 Trenches Provides = 36" Wide = 300 Linear Feet
 300 Linear Feet x 3 = 900 Sq Ft. Provided
 1 - 600 GPD Treatment Unit
 1 - 1500 Gal. Pump Chamber
 Pump Rate = 60 Perforations @ 1.63 = 98 GPM

SPECIFICATIONS

- Treatment unit to be a Model ES6 as manufactured by Microseptic. Contact Envirotec - (410) 579-2442 or approved equal, to be installed in accordance with manufacturers directions.
- Pump Chamber measurements and elevations are based on units as manufactured by Mayer Bros., Elkridge, Md (410) 796-1434.
- All piping to be schedule 40 PVC of size shown.
- The force main from the pump chamber to the trench field is to be installed with a continuous slope back to the chamber to assure complete drainage following each pump cycle.
- A submersible pump to remove 98 GPM against 14' TDH to be provided. Pump to be a Goulds Model 3885-WE-10H, or equal.
- A test of the pump system and distribution piping is required prior to covering the system.
- The High Water Alarm is to be on a separate circuit.
- Alarm to be located in the house.
- Stone bed to be 1/2" to 2 1/2" clean gravel. Crushed lime stone is not acceptable.



NOTE: ALL TRENCH BOTTOMS TO BE ELEV. 472.5 ALL LATERAL INVERTS TO BE ELEV. 473.0



James D. Clise

Signature: *JDC* Date: 3/9/04

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|---|-------------------|------------------|
| S/E ENGINEERING, INC. WESTMINSTER, MARYLAND | | |
| SCALE: AS SHOWN | APPROVED: J.D.C. | DRAWN BY: R.S.K. |
| DATE: JUNE, 2004 | DESIGN BY: J.D.C. | |
| LOT 14 - OLD FREDERICK ROAD WILLIAMS PROPERTY | | |
| LOW PRESSURE DOSING SYSTEM | DRAWING NO. | OF |