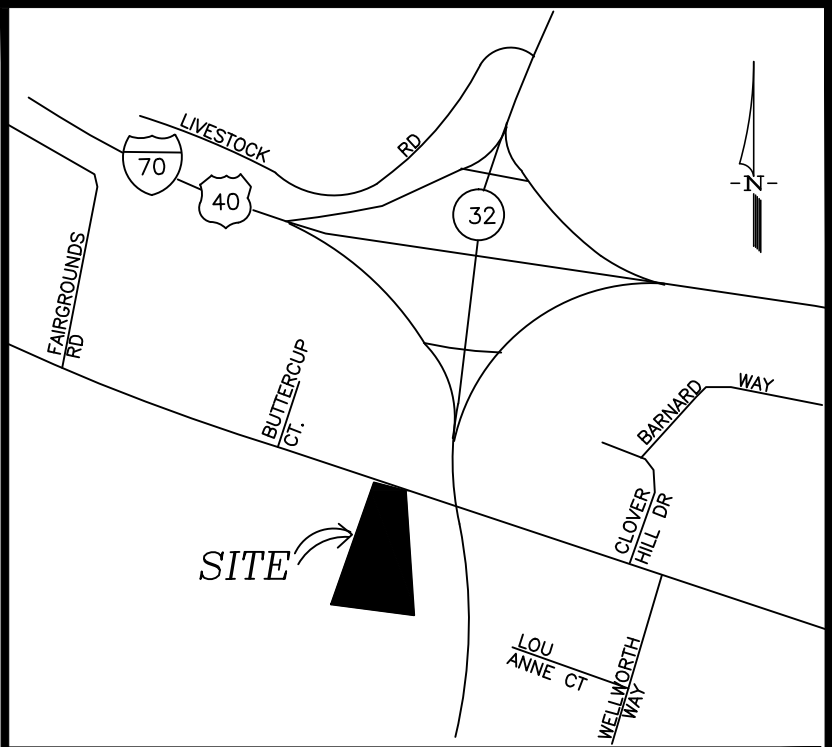


GENERAL NOTES:

- This area designates a private sewage area of at least 10,000 square feet as required by the Maryland State Department of the Environment for individual sewage disposal improvements of any nature in this area are restricted until public sewage is available. This area shall become null and void upon connection to a public sewage system. The county Health Officer shall have the authority to grant adjustments to the private sewage area. Recordation of a modified sewage area shall not be necessary.
- The lot shown hereon complies with the minimum ownership, width, and lot area as required by the Maryland State Department of the Environment.
- Existing wells, septic systems, and sewage disposal areas within 100' of the property and those wells within 200' down gradient of existing or proposed septic systems or sewage disposal areas have been shown.
- All wells shall be drilled prior to building permit approval. It is the developer's responsibility to schedule the well drilling prior to building permit submission. It will not be considered "government delay" if the well drilling holds up Health Department approval of the building permit.
- Topography shown is at two-foot contour intervals (one-foot intervals are required for mound systems and systems with pipe depth less than two feet) and has been field verified or field run.
- Any changes to a private sewage area shall require a revised perc. certification plan.
- The topography hereon was field run May, 2011 and represents two-foot contour intervals.
- The topography of this plat is taken from a field run survey and is verified to accurately represent the relative changes on the subject property.
- This plan is for the approval of a system handling 4,900gpd equating to 49 beds. If additional beds or capacity is needed beyond 4,999gpd an MDE permit will need to be applied.
- A Low-Pressure Dose Distribution system is proposed for this site.

CALCULATIONS

Assisted Living = 100 gallons /day/bed
 49 Beds = 4,900 gallons/day
 Trench Width = 2 ft
 Trench Spacing = 8 ft
 Application Rate = 0.8 gpd/ft²
 sf of Trench required = 4,900 gpd / 0.8gpd/ft² = 6,125 ft²
 Length of Trench = 6,125 ft² / 2 ft = 3,062.5 ft
 Effective Depth of Gravel Below Pipe = 36 inches
 Trench Width Percentage = 0.44
 Length of Trench (depth adjustment) = 3,062.5 ft x 0.44 = 1,347.5 ft
 Peak Flow = 4,900 gpd
 Septic Tank Capacity Req. = 4,900 gpd x 0.75 + 1,125 gallons = 4,800 gallons
 Septic Tank Capacity Prov. = 5,000 gallons (1 - 3,000 gallon tank & 1 - 2,000 gallon tank in series)
 Pump Chamber
 Use 7.5 gal/cu ft - 4,900 gallons = 654 ft³
 Volume for Pump = 4 ft³
 Volume for 6"x24"x24" block = 2 ft³
 Dosing Volume = 5x lateral length + manifold volume + force main volume
 Manifold Volume = 100 ft (pipe length) x 0.02319 ft (pipe area - 2" pipe) x 7.5gal/cu ft = 17.4 gallons
 Lateral Length Volume = 1,347.5 ft (pipe length) x 0.02319 ft (pipe area - 2" pipe) x 7.5 x 5 = 1,172 gallons
 Force Main Volume = 280 ft (pipe length) x 0.02319 ft (pipe area - 2" pipe) x 7.5gal/cu ft = 48.7 gallons
 Dosing Volume = 1,172 gallons + 17.4 gallons + 48.7 gallons = 1,238.1 gallons
 Total Volume Needed = 653.3 ft³ (one day storage) + 165 ft³ (dosing storage) = 819 ft³
 20 ft Long x 7 ft Wide x 6 ft Deep = 840 ft³
 Add 1 ft in the depth (6" block and 6" for pump) = 20 ft x 7 ft x 7 ft = 980 ft³



VICINITY MAP
 SCALE 1"=2000'
 HOWARD CO. MAP PAGE 4813 GRID G-2
 TAX MAP 15 GRID 11

LEGEND

- W WELL
- EX. POWER POLE
- ⊗ FAILED PERC. TEST
- HOLD PERC. TEST
- ⊕ PASSED PERC. TEST
- - - EX. CONTOUR
- [] SEPTIC RESERVE AREA W/PROP. LATERALS
- [] STEEP SLOPES ≥25%
- - - PROPERTY LINE
- ~ EX. TREE LINE

SOILS

GmB - Glenville silt loam, 3 to 8 percent slopes
 GnB - Glenville Baile silt loams, 0 to 8 percent slopes
 MaC - Manor loam, 8 to 15 percent slopes
 MaD - Manor loam, 15 to 25 percent slopes
 Ha - Hatboro-Codorus silt loams, 0 to 3 percent slopes

TYPE OF DEVELOPMENT

ASSISTED LIVING FACILITY

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.: 22538
 Expiration Date: 11-24-13

I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.



APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEMS

HEALTH OFFICER, HOWARD COUNTY HEALTH DEPT. DATE

OWNER / DEVELOPER:
 ETB Enterprises LLC
 8820 Columbia 110 PKWY
 Suite 400
 Columbia, MD. 21045
 (410) 884-1960
 mjkalinock@jpb.com

ENGINEER:
 CMS Associates LLC
 4925 Ellis Lane
 Ellicott City, Maryland 21043
 (410) 988-2436 Contact: Geoffrey Ciniero
 gciniero@cms-engineering.net

CMS Associates LLC

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 Ellicott City, Maryland 21043
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 www.cms-engineering.net

PLANNING
 ENGINEERING
 SITE ANALYSIS
 PROJECT MANAGEMENT

12745 FREDERICK ROAD
 FINAL PERCOLATION CERTIFICATION PLAN



PLAN NO.:
 SCALE: 1"=50'
 DATE: 3/20/12
 SHEET 1 OF 1
 FILE NO: 10-014