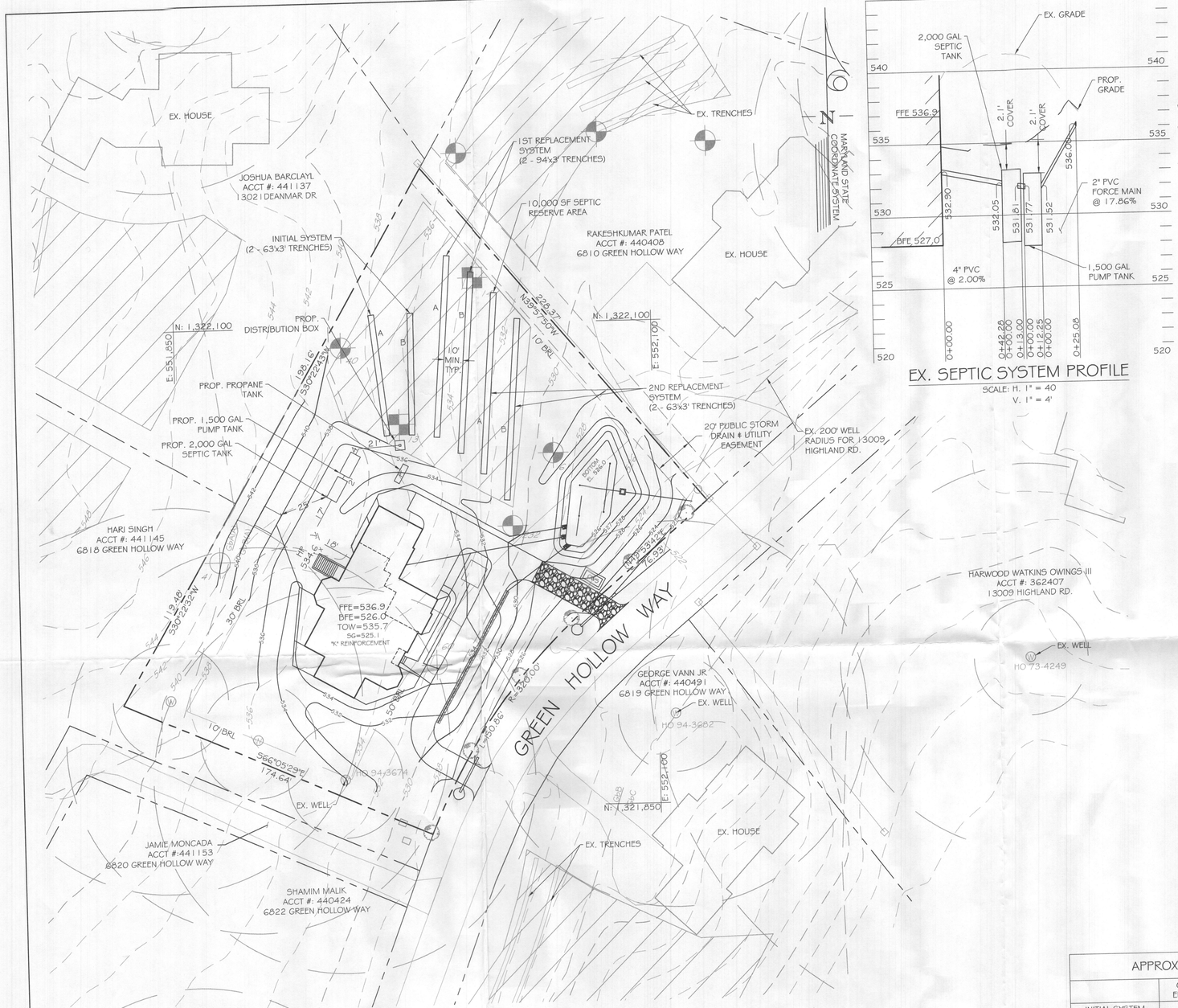


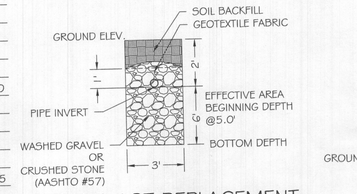

## PLAN VIEW

SCALE: 1" = 30'



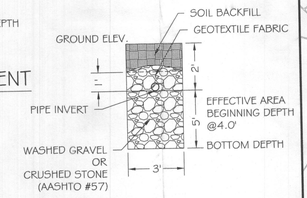

## EX. SEPTIC SYSTEM PROFILE

SCALE: H. 1" = 40
V. 1" = 4'



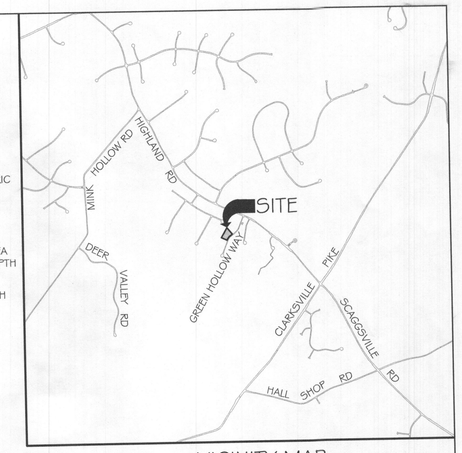

## INITIAL & 1ST REPLACEMENT TRENCH DETAIL

N.T.S.




## 2ND REPLACEMENT TRENCH DETAIL

N.T.S.




## VICINITY MAP

SCALE: 1" = 2000'

GENERAL NOTES:

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
10. THE WELL (TAG# 94-3674) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
11. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
12. EXISTING SYSTEM LOCATION HAVE BEEN OBTAINED FROM THE HEALTH DEPARTMENT AND THE PROPERTY OWNER.
13. THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENT OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE 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 ARE SHALL NOT BE NECESSARY.
14. 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.
15. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
16. THE LOT SHOWN HEREIN COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
17. A PROFESSIONAL SURVEYOR OR ENGINEER MUST MARK THE PROPERTY LINE WHEN THE TRENCHES ARE BEING INSTALLED IN AREAS WHERE THE PROPERTY LINE SETBACK HAS BEEN REDUCED.

Approved Septic System Plan
Howard County Health Department
Signature — Date 7/14/2025

| PERC RESULTS (10/05/1999 - 06/10/2002) | |
|---|---|
| TEST # | TIME FOR 1" DROP (MINUTES) |
| 13 | 3.5 |
| 14 | 13 |
| 40 | 3 |
| 61 | VISUAL-PASSED |
| AVG. | 6.5 |

## LEGEND

- 759 — EXISTING MINOR CONTOUR (2' INTERVAL)
- 760 — EXISTING MAJOR CONTOUR (10' INTERVAL)
- ADJACENT PROPERTY LINE
- 307.90' N22°37'18"W — EXISTING PROPERTY BOUNDARY
- EXISTING ROAD / EDGE OF PAVING
- EXISTING ROAD CENTERLINE
- 761 — PROPOSED MINOR CONTOUR (2' INTERVAL)
- 760 — PROPOSED MAJOR CONTOUR (10' INTERVAL)
- EXISTING BUILDING
- PROPOSED BUILDING
- 765.0 x — PROPOSED SPOT ELEVATION
- LOD — LOD — LIMIT OF DISTURBANCE
- SF — SF — PROPOSED SILT FENCE
- BrC GdB — SOIL DELINEATION LINE
- PERCOLATION TEST HOLE

| RELATIVE DEPTHS | | | |
|---|---|---|---|
| | PIPE INVERT (FT) | EFFECTIVE AREA BEGINNING (FT) | MAXIMUM TRENCH BOTTOM (FT) |
| INITIAL SYSTEM TRENCHES | 2.0 | 5.0 | 8.0 |
| 1ST REPLACEMENT TRENCHES | 2.0 | 5.0 | 8.0 |
| 2ND REPLACEMENT TRENCHES | 2.0 | 4.0 | 7.0 |

| APPROXIMATE ELEVATIONS | | | |
|---|---|---|---|
| | GROUND ELEVATION | INVERT ELEVATION | BOTTOM ELEVATION |
| INITIAL SYSTEM TRENCH A | 537.8 | 535.8 | 529.2 |
| INITIAL SYSTEM TRENCH B | 536.2 | 534.2 | 529.2 |
| 1ST REPLACEMENT TRENCH A | 534.5 | 532.5 | 525.8 |
| 1ST REPLACEMENT TRENCH B | 533.8 | 531.8 | 525.8 |
| 2ND REPLACEMENT TRENCH A | 532.4 | 530.4 | 523.3 |
| 2ND REPLACEMENT TRENCH B | 531.3 | 529.3 | 523.3 |

TRENCH LENGTH AND SPACING CALCULATIONS

TRENCH DESIGN (6 BDRM X 150 GPD/BDRM = 900 GPD)

INITIAL SYSTEM
900 GPD / 1.2 GPD/SF (APP. RATE) = 750 SF
USE 3' WIDE TRENCH W/ 42" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 5' - 8'
750 SF / 3' WIDTH = 250 LF x 0.50 = 125 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

1ST REPLACEMENT SYSTEM
900 GPD / 0.8 GPD/SF (APP. RATE) = 1125 SF
USE 3' WIDE TRENCH W/ 36" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 5' - 8'
1125 SF / 3' WIDTH = 375 LF x 0.500 = 188 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

2ND REPLACEMENT SYSTEM
900 GPD / 0.8 GPD/SF (APP. RATE) = 1125 SF
USE 3' WIDE TRENCH W/ 36" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 4' - 7'
1125 SF / 3' WIDTH = 375 LF X 0.500 = 188 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

2 - 63' LONG TRENCHES FOR INITIAL SYSTEM
2 - 94' LONG TRENCHES FOR 1ST REPLACEMENT SYSTEM
2 - 94' LONG TRENCHES FOR 2ND REPLACEMENT SYSTEM


OWNER:
RAKHEE BATRA & SANJEEV KUMAR
11288 TERRACE LANE
FULTON, MD 20759
(202) 878-0303

DEVELOPER:
KEYSTONE CUSTOM HOMES
GREG REINSMITH
227 GRANITE RUN DR, SUITE 100,
LANCASTER, PA 17601
(717) 464-9060 EXT. 1108

DESIGNER:
KCI TECHNOLOGIES INC.
FRANK WHITE
936 RIDGEBROOK RD,
SPARKS, MD 21152
(410) 316-0803


PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREIN IS BASED ON FIELD WORK PREFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF. LICENSE NO. 28935 EXPIRATION DATE: 1/15/2025

STATE OF MARYLAND — MATTHEW W. SHEAR — No. 28935 — PROFESSIONAL ENGINEER

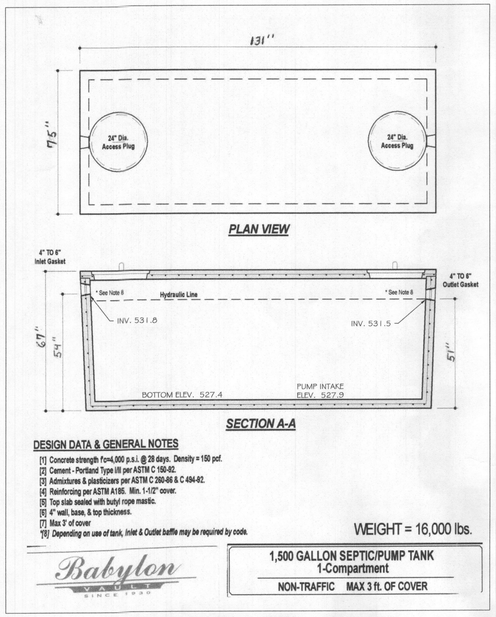

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818


| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

DATE 06/29/2023
SCALE AS SHOWN
DESIGNED BY FFW
DRAWN BY JDL

# BATRA & KUMAR PROPERTY
# ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
6816 GREEN HOLLOW WAY
HIGHLAND, MD 20777

DRAWING NO. ZhoGH2
SHEET 1 OF 2
KCI JOB NUMBER 271803754.119




**DESIGN DATA & GENERAL NOTES**

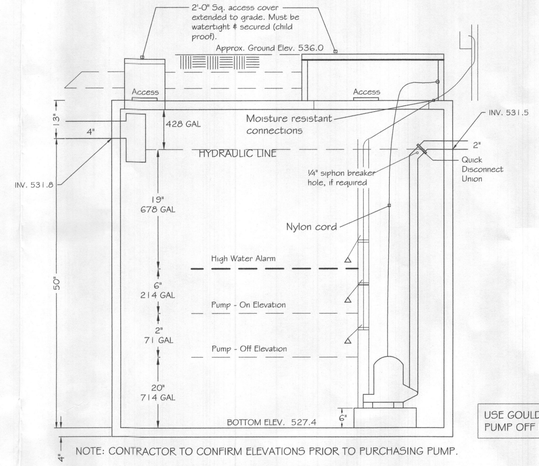
[1] Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf.
[2] Cement - Portland Type III per ASTM C 150-92.
[3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
[4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, base, & top thickness.
[7] Max 3' of cover
[8] *Depending on use of tank, Inlet & Outlet baffle may be required by code.*

**WEIGHT = 16,000 lbs.**

Babylon Vault Co. Since 1930

**1,500 GALLON SEPTIC/PUMP TANK**
**1-Compartment**
**NON-TRAFFIC MAX 3 ft. OF COVER**

SEE TYPICAL PUMP CHAMBER DETAIL FOR PUMP FLOAT ELEVATION INFORMATION.



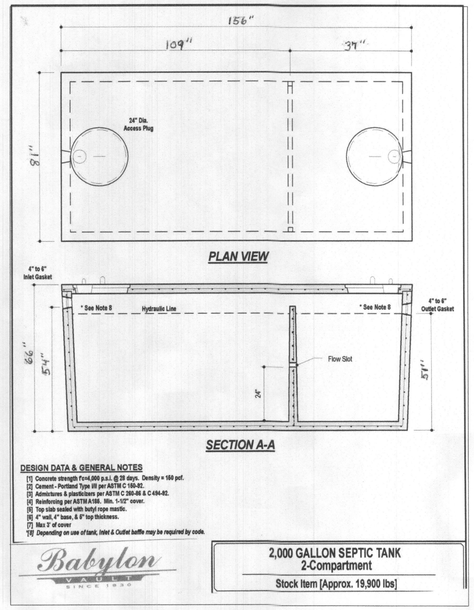

USE GOULDS WE03L PUMP OR EQUIVALENT
PUMP OFF ELEVATION 529.1

NOTE: CONTRACTOR TO CONFIRM ELEVATIONS PRIOR TO PURCHASING PUMP.

123" x 67" INSIDE DIMENSIONS
PUMP TANK VOLUME 1500 GAL

TYPICAL PUMP CHAMBER DETAIL

N.T.S.

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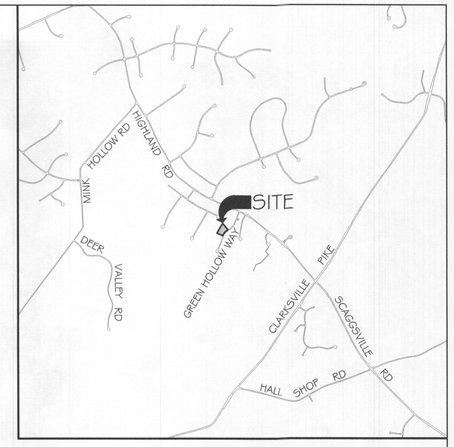
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, 4" base, & 6" top thickness.
[7] Max 3' of cover
[8] *Depending on use of tank, Inlet & Outlet baffle may be required by code.*

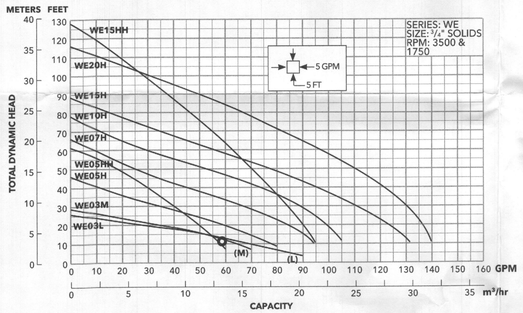
Babylon Vault Co. Since 1930

**2,000 GALLON SEPTIC TANK**
**2-Compartment**
**Stock Item [Approx. 19,900 lbs]**




VICINITY MAP

SCALE: 1" = 2000'




PUMP REQUIREMENT:
WE03L - (1/3 HP)

DESIGN CALCULATIONS:

DESIGN HEAD

| FRICTION LOSS: | | | 2" | EQUIV. LENGTH |
|---|---|---|---|---|
| | CONNECTIONS | | | |
| | (1) | 90 DEGREE BEND | (5.55) | 5.55 |
| | (1) | DISCONNECT | (1.35) | 1.35 |
| | (1) | STD. TEE | (11.10) | 11.10 |
| | (1) | 45 DEGREE BENDS | (2.58) | 2.58 |
| | (0) | COUPLINGS | (1.35) | 0.00 |
| | | | TOTAL | 20.58 |

25.08 (ACTUAL) + 20.58 (EQUIV.) = 45.66 (TOTAL)

FOR 2" PIPE @ 58.66 GPM; C=150 (FOR PVC PIPE)

FRICTION LOSS PER 100' = 0.2083*(100/150)^1.85*(58.66^1.85/2^4.8655)

45.66 X 6.3/100 = 2.88' FRICTION HEAD LOSS

| | | |
|---|---|---|
| | 2.88' | FRICTION |
| TOTAL HEAD: | 4.48' | ELEVATION |
| | 3.00' | MAINTAINED |
| | 10.36 | TOTAL |

FORCE MAIN VOLUMN

VOLUMN OF FORCE MAIN = (25.08/100) x 17.42 = 4 GALLONS

OWNER:
RAKHEE BATRA & SANJEEV KUMAR
11288 TERRACE LANE
FULTON, MD 20759
(202) 878-0303

DEVELOPER:
KEYSTONE CUSTOM HOMES
GREGG REINSMITH
227 GRANITE RUN DR, SUITE 100,
LANCASTER, PA 17601
(717) 464-9060 EXT. 1108

DESIGNER:
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STATE OF MARYLAND — THEODORE SHEPARD SCHEL — 28935 — PROFESSIONAL ENGINEER

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ENGINEERS
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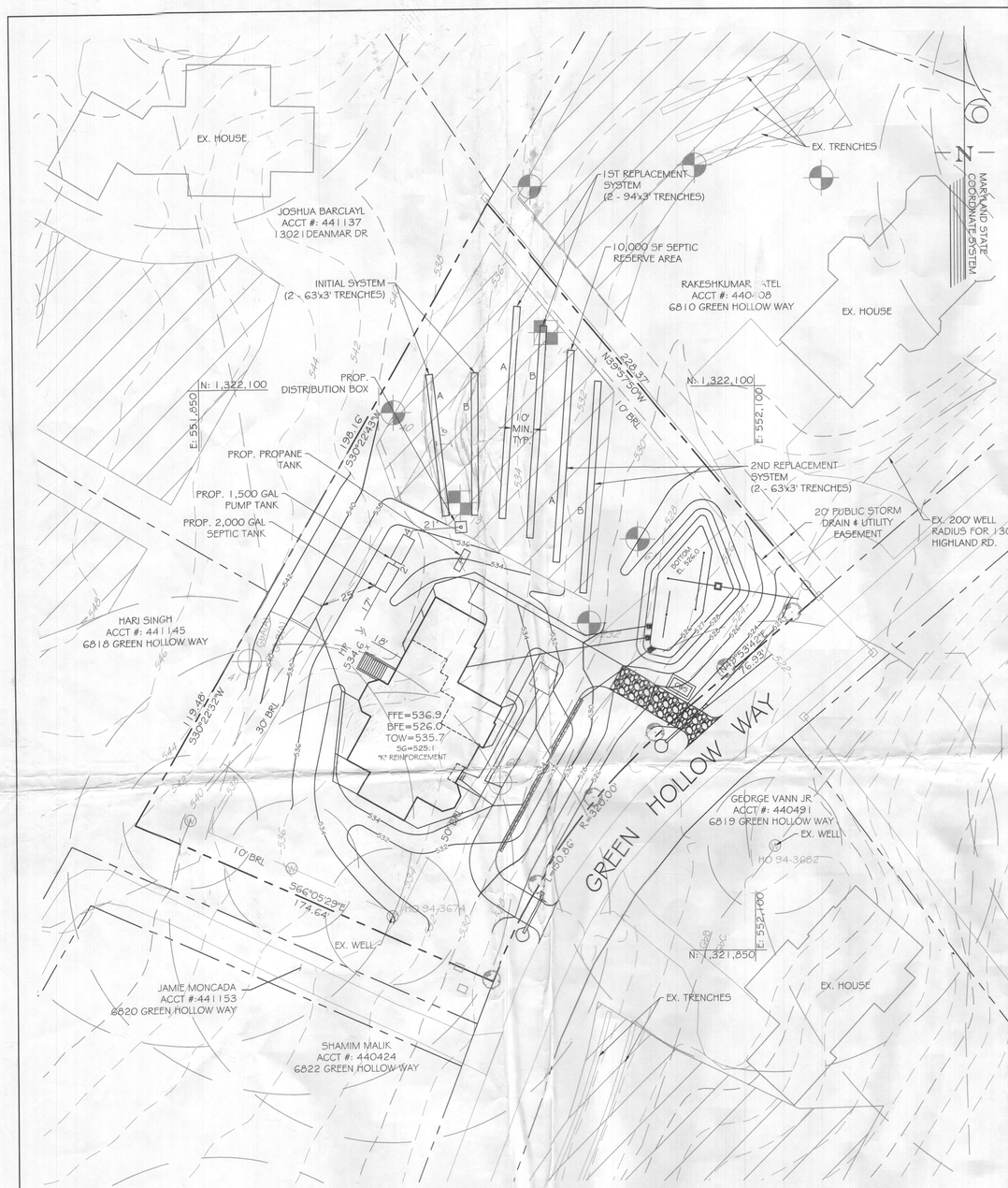
CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

DATE 06/29/2013
SCALE AS SHOWN
DESIGNED BY FFW
DRAWN BY JDL

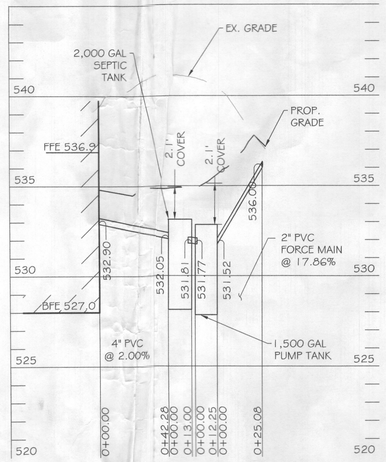
BATRA & KUMAR PROPERTY
ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
6816 GREEN HOLLOW WAY
HIGHLAND, MD 20777

DRAWING NO. ZhoGH2
SHEET 2 OF 2
KCI JOB NUMBER 271803754.119



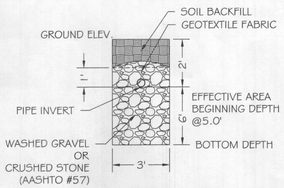

## PLAN VIEW

SCALE: 1" = 30'



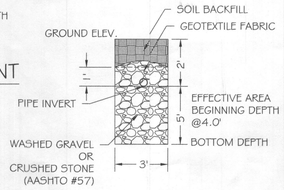

## EX. SEPTIC SYSTEM PROFILE

SCALE: H. 1" = 40
V. 1" = 4'



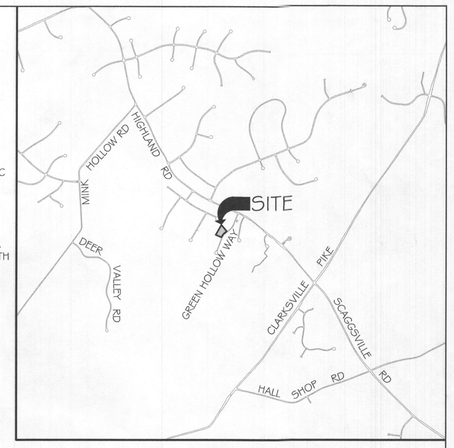

## INITIAL & 1ST REPLACEMENT TRENCH DETAIL

N.T.S.




## 2ND REPLACEMENT TRENCH DETAIL

N.T.S.

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Approved Septic System Plan
Howard County Health Department
Signature Date 7/14/2023

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| 765.0 x | PROPOSED SPOT ELEVATION |
| LOD LOD | LIMIT OF DISTURBANCE |
| SF SF | PROPOSED SILT FENCE |
| BrC GdB | SOIL DELINEATION LINE |
| | PERCOLATION TEST HOLE |

## RELATIVE DEPTHS

| | PIPE INVERT (FT) | EFFECTIVE AREA BEGINNING (FT) | MAXIMUM TRENCH BOTTOM (FT) |
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| INITIAL SYSTEM TRENCHES | 2.0 | 5.0 | 8.0 |
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## APPROXIMATE ELEVATIONS

| | GROUND ELEVATION | INVERT ELEVATION | BOTTOM ELEVATION |
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STATE OF MARYLAND
FRANK WHITE
No. 28935
PROFESSIONAL ENGINEER


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| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

DATE 06/29/2023
SCALE AS SHOWN
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# BATRA & KUMAR PROPERTY
# ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
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DRAWING NO. ZhoGH2
SHEET 1 OF 2
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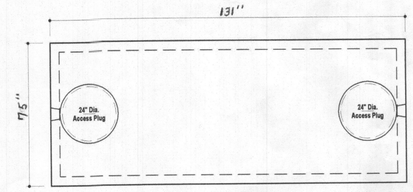
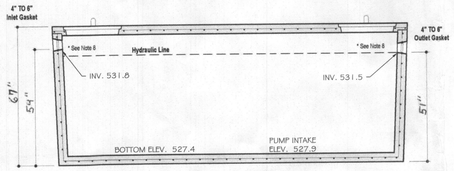



**PLAN VIEW**




**SECTION A-A**

**DESIGN DATA & GENERAL NOTES**

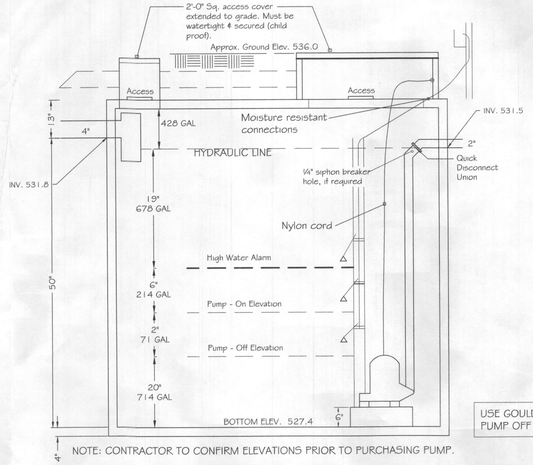
[1] Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf.
[2] Cement - Portland Type III per ASTM C 150-92.
[3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
[4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, base, & top thickness.
[7] Max 3' of cover
[7a] *Depending on use of tank, Inlet & Outlet baffle may be required by code.*

**WEIGHT = 16,000 lbs.**

Babylon VALVE SINCE 1890

**1,500 GALLON SEPTIC/PUMP TANK**
**1-Compartment**
**NON-TRAFFIC MAX 3 ft. OF COVER**

SEE TYPICAL PUMP CHAMBER DETAIL FOR PUMP FLOAT ELEVATION INFORMATION.



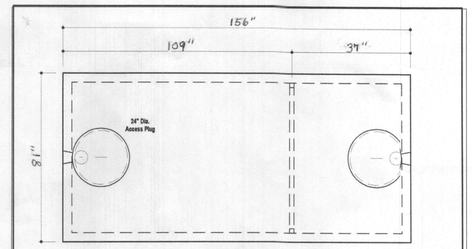

USE GOULDS WE03L PUMP OR EQUIVALENT
PUMP OFF ELEVATION 529.1

NOTE: CONTRACTOR TO CONFIRM ELEVATIONS PRIOR TO PURCHASING PUMP.

123" x 67" INSIDE DIMENSIONS
PUMP TANK VOLUME 1500 GAL

TYPICAL PUMP CHAMBER DETAIL

N.T.S.

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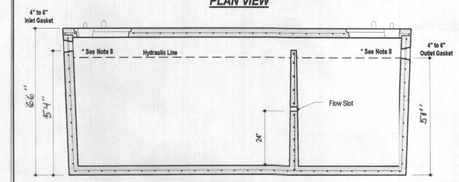


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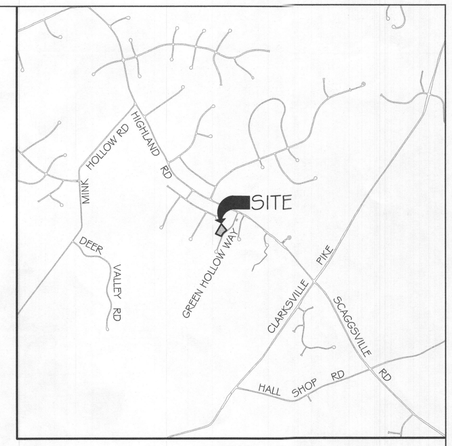
[7a] *Depending on use of tank, Inlet & Outlet baffle may be required by code.*

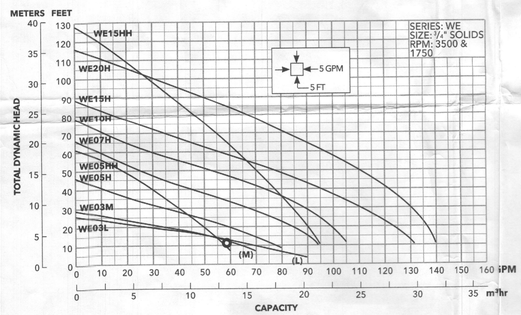
Babylon VALVE SINCE 1890

**2,000 GALLON SEPTIC TANK**
**2-Compartment**
**Stock Item [Approx. 19,900 lbs]**




VICINITY MAP

SCALE: 1" = 2000'




PUMP REQUIREMENT:
WE03L - (1/3 HP)

DESIGN CALCULATIONS:

DESIGN HEAD

| FRICTION LOSS: | CONNECTIONS | 2" | EQUIV. LENGTH |
|---|---|---|---|
| | (1) 90 DEGREE BEND | (5.55) | 5.55 |
| | (1) DISCONNECT | (1.35) | 1.35 |
| | (1) STD. TEE | (11.10) | 11.10 |
| | (1) 45 DEGREE BENDS | (2.58) | 2.58 |
| | (0) COUPLINGS | (1.35) | 0.00 |
| | | TOTAL | 20.58 |

25.08 (ACTUAL) + 20.58 (EQUIV.) = 45.66 (TOTAL)
FOR 2" PIPE @ 58.66 GPM; C=150 (FOR PVC PIPE)
FRICTION LOSS PER 100' = 0.2083*(100/150)^1.85*(58.66^1.85/2^4.8655)
45.66 X 6.3/100 = 2.88' FRICTION HEAD LOSS

| | | |
|---|---|---|
| | 2.88' | FRICTION |
| TOTAL HEAD: | 4.48' | ELEVATION |
| | 3.00' | MAINTAINED |
| | 10.36 | TOTAL |

FORCE MAIN VOLUMN
VOLUMN OF FORCE MAIN = (25.08/100) x 17.42 = 4 GALLONS

OWNER:
RAKHEE BATRA & SANJEEV KUMAR
11288 TERRACE LANE
FULTON, MD 20759
(202) 878-0303

DEVELOPER:
KEYSTONE CUSTOM HOMES
GREGG REINSMITH
227 GRANITE RUN DR, SUITE 100,
LANCASTER, PA 17601
(717) 464-9060 EXT. 1108

DESIGNER:
KCI TECHNOLOGIES INC.
FRANK WHITE
936 RIDGEBROOK RD.
SPARKS, MD 21152
(410) 316-0803

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STATE OF MARYLAND · MATTHEW SHERK · 28935 · PROFESSIONAL ENGINEER

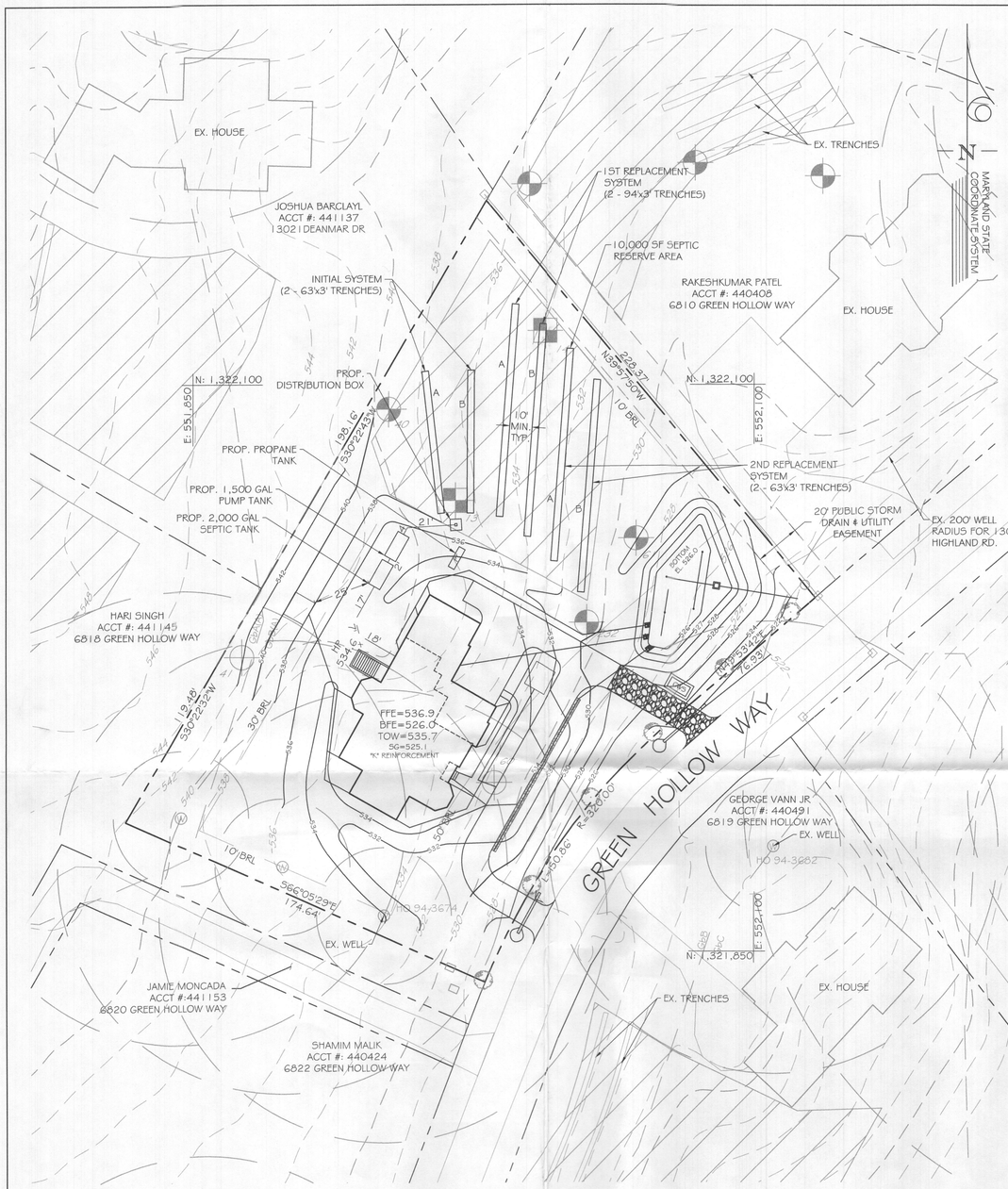
KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

DATE 06/29/2023
SCALE AS SHOWN
DESIGNED BY FFW
DRAWN BY JDL

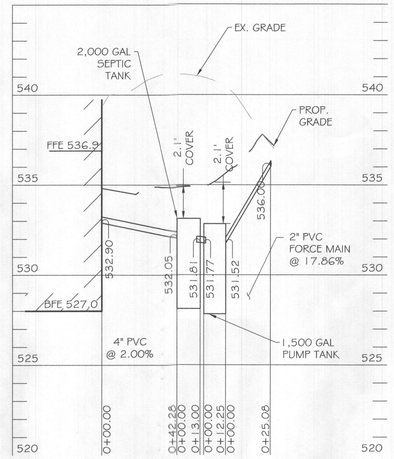
BATRA & KUMAR PROPERTY
ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
6816 GREEN HOLLOW WAY
HIGHLAND, MD 20777

DRAWING NO. ZhoGH2
SHEET 2 OF 2
KCI JOB NUMBER 271803754.119



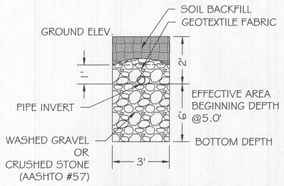

## PLAN VIEW

SCALE: 1" = 30'



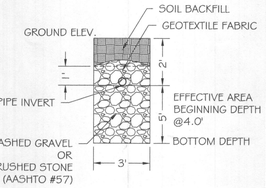

## EX. SEPTIC SYSTEM PROFILE

SCALE: H. 1" = 40
V. 1" = 4'



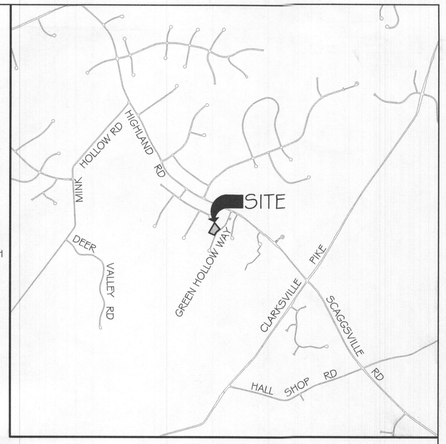

## INITIAL & 1ST REPLACEMENT TRENCH DETAIL

N.T.S.




## 2ND REPLACEMENT TRENCH DETAIL

N.T.S.




## VICINITY MAP

SCALE: 1" = 2000'

GENERAL NOTES:

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
10. THE WELL (TAG# 94-3674) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
11. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
12. EXISTING SYSTEM LOCATION HAVE BEEN OBTAINED FROM THE HEALTH DEPARTMENT AND THE PROPERTY OWNER.
13. THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENT OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE 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 ARE SHALL NOT BE NECESSARY.
14. 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.
15. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
16. THE LOT SHOWN HEREIN COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
17. A PROFESSIONAL SURVEYOR OR ENGINEER MUST MARK THE PROPERTY LINE WHEN THE TRENCHES ARE BEING INSTALLED IN AREAS WHERE THE PROPERTY LINE SETBACK HAS BEEN REDUCED.

Approved Septic System Plan
Howard County Health Department
Signature 7/14/2023 Date

| PERC RESULTS (11/05/1999 - 06/10/2002) | |
|---|---|
| TEST # | TIME FOR 1" DROP (MINUTES) |
| 13 | 3.5 |
| 14 | 13 |
| 40 | 3 |
| 61 | VISUAL-PASSED |
| AVG. | 6.5 |

## LEGEND

| | |
|---|---|
| 759 | EXISTING MINOR CONTOUR (2' INTERVAL) |
| 760 | EXISTING MAJOR CONTOUR (10' INTERVAL) |
| | ADJACENT PROPERTY LINE |
| 307.90' N22°37'18"W | EXISTING PROPERTY BOUNDARY |
| | EXISTING ROAD / EDGE OF PAVING |
| | EXISTING ROAD CENTERLINE |
| 761 | PROPOSED MINOR CONTOUR (2' INTERVAL) |
| 760 | PROPOSED MAJOR CONTOUR (10' INTERVAL) |
| | EXISTING BUILDING |
| | PROPOSED BUILDING |
| 765.0 x | PROPOSED SPOT ELEVATION |
| LOD LOD | LIMIT OF DISTURBANCE |
| SF SF | PROPOSED SILT FENCE |
| BrC GdB | SOIL DELINEATION LINE |
| | PERCOLATION TEST HOLE |

| RELATIVE DEPTHS | | | |
|---|---|---|---|
| | PIPE INVERT (FT) | EFFECTIVE AREA BEGINNING (FT) | MAXIMUM TRENCH BOTTOM (FT) |
| INITIAL SYSTEM TRENCHES | 2.0 | 5.0 | 8.0 |
| 1ST REPLACEMENT TRENCHES | 2.0 | 5.0 | 8.0 |
| 2ND REPLACEMENT TRENCHES | 2.0 | 4.0 | 7.0 |

| APPROXIMATE ELEVATIONS | | | |
|---|---|---|---|
| | GROUND ELEVATION | INVERT ELEVATION | BOTTOM ELEVATION |
| INITIAL SYSTEM TRENCH A | 537.8 | 535.8 | 529.2 |
| INITIAL SYSTEM TRENCH B | 536.2 | 534.2 | 529.2 |
| 1ST REPLACEMENT TRENCH A | 534.5 | 532.5 | 525.8 |
| 1ST REPLACEMENT TRENCH B | 533.8 | 531.8 | 525.8 |
| 2ND REPLACEMENT TRENCH A | 532.4 | 530.4 | 523.3 |
| 2ND REPLACEMENT TRENCH B | 531.3 | 529.3 | 523.3 |

TRENCH LENGTH AND SPACING CALCULATIONS

TRENCH DESIGN (6 BDRM X 150 GPD/BDRM = 900 GPD)

INITIAL SYSTEM
900 GPD / 1.2 GPD/SF (APP. RATE) = 750 SF
USE 3' WIDE TRENCH W/ 42" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 5' - 8'
750 SF / 3' WIDTH = 250 LF x 0.50 = 125 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

1ST REPLACEMENT SYSTEM
900 GPD / 0.8 GPD/SF (APP. RATE) = 1125 SF
USE 3' WIDE TRENCH W/ 36" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 5' - 8'
1125 SF / 3' WIDTH = 375 LF x 0.500 = 188 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

2ND REPLACEMENT SYSTEM
900 GPD / 0.8 GPD/SF (APP. RATE) = 1125 SF
USE 3' WIDE TRENCH W/ 36" OF GRAVEL BELOW PIPE, EFFECTIVE AREA 4' - 7'
1125 SF / 3' WIDTH = 375 LF X 0.500 = 188 LF MIN. TRENCH
10' MIN. SPACING BETWEEN TRENCH EDGES

2 - 63' LONG TRENCHES FOR INITIAL SYSTEM
2 - 94' LONG TRENCHES FOR 1ST REPLACEMENT SYSTEM
2 - 94' LONG TRENCHES FOR 2ND REPLACEMENT SYSTEM


OWNER:
RAKHEE BATRA & SANJEEV KUMAR
11288 TERRACE LANE
FULTON, MD 20759
(202) 878-0303

DEVELOPER:
KEYSTONE CUSTOM HOMES
GREG REINSMITH
227 GRANITE RUN DR, SUITE 100,
LANCASTER, PA 17601
(717) 464-9060 EXT. 1108

DESIGNER:
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STATE OF MARYLAND FRANK WHITE SHERK 28935 PROFESSIONAL ENGINEER


KCI TECHNOLOGIES
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CONSTRUCTION MANAGERS
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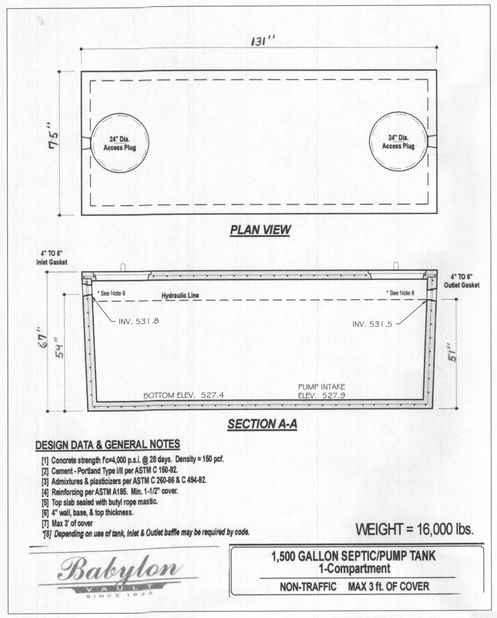
| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

DATE 06/29/2023
SCALE AS SHOWN
DESIGNED BY FFW
DRAWN BY JDL

# BATRA & KUMAR PROPERTY
# ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
# 6816 GREEN HOLLOW WAY
# HIGHLAND, MD 20777

DRAWING NO. ZhoGH2
SHEET 1 OF 2
KCI JOB NUMBER 271803754.119

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[5] Top slab sealed with butyl rope mastic.
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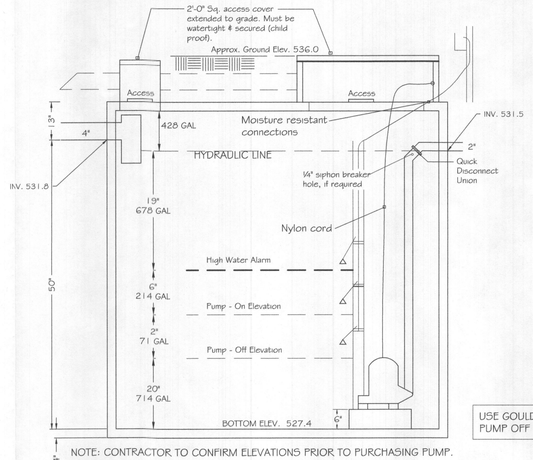
[7] Max 3' of cover
*[8] Depending on use of tank, Inlet & Outlet baffle may be required by code.*

WEIGHT = 16,000 lbs.

Babylon VAULT SINCE 1930

**1,500 GALLON SEPTIC/PUMP TANK**
**1-Compartment**
**NON-TRAFFIC MAX 3 ft. OF COVER**

SEE TYPICAL PUMP CHAMBER DETAIL FOR PUMP FLOAT ELEVATION INFORMATION.

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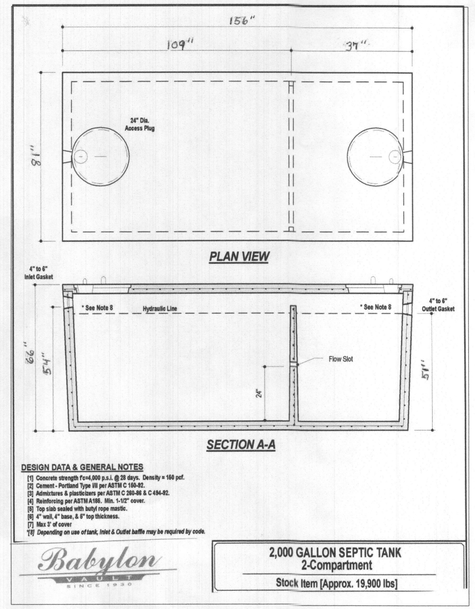


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**2-Compartment**
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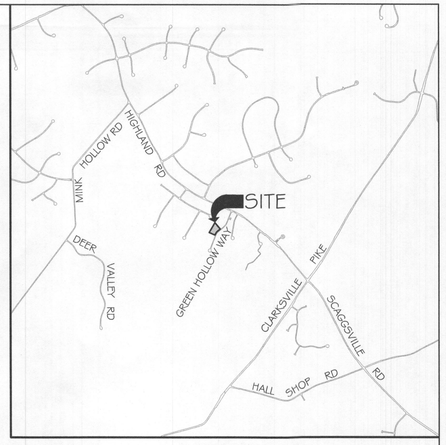


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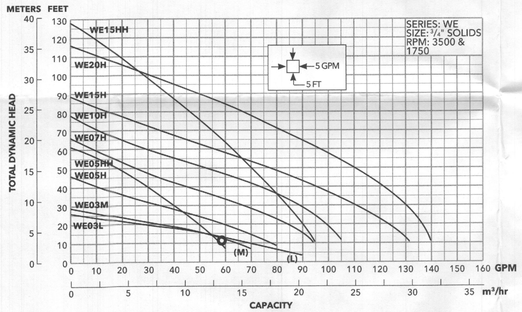


PUMP REQUIREMENT:
WE03L - (1/3 HP)

DESIGN CALCULATIONS:

DESIGN HEAD

| FRICTION LOSS: | | CONNECTIONS | 2" | EQUIV. LENGTH |
|---|---|---|---|---|
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| | | | TOTAL | 20.58 |

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45.66 X 6.3/100 = 2.88' FRICTION HEAD LOSS

TOTAL HEAD:
2.88' FRICTION
4.48' ELEVATION
3.00' MAINTAINED
10.36 TOTAL

FORCE MAIN VOLUMN
VOLUMN OF FORCE MAIN = (25.08/100) x 17.42 = 4 GALLONS

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STATE OF MARYLAND · THEODORE SHEAK · 28935 · PROFESSIONAL ENGINEER

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