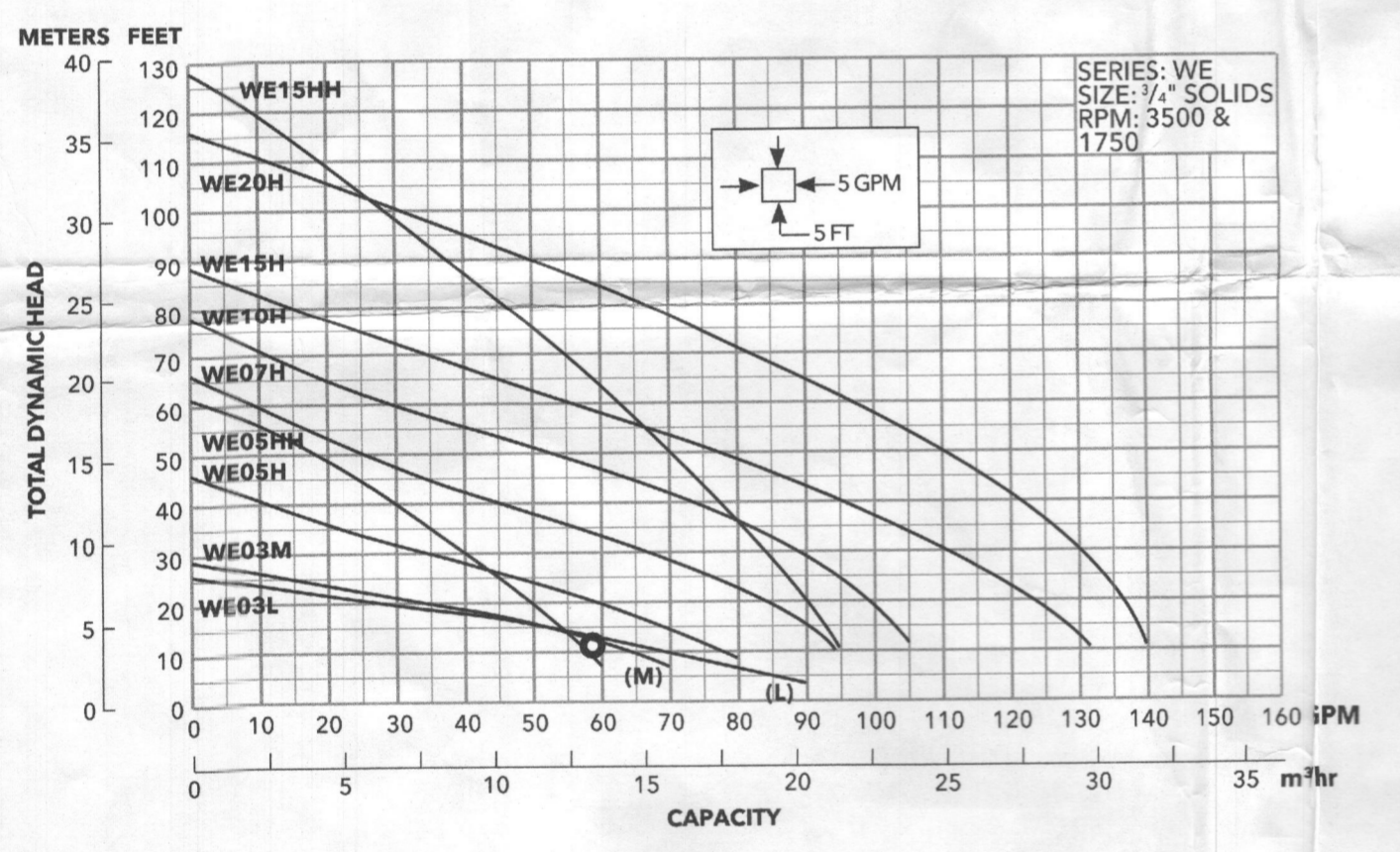
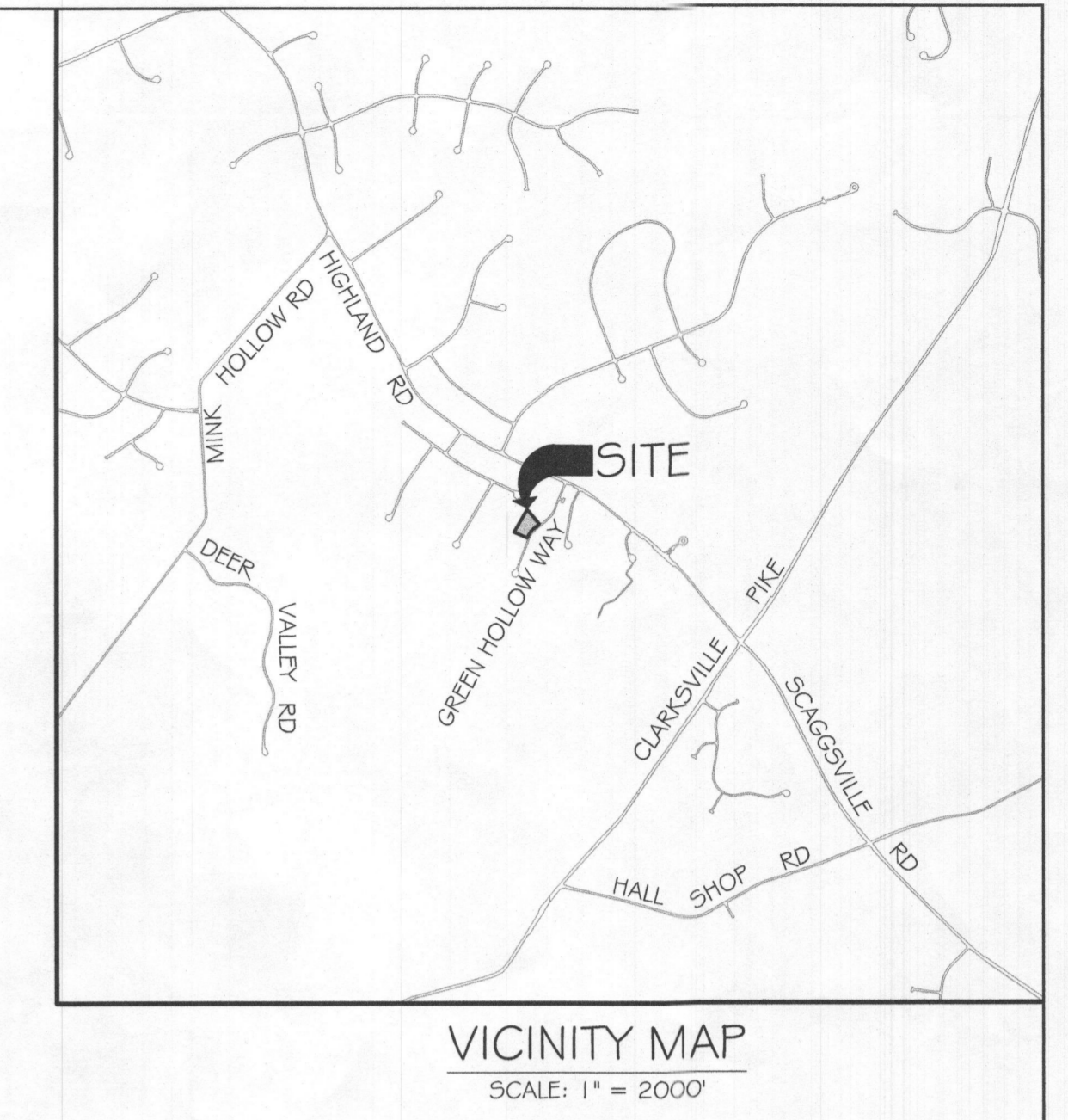
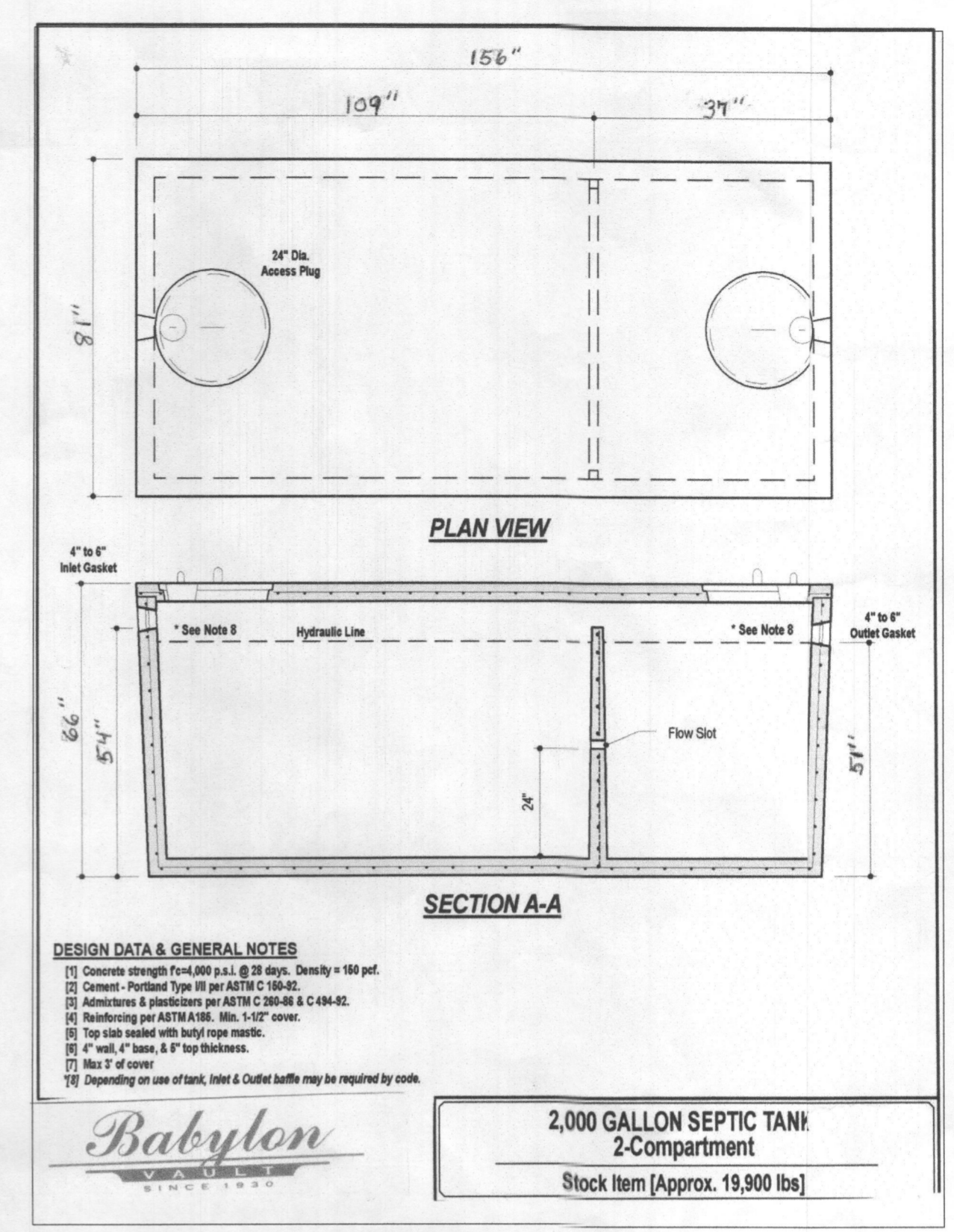


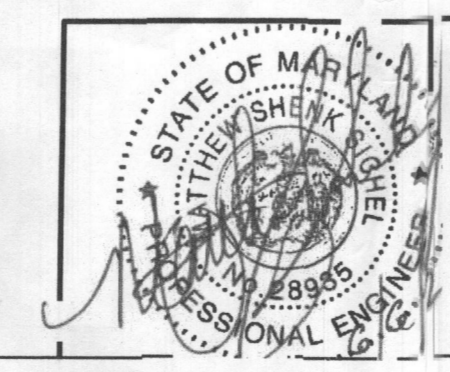
USE GOULDS WEO3L PUMP OR EQUIVALENT
PUMP OFF ELEVATION 529.1



DESIGN CALCULATIONS:

DESIGN HEAD		
FRICITION LOSS:	CONNECTIONS	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)		
FRICITION LOSS PER 100' = 0.2083*(100/150)*1.85*(58.66)^1.85/2^4.8655		
45.66 x 0.2083 = 2.98' 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		

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREIN IS BASED ON FIELD WORK PERFORMED 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



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

REVISIONS		DATE
NO.	DATE	DESCRIPTION

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

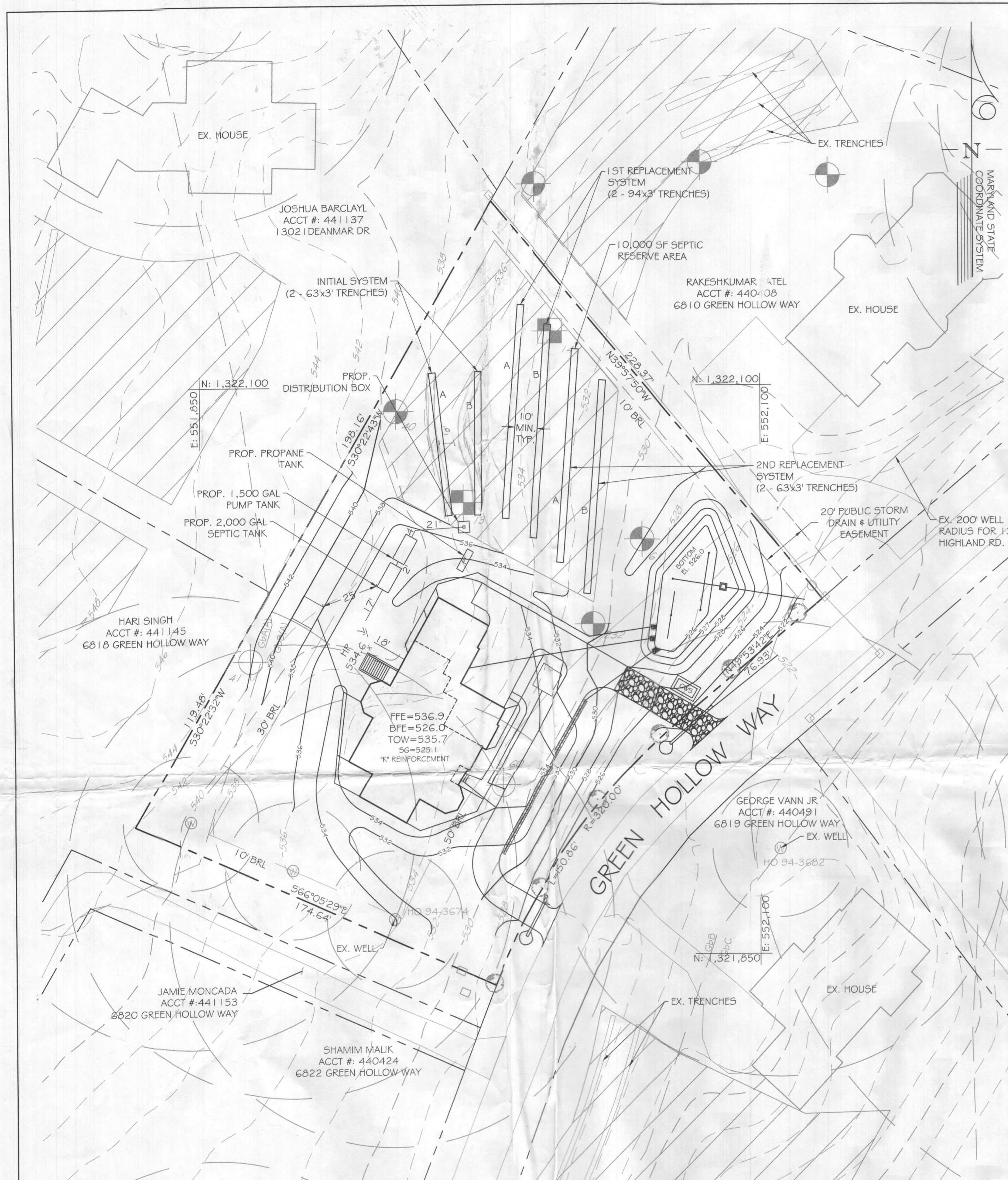
BATRA & KUMAR PROPERTY
ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
6816 GREEN HOLLOW WAY
HIGHLAND, MD 20777

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

OWNER:
RAKHIE BATRA & SANJEEV KUMAR
11208 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

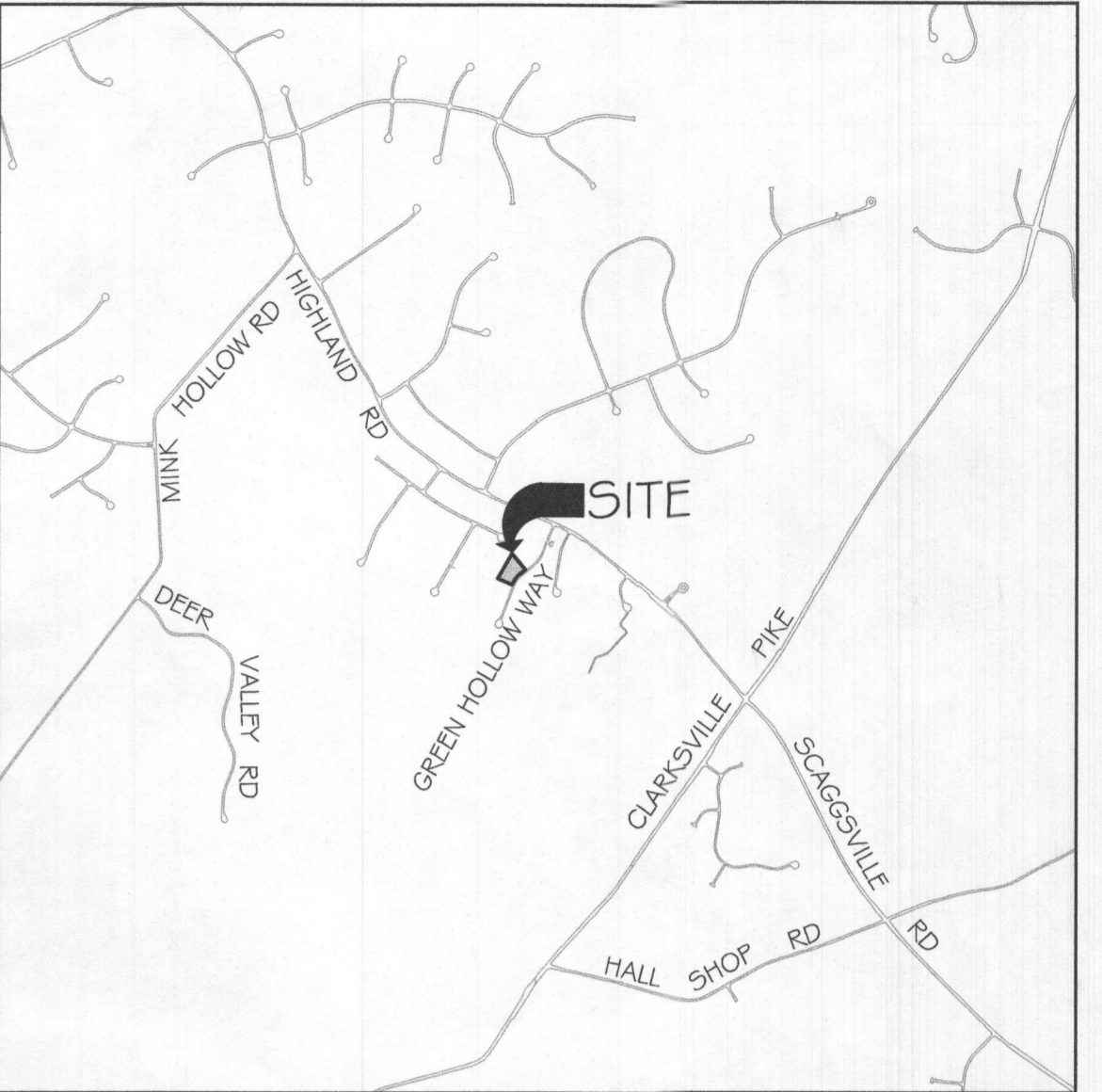
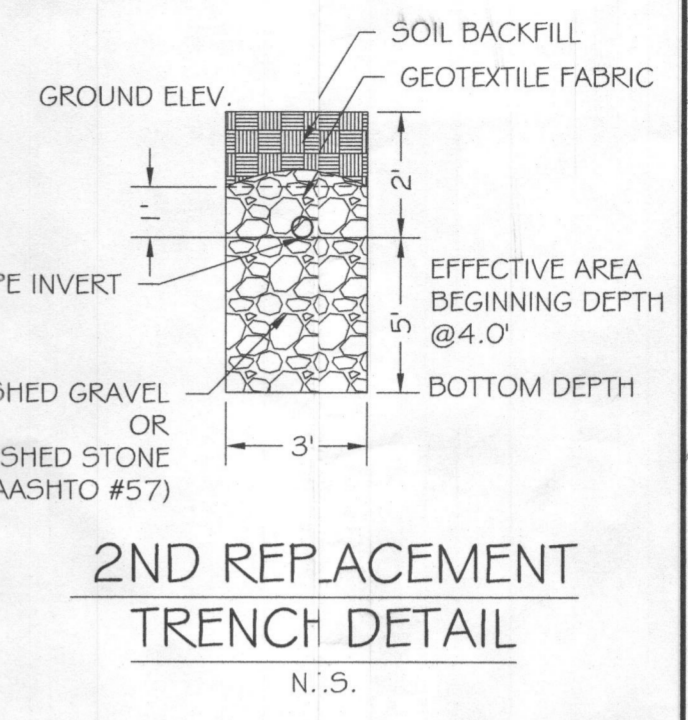
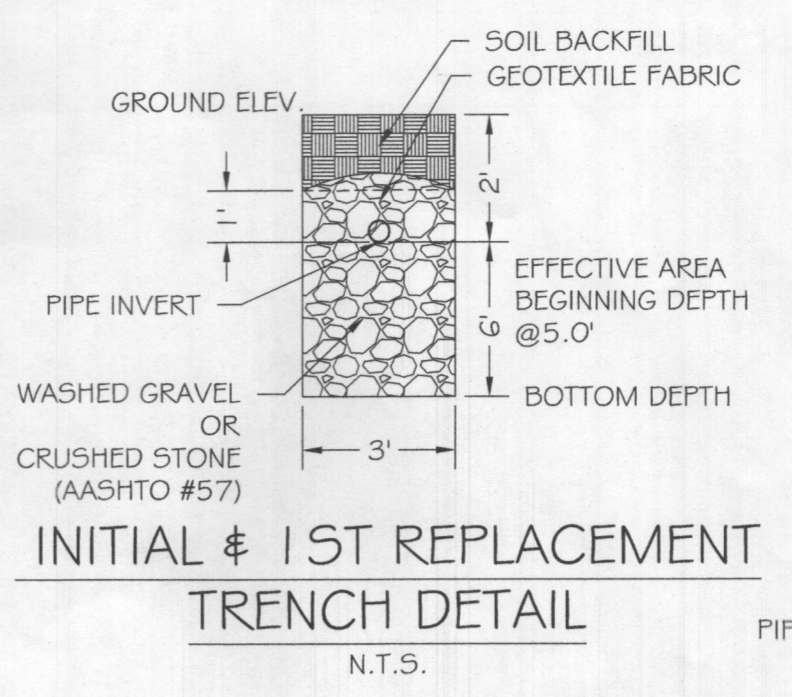
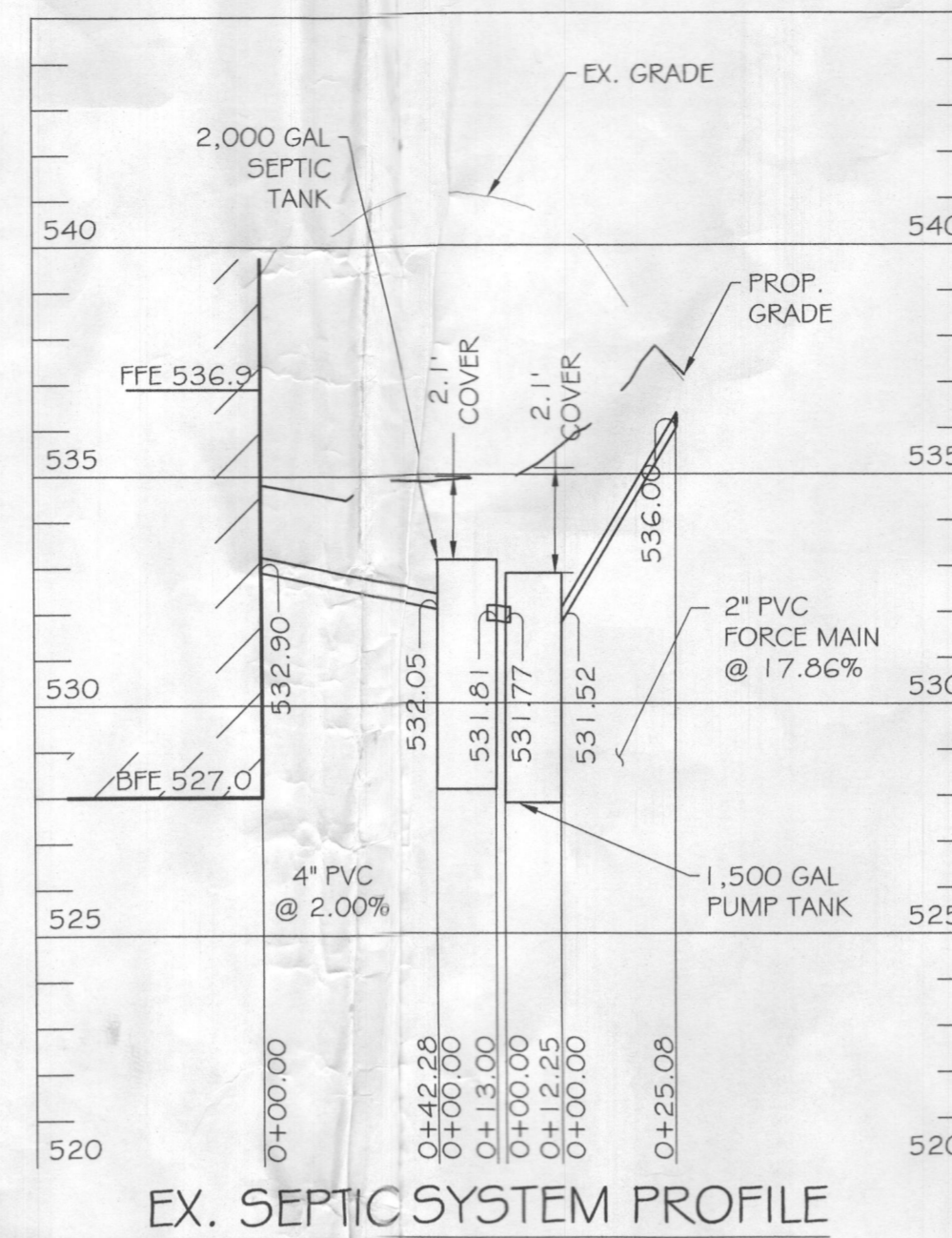
DESIGNER:
KCI TECHNOLOGIES INC.
FRANK WHITE
936 RIDGEBROOK RD.
SPARKS, MD 21152
(410) 316-0803



PLAN VIEW
SCALE: 1" = 30'

LEGEND

	EXISTING MINOR CONTOUR (2' INTERVAL)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
	ADJACENT PROPERTY LINE
	EXISTING PROPERTY BOUNDARY
	EXISTING ROAD / EDGE OF PAVING
	EXISTING ROAD CENTERLINE
	PROPOSED MINOR CONTOUR (2' INTERVAL)
	PROPOSED MAJOR CONTOUR (10' INTERVAL)
	EXISTING BUILDING
	PROPOSED BUILDING
	PROPOSED SPOT ELEVATION
	LIMIT OF DISTURBANCE
	PROPOSED SILT FENCE
	SOIL DELINEATION LINE
	PERCOLATION TEST HOLE



- GENERAL NOTES:**
- 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.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - THE WELL (TAG# 94-3674) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - 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.
 - EXISTING SYSTEM LOCATION HAVE BEEN OBTAINED FROM THE HEALTH DEPARTMENT AND THE PROPERTY OWNER.
 - 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 AREA SHALL NOT BE NECESSARY.
 - 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 PERCOLATION CERTIFICATION PLAN.
 - THE LOT SHOWN HEREIN COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - 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: *[Signature]* Date: 7/19/2025

PERC RESULTS (10/05/1999 - 06/10/2002)

TEST #	TIME FOR 1" DROP (MINUTES)
13	3.5
14	13
40	3
G1	VISUAL-PASSED
AVG.	6.5

TRENCH LENGTH AND SPACING CALCULATIONS
TRENCH DESIGN (6 BDRM : 150 GPD/BDRM = 900 GPD)

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

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

INITIAL SYSTEM
900 GPD / 1.2 GPD/AF (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/AF (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/AF (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 PERFORMED 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



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

REVISIONS		DATE
NO.	DATE	DESCRIPTION
	06/29/2023	AS SHOWN
		DESIGNED BY: FFW
		DRAWN BY: JDL

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

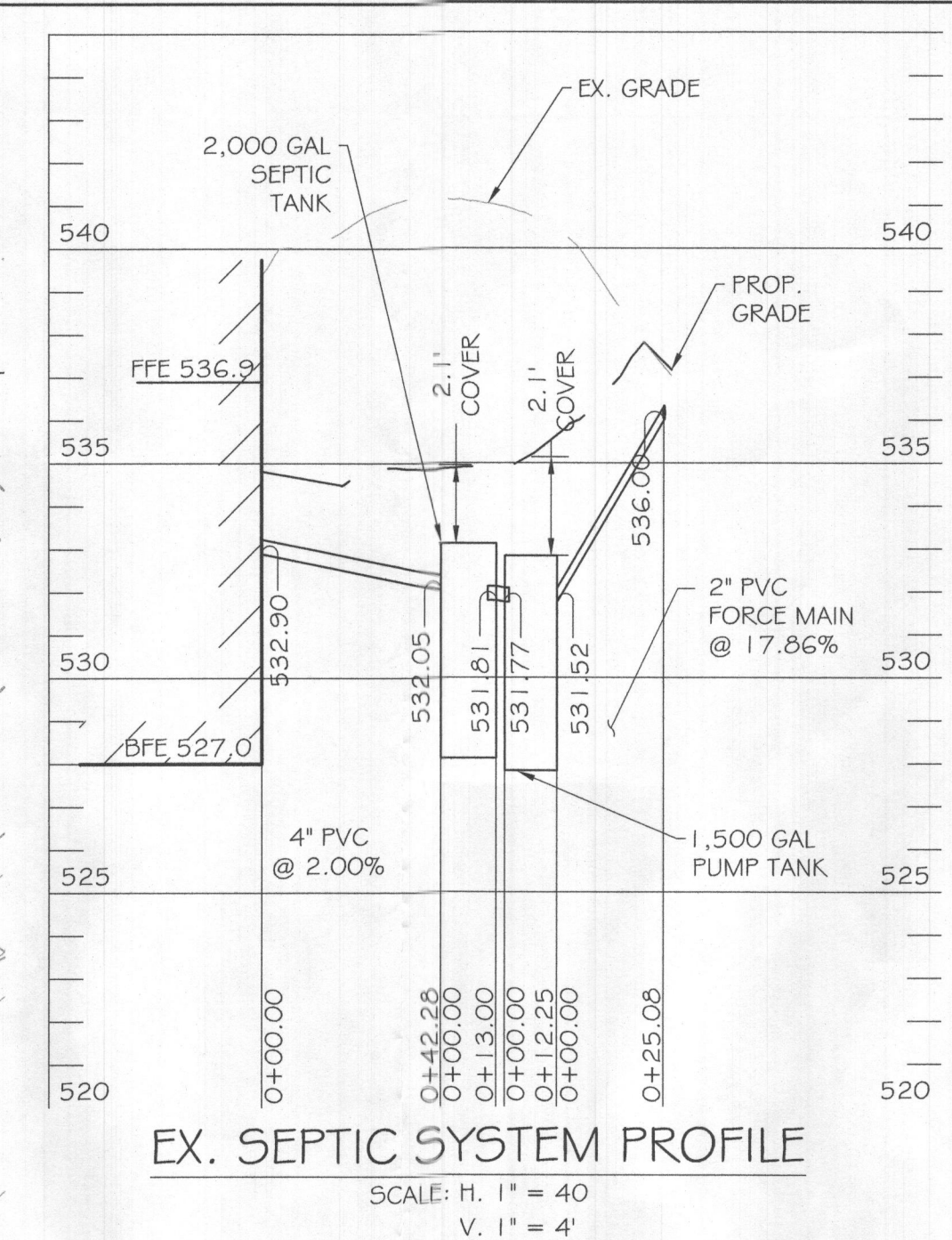
DRAWING NO. **ZhoGH2**
SHEET 1 OF 2
KCI JOB NUMBER 271803754.119



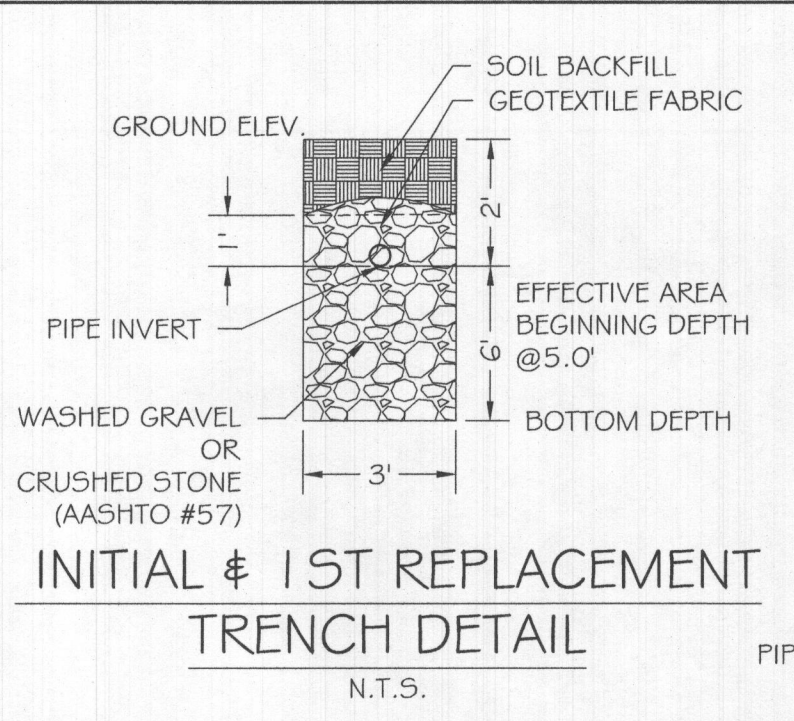
PLAN VIEW
SCALE: 1" = 30'

LEGEND

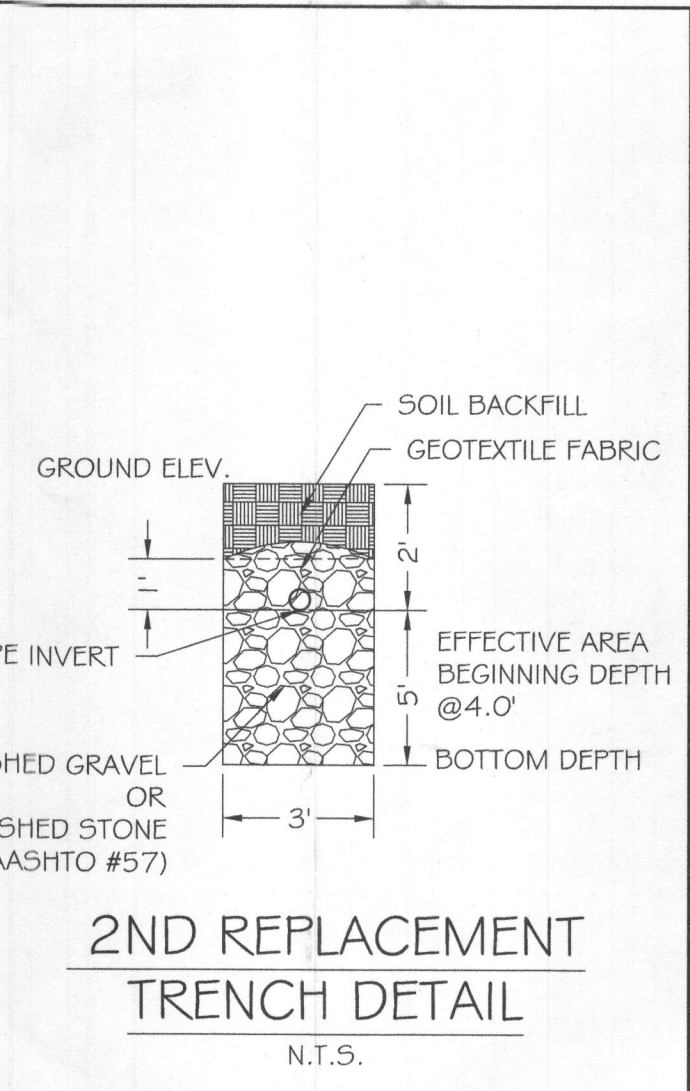
- - - 759 - - - EXISTING MINOR CONTOUR (2' INTERVAL)
- - - 760 - - - EXISTING MAJOR CONTOUR (10' INTERVAL)
- - - 307.90 - - - ADJACENT PROPERTY LINE
- - - N22°37'18"W - - - EXISTING PROPERTY BOUNDARY
- - - 761 - - - EXISTING ROAD / EDGE OF PAVING
- - - 760 - - - EXISTING ROAD CENTERLINE
- - - 761 - -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



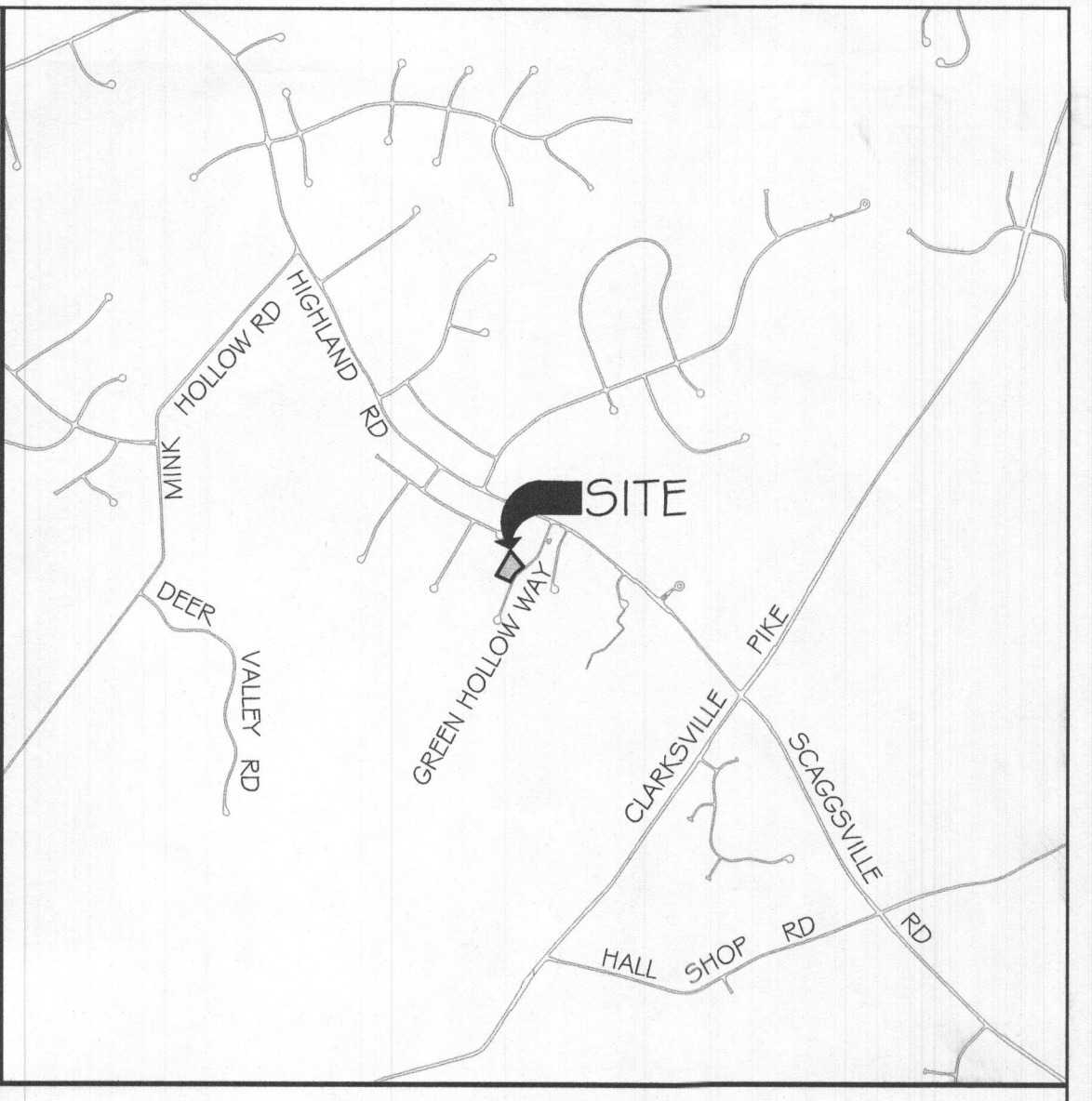
EX. SEPTIC SYSTEM PROFILE
SCALE: H. 1" = 40'
V. 1" = 4'



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 SEWERAGE 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.
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
Signature Date

TEST #	TIME FOR 1" DROP (MINUTES)
13	3.5
14	13
40	3
61	VISUAL-PASSED
AVG.	6.5

TRENCH LENGTH AND SPACING CALCULATIONS
TRENCH DESIGN (6 BDRM X 150 GPD/BDRM = 900 GPD)

	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

	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

INITIAL SYSTEM
900 GPD / 1.2 GPD/EF (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/EF (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/EF (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

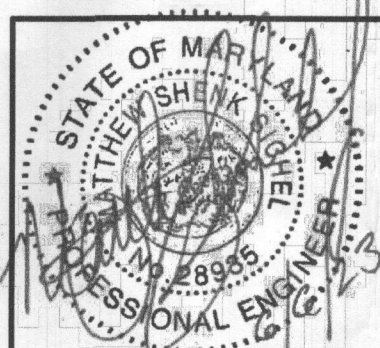
2 - 63' LONG TRENCHES FOR INITIAL SYSTEM
2 - 94' LONG TRENCHES FOR 1ST REPLACEMENT SYSTEM
2 - 94' LONG TRENCHES FOR 2ND REPLACEMENT SYSTEM

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 PERFORMED 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



ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

KCI
TECHNOLOGIES

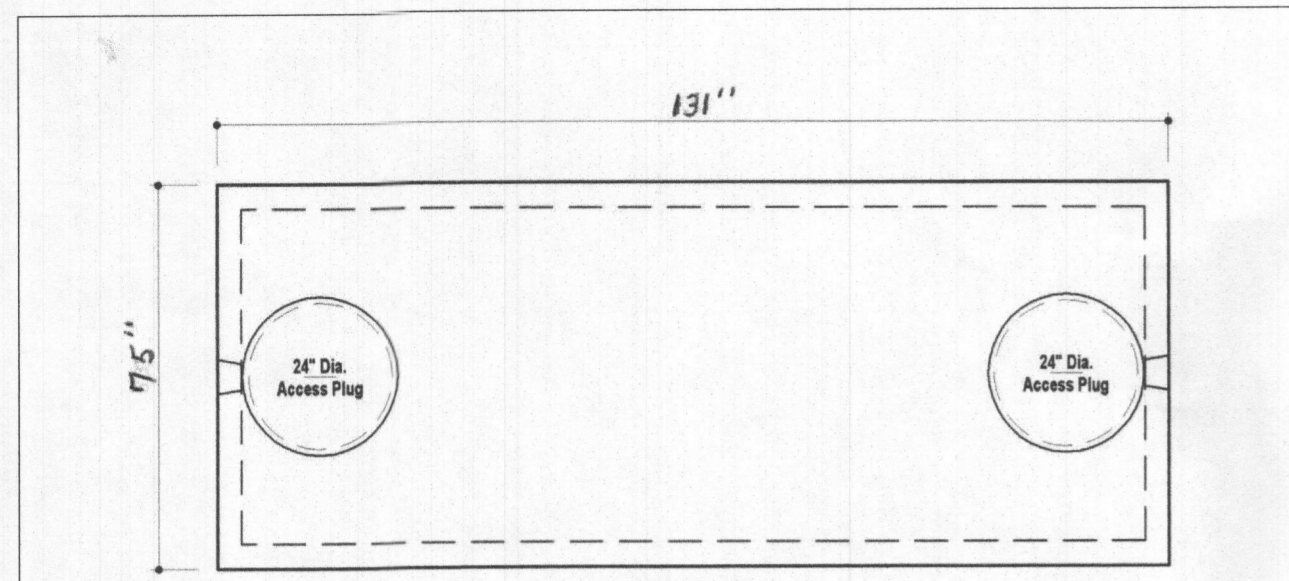
936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

REVISIONS			
NO.	DATE	DESCRIPTION	BY

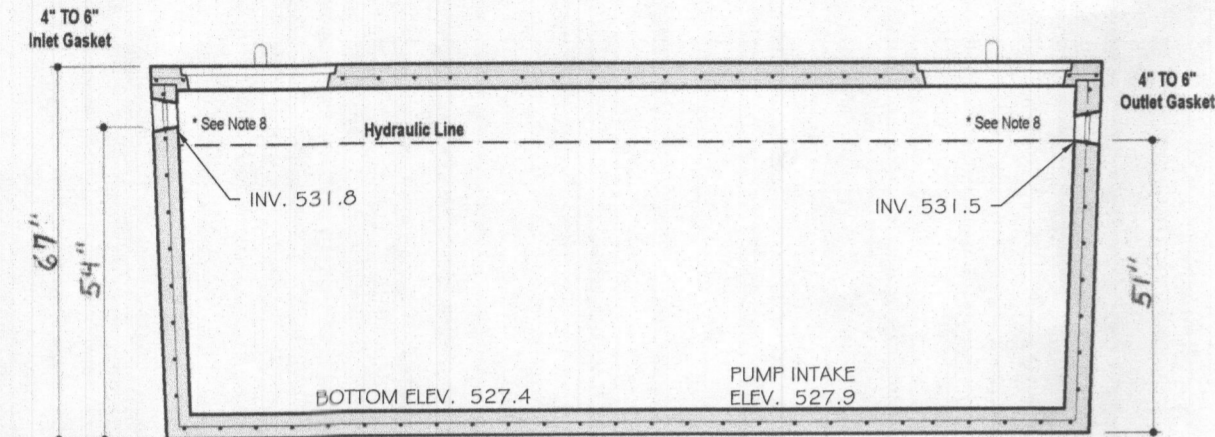
DATE: 06/29/2023
SCALE: AS SHOWN
DESIGNED BY: FFW
DRAWN BY: JDL

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



PLAN VIEW



SECTION A-A

DESIGN DATA & GENERAL NOTES

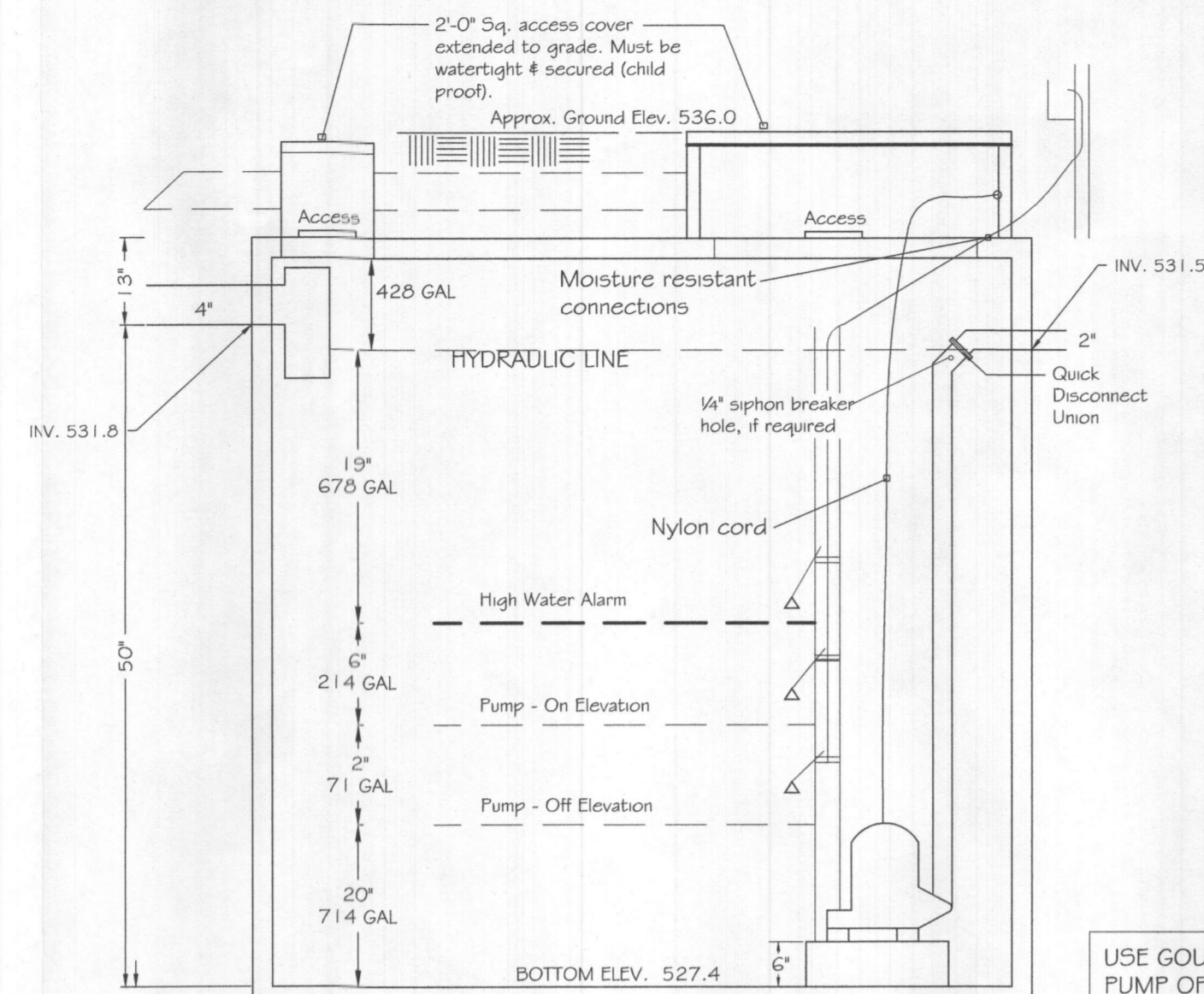
- [1] Concrete strength 4,000 p.s.i. @ 28 days. Density = 150 pcf.
- [2] Cement - Portland Type III per ASTM C 150-02.
- [3] Admixtures & plasticizers per ASTM C 260-06 & C 494-02.
- [4] Reinforcing per ASTM A193. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, base, & top thickness.
- [7] Max 2" of cover.
- [8] Depending on use of tank, inlet & outlet baffles may be required by code.

WEIGHT = 16,000 lbs.



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

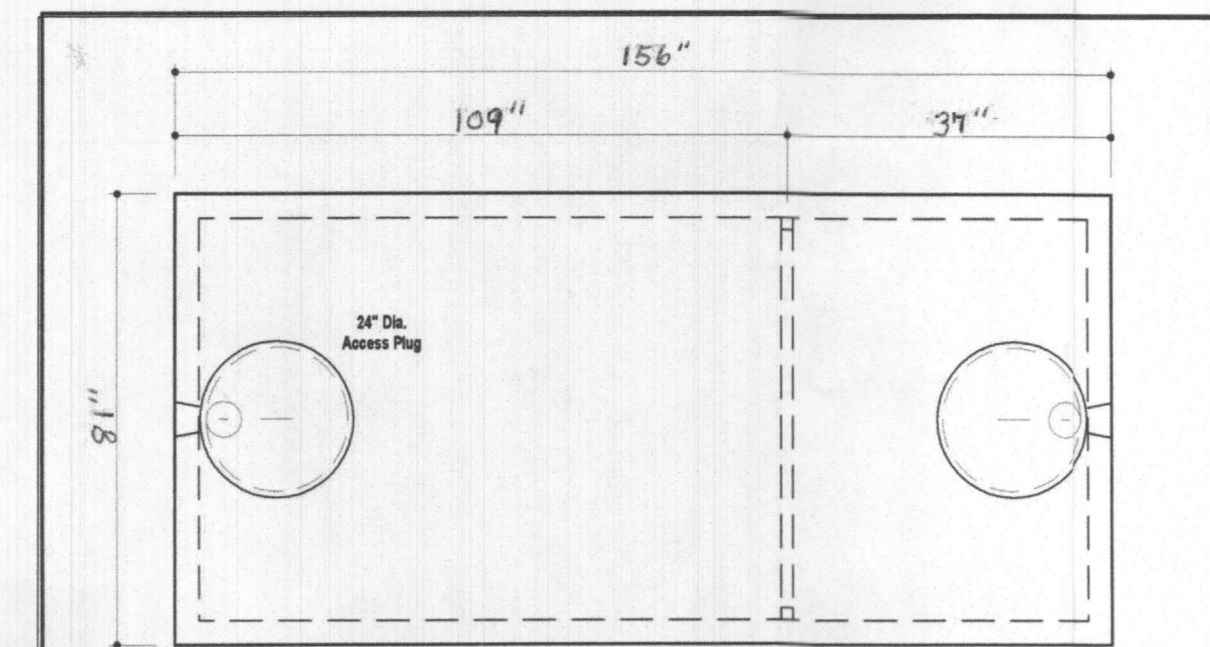
SEE TYPICAL PUMP CHAMBER DETAIL FOR PUMP FLOAT ELEVATION INFORMATION.



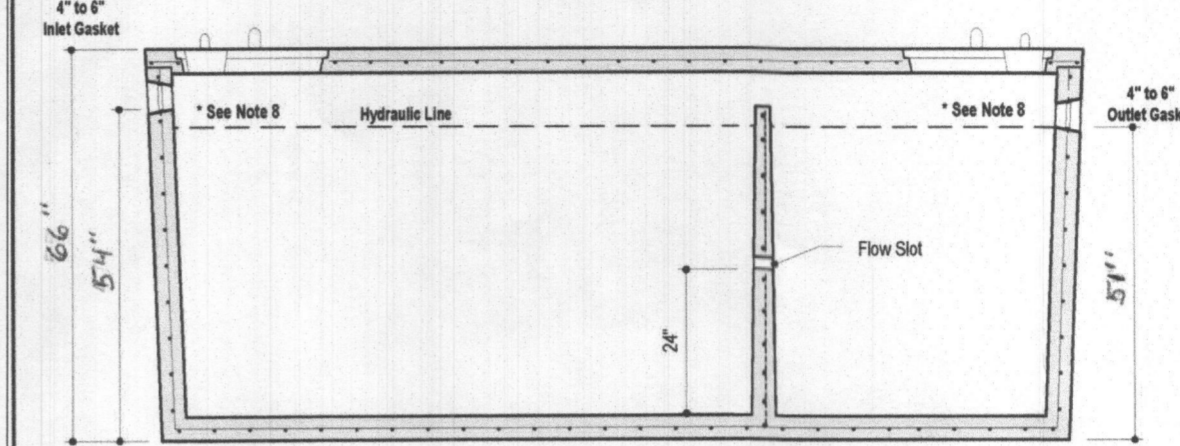
NOTE: CONTRACTOR TO CONFIRM ELEVATIONS PRIOR TO PURCHASING PUMP.

1.23' x 67" INSIDE DIMENSIONS
PUMP TANK VOLUME 1500 GAL
TYPICAL PUMP CHAMBER DETAIL
N.T.S.

USE GOULD'S WE03L PUMP OR EQUIVALENT
PUMP OFF ELEVATION 529.1



PLAN VIEW



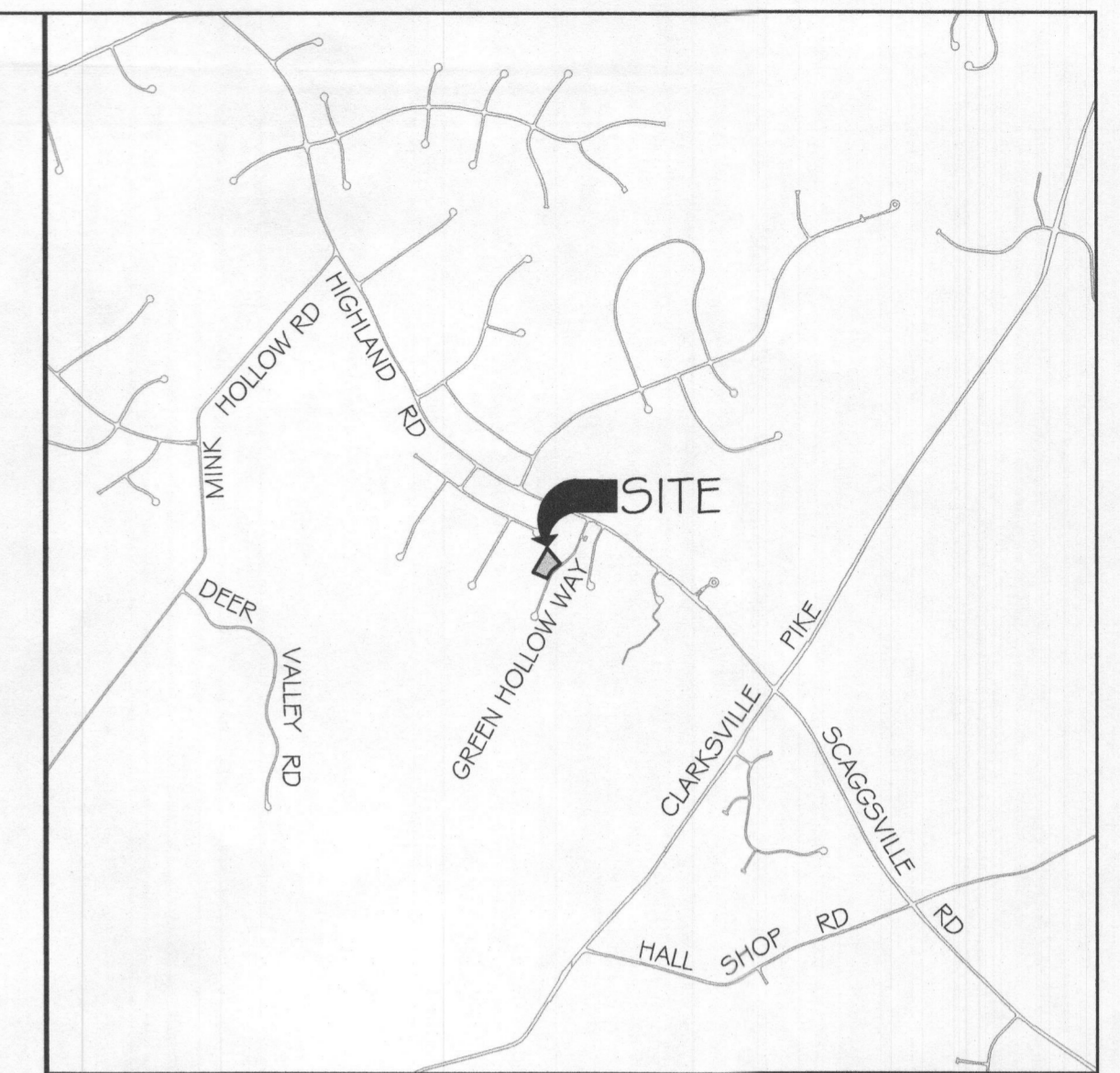
SECTION A-A

DESIGN DATA & GENERAL NOTES

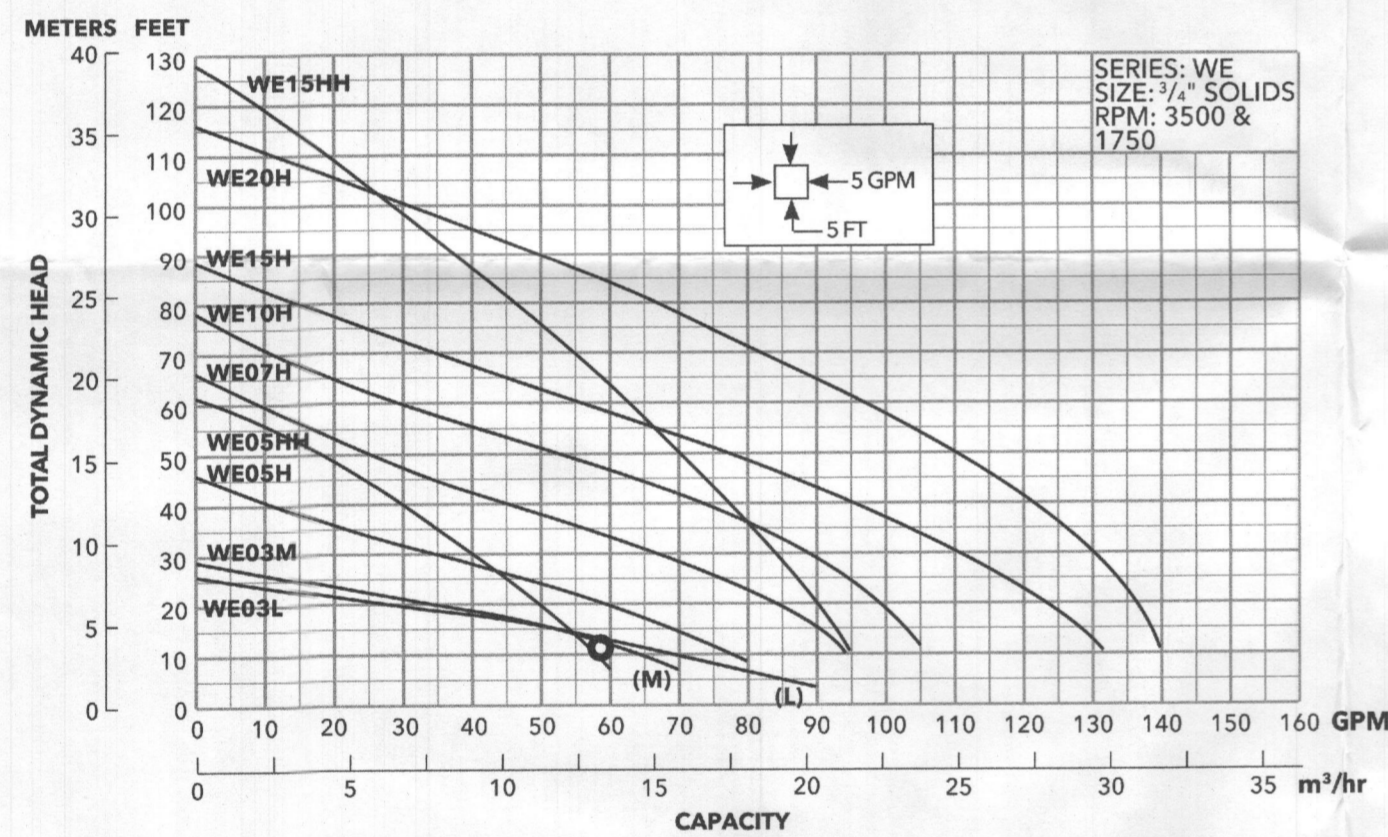
- [1] Concrete strength 4,000 p.s.i. @ 28 days. Density = 150 pcf.
- [2] Cement - Portland Type III per ASTM C 150-02.
- [3] Admixtures & plasticizers per ASTM C 260-06 & C 494-02.
- [4] Reinforcing per ASTM A193. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, 4" base, & 4" top thickness.
- [7] Max 2" of cover.
- [8] Depending on use of tank, inlet & outlet baffles may be required by code.



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		
FRICITION LOSS:	CONNECTIONS	2"
	(1) 90 DEGREE BEND	(5.55)
	(1) DISCONNECT	(1.35)
	(1) STD. TEE	(11.10)
	(1) 45 DEGREE BENDS	(2.58)
	(0) COUPLINGS	(1.35)
	TOTAL	20.58
	25.08 (ACTUAL) + 20.58 (EQUIV.) =	45.66 (TOTAL)
FOR 2" PIPE @ 58.66 GPM; C=150 (FOR PVC PIPE)		
FRICITION LOSS PER 100' = 0.2683*(100/150)^1.85*(58.66^1.85/2^4.8655)		
	45.66 x 100	= 2.88' FRICITION HEAD LOSS
	2.88' FRICITION	
	4.48' ELEVATION	
	3.00' MAINTAINED	
	10.36' TOTAL	
FORCE MAIN VOLUMN		
VOLUMN OF FORCE MAIN = (25.08/100) x 17.42 = 4 GALLONS		

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREIN IS BASED ON FIELD WORK PERFORMED 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



KCI
TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SENECA, 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

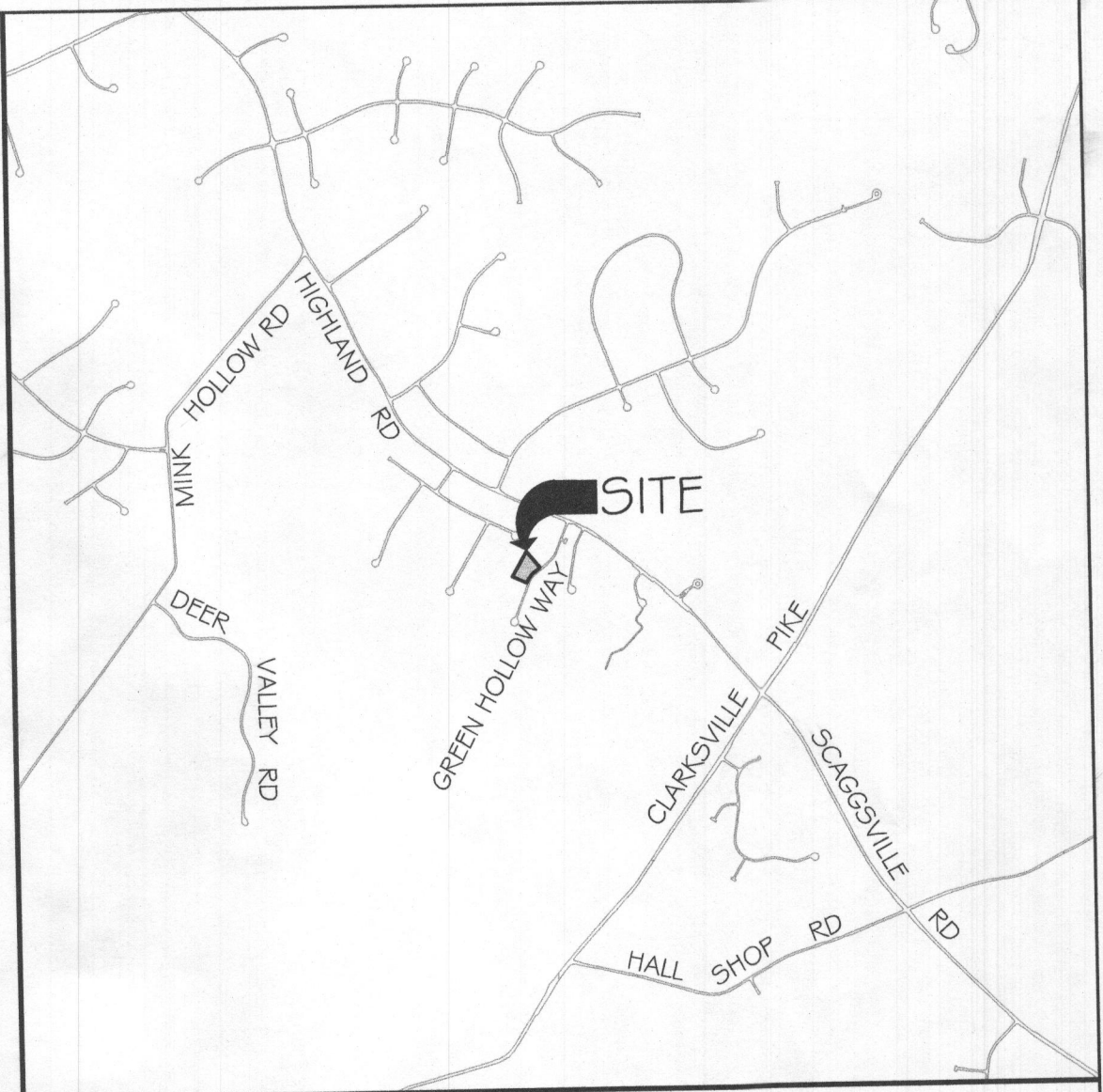
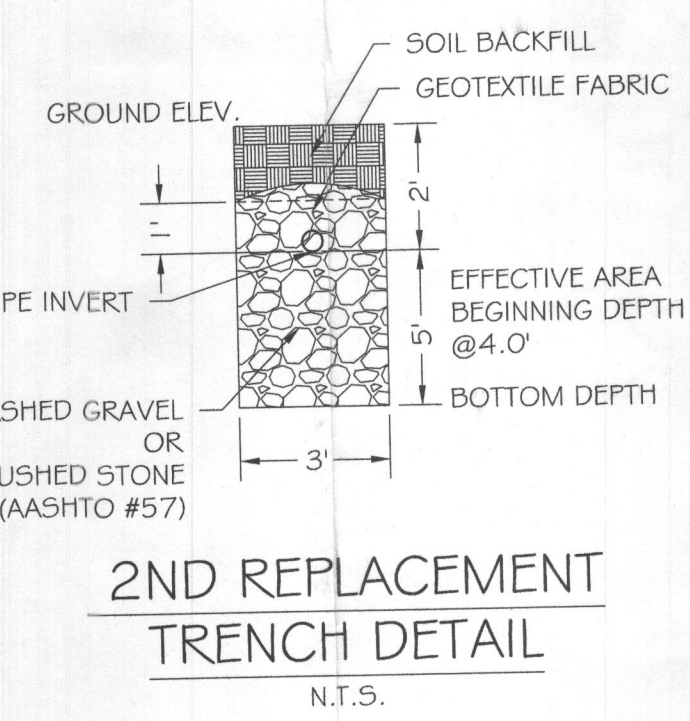
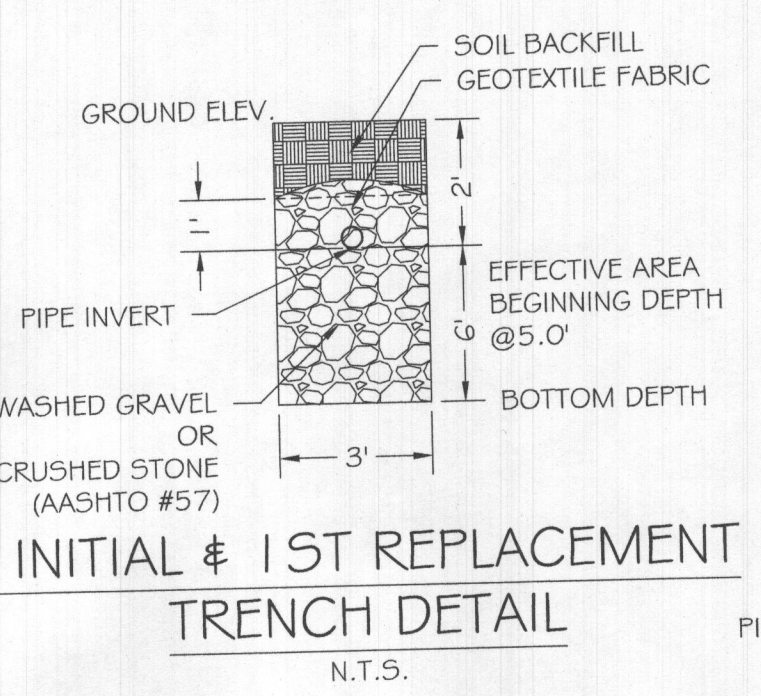
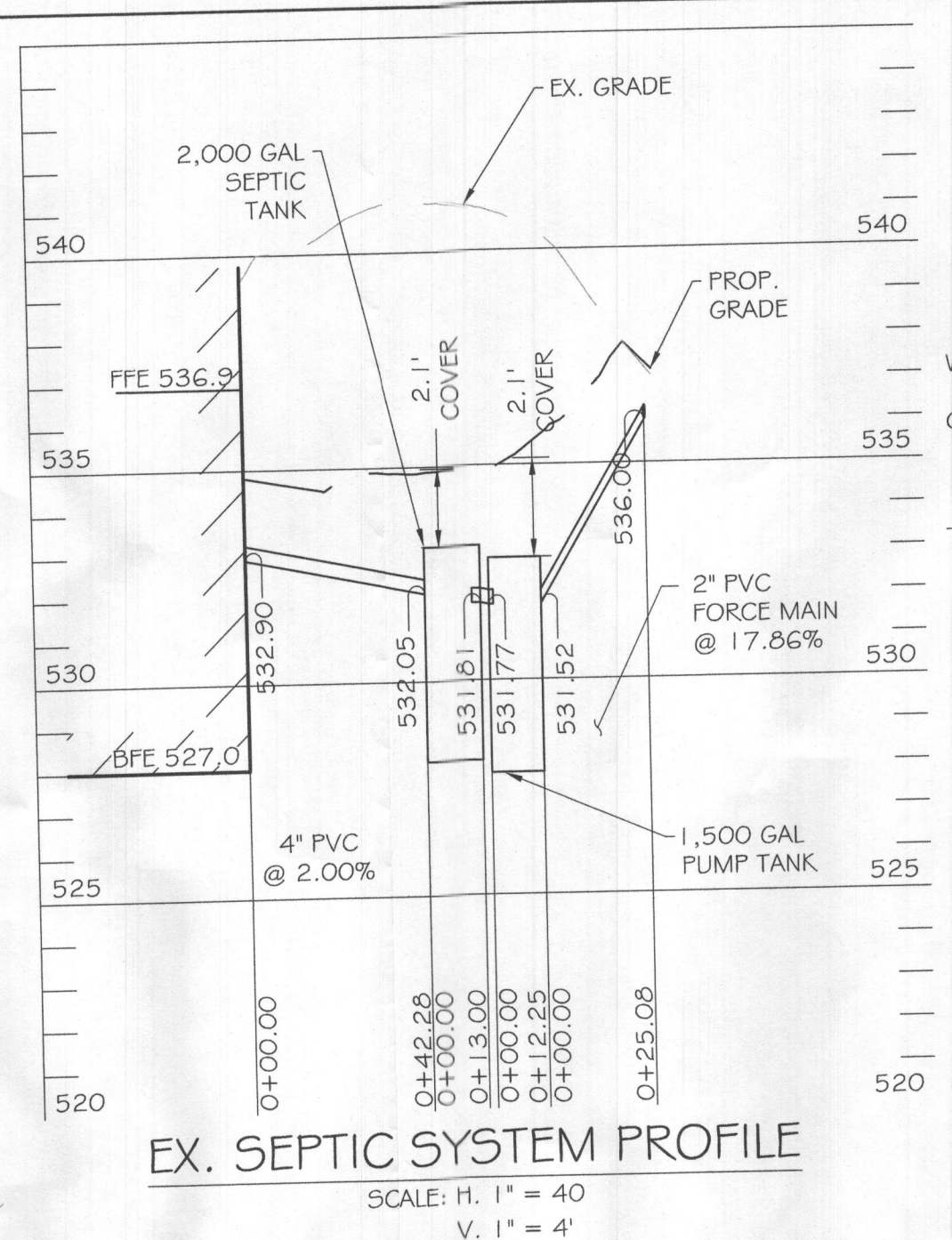
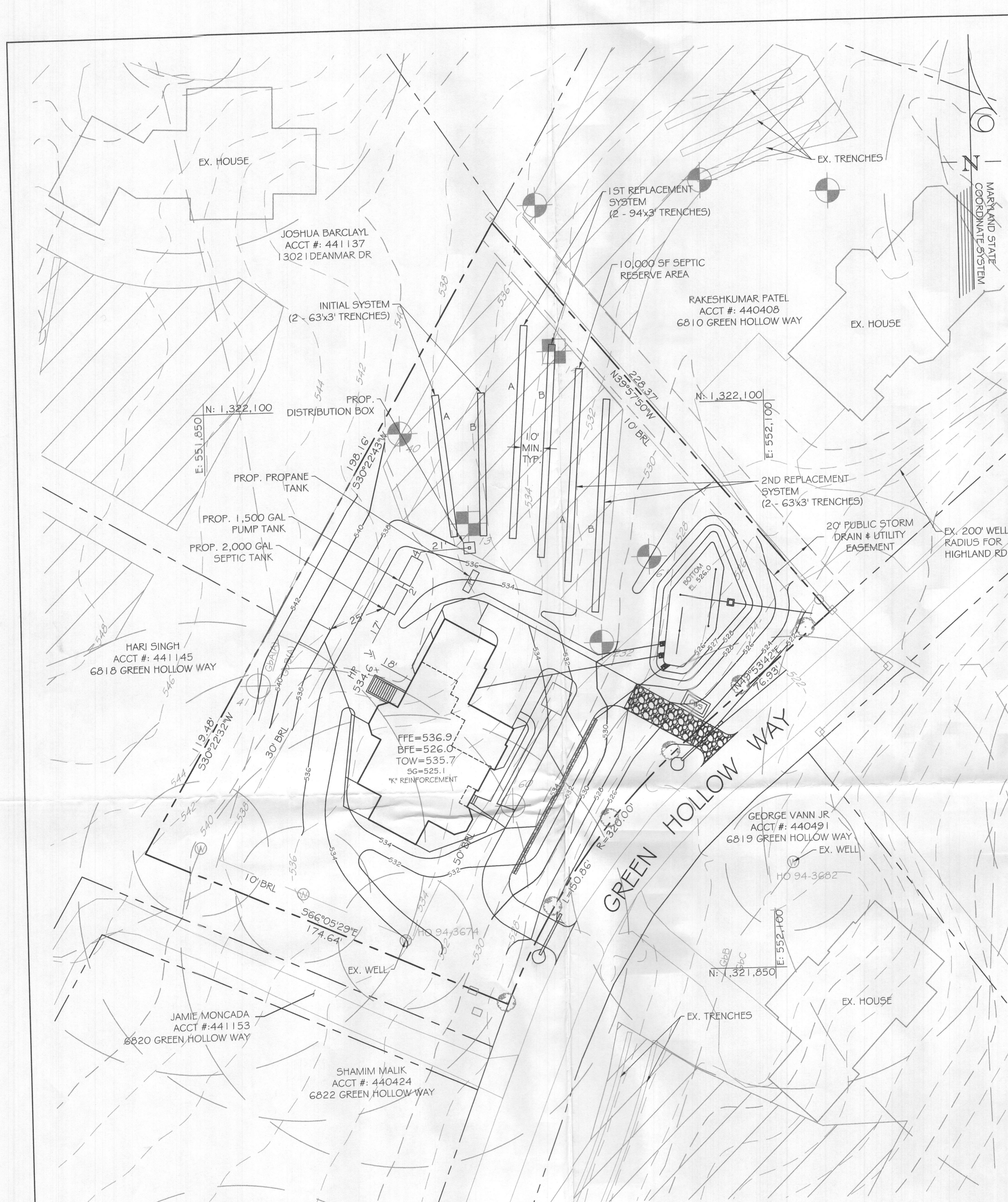
BATRA & KUMAR PROPERTY
ON-SITE SEWAGE DISPOSAL SYSTEM PLAN
6816 GREEN HOLLOW WAY
HIGHLAND, MD 20777

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

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



- GENERAL NOTES:
- 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.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - THE WELL (TAG# 94-3674) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - 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.
 - EXISTING SYSTEM LOCATION HAVE BEEN OBTAINED FROM THE HEALTH DEPARTMENT AND THE PROPERTY OWNER.
 - 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.
 - 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 PERCOLATION CERTIFICATION PLAN.
 - THE LOT SHOWN HEREIN COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - 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: *[Signature]* Date: 7/14/2023

PERC RESULTS (110105/1999 - 06/10/2002)	
TEST #	TIME FOR 1" DROP (MINUTES)
13	3.5
14	1.3
40	3
61	VISUAL-PASSED
AVG.	6.5

PLAN VIEW
 SCALE: 1" = 30'

LEGEND

	EXISTING MINOR CONTOUR (2' INTERVAL)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
	ADJACENT PROPERTY LINE
	EXISTING PROPERTY BOUNDARY
	EXISTING ROAD / EDGE OF PAVING
	EXISTING ROAD CENTERLINE
	PROPOSED MINOR CONTOUR (2' INTERVAL)
	PROPOSED MAJOR CONTOUR (10' INTERVAL)
	EXISTING BUILDING
	PROPOSED BUILDING
	PROPOSED SPOT ELEVATION
	LIMIT OF DISTURBANCE
	PROPOSED SILT FENCE
	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/EF (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/EF (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/EF (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

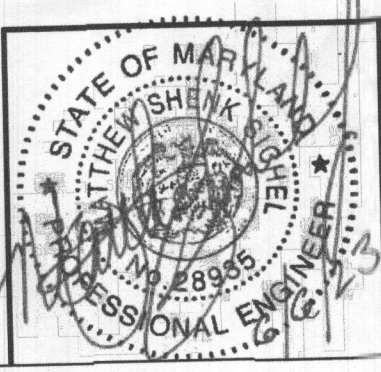
2 - 63' LONG TRENCHES FOR INITIAL SYSTEM
 2 - 94' LONG TRENCHES FOR 1ST REPLACEMENT SYSTEM
 2 - 94' LONG TRENCHES FOR 2ND REPLACEMENT SYSTEM

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 PERFORMED 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



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

REVISIONS		DATE
NO.	DESCRIPTION	BY
		06/29/2013

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