



Howard County  
Health Department

Bureau of Environmental Health  
7178 Gateway Drive Columbia, MD 21046  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 6/24/14

**ONSITE SEWAGE DISPOSAL SYSTEM**

P 554521

INSTALLATION

APPROVAL DATE: 9.29.14

**PERMIT**

A \_\_\_\_\_

**CONSTRUCTION**

PROPERTY ADDRESS: 15324 Sweetbay Street

SUBDIVISION: Belle Haven Estates

LOT: 2

TAX ID: 04-373650

CONTRACTOR: Ben Lewis Plumbing

EMAIL: \_\_\_\_\_

CONTRACTOR ADDRESS: 23407 Frederick Road, Clarksburg, MD 20871

PHONE: 301-674-3324

PROPERTY OWNER: KHovnanian Homes

EMAIL: \_\_\_\_\_

OWNER ADDRESS: 1802 Brightseat Road, Landover, MD 20785

PHONE: 301-683-6268

BAT UNIT MODEL: HOOT BNR 600

BAT UNIT SIZE: 600GPD

PUMP CHAMBER CAPACITY (GALLONS): 750GPD

PUMP SIZE: \_\_\_\_\_

NUMBER OF BEDROOMS: 4

HOUSE SQ. FT. \_\_\_\_\_

APPLICATION RATE: 0.8

DISTRIBUTION SYSTEM: GRAVITY FED ☒

LOW PRESSURE DOSED ☐

TRENCHES:	LINEAR FEET REQUIRED: <u>SEE BAT PLAN</u> <u>100'</u>	INLET DEPTH: <u>SEE BAT PLAN</u> <u>3</u>
	TRENCH WIDTH: <u>SEE BAT PLAN</u> <u>2'</u>	MAXIMUM BOTTOM DEPTH: <u>SEE BAT PLAN</u> <u>6.5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>SEE BAT PLAN</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>SEE BAT PLAN</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Set BAT unit per plan.	

ISSUED BY: Robert Bricker

ISSUE DATE: 7.30.14

EXPIRATION DATE: 7.30.15

**NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION**

**NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING**

**NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.**

**NOTE: WATERTIGHT SEPTIC TANKS REQUIRED**

**NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADE FROM ANY WATER WELL**

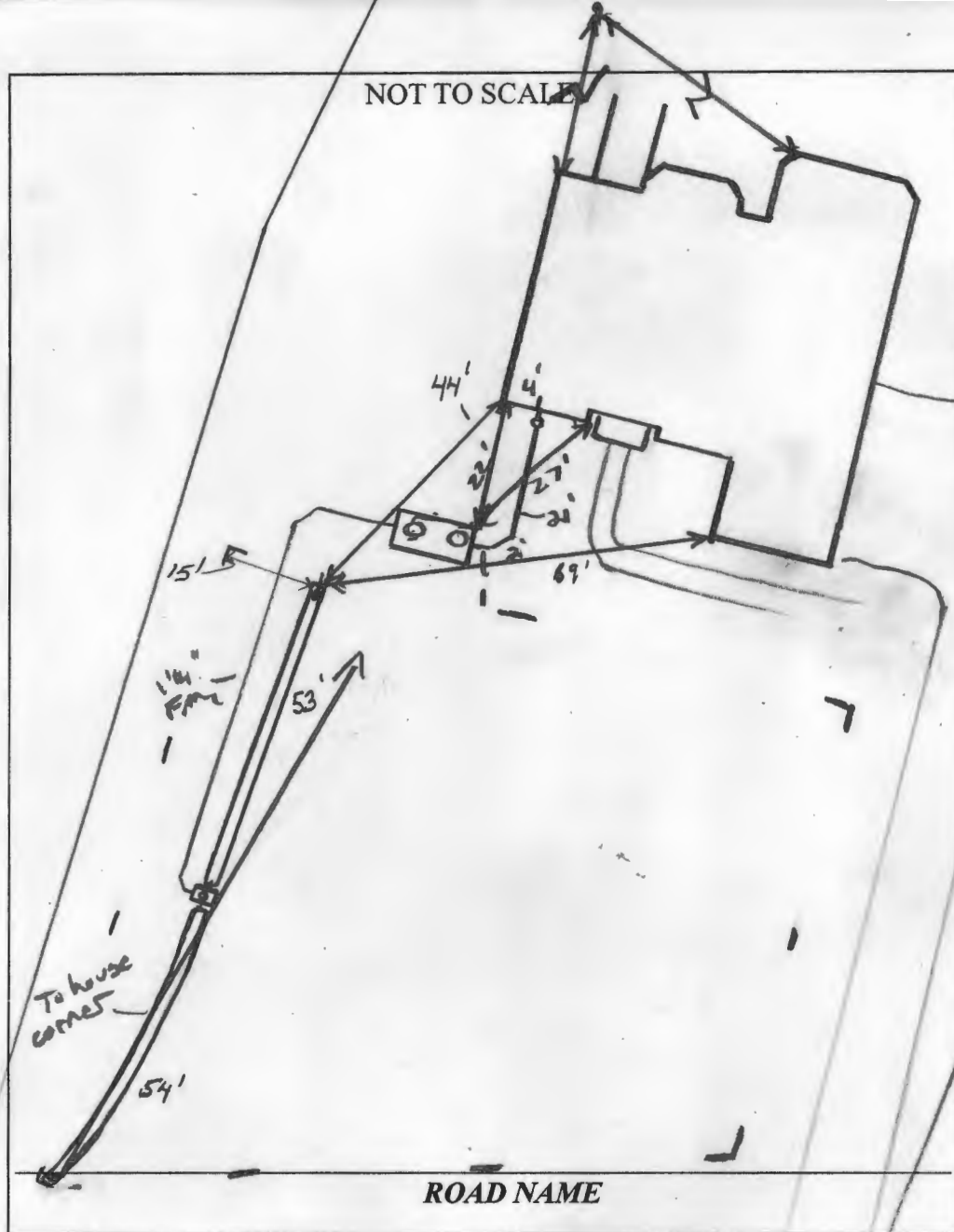
**NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS**

**NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM**

**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.**

**CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**



# TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2'	3	6.5'
NUMBER OF TRENCHES		2
TOTAL LENGTH		109'
ABSORPTION AREA		200'± SW
DISTRIBUTION BOX LEVEL		Yes
DISTRIBUTION BOX BAFFLE		Yes
DISTRIBUTION BOX PORT		Yes

## SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	Yes
MANUFACTURER	Mayer Bros
CAPACITY	H600 GAL
SEAM LOC	Top
TANK LID DEPTH	2'
BAFFLES	Yes
BAFFLE FILTER	—
MANHOLE LOC	Front/Rear
6" PORT LOC	None
WATERTIGHT TEST	—
SLOTTED	Yes
DATE ON LID	N/A

PUMP/SEPTIC TANK LEVEL N/A

MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

## PRE-CONSTRUCTION:

8/25/14 Contractor to install 2x50' trenches per BAT approved site plan. BAT tank staker OK. Trench specs OK. Call for inspection (KW)

INSTALLATION: 8/26/14 Trenches just about finished. Need to store 1x50' trench after pipe is set. OK to continue (KW)

8/27/14 Side inspection made late. Trenches complete. F.M. on about 90' back towards tank. (KW) 8/28/14 BAT unit installed. SHC started OK to cover when complete. Need as-built from contractor (KW)

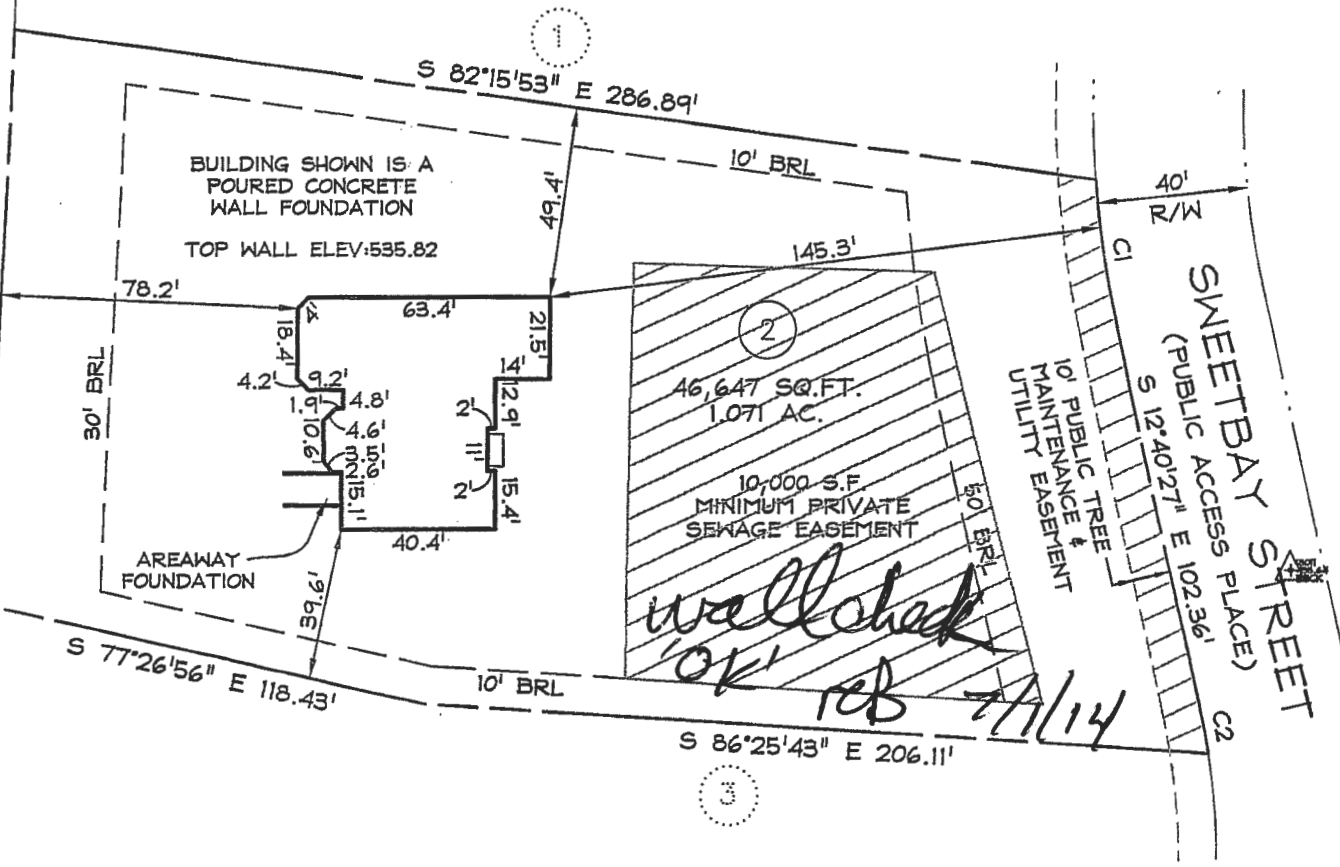
9/8/14 As-built received in field from contractor. Need BAT start-up for final approval (KW)

FINAL INSPECTOR \_\_\_\_\_ DATE OF APPROVAL \_\_\_\_\_

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TAN	CHD. BRG.	CHD. DIST.
C1	260.00'	37.64'	8°17'36"	18.85'	S08°31'39"E	37.60'
C2	180.00'	12.90'	4°06'16"	6.45'	N10°37'19"W	12.89'

MARYLAND COORDINATE  
SYSTEM NAD 83 (1991)

P/O  
PRESERVATION PARCEL 'D'  
N 02°31'52" E 149.91'



### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I EITHER PERSONALLY PREPARED OR WAS IN RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS DRAWING AND THE SURVEYING WORK REFLECTED IN IT, AND THAT IT IS IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION .12 OF CHAPTER 06, MINIMUM STANDARDS OF PRACTICE. I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 239, EXPIRATION DATE 7/6/14.

STATE OF MARYLAND  
*Robert B. Smith* 5-23-14

BQ

Barrick Dispatch 301-845-6343  
Barrick Sale 301-845-6341

We are an Equal Opportunity Employer  
**S.W. Barrick & Sons**  
WOODSBORO, MARYLAND

Mailing Address:  
P.O. Box 1504  
Laurel, Maryland 20725

**INSPECTOR'S COPY**

BILLING INQUIRIES  
1-800-762-2294

**TICKET #01063507**

**STATION B**

**DATE 08/26/14 TIME 07:23:08**

**CUSTOMER LEWEN**  
**BEN LEWIS INC.**  
**23407 FREDERICK RD**  
**CLARKSBURG, MD 20871**

**JOB BELHAV : BELL HAVEN**  
**P.O. # 30587 PROJECT #:**  
**70- R 97S- R UNION CHAPEL RD-**  
**L BRIDALWREATH CT. TO ADD "2803"**

**TRUCK 548A LICENSE**  
**DRIVER: DEESE TRUCKING**

**3 AXLES**

**LOT 2**

GROSS	SCALE B	68700 lb
TARE	IN (STORED)	24880 lb
NET		43820 lb
NET		21.91 t

	Loads	Tons
DAILY	1	21.91
TOTAL	4	90.50
TIME IN 07:23:08		TIME OUT 07:23:08

**MAT'L 22W : DBL WSHED MD#2 STONE**  
**HAUL ZONE H09**

**WEIGHMASTER**

Amanda Jacobs

**Have a Nice Day!**

**RECEIVED BY**  
**301-674-3324 ANDY**

*Load 1*



1. Deliveries of products of S.W. Barrick & Sons (SWB) in vehicles arranged for by SWB are usually made by interstate common carriers or by independent contractor businessmen operating as intrastate nonregulated truckers. In either such case SWB exercises no control over and does not assume responsibility for the transportation and delivery of the products covered by this ticket. SWB will not be liable in any way for any accidents or damage to persons or to property or for loss of property or delay arising out of or occurring during the transportation and delivery and unloading of such products.

2. SWB assumes no responsibility for and exercises no control over deliveries of products of SWB in vehicles arranged for by others, and SWB will not be liable in any way for any accidents or damage to persons or to property or for loss of property or delay arising out of or occurring during the transportation and delivery and unloading of such products.

3. Purchaser shall be responsible for providing promptly upon arrival a safe and practical location for the delivery and unloading of the product. SWB shall not be responsible for any detention time charge or other cost or damage resulting from failure to provide promptly such safe and practical location.

## MATERIAL SAFETY DATA SHEET (MSDS) FOR LIMESTONE

### SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER: S.W.BARRICK & SONS  
14504 Greenview Drive, Suite 210  
Laurel, Maryland 20708  
Information Telephone #: 301-953-7650  
Emergency Telephone #: 301-953-7650

Preparation Date: October 15, 2007

Product Chemical Name: Crushed Stone (Limestone)  
Product Identification/Synonyms: Crushed Stone, Aggregate, Manufactured Sand

### SECTION II - PRODUCT AND COMPONENT DATA

Ingredient Name:	CAS Registry Number	Approximate Percentage	Exposure Limits ACGIH TLV (mg/m <sup>3</sup> )	Exposure Limits OSHA PEL (mg/m <sup>3</sup> )
Limestone	1317-65-3	100	10 (nuisance dust)	15 total (dust)
Quartz (Crystalline Silica)	14808-60-7	>1	.01 (respirable dust)	.01 (respirable dust)

### SECTION III - PHYSICAL DATA

Boiling Point	N/A	Vapor Pressure (mm Hg)	N/A
Specific Gravity (H <sub>2</sub> O=1)	2.6 - 2.8	Appearance and Odor	Angular to round, gray
Vapor Density (Air=1)	N/A	Freezing Point	None, Solid
Solubility in Water	Insoluble	Evaporation Rate	N/A
Physical State	Solid	Odor	None
PH in Water	Neutral	Viscosity	None, Solid

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method: Non-combustible  
Combustion Products: Decomposes at 825° C  
Extinguishing Media: Use extinguishing media for surrounding fire conditions  
General Hazard: Avoid breathing dust

Fire Fighting Procedures: Limestone poses no fire related hazard. Use appropriate personal protective clothing and equipment for surrounding fire conditions.

### SECTION V - REACTIVE DATA

Stability: Product is Stable  
Incompatibility: Aggregate dissolves in hydrofluoric acid, and may produce corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.  
Hazardous Decomposition: Carbon Dioxide  
Hazardous Polymerization: None

### SECTION VI - TOXICOLOGICAL INFORMATION

Primary Routes of Entry: Skin contact, eyes, Acute and Chronic Inhalation, and ingestion.

Acute Exposure effects to Product

Skin: Exposure to dust may cause dry and irritate the skin.

Eyes: Exposure may cause eye irritation.

Inhalation: Inhalation can irritate nose, throat, and lungs, causing coughing, sneezing, and shortness of breath.

Ingestion: Do not ingest aggregates. Ingestion of small quantities is not expected to be harmful. If ingested in large quantities, it may cause intestinal distress.

Effect of Chronic Exposure

Proper use of Limestone Aggregates for construction purposes is not believed to cause acute toxic effects. This product contains crystalline silica, which has been classified as a human carcinogen by IRAC and NPT.

Repeated overexposures to high levels of respirable crystalline silica (cristobalite, quartz, and tridymite) can cause silicosis, serious and fatal lung disease, scleroderma (thickening of skin, systemic lupus erythematosus, rheumatoid arthritis) and disease affecting the kidneys.

### SECTION VII - FIRST AID MEASURES

Skin Contact: Persons with pre-existing skin conditions should remove dust promptly with soap and water. Seek medical attention if irritation persists.

Eye Contact: Irrigate exposed eye(s) with clean water or saline solution for at least 15 minutes while holding the eye lid(s) open. Seek medical attention for abrasions, embedded particles, or persistent irritation.

Ingestion: If the victim is conscious, provide clean water to rinse the mouth. Provide large quantities of water for the victim to drink to induce vomiting. Seek medical attention. Do not attempt to administer water by mouth to an unconscious person.

Inhalation: Immediately move the person to fresh air. Dust should be cleared from the throat and nasal passages. Seek medical attention for discomfort or if irritation persists. Monitor vital signs and administer CPR if necessary.

### SECTION VIII - PERSONAL PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Engineering Controls: Use exhaust, ventilation, or other effective suppression measures to maintain dust exposure levels below the established exposure limits.

Respiratory Protection: Respiratory protection is typically not required under normal conditions. If dust concentrations exceed OSHA/MSHA Personal Exposure Limits, wear appropriate NIOSH/MSHA - approved respiratory protection. Respirators should be properly fitted for maximum effectiveness.

Skin Protection: Long cuffed pants, long sleeve shirts, gauntlet-type gloves and appropriate boots should be used to prevent exposure. Dust exposed personal protective equipment should be cleaned after each use and exposed clothing should be laundered after each use.

Eye Protection: Safety glasses with side shields that comply with ANSI Standard Z87.1 should be worn as minimal protection when eye exposure to airborne particles exists. Dust goggles should be worn when excessive dust conditions exist or are anticipated.

### SECTION IX - STORAGE AND HANDLING PRECAUTIONS

Respirable crystalline silica-containing dust may be generated during the processing, handling and storage. The personal protective and control measures in Section VIII of this MSDS should be followed. Use methods that will minimize dust generation. Do not stand on stockpiles of this material, as it may be unstable. This product is not intended for abrasive blasting use. Do not store near food or beverage.

### SECTION X - SPILL AND DISPOSAL PRACTICES

The cleanup of spilled material may cause dusty conditions. The personal protective measures in Section VIII of the MSDS should be followed. Wetting material will minimize dust generation. Material should be disposed of according to all applicable federal, state, and local laws and regulations.

### SECTION XI - TRANSPORTATION

DOT Classification - None Placard Requirement: None

### SECTION XII - DISCLAIMER

The information in this MSDS is believed to be current and accurate. No warranty, expressed or implied, of merchantability, fitness or otherwise is made. Any party using this product should review all federal, state, or local laws and regulations prior to use. S.W. Barrick & Sons is not responsible for the condition, performance, handling, storage, or disposal of the aggregate after the buyer takes title by pickup at the plant or delivery to the buyer's jobsite by S.W. Barrick & Sons.

### SECTION XIII - DATE OF PREPARATION

Revision Summary: Revised October 15, 2007

BQ

Barrick Dispatch  
301-845-6343

Barrick Sale  
301-845-6341

We are an Equal Opportunity Employer  
**S.W. Barrick & Sons**  
WOODSBORO, MARYLAND

Mailing Address:  
P.O. Box 1504  
Laurel, Maryland 20725

**INSPECTOR'S COPY**

BILLING INQUIRIES  
1-800-762-2294

**TICKET #01063552**

**STATION B**

**DATE 08/26/14 TIME 09:24:09**

**CUSTOMER LEWEN**

**BEN LEWIS INC.**

**23407 FREDERICK RD**

**CLARKSBURG, MD 20871**

**TRUCK 548A LICENSE**

**DRIVER: DEESE TRUCKING**

**3 AXLES**

**JOB BELHAV : BELL HAVEN**

**P.O. # 30587 PROJECT #:**

**70-R 97S- R UNION CHAPEL RD-**

**L BRIDALWREATH CT. TO ADD "2803"**

**LOT**

GROSS	SCALE B	69500 lb
TARE	IN (STORED)	24880 lb
NET		44620 lb
NET		22.31 t

Loads	Tons
DAILY 2	44.22
TOTAL 5	112.81
TIME IN 09:24:09	TIME OUT 09:24:09

**MAT'L 22W : DBL WSHED MD#2 STONE**  
**HAUL ZONE H09**

**WEIGHMASTER**

**Amanda Jacobs**

**Have a Nice Day!**

**RECEIVED BY**

**301-674-3324 ANDY**

*AR*

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14504 Greenview Drive, Suite 210  
Laurel, Maryland 20708  
Information Telephone #: 301-953-7650  
Emergency Telephone #: 301-953-7650

Preparation Date: October 15, 2007

Product Chemical Name: Crushed Stone (Limestone)  
Product Identification/Synonyms: Crushed Stone, Aggregate, Manufactured Sand

### SECTION II - PRODUCT AND COMPONENT DATA

Ingredient Name:	CAS Registry Number	Approximate Percentage	Exposure Limits	
			ACGIH TLV (mg/m <sup>3</sup> )	OSHA PEL (mg/m <sup>3</sup> )
Limestone	1317-65-3	100	10 (nuisance dust)	15 total (dust)
Quartz (Crystalline Silica)	14808-60-7	>1	.01 (respirable dust)	.01 (respirable dust)

### SECTION III - PHYSICAL DATA

Boiling Point	N/A	Vapor Pressure (mm Hg)	N/A
Specific Gravity (H <sub>2</sub> O=1)	2.6 - 2.8	Appearance and Odor	Angular to round, gray
Vapor Density (Air=1)	N/A	Freezing Point	None, Solid
Solubility in Water	Insoluble	Evaporation Rate	N/A
Physical State	Solid	Odor	None
PH in Water	Neutral	Viscosity	None, Solid

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method	Non-combustible Decomposes at 825° C Use extinguishing media for surrounding fire conditions Avoid breathing dust
Combustion Products	
Extinguishing Media	
General Hazard	

Fire Fighting Procedures: Limestone poses no fire related hazard. Use appropriate personal protective clothing and equipment for surrounding fire conditions.

### SECTION V - REACTIVE DATA

Stability	Product is Stable
Incompatibility	Aggregate dissolves in hydrofluoric acid, and may produce corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.
Hazardous Decomposition	Carbon Dioxide
Hazardous Polymerization	None

### SECTION VI - TOXICOLOGICAL INFORMATION

Primary Routes of Entry: Skin contact, eyes, Acute and Chronic Inhalation, and ingestion.

Acute Exposure effects to Product

Skin: Exposure to dust may cause dry and irritate the skin.

Eyes: Exposure may cause eye irritation.

Inhalation: Inhalation can irritate nose, throat, and lungs, causing coughing, sneezing, and shortness of breath.

Ingestion: Do not ingest aggregates. Ingestion of small quantities is not expected to be harmful. If ingested in large quantities, it may cause intestinal distress.

Effect of Chronic Exposure

Proper use of Limestone Aggregates for construction purposes is not believed to cause acute toxic effects. This product contains crystalline silica, which has been classified as a human carcinogen by IRAC and NPT.

Repeated overexposures to high levels of respirable crystalline silica (cristobalite, quartz, and tridymite) can cause silicosis, serious and fatal lung disease, scleroderma (thickening of skin, systemic lupus erythematosus, rheumatoid arthritis) and disease affecting the kidneys.

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Ingestion: If the victim is conscious, provide clean water to rinse the mouth. Provide large quantities of water for the victim to drink to induce vomiting. Seek medical attention. Do not attempt to administer water by mouth to an unconscious person.

Inhalation: Immediately move the person to fresh air. Dust should be cleared from the throat and nasal passages. Seek medical attention for discomfort or if irritation persists. Monitor vital signs and administer CPR if necessary.

### SECTION VIII - PERSONAL PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Engineering Controls: Use exhaust, ventilation, or other effective suppression measures to maintain dust exposure levels below the established exposure limits.

Respiratory Protection: Respiratory protection is typically not required under normal conditions. If dust concentrations exceed OSHA/MSHA Personal Exposure Limits, wear appropriate NIOSH/MSHA - approved respiratory protection. Respirators should be properly fitted for maximum effectiveness.

Skin Protection: Long cut-off pants, long sleeve shirts, painter-type gloves and appropriate boots should be used to prevent exposure. Dust exposed personal protective equipment should be cleaned after each use and exposed clothing should be laundered after each use.

Eye Protection: Safety glasses with side shields that comply with ANSI Standard Z87.1 should be worn as minimal protection when eye exposure to airborne particles exists. Dust goggles should be worn when excessive dust conditions exist or are anticipated.

### SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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### SECTION X - SPILL AND DISPOSAL PRACTICES

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### SECTION XI - TRANSPORTATION

DOT Classification - None Placard Requirement: None

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### SECTION XIII - DATE OF PREPARATION

Revision Summary: Revised October 15, 2007

BQ

We are an Equal Opportunity Employer  
**S.W. Barrick & Sons**  
WOODSBORO, MARYLAND

INSPECTOR'S COPY

BILLING INQUIRIES  
1-800-762-2294

TICKET #01063603

STATION B

DATE 08/26/14 TIME 11:06:26

CUSTOMER LEWEN  
BEN LEWIS INC.  
23407 FREDERICK RD  
CLARKSBURG, MD 20871

JOB BELHAV : BELL HAVEN  
P.O. # 30587 PROJECT #:  
70- R 975- R UNION CHAPEL RD-  
L BRIDALWREATH CT. TO ADD "2803"

TRUCK 548A LICENSE  
DRIVER: DEESE TRUCKING

3 AXLES

LOT 2

	SCALE A	
GROSS	37320 lb	
TARE IN (STORED)	24880 lb	
NET	12440 lb	
NET	6.22 t	

	Loads	Tons
DAILY	3	50.44
TOTAL	6	119.03
TIME IN 11:06:26		TIME OUT 11:06:26

MAT'L 22W : DBL WSHED MD#2 STONE  
HAUL ZONE H09

WEIGHMASTER

Amanda Jacobs

Have a Nice Day!

RECEIVED BY  
301-674-3324 ANDY

*AR Byggs*

*John*

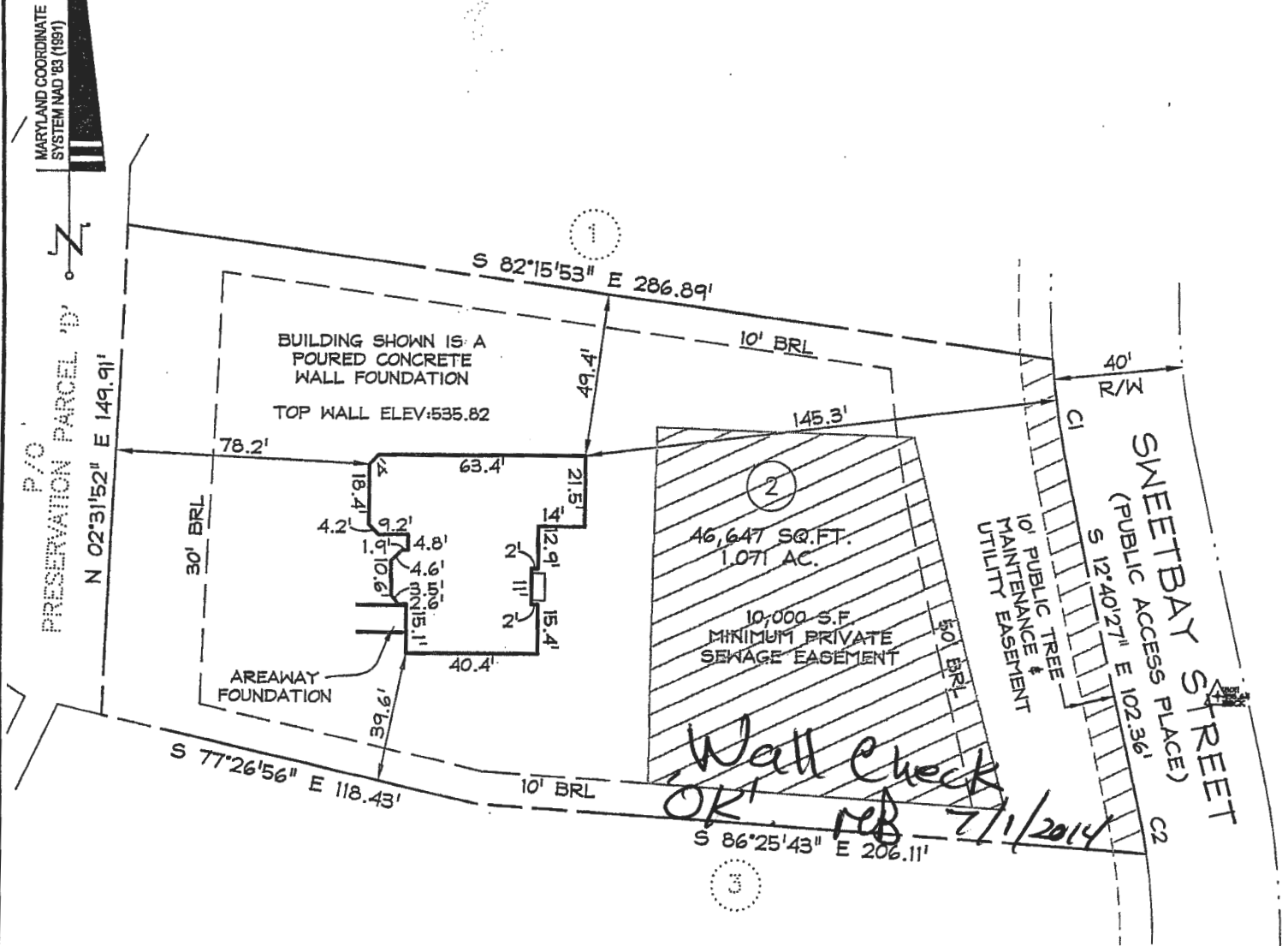
*ced*

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MATERIAL SAFETY DATA SHEET (MSDS) FOR LIMESTONE

SECTION I – PRODUCT IDENTIFICATION					SECTION VI – TOXICOLOGICAL INFORMATION		SECTION VIII – PERSONAL PROTECTIVE EQUIPMENT AND CONTROL MEASURES	
MANUFACTURER: S.W.BARRICK & SONS 14504 Greenview Drive, Suite 210 Laurel, Maryland 20708 Information Telephone #: 301-953-7650 Emergency Telephone #: 301-953-7650					Primary Routes of Entry	Skin contact, eyes, Acute and Chronic inhalation, and ingestion.	Engineering Controls	Use exhaust, ventilation, or other effective suppression measures to maintain dust exposure levels below the established exposure limits.
Preparation Date: October 15, 2007					Acute Exposure effects to Product		Respiratory Protection	Respiratory protection is typically not required under normal conditions. If dust concentrations exceed OSHA/MSHA Personal Exposure Limits, wear appropriate NIOSH/MSHA - approved respiratory protection. Respirators should be properly fitted for maximum effectiveness.
Product Chemical Name: Crushed Stone (Limestone) Product Identification/Synonyms: Crushed Stone, Aggregate, Manufactured Sand					Skin	Exposure to dust may cause dry and irritate the skin.	Skin Protection	Long cuffless pants, long sleeve shirts, gauntlet-type gloves and appropriate boots should be used to prevent exposure. Dust exposed personal protective equipment should be cleaned after each use and exposed clothing should be laundered after each use.
SECTION II – PRODUCT AND COMPONENT DATA					Eyes	Exposure may cause eye irritation.	Eye Protection	Safety glasses with side shields that comply with ANSI Standard Z87.1 should be worn as minimal protection when eye exposure to airborne particles exists. Dust goggles should be worn when excessive dust conditions exist or are anticipated.
Ingredient Name: CAS Registry Number Approximate Percentage Exposure Limits ACGIH TLV (mg/m³) Exposure Limits OSHA PEL (mg/m³)					Inhalation	Inhalation can irritate nose, throat, and lungs, causing coughing, sneezing, and shortness of breath.		
Limestone 1317-65-3 100 10 (nuisance dust) 15 total (dust)					Ingestion	Do not ingest aggregates. Ingestion of small quantities is not expected to be harmful. If ingested in large quantities, it may cause intestinal distress.		
Quartz 14908-60-7 >1 .01 (respirable dust) .01 (respirable dust)					Effect of Chronic Exposure			
(Crystalline Silica)								
SECTION III – PHYSICAL DATA					Proper use of Limestone Aggregates for construction purposes is not believed to cause acute toxic effects. This product contains crystalline silica, which has been classified as a human carcinogen by IRAC and NPT.			
Boiling Point N/A Vapor Pressure (mm Hg) N/A					Repeated overexposures to high levels of respirable crystalline silica (cristobalite, quartz, and tridymite) can cause silicosis, serious and fatal lung disease, scleroderma (thickening of skin, systemic lupus erythematosus, rheumatoid arthritis) and disease affecting the kidneys.			
Specific Gravity (H₂O=1) 2.6 - 2.8 Appearance and Odor Angular to round, gray								
Vapor Density (Air=1) N/A Freezing Point None, Solid								
Solubility in Water Insoluble Evaporation Rate N/A								
Physical State Solid Odor None								
PH in Water Neutral Viscosity None, Solid								
SECTION IV – FIRE AND EXPLOSION HAZARD DATA					SECTION VII – FIRST AID MEASURES			
Flash Point and Method Non-combustible					Skin Contact			
Combustion Products Decomposes at 825° C					Persons with pre-existing skin conditions should remove dust promptly with soap and water. Seek medical attention if irritation persists.			
Extinguishing Media Use extinguishing media for surrounding fire conditions					Eye Contact			
General Hazard Avoid breathing dust					Irrigate exposed eye(s) with clean water or saline solution for at least 15 minutes while holding the eye lid(s) open. Seek medical attention for abrasions, embedded particles, or persistent irritation.			
Fire Fighting Procedures: Limestone poses no fire related hazard. Use appropriate personal protective clothing and equipment for surrounding fire conditions.					Ingestion			
SECTION V – REACTIVE DATA					If the victim is conscious, provide clean water to rinse the mouth. Provide large quantities of water for the victim to drink to induce vomiting. Seek medical attention. Do not attempt to administer water by mouth to an unconscious person.			
Stability Product is Stable					Inhalation			
Incompatibility Aggregate dissolves in hydrofluoric acid, and may produce corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.					Immediately move the person to fresh air. Dust should be cleared from the throat and nasal passages. Seek medical attention for discomfort or if irritation persists. Monitor vital signs and administer CPR if necessary.			
Hazardous Decomposition Carbon Dioxide								
Hazardous Polymerization None								
					SECTION IX – STORAGE AND HANDLING PRECAUTIONS			
					Respirable crystalline silica-containing dust may be generated during the processing, handling and storage. The personal protective and control measures in Section VIII of this MSDS should be followed. Use methods that will minimize dust generation. Do not stand on stockpiles of this material, as it may be unstable. This product is not intended for abrasive blasting use. Do not store near food or beverage.			
					SECTION X – SPILL AND DISPOSAL PRACTICES			
					The cleanup of spilled material may cause dusty conditions. The personal protective measures in Section VIII of the MSDS should be followed. Wetting material will minimize dust generation. Material should be disposed of according to all applicable federal, state, and local laws and regulations.			
					SECTION XI – TRANSPORTATION			
					DOT Classification - None Placard Requirement: None			
					SECTION XII – DISCLAIMER			
					The information in this MSDS is believed to be current and accurate. No warranty, expressed or implied, of merchantability, fitness or otherwise is made. Any party using this product should review all federal, state, or local laws and regulations prior to use. S.W. Barrick & Sons is not responsible for the condition, performance, handling, storage, or disposal of the aggregate after the buyer takes title by pickup at the plant or delivery to the buyer's jobsite by S.W. Barrick & Sons.			
					SECTION XIII – DATE OF PREPARATION			
					Revision Summary: Revised October 15, 2007			

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TAN	CHD. BRG.	CHD. DIST.
C1	260.00'	37.64'	8°17'36"	18.85'	S08°31'39"E	37.60'
C2	180.00'	12.90'	4°06'16"	6.45'	N10°37'19"W	12.89'



### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I EITHER PERSONALLY PREPARED OR WAS IN RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS DRAWING AND THE SURVEYING WORK REFLECTED IN IT, AND THAT IT IS IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION .12 OF CHAPTER 06, MINIMUM STANDARDS OF PRACTICE. I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 239, EXPIRATION DATE 7/6/14.

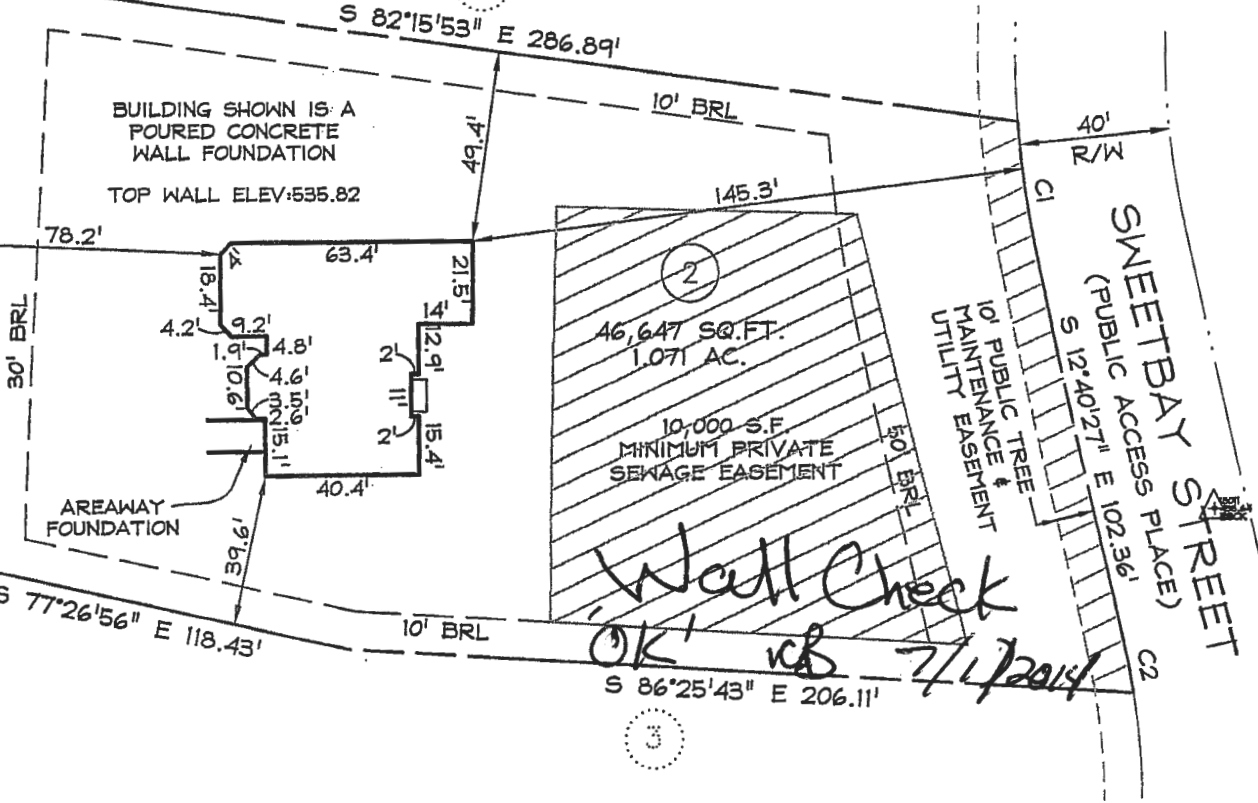
STATE OF MARYLAND  
Anthony B. Swann 5-23-14

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TAN	CHD. BRG.	CHD. DIST.
C1	260.00'	37.64'	8°17'36"	18.85'	S08°31'39"E	37.60'
C2	180.00'	12.90'	4°06'16"	6.45'	N10°37'19"W	12.89'

MARYLAND COORDINATE  
SYSTEM NAD 83 (1991)

P/O  
PRESERVATION PARCEL 'D'

N 02°31'52" E 149.91'



### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I EITHER PERSONALLY PREPARED OR WAS IN RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS DRAWING AND THE SURVEYING WORK REFLECTED IN IT, AND THAT IT IS IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION .12 OF CHAPTER 06, MINIMUM STANDARDS OF PRACTICE. I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 239, EXPIRATION DATE 7/6/14.

STATE OF MARYLAND  
Surveyor's Signature: *B. Swann* 5-23-14



15324 Sweetbay  
Street

Clerk of the Circuit Court for  
Howard County  
Land Records/Licensing

The Thomas Dorsey Building  
9250 Bendix Road  
Columbia, MD 21045  
410-313-5850

=====  
LR - Agreement Recording Fee  
1x 20.00 20.00

Grantor/Grantee Name: Khovnanian Homes  
of Maryland

Reference/Control #: 209

LR - Agreement Surcharge  
1x 40.00 40.00

LR - Agreement Recording Fee  
1x 20.00 20.00

Grantor/Grantee Name: Khovnanian Homes  
of Maryland

Reference/Control #: 210

LR - Agreement Surcharge  
1x 40.00 40.00

LR - Agreement Recording Fee  
1x 20.00 20.00

Grantor/Grantee Name: Khovnanian Homes  
of Maryland

Reference/Control #: 211

LR - Agreement Surcharge  
1x 40.00 40.00

LR - Agreement Recording Fee  
1x 20.00 20.00

Grantor/Grantee Name: Khovnanian Homes  
of Maryland

Reference/Control #: 212

LR - Agreement Surcharge  
1x 40.00 40.00

LR - Agreement Recording Fee  
1x 20.00 20.00

Grantor/Grantee Name: Khovnanian Homes  
of Maryland

Reference/Control #: 213

LR - Agreement Surcharge  
1x 40.00 40.00

=====  
SubTotal: 300.00  
Total: 300.00  
=====

REV-Check-BOA 60.00

Number : 00016427

REV-Check-BOA 60.00

Number : 00016426

REV-Check-BOA 60.00

Number : 0016425

REV-Check-BOA 60.00

Number : 00016424

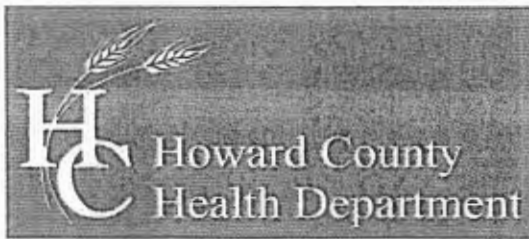
REV-Check-BOA 60.00

Number : 00045404

06/24/2014 14:24  
#2959610 /1246/109

CC13-DS

Thank you for visiting us today~



Bureau of Environmental Health  
7178 Columbia Gateway Drive, Columbia, MD 21046-2147  
Main: 410-313-2640 | Fax: 410-313-2648  
TDD 410-313-2323 | Toll Free 1-866-313-6300  
www.hchealth.org  
Facebook: www.facebook.com/hocohealth  
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

**OPERATION AND MAINTENANCE AGREEMENT  
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM  
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 23<sup>rd</sup> day of June, 2014, among K. Hovnanian Homes of Maryland I LLC, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 15324 Sweetbay Street Woodbine, MD 21797, in the 04 Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 15508 Folio 136. 04/373656  
LOT 2

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement a

long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Owner

Date

Bert Rifon 6/24/2014  
Howard County Health Department

Owner

Date

Steve Snyder 6-23-14  
Steve Snyder  
V.P. KATHARINE HOUSE  
OF MARYLAND LLC

RECEIVED

JUN 24 2014

HOWARD COUNTY HEALTH DEPT  
BUREAU OF ENVIRONMENTAL HEALTH

RECEIPT DATE: 12/17/12

P 544449

INSTALLATION  
APPROVAL DATE: \_\_\_\_\_

# PERMIT

A

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

PROPERTY OWNER: Belle Haven Baker LLC

OWNER'S

ADDRESS: 10751 Falls Road Ste 405, Lutherville, MD 21093

PHONE: 301-683-3268

ADDRESS: 15324 Sweetbay Street

TAX ACCT #: 04-373650

SUBDIVISION: Belle Haven Estates

LOT: 2

SEPTIC TANK CAPACITY (GALLONS): TBD

PUMP CHAMBER CAPACITY (GALLONS): TBD

NUMBER OF BEDROOMS: TBD

APPLICATION RATE: TBD

SQUARE FOOTAGE OF HOUSE: TBD

LINEAR FEET OF TRENCH REQUIRED: TBD

TRENCHES:	TO BE DETERMINED ON APPROVED SUPPLEMENTAL PLAN
LOCATION:	TO BE DETERMINED ON APPROVED SUPPLEMENTAL PLAN
NOTES:	A SUPPLEMENTAL PLAN PROVIDING SYSTEM DETAILS IS REQUIRED PRIOR TO HEALTH APPROVAL OF BUILDING PERMIT, PLOT PLAN, AND WALL CHECK. AN APPROVED WALL CHECK IS REQUIRED PRIOR TO PRE-CONSTRUCTION INSPECTION. THE OSDS PERMITTED HEREIN IS NOT SUBJECT TO REVISIONS TO COMAR 26.04.02 EFFECTIVE 1/1/13 ON THE CONDITION THAT FINAL HEALTH APPROVAL OF THE INSTALLATION IS GRANTED PRIOR TO PERMIT EXPIRATION.

ISSUED BY: JEFF WILLIAMS

ISSUE DATE: 12/17/12

EXPIRATION DATE: 12/17/13

NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

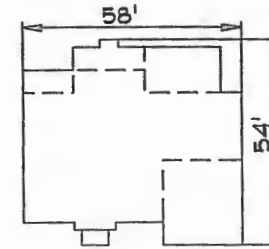
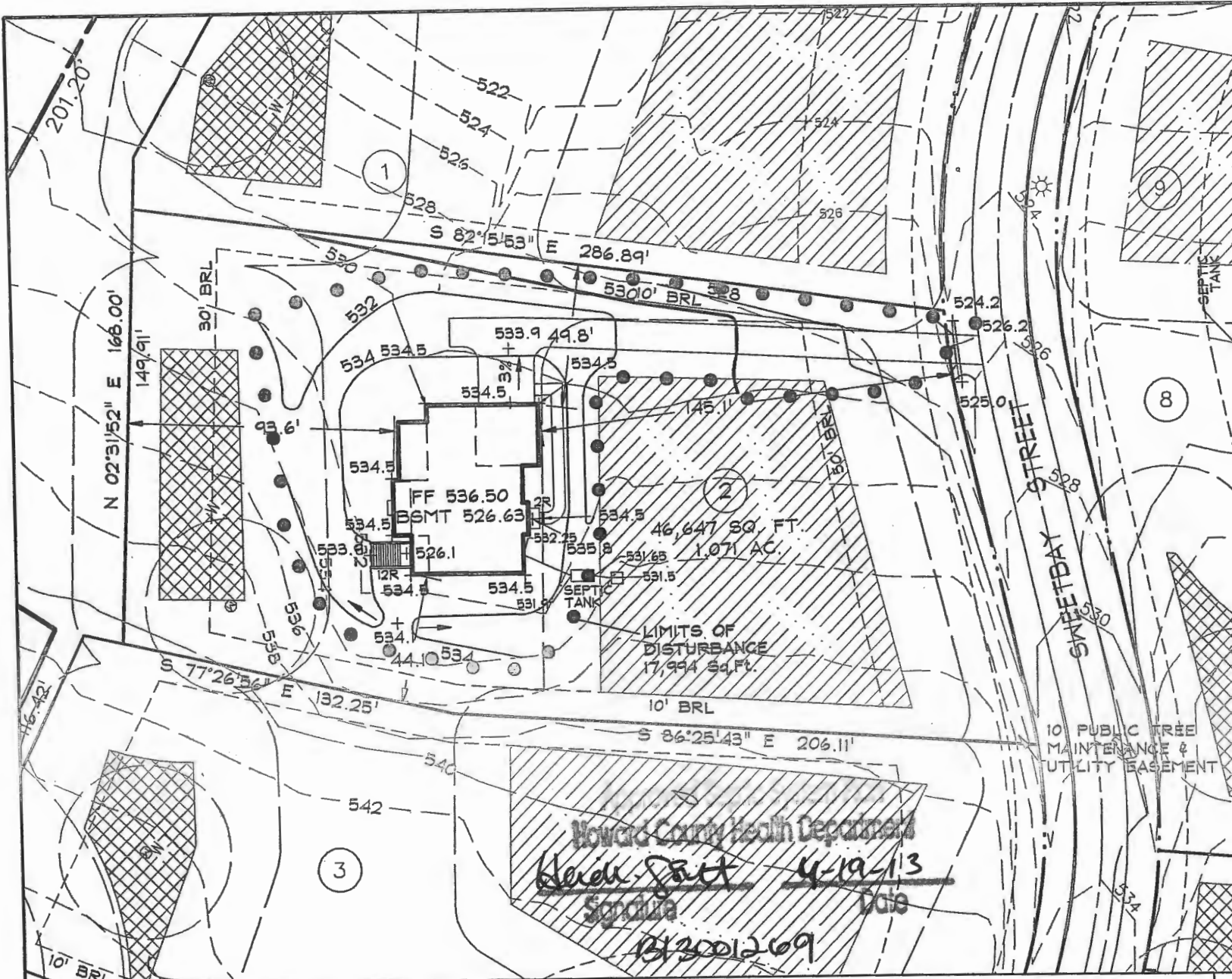
NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

NEITHER THE HOWARD COUNTY COUNCIL OR THE HEALTH DEPARTMENT IS  
RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.  
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.  
CALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM.



COLORADO  
GEORGIAN ELEVATION  
BRICK FRONT

#### GENERAL NOTES

1. THE EXISTING WELL SHOWN ON THIS PLAN (HO-95-0656) HAS BEEN LOCATED BY DDC, PROFESSIONAL LAND SURVEYOR, AND IS ACCURATELY SHOWN.
2. BASE SQUARE FOOTAGE OF HOUSE: 3,530 sq. ft. NUMBER OF BEDROOMS: 4
3. INFORMATION SHOWN ON THIS PLAN BASED ON PLANS PREPARED BY DMW DATED 6/25/07. EXISTING TOPOGRAPHY BASED ON GRADING PLAN PREPARED BY DEMARIO DESIGN CONSULTANTS DATED 7/9/07 AND FIELD RUN TOPOGRAPHY PREPARED BY DDC INC IN JAN. 2012.
4. EJECTOR PUMP REQUIRED TO SEWER BASEMENT



Development Design Consultants

Planners

Surveyors

Engineers

Landscape Architects

192 East Main Street  
Westminster, MD 21157

410.386.0560

410.386.0564 (Fax)

DDC@DDCinc.us

www.DDCinc.us

DDC JOB# 06116.5

DATE: 11/28/12

SCALE: 1" = 50'

DES. BY: BKC

DRN. BY: AJS

CHK. BY: BKC

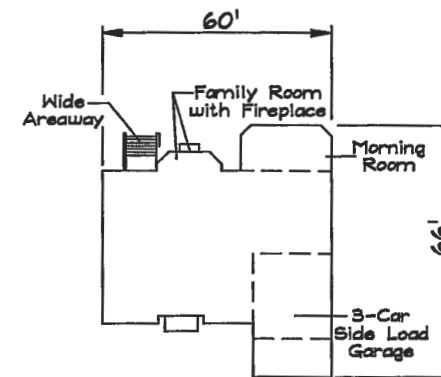
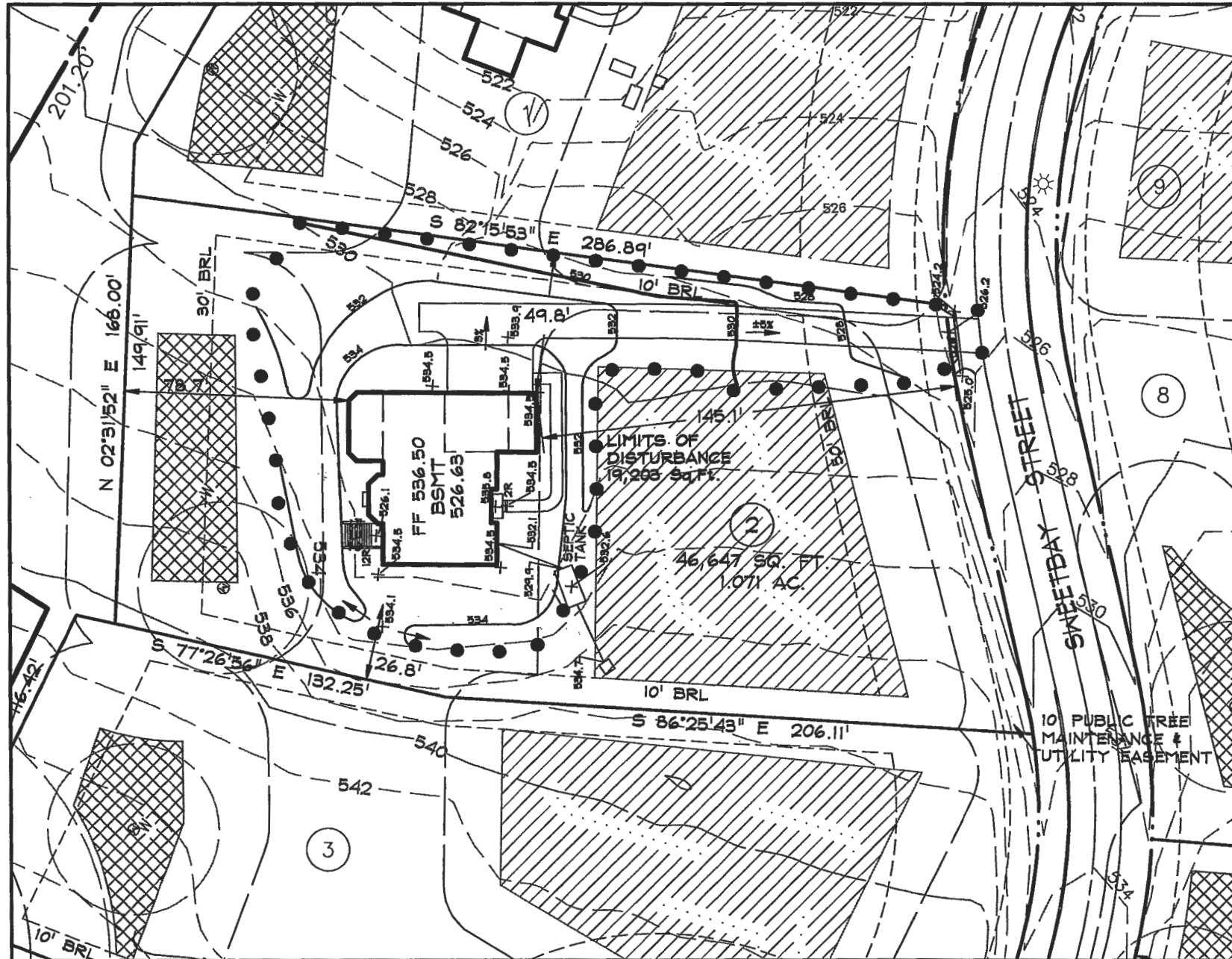
**BELLE HAVEN ESTATES**  
3rd ELECTION DISTRICT HOWARD COUNTY, MD  
TAX MAP 14, PARCEL 66

LOT 2  
15324 SWEETBAY STREET  
WOODBINE, MD 21797  
PLOT PLAN  
KHOV ELEVATION

OWNER/BUILDER:

K.HOVNANIAN HOMES  
1802 Brightseat Road  
Landover, Maryland 20785  
(301)683-6268





MANHATTAN  
ELEVATION 'C'  
BRICK FRONT

#### GENERAL NOTES

1. THE EXISTING WELL SHOWN ON THIS PLAN (HO-95-0656) HAS BEEN LOCATED BY DDC, PROFESSIONAL LAND SURVEYOR, AND IS ACCURATELY SHOWN.
2. BASE SQUARE FOOTAGE OF HOUSE: 4,140 sq. ft.  
NUMBER OF BEDROOMS: 4
3. INFORMATION SHOWN ON THIS PLAN BASED ON PLANS PREPARED BY DMW DATED 6/25/07. EXISTING TOPOGRAPHY BASED ON GRADING PLAN PREPARED BY DEMARIO DESIGN CONSULTANTS DATED 7/9/07 AND FIELD RUN TOPOGRAPHY PREPARED BY DDC INC IN JAN. 2012
4. EJECTOR PUMP REQUIRED TO SEWER BASEMENT
5. DRIVEWAY CULVERT SHOWN PER THE APPROVED ROAD DRAWINGS F-07-38.

*Revise House Footprint 'OK' Health Dept.*  
*not a guaranteed review of revision*  
 OWNER/BUILDER: K. HOVNANIAN HOMES  
 1802 Brightseat Road  
 Landover, Maryland 20785  
 (301) 683-6268



Planners  
Surveyors  
Engineers  
Landscape Architects

192 East Main Street  
Westminster, MD 21157  
410.386.0560  
410.386.0564 (Fax)  
DDC@DDCinc.us  
www.DDCinc.us

DDC JOB#: 06116.5

DATE: 8/28/14

SCALE: 1" = 50'

DES. BY: BKC/JHK

DRN. BY: BKC

CHK. BY: BKC

#### BELLE HAVEN ESTATES

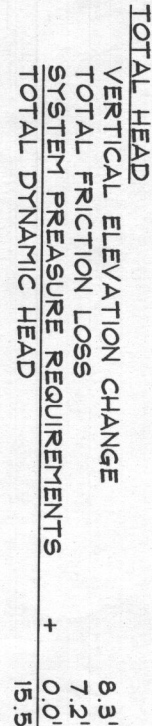
3rd ELECTION DISTRICT HOWARD COUNTY, MD  
TAX MAP 14, PARCEL 66

LOT 2  
15324 SWEETBAY STREET  
WOODBINE, MD 21797  
PLOT PLAN  
KHOV ELEVATION



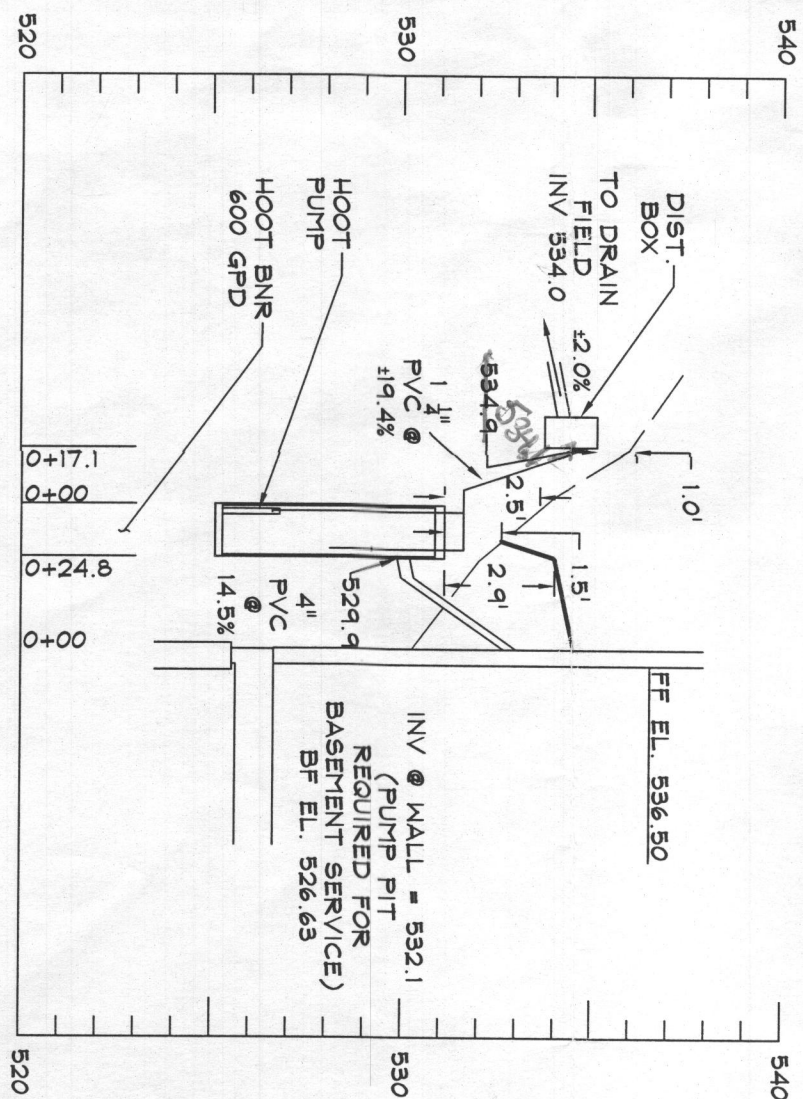
1. BASE SQUARE FOOTAGE OF HOUSE: 140 SQ.FT.
2. NUMBER OF BEDROOMS: 4
3. ELECTRIC PUMP REQUIRED TO SPILLER BASEMENT F-07-38
4. THE SUBJECT PROPERTY IS ZONED RC-D2D PER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND PER COMP-LITE ZONING REGULATIONS DATED 7/28/06.
5. PLAT REFERENCE: #9946
6. PREVIOUSLY EXISTING SEWAGE DISPOSAL SYSTEMS BASED ON GRADING PLAN PREPARED BY DDC INC IN JANUARY 2002.
7. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND DESIGN DETAILS. PRIOR TO STAKEOUT FOR CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE DDC, INC WITH THE MOST RECENT SET OF RECORD DRAWINGS FOR ANY EXISTING PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410)313-1881 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
8. THE CONTRACTOR SHALL NOTIFY THIS UTILITY AT 1-800-257-7777 AT LEAST EIGHTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK THAT DEEPER THAN FOUR (4) FEET.
9. STORMWATER MANAGEMENT FOR THIS LOT IS PROVIDED PER THE PREVIOUSLY APPROVED FINAL PLAN (F-07-38).
10. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS OR PAVED PUBLIC ROADS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
11. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE CIVIL ENGINEER (CDC, INC.) MAY CAUSE THE PROJECT TO BE UNACCEPTABLE.
12. THE DIMENSIONED DISTANCES SHALL GOVERN IF SCALED AND DIMENSIONED DISTANCES ON THIS PLAN ARE FOUND TO BE IN DISCREPANCY.
13. THERE SHALL BE NO GREEN CORNER WITH THE MINIMUM LOT AREA AND OVERLAP WIDTH AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
14. THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL AREA OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
15. THE SHADY GREEN CORNER IN THIS AREA ARE RESTRICTED TO THIS SEWAGE DISPOSAL AREA. SHALL NOT BE USED FOR ANY OTHER PURPOSES. ANY PUBLIC SERVICE UTILITIES, THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE ASSEMENT. RECORDATION OF A REVISED SEWAGE ASSEMENT SHALL NOT BE NECESSARY.
16. EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING SEWER LINES SHALL BE IDENTIFIED AND MARKED.
17. PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN ON THE PLANS.
18. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
19. UPON BUILDING PERMIT REVIEW THE SEPTIC SYSTEMS OF ALL PROPOSED STRUCTURES AND/OR EXISTING STRUCTURE EXPANSIONS SHALL BE RE-EVALUATED TO DETERMINE SUFFICIENT SYSTEM CAPACITY TO SERVE THE LOT. THIS DOES NOT REQUIRE AN ENVIRONMENTAL CONCEPT PLAN SINCE STORE/WATER MANAGEMENT WAS PREVIOUSLY APPROVED UNDER -07-38.
20. SEPTIC SYSTEM/ASEMENT AVAILABLE TECHNOLOGY (BAT) 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 DEPTH OF THE BAT PER THE MANUFACTURERS SPECIFICATION IS 3 FEET.  
TECHNICAL MANUAL MAY NOT BE LOCATED MORE THAN 10 FEET FROM THE TANK BASED ON THE MANUFACTURERS SPECIFICATION.  
4. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.  
5. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.  
6. PROVIDER YOUTH OF INSTALLATION. A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE LAND USE DEPARTMENT OF THE ENVIRONMENT (RDE) IN A MANNER ACCEPTABLE TO RDE THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.  
7. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.  
8. THE HEALTH DEPARTMENT AND ASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICANTS.  
9. THE HEALTH DEPARTMENT IS REQUIRED TO RECORD IN LAND RECORDS OF HOWARD COUNTY. THE HEALTH DEPARTMENT WILL RECORD THE RECORD AFTER THE START-UP CERTIFICATION HAS BEEN RECEIVED.  
10. INSTALLATION.

TOTAL DYNAMIC HEAD CALCULATIONS		
STATIC HEAD	OFF FLOOR ELEVATION	526.6
	HIGH POINT OF THE SYSTEM	+ 35.4
VERTICAL ELEVATION CHANGE:		6.3
FRICTION HEAD		
FITTINGS:		13.6
LENGTH OF P.V.C. PIPE:		+ 35.6
52.6' / 100 x 13.6 = 7.2'	TOTAL FRICTION LOSS	49.2
TOTAL HEAD		
VERTICAL ELEVATION CHANGE		6.3
TOTAL FRICTION LOSS		+ 7.2
SYSTEM PRESSURE REQUIREMENTS		15.5
TOTAL DYNAMIC HEAD		10.0

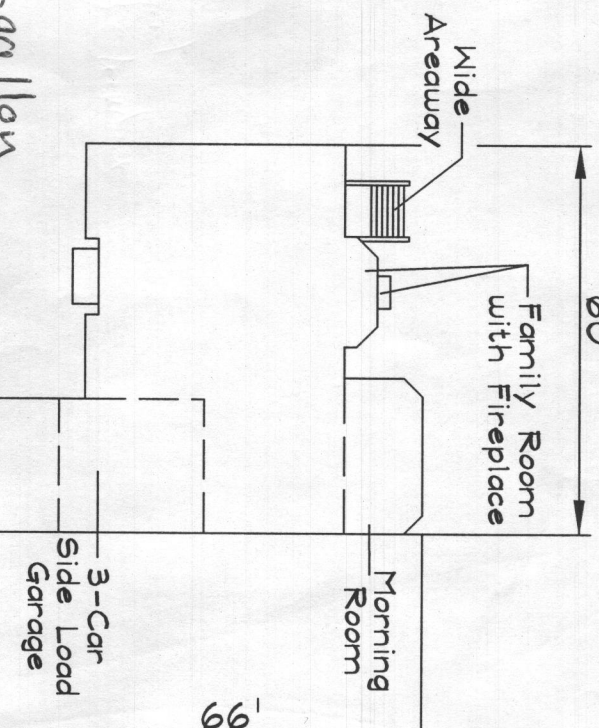
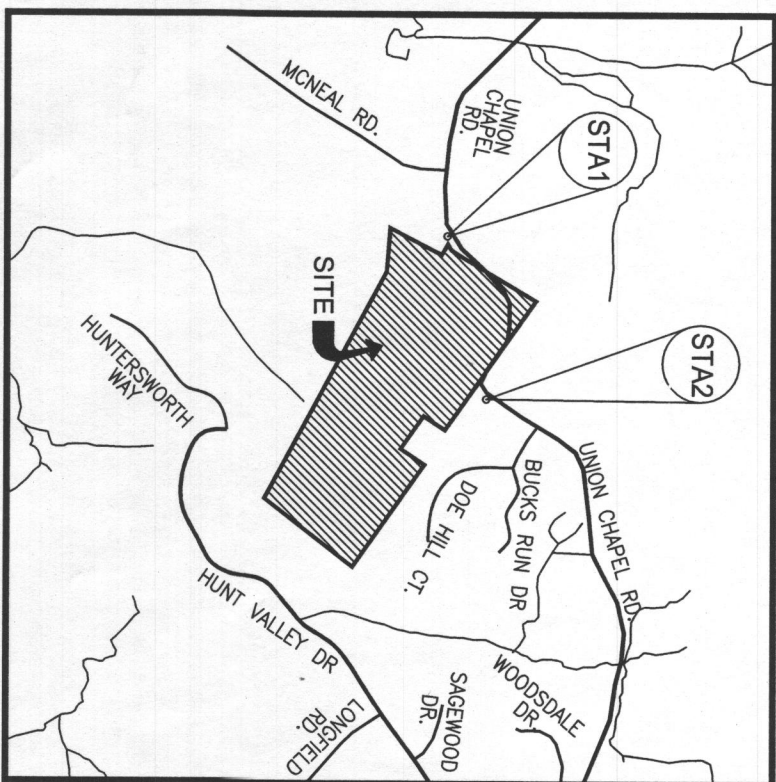
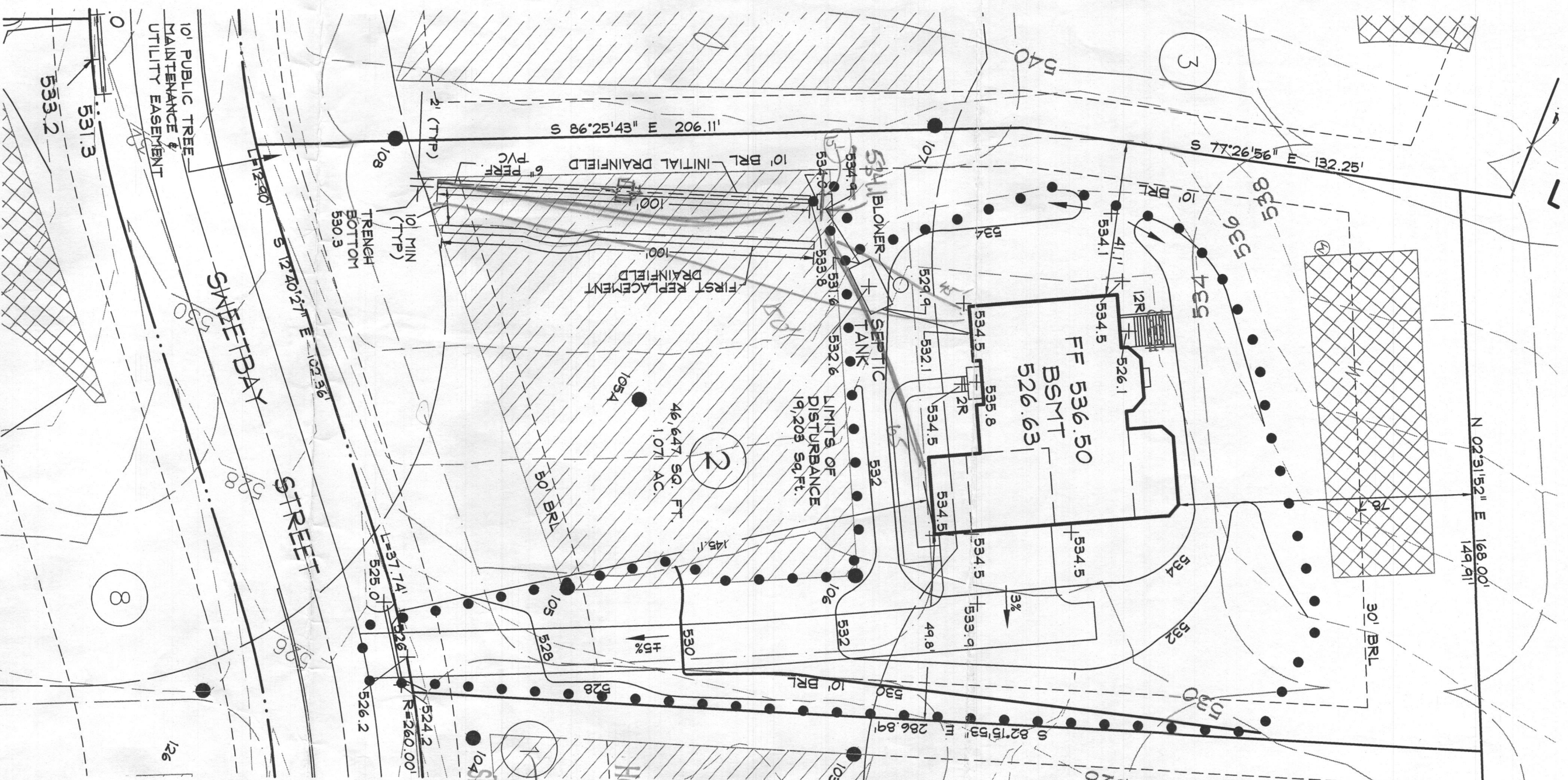


TOTAL HEAD	
VERTICAL ELEVATION CHANGE	8.3
TOTAL FRICTION LOSS	7.2
SYSTEM PRESSURE REQUIREMENTS	0.0
TOTAL DYNAMIC HEAD	15.5

LOT 2 INITIAL SYSTEM TRENCH SPECIFICATIONS			
	GROUND ELEVATION	INVERT ELEVATION	BOTTOM ELEVATION
INITIAL DRAINFIELD TRENCH (100)	556.6	553.6	550.3
FIRST REPLACEMENT TRENCH (100)	555.9	552.9	549.4

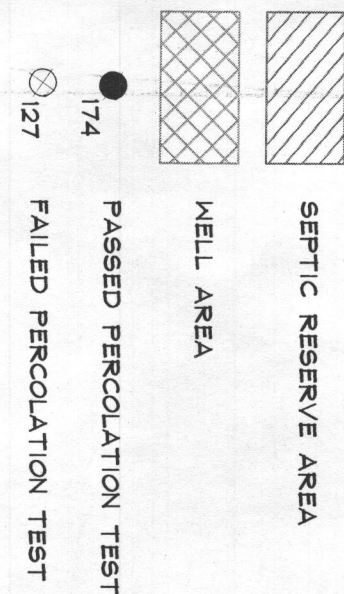


STAGE DISPOSAL SYSTEM DATA (4 BEDROOM):  
 1. INVERT @ FOUNDATION WALL: 532.1 (BASEMENT PUMP REQUIRED)  
 2. 600 GPD BUR SYSTEM @ 750 GALLON PUMP CHAMBER  
     USE 1 - 100' LONG TRENCH = 532.9  
     PROPOSED GRADE OVER TANKS: 532.6  
     INVERT: 529.4  
 3. DISTRIBUTION BOX  
     INVERT: 534.9  
     EX @ PROPOSED GRADE OVER TANK: 536.4  
 4. TRENCH DISPOSAL (4 BEDRM @ 150 GPD/DRAWN = 600 GPD)  
     USE 1 - 100' LONG TRENCH @ 10" DIA. OF GRAVEL/BELLOW PIPE  
     USE 2 - WIDE TRENCH (X 42" OF GRAVEL/BELLOW PIPE  
     @ MIN. SPACING BETWEEN TRENCH ES  
     5.00 SF / 2' WIDTH = 250 LF @ 0.40 = 100 LF MIN OF TRENCH  
     USE 1 - 100' LONG TRENCH = 100 LF FOR INITIAL SYSTEM  
     USE 1 - 100' LONG TRENCH = 100 LF FOR FIRST REPLACEMENT SYSTEM



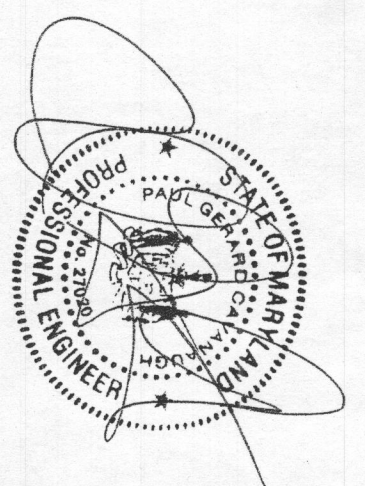
500	PROPOSED GRADE
502	PROPOSED LIMIT OF DISTURBANCE

- + 665.5 PROP. SPOT ELEV./FLOW ARROW  
 PROPOSED 20 SEPTIC RESERVE  
 BUFFER  
 EXISTING 30' WELL BUFFER  
 EXISTING 100' WELL BUFFER  
 BUILDING RESTRICTION LINE



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. 21020, Expiration Date 01/25/16.

DATE 07/07/2014



PAUL G. CAVANAUGH, P.E.

B-1E ELECTION DISTRICT		HOWARD COUNTY	
RE/INDS			
NO.	DESCRIPTION OF CHANGES	DRN.	REV.
CO. FILE #	DES. BY: JHK	DATE	
TAX AC. #	DRN. BY: JHK/JMM		
TAX MAP-14	CHK. BY: PGC/BMC		
BLOCK / GRID:	DATE: 06/23/14		
PARCEL #. 66	DDC JOB#: 06116.5		
ZONE / USE: RC-DEO			

**OWNER:** K HOYMANIANI HOMES

**DEVELOPER:**

**SITE ADDRESS:**  
LOT 2  
15324 Sweetbay St.  
Woodbine, Maryland 21797

**BELLE HAVEN ESTATES**

# SITE PLAN FOR BAT INSTALLATION

3rd ELECTION DISTRICT

HOWARD COUNTY

REVISIONS			
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[illegible]

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NO	DESCRIPTION OF CHANGES	DBN	REV	DATE

NO.	DESCRIPTION OF CHANGES	DATE	REV.	DATE
CO FILE #:	DEC BY: HUK			

CO. FILE #:	DES. BY: JHK
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TAX ACC. #: DRN. BY: JHK/JMM

TAX MAP: 14	CHK. BY: PGC/BKC
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BLOCK / GRID:	DATE: 06/23/14
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BOOK / CRID.	DATE: 06/23/14
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PARCEL #: 66	DDC JOB#:06116.5
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ZONE / USE: RC-DEO SHEET NUMBER:

DWG SCALE: 1"=30'	1	CE	1
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