

SOIL EVALUATION SUMMARY

SOIL EVALUATOR: LIMHUOT TIV, GPR, INC.
SOIL EVALUATOR APPROVED ON: NOVEMBER 02, 2021
WITNESSED BY: UNWITNESSED
EVALUATION PERFORMED: 01/13/2022

Deep Observation Hole Log					
Hole #	122-1	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	A	FSL	10YR 3/3	
	12-42	C1	S	10YR 5/4	
	42-85	C2	SL	2.5Y 5/3	
				10YR 6/4	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: 85"
Depth to Groundwater: Standing Water in the Hole: None Weeping from Pit Face: None
Estimated Seasonal High Groundwater in the Hole: 42"

Deep Observation Hole Log					
Hole #	122-2	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	A	FSL	10YR 3/3	
	12-50	C1	S	10YR 5/4	
	50-91	C2	SL	2.5Y 5/4	
				10YR 6/4	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >91"
Depth to Groundwater: Standing Water in the Hole: 88" Weeping from Pit Face: 78"
Estimated Seasonal High Groundwater in the Hole: 50"

Deep Observation Hole Log					
Hole #	122-3	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	A	FSL	10YR 3/3	
	12-27	C1	S	10YR 5/4	
	27-102	C2	FSL	2.5Y 5/4	
				7.5YR 5/6	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >102"
Depth to Groundwater: Standing Water in the Hole: 60" Weeping from Pit Face: 30"
Estimated Seasonal High Groundwater in the Hole: 24"

Deep Observation Hole Log					
Hole #	122-4	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	A	FSL	10YR 3/3	
	12-26	Ab	LS	10YR 4/3	
	26-40	C1	FS	2.5Y 6/1	
	40-50	Ab	FS	2.5Y 6/1	
	50-102	C2	FSL	2.5Y 5/4	
				7.5YR 5/6	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >102"
Depth to Groundwater: Standing Water in the Hole: 90" Weeping from Pit Face: 48"
Estimated Seasonal High Groundwater in the Hole: 45"

Deep Observation Hole Log					
Hole #	122-5	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-40	Fill	FSL	10YR 3/3	
	40-48	C1	S	10YR 5/4	
	48-108	C2	FSL	2.5Y 5/4	
				7.5YR 5/6	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >108"
Depth to Groundwater: Standing Water in the Hole: 101" Weeping from Pit Face: 52"
Estimated Seasonal High Groundwater in the Hole: 50"

Deep Observation Hole Log					
Hole #	122-6	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-15	A	FSL	10YR 3/3	
	15-80	C1	FSL	GLEYS 3/N	
	80-108	C2	FLS	7.5YR 5/8	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >108"
Depth to Groundwater: Standing Water in the Hole: 100" Weeping from Pit Face: 35"
Estimated Seasonal High Groundwater in the Hole: 15"

Deep Observation Hole Log					
Hole #	122-7	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-15	A	FSL	7.5YR 2.5/2	
	15-28	C1	S	10YR 4/2	
	28-99	C2	FSL	GLEYS 3/N	
				10YR 5/6	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >99"
Depth to Groundwater: Standing Water in the Hole: 80" Weeping from Pit Face: 20"
Estimated Seasonal High Groundwater in the Hole: 15"

Deep Observation Hole Log					
Hole #	122-8	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	A	FSL	10YR 3/3	
	12-28	C1	LS	10YR 5/4	
	28-76	C2	SL	2.5Y 5/3	
				10YR 6/4	
				2.5Y 6/2	

*MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
Parent Material (geologic): Glacial Till Depth to Bedrock: >76"
Depth to Groundwater: Standing Water in the Hole: 72" Weeping from Pit Face: 70"
Estimated Seasonal High Groundwater in the Hole: 60"

*SOIL TESTING FROM PLAN REF. #1. ELEVATIONS HAVE BEEN CONVERTED FROM NGVD 1929 TO NAVD98.

ADDITIONAL DEEP OBSERVATION HOLE TESTING

PERFORMED APRIL 17, 1991 BY BRUCE RINGWALL
WITNESSED BY IRA GROSSMAN, NABH

491-1 0'0" - 1'0" 1'0" - 6'0" 6'0" - 10'0" ELEV.= 300.4 TOP & SUBSOIL GRAVEL GRAY SANDY TILL GWO @ 6'6" NO REFUSAL	491-2 0'0" - 1'5" 1'5" - 6'0" 6'0" - 9'0" ELEV.= 309.3 TOP & SUBSOIL SAND GREY TILL GWO @ 6'0" NO REFUSAL	491-3 0'0" - 1'0" 1'0" - 5'6" 5'6" - 6'6" 6'6" - 10'0" ELEV.= 311.6 TOP & SUBSOIL SAND VERY FINE SAND TIGHT FINE SANDY SILT GWO @ 6'0" NO REFUSAL	491-4 0'0" - 1'5" 1'5" - 6'0" 6'0" - 6'6" 6'6" - 10'6" ELEV.= 313.4 TOP & SUBSOIL SAND VERY FINE SAND TIGHT FINE SANDY SILT GWO @ 6'0" NO REFUSAL	491-5 0'0" - 1'0" 1'0" - 7'0" 7'0" - 11'0" ELEV.= 313.0 TOP & SUBSOIL SAND TIGHT SANDY SILT GWO @ 7'0" NO REFUSAL	491-6 0'0" - 1'0" 1'0" - 5'0" 5'0" - 7'6" 7'6" - 10'6" ELEV.= 315.4 TOP & SUBSOIL SAND FINE SAND TIGHT FINE SANDY SILT GWO @ 7'0" NO REFUSAL	491-7 0'0" - 1'0" 1'0" - 3'0" 3'0" - 7'0" 7'0" - 11'0" ELEV.= 316.3 TOP & SUBSOIL COARSE SAND SAND TIGHT SANDY SILT GWO @ 7'0" NO REFUSAL	491-8 0'0" - 1'0" 1'0" - 4'0" 4'0" - 6'0" 6'0" - 10'6" ELEV.= 317.3 TOP & SUBSOIL GRAVEL SAND TIGHT SANDY SILT GWO @ 6'6" NO REFUSAL	491-11 0'0" - 1'5" 1'5" - 6'0" 6'0" - 7'0" 7'0" - 10'6" ELEV.= 318.2 TOP & SUBSOIL COARSE SAND VERY FINE SILTY SAND TIGHT FINE SANDY SILT GWO @ 6'6" NO REFUSAL	491-12 0'0" - 1'0" 1'0" - 4'0" 4'0" - 7'0" 7'0" - 10'6" ELEV.= 317.0 TOP & SUBSOIL GRAVEL SAND VERY FINE SILTY SAND TIGHT FINE SANDY SILT GWO @ 7'0" NO REFUSAL	491-18 0'0" - 1'0" 1'0" - 5'0" 5'0" - 6'6" 6'6" - 7'6" 7'6" - 10'6" ELEV.= 315.0 TOP & SUBSOIL GRAVEL COARSE SAND VERY FINE SANDY SILT TIGHT SANDY SILT GWO @ 6'6" NO REFUSAL	491-19 0'0" - 1'0" 1'0" - 6'6" 6'6" - 10'0" ELEV.= 311.7 TOP & SUBSOIL SAND STONE & TIGHT SANDY TILL GWO @ 6'6" NO REFUSAL
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PERCOLATION TESTING

CONDUCTED 8-1-96 BY BARRY BERZINIS
WITNESSED BY: IRA GROSSMAN, N.A.B.H.
896-C 2 MIN/IN @ 64" OVER 24 GALLONS APPLIED
896-D 2 MIN/IN @ 64" OVER 24 GALLONS APPLIED

ADDITIONAL PERCOLATION TESTING

PERFORMED OCTOBER 22, 1986
BY: CHARLES A. PERKINS CO. INC.
WITNESSED BY: NABH

1086-PA	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PB	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PD	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PH	2 MIN/IN	@ 62"	25 GALLONS APPLIED
1086-PI	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PK	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PL	2 MIN/IN	@ 60"	25 GALLONS APPLIED
1086-PN	2 MIN/IN	@ 60"	25 GALLONS APPLIED

DRAWING ISSUED FOR:

- ☐ CONCEPT ☐ CONSTRUCTION
☒ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY BE USED FOR CONSTRUCTION UPON ISSUANCE OF ALL PERMITS AND APPROVALS BY REGULATORY AUTHORITIES.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO. DATE BY APP. REVISION DESCRIPTION

GPR Engineering Solutions for Land & Structures

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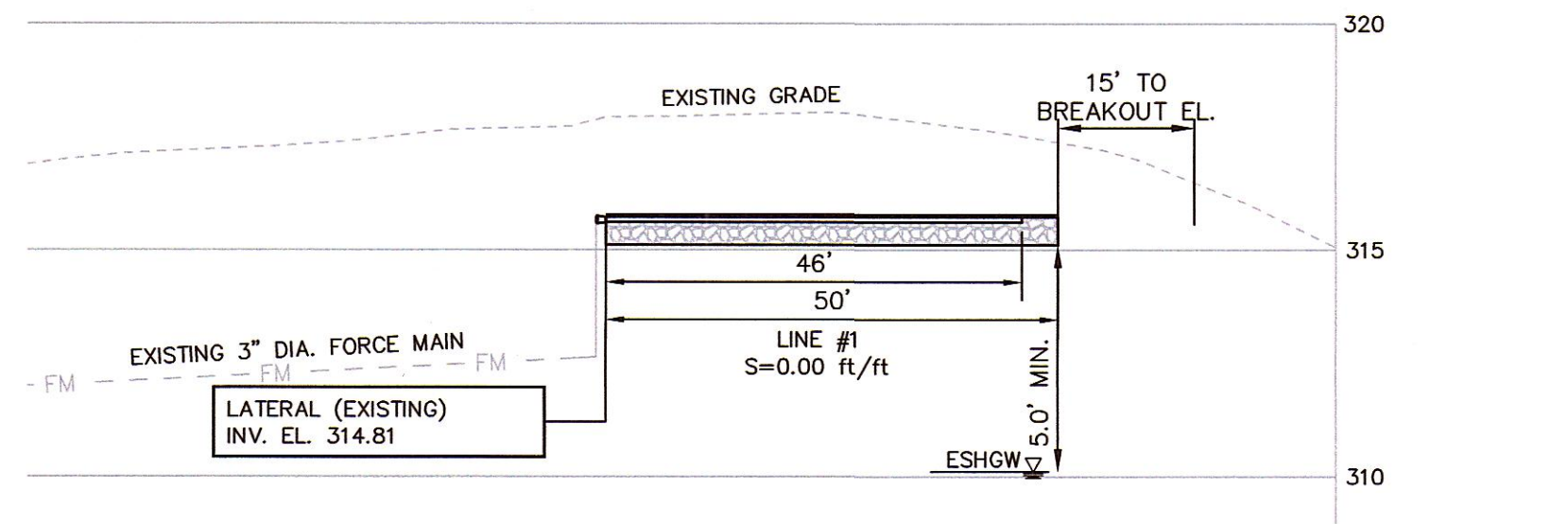
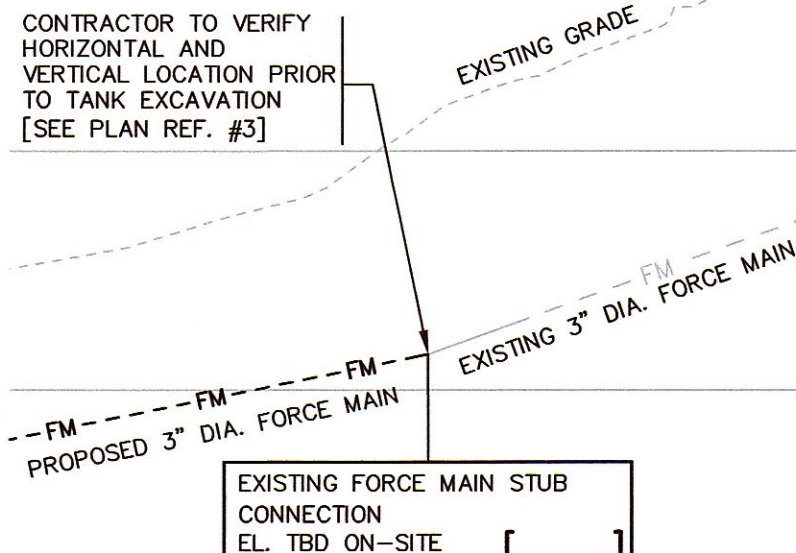
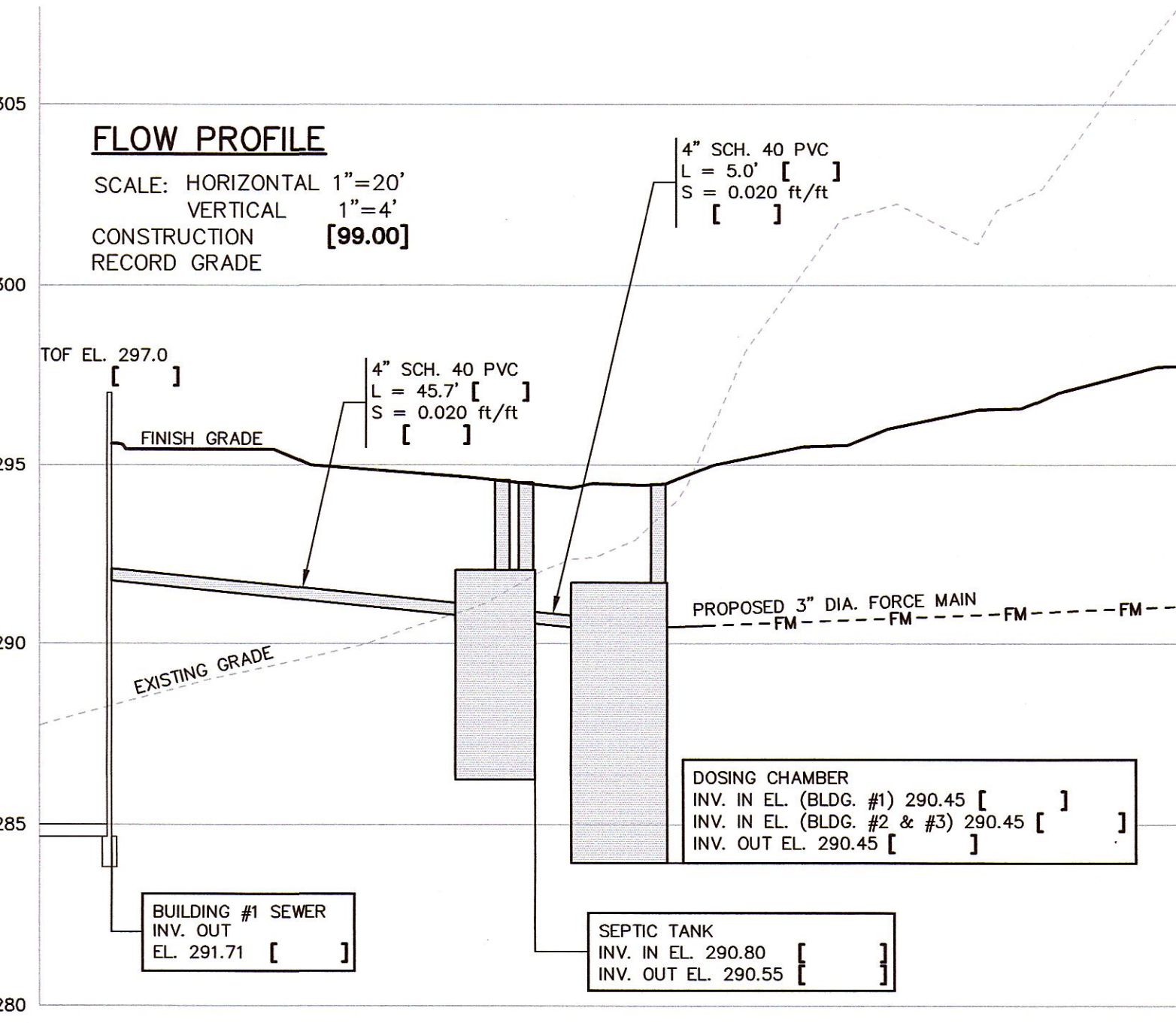
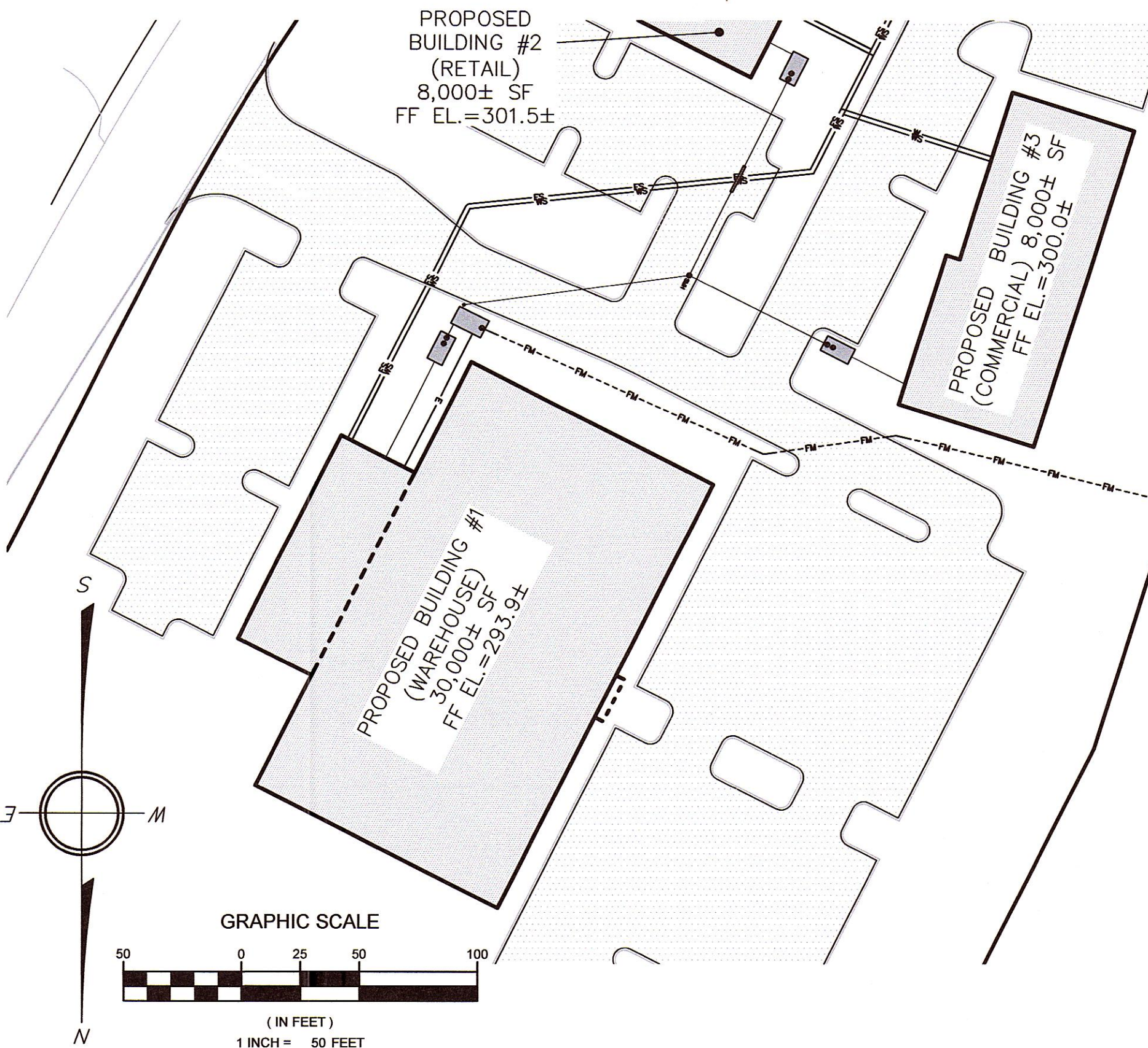
SUBSURFACE SEWAGE DISPOSAL SYSTEM UPGRADE

FLOW PROFILE AND SOIL LOGS

203 AYER ROAD
HARVARD, MA

PREPARED FOR:
WHEELER REALTY TRUST
198 AYER ROAD
HARVARD, MA 01451

DES. BY: MCL DATE: FEBRUARY 2022 JOB 211009A 2 OF 3
CHK. BY: NMP



SOIL EVALUATION SUMMARY

CONDUCTED 8-1-96 BY BARRY BERZINIS
WITNESSED BY: IRA GROSSMAN, N.A.B.H.

DEEP OBSERVATION HOLE LOG					
Hole #	896-5	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-12	Ap	LS	10YR 3/3	
	12-16	Bw	LS	10YR 5/4	
	16-66	1C1	S	2.5Y 5/4	
				7.5YR 5/6	
				2.5Y 6/2	

DEEP OBSERVATION HOLE LOG					
Hole #	896-6	NB	14/E-31	Soil Color (MUNSELL)	Soil Motting
Depth from Surface (inches)	0-9	Ap	LS	10YR 3/3	
	9-16	Bw	LS	10YR 5/4	
	16-72	1C1	S	2.5Y 5/4	
				7.5YR 5/6	
				2.5Y 6/2	

*SOIL TESTING FROM PLAN REF. #1. ELEVATIONS HAVE BEEN CONVERTED FROM NGVD 1929 TO NAVD98.

1. LOCATION OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. LOCATE AND PROTECT ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
2. INSTALL ALL NEW UTILITIES UNDERGROUND, UNLESS SPECIFICALLY INDICATED OTHERWISE.
3. EMPLOY A LICENSED PROFESSIONAL LAND SURVEYOR TO LAY OUT BUILDING AND SITE IMPROVEMENTS FOR CONSTRUCTION. PROPERTY LINES SHOWN HEREON ARE APPROXIMATE. SEE PLAN REFERENCE HEREON.
4. CONTRACTOR IS RESPONSIBLE FOR SAFETY MEASURES, CONSTRUCTION METHODS, AND CONTROL OF WORK.
5. REPAIRS AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON ARE THE RESPONSIBILITY OF CONTRACTOR. REPAIR SUCH DAMAGE TO THE SATISFACTION OF OWNER(S).
6. THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN, WHICH WOULD INCLUDE DETAILS AND ELEVATIONS OF FOOTINGS, WALLS AND SUBSURFACE DRAINS TO PREVENT INTERIOR FLOODING. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
7. PRIOR TO IMPLEMENTATION, SEEK ENGINEER REVIEW AND APPROVAL OF ANY INTENDED REVISION OF HORIZONTAL AND/OR VERTICAL DESIGN LOCATION OF IMPROVEMENTS SHOWN HEREON.
8. PROMPTLY NOTIFY ENGINEER UPON COMMENCEMENT OF CONSTRUCTION IN ORDER TO ENSURE THAT REQUIRED INSPECTIONS ARE PERFORMED IN A TIMELY AND EFFICIENT MANNER. MAINTAIN DISPOSAL SYSTEM IN AN UNCOVERED CONDITION UNTIL AUTHORIZED TO BACKFILL BY ENGINEER AND LOCAL BOARD OF HEALTH.

9. NOTIFY ENGINEER UPON DISCOVERY OF ANY UNFORESEEN SURFACE OR SUBSURFACE CONDITIONS THAT MAY IMPACT SYSTEM INSTALLATION, REGULATORY APPROVAL, OR FUNCTION.
10. INSTALL FINISH RIM ELEVATIONS TO MATCH FINISH PAVEMENT, GRADING OR LANDSCAPING SURFACE, UNLESS SPECIFICALLY INDICATED OTHERWISE.
11. PLUG/CAP/FILL EXISTING UTILITY LINES/STRUCTURES THAT ARE TO BE CUT/BROKEN DOWN/ABANDONED, IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
12. WHERE THE WORD "INSTALL" IS USED HEREIN, IT IS INTENDED TO DIRECT CONTRACTOR TO "FURNISH, INSTALL, AND PLACE IN OPERATION" THE COMPONENT REFERRED TO.
13. THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE IS NOT A GUARANTEE THAT THE DISPOSAL SYSTEM WILL FUNCTION SATISFACTORILY.
14. INSTALL EROSION CONTROL MEASURES, SUCH AS SILT FENCE OR HAY BALES AS MAY BE SHOWN HEREIN, BEFORE EARTH DISTURBANCE OCCURS.
15. THE SUBJECT SYSTEM HAS BEEN DESIGNED TO PROCESS ONLY DOMESTIC SEWAGE AT THE INDICATED LOADING RATE. THE SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE DISPOSAL.
16. COORDINATE WITH OWNER/ENGINEER REGARDING REMOVAL OF TREES AND OTHER VEGETATION NOT REQUIRING REMOVAL BY REGULATIONS AND CODES.
17. THESE DRAWINGS DO NOT ADDRESS PLUMBING REQUIRED INSIDE BUILDINGS TO ROUTE APPROPRIATE DRAINS TO BUILDING SEWER. OWNER SHALL EMPLOY A LICENSED PLUMBER TO COMPLETE SUCH WORK AS IS NECESSARY TO DRAIN ALL BLACKWATER AND GREYWATER TO THE PROPOSED SEWAGE DISPOSAL SYSTEM.
18. ENGINEER TO PERFORM CLEAR WATER TEST OF THE PRESSURE DISTRIBUTION NETWORK AND THE ASSOCIATED ADJUSTMENTS TO ENSURE EQUAL DISTRIBUTION THROUGHOUT NETWORK. TEST PERFORMED PRIOR TO CONTRACTOR BACKFILLING THE SOIL ABSORPTION AREA.
19. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

1. A LICENSED DISPOSAL SYSTEM INSTALLER SHALL PERFORM ALL WORK ON THE SEWAGE DISPOSAL SYSTEM.
2. CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
3. OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
4. PRIOR TO COMMENCEMENT OF ANY WORK, REVIEW AND THOROUGHLY UNDERSTAND ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES.
5. COMPLETE ALL WORK THAT IS OUTSIDE OF BUILDING AND LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATION IN CONFORMANCE WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.
6. GENERAL COMPLIANCE WITH 28 CFR PART 36 - 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND CMR PART C, EXTERIOR OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS IS INTENDED, CONTRACTOR SHALL VERIFY COMPLIANCE DURING CONSTRUCTION AND SHALL NOTIFY THE OWNER OF ANY NON-COMPLIANCE ISSUES AS SOON AS DISCOVERED.

1. ALL SEWAGE DISPOSAL SYSTEM COMPONENTS ARE GREATER THAN 400 FEET FROM SURFACE WATER RESERVOIRS AND GREATER THAN 200 FEET FROM TRIBUARIES TO SURFACE WATER RESERVOIRS.
2. THERE ARE NO KNOWN EXISTING WELLS WITHIN 150 FEET OF PROPOSED SOIL ABSORPTION AREA, OR WITHIN 50 FEET OF PROPOSED SEPTIC TANK.
3. ALL KNOWN WELLS WITHIN 200 FEET OF SEWAGE DISPOSAL SYSTEM ARE SHOWN HEREON.
4. WATER SERVICE VIA PRESSURE LINE FROM WELL.



- PIPE (310 CMR 15.251)
1. BUILDING SEWER: 4-INCH DIA. SCH 40 PVC, MIN. SLOPE 1/4 IN. PER FT.
2. SEPTIC TANK TO DOSING CHAMBER: 4-INCH DIA. SCH 40 PVC OR SDR35 PVC, MIN. SLOPE 1/8 IN. PER FT.
3. FORCE MAIN: 3-INCH DIA. CL 160 GASKETED JOINT PVC.
4. MANIFOLD: 3-INCH DIA. SCH 40 PVC.
5. DISTRIBUTION LATERALS: 1½-INCH DIA. SCH 40 PVC.
6. BED, HAUNCH, AND BACKFILL ALL PIPE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. ALL JOINTS SHALL BE WATERTIGHT.
7. VENT BUILDING SEWER THROUGH MAIN STACK IN BUILDING SERVED BY IT.
8. CLEAR ALL PIPE AND ORIFICES OF DEBRIS BEFORE BACKFILL OF SYSTEM OCCURS.

1. TANK RATED FOR H-10 LOADING. MANUFACTURER: SHEA CONCRETE PRODUCTS, INC., WILMINGTON, MA (978-658-2645), OR EQUAL.

2. SEAL TANK WATER TIGHT, USING RUBBER JOINT SEALER AND NON-SHRINK GROUT ALONG ALL JOINTS. A WATER TEST MAY BE REQUIRED.
3. **DOSING CHAMBER** (310 CMR 15.221, 15.231, 15.254)
 1. CHAMBER RATED FOR H-20 LOADING. MANUFACTURER: SHEA CONCRETE PRODUCTS, INC., WILMINGTON, MA (978-658-2645), OR EQUAL.
2. SEAL CHAMBER WATER TIGHT, USING RUBBER JOINT SEALER AND NON-SHRINK GROUT ALONG ALL JOINTS. A WATER TEST MAY BE REQUIRED.
3. BRING ENTRY MANHOLE ABOVE PUMPS TO FINISH GRADE.
4. INSTALL PUMPS IN A DUPLEX CONFIGURATION. PUMPS SHALL BE:
 - a. SUBMERSIBLE TYPE, RATED FOR 200/230/460/575 VOLT, THREE PHASE SERVICE. (NOTE: CONTACT ENGINEER IF 200/230 VOLT CIRCUIT IS NOT AVAILABLE AT PANEL);
 - b. SIMILAR OR EQUAL TO MYERS MODEL 3RH, 4.25" IMPELLER DIA., RATED AT 7.5 HP;
 - c. CAPABLE OF PUMPING 120.2 GPM AT 82.4 FEET TOTAL DYNAMIC HEAD.
5. INSTALL NON-MERCURY MAGNETIC REED SWITCHES TO CONTROL PUMP AND ALARM, SUCH THAT FLOATS ARE READILY REMOVABLE FROM CHAMBER. JUNCTION BOX: USE WATER TIGHT THERMOPLASTIC STRUCTURAL FOAM BOX BY MYERS OR APPROVED EQUAL. LOCATE BOX OUTSIDE CHAMBER. PERFORM ALL ELECTRICAL WORK IN ACCORDANCE WITH CODE REQUIREMENTS.
6. INSTALL NEMA 3 CONTROL PANEL ENCLOSURE, WITH WALL MOUNT CABINET, INCLUDING THE FOLLOWING:
 - a. A VISIBLE AND AUDIBLE ALARM TO SIGNAL HIGH WATER, POWERED BY A SEPARATE, DEDICATED CIRCUIT.
 - b. ALTERNATING PUMPS.
7. INSTALL FORCE MAIN WITHIN DOSING CHAMBER USING SOLVENT WELDED SCHEDULE 40 PVC. SECURE FORCE MAIN AGAINST MOVEMENT AND SHIELD FROM ABRASION. INSTALL A BALL VALVE ON THE VERTICAL FORCE MAIN RUN, ABOVE THE ALARM-ON LEVEL.
8. DRILL A SINGLE 1/4-INCH DIAMETER WEEP HOLE IN FORCE MAIN BETWEEN BALL VALVE AND CHAMBER WALL.

1. REMOVE FROM SOIL ABSORPTION AREA ALL TOPSOIL, Boulders larger than 24 inches (longest dimension), OR OTHER UNSUITABLE MATERIAL ENCOUNTERED DURING EXCAVATION.
2. SCARIFY ALL EXCAVATION INTERFACES PRIOR TO PLACEMENT OF FILL OR LEACHING AGGREGATE.
3. WHEN AREA IS TO BE INSTALLED WITHIN A & B SOIL HORIZONS (TOP & SUBSOIL) OR ABOVE NATURAL GRADE, REMOVE TOP SUBSOIL AND OTHER IMPERVIOUS MATERIALS FROM BEATH SOIL ABSORPTION AREA, AND FROM THE SURROUNDING 5-FOOT BUFFER (SEE PLAN), AND REPLACE WITH SELECT SOIL FILL. PLACE AND COMPACT FILL TO MINIMIZE SETTLEMENT. SCARIFY FILL PRIOR TO PLACEMENT OF LEACHING AGGREGATE.

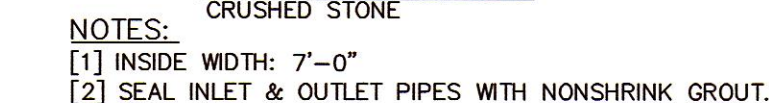
4. LEACHING AGGREGATE: 3/4 TO 1-1/2" DOUBLE-WASHED STONE, FREE OF IRON, FINES, AND DUST IN PLACE.
5. FILTER FABRIC: MIRAFIT 140NC OR APPROVED EQUAL.
6. COVER MATERIAL: FREE OF DEBRIS AND STONES LARGER THAN 6 INCHES. FINISH GRADE COVER OVER SOIL ABSORPTION AREA TO ENSURE ADEQUATE RUNOFF (2% MIN. SLOPE).

1. SELECT SOIL FILL MATERIAL FOR SYSTEM CONSTRUCTION MAY CONSIST OF SELECT ON-SITE SOIL, OR IMPORTED SOIL.
2. SELECT SOIL FILL MATERIAL: COMPRISED OF CLEAN, GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. MAXIMUM PARTICLE SIZE: 2 INCHES.
3. PERFORM A SIEVE ANALYSIS ON A REPRESENTATIVE SAMPLE OF THE FILL, UP TO 45% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED ON A #4 SIEVE. ALSO PERFORM A SIEVE ANALYSIS ON THE FRACTION OF THE FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSIS SHALL DEMONSTRATE THAT THE MATERIAL PASSING THE #4 SIEVE MEETS THE FOLLOWING GRADATION:

<u>SIEVE</u>	<u>EFFECTIVE PARTICLE SIZE</u>	<u>PERCENT PASSING</u>
#4	4.75 mm	100
#50	0.30 mm	10 TO 100
#100	0.15 mm	0 TO 20
#200	0.075 mm	0 TO 5

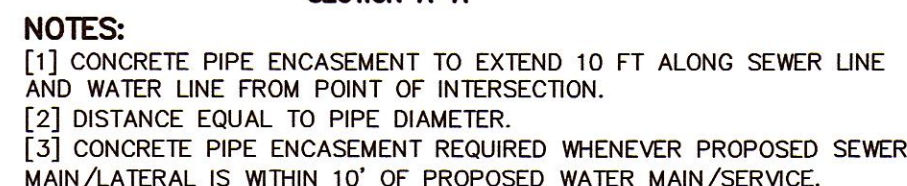
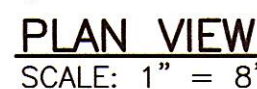


310 CMR 15.221, 15.223, 15.224, 15.226
TYPICAL CROSS SECTION FOR DUAL COMPARTMENT
NOT TO SCALE

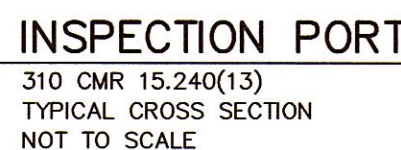


310 CMR 15.231
TYPICAL CROSS SECTION
NOT TO SCALE

*CONSTRUCTION DETAILS FROM PLAN REF. #1.



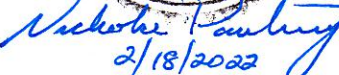
NOT TO SCALE



TYPICAL CROSS SECTION
NOT TO SCALE

☐ CONCEPT ☐ CONSTRUCTION
☒ PERMIT ☐ CONSTRUCTION
RECORD

THIS DRAWING MAY BE USED FOR CONSTRUCTION
UPON ISSUANCE OF ALL PERMITS AND APPROVALS
BY REGULATORY AUTHORITIES.



PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

GPR Engineering Solutions
for Land & Structures

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CONSTRUCTION DETAILS & SPECIFICATIONS

PREPARED FOR:
WHEELER REALTY TRUST
198 AYER ROAD
HARVARD, MA 01451

DES. BY: MCL	DATE: FEBRUARY 2022	JOB 211009A	3 OF 3
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