

**Plan of Land**

SCALE: 1"=20'  
 MAP NO.: 3  
 PARCEL NO.: 19  
 AREA: 17.45± SF.

**SOILS LOG**

TEST HOLE #1 DATE: 10/30/2019 ELEV. = 27.4

DEPTH	HORIZON	TEXTURE
00-18"		FILL
18-22"	B	LOAMY SAND
22-120"	C	LOAMY SAND

TEST HOLE #2 DATE: 10/30/2019 ELEV. = 28.3

DEPTH	HORIZON	TEXTURE
00-04"	A	LOAMY SAND
04-28"	B	LOAMY SAND
28-120"	C	LOAMY SAND

**Legend**

— 100 —	EXISTING CONTOUR
100+0	EXISTING SPOT ELEVATION
— 100 —	PROPOSED CONTOUR
⊠	THI PERCOLATION TEST
X	SEWAGE LINE
— W — W —	SUSPECTED WATER LINE
— — —	APPROXIMATE PROPERTY LINE
— O.W. — U.E. —	OVERHEAD WIRE OR UNDERGROUND ELECTRIC

**Notes**

- GENERAL NOTES:**
- THIS PLAN IS TO BE USED ONLY FOR THE PERMITTING AND INSTALLATION OF A SEWAGE DISPOSAL SYSTEM. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.
  - NO CHANGES TO THIS PLAN ARE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF SOURATI ENGINEERING GROUP, LLC.
  - INSTALLATION SHALL BE IN STRICT CONFORMITY WITH TITLE 5 OF THE MASSACHUSETTS STATE SANITARY CODE AND THE RULES & REGULATIONS OF THE TOWN OF OAK BLUFFS BOARD OF HEALTH.
  - MACHINERY THAT MAY DISTURB PIPE ALIGNMENT IN THE DISPOSAL SYSTEM SHALL NOT BE USED ON THE DISPOSAL AREA.
  - NO EXISTING WELLS WERE FOUND WITHIN 100' FROM THE PROPOSED SOIL ADSORPTION SYSTEM OR WITHIN 50' FROM THE SEPTIC TANK.
  - FINISHED SURFACE OF LEACHING AREA SHALL BE GRADED TO INSURE RUNOFF (2% MINIMUM SLOPE).
  - THE SEPTIC TANK AND THE DISTRIBUTION BOX SHALL BE EITHER:
    - A. WATER TIGHT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WARRANTY, OR
    - B. MADE WATER TIGHT BY THE MANUFACTURER, EQUIPMENT SUPPLIER OR INSTALLER, USING ASPHALT OR SYNTHETIC POLYMER SEALER SPECIFIED BY THE CONCRETE OR SYNTHETIC MATERIAL MANUFACTURER.
  - SEPTIC TANKS AND DISTRIBUTION BOXES SHALL BE LEVEL AND TRUE TO GRADE ON A LEVEL STABLE BASE THAT HAS BEEN MECHANICALLY COMPACTED AND ONTO WHICH 6 INCHES OF CRUSHED STONE HAVE BEEN PLACED TO MINIMIZE UNEVEN SETTLING.
  - ALL SYSTEM COMPONENTS SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS.
  - ALL PIPING SHALL BE A MINIMUM OF SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.
  - DISTRIBUTION BOX OUTLET LINES SHALL BE LEVEL FOR A MINIMUM OF THE FIRST TWO FEET OF THEIR LENGTH.

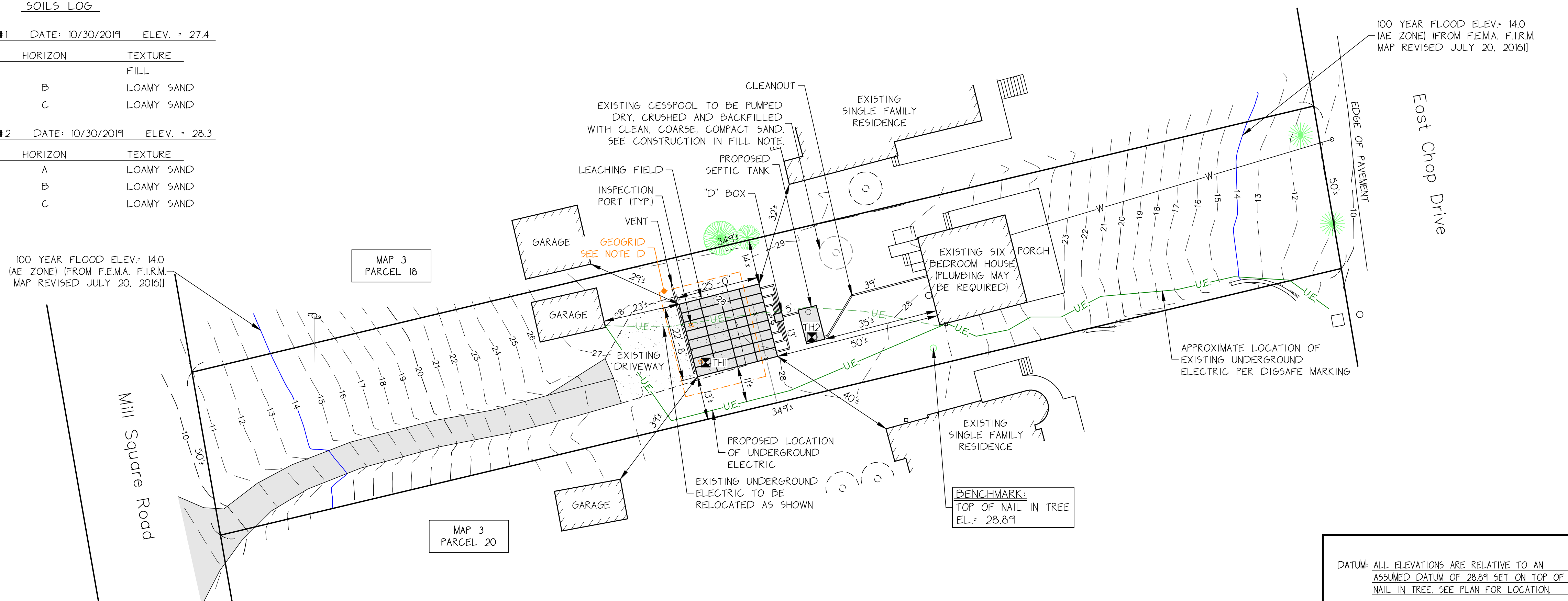
**CONSTRUCTION IN FILL:**

1. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL. THE FILL BE COMPOSED OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. MIXTURES AND LAYERS OF DIFFERENT CLASSES OF SOIL SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN TWO INCHES. A SIEVE ANALYSIS USING A #4 SIEVE SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL UP TO 25% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED ON THE #4 SIEVE. SIEVE ANALYSIS ALSO SHALL BE PERFORMED ON THE FRACTION OF THE FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSES MUST DEMONSTRATE THAT THE MATERIAL MEETS EACH OF THE FOLLOWING SPECIFICATIONS:

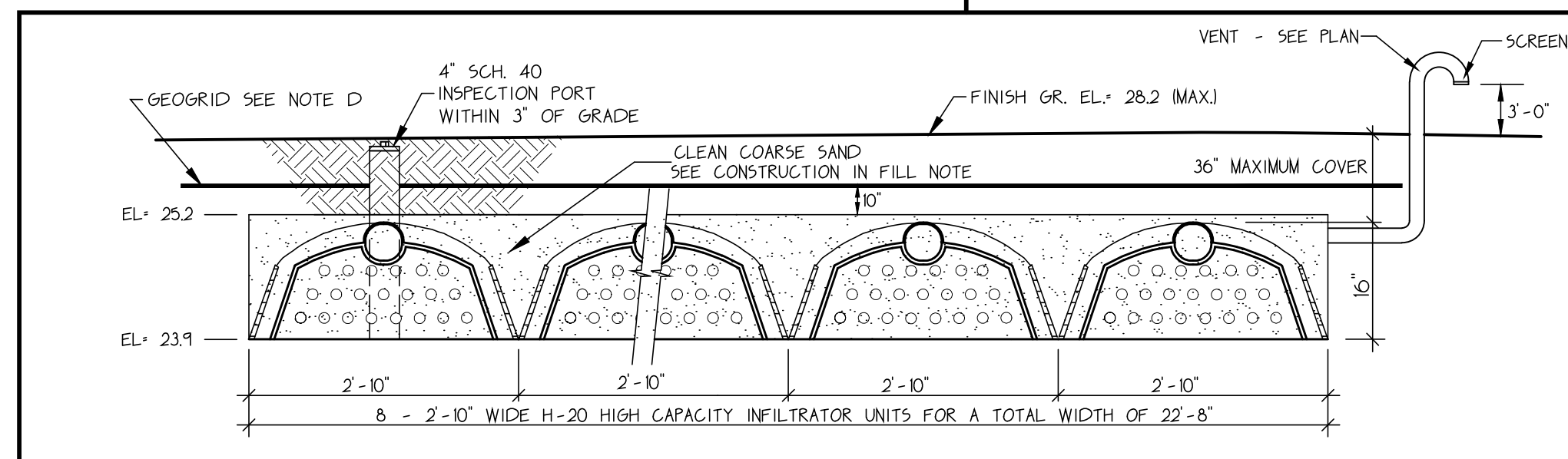
SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
#4	4.75 MM	100 ±
#10	0.30 MM	10 ± - 100 ±
#100	0.075 MM	0 ± - 20 ±
#200	0.075 MM	0 ± - 5 ±

**HIGH CAPACITY INFILTRATOR CHAMBER ISOL ADSORPTION SYSTEM:**

1. THE INFILTRATORS SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE MANUFACTURER SPECIFICATIONS.



- NOTES:**
- THE OWNER SHALL SUBMIT THE EXISTING HOUSE FLOOR PLANS TO THE OAK BLUFFS BOARD OF HEALTH FOR THEIR APPROVAL.
  - ALL UNDERGROUND UTILITIES, INCLUDING WATER, PHONE, AND ELECTRICAL LINES, MUST BE LOCATED BY THE CONTRACTOR AND DIG SAFE SYSTEM, INC. MUST BE CONTACTED AT 1-888-344-7233 PRIOR TO ANY EXCAVATION.
  - ENGINEER SHALL INSPECT BOTTOM OF EXCAVATION IN THE LEACHING FIELD PRIOR TO PLACEMENT OF ANY FILL.
  - INSTALL TENCATE MIRAGRID 10XT GEOGRID OR APPROVED EQUAL 10' ABOVE LEACHING FIELD AND EXTENDING OUT 5'-0" FROM LEACHING FIELD AND DRIVEWAY AS SHOWN ON PLAN. CUT 1X1 OPENINGS ABOVE INSPECTION PORTS.
  - NO VEHICULAR TRAFFIC ALLOWED OVER THE "D" BOX AND THE SEPTIC TANK.



**Cross Section of H-20 High Capacity Infiltrator Chamber Field**  
 Not To Scale

**Design Computations:**

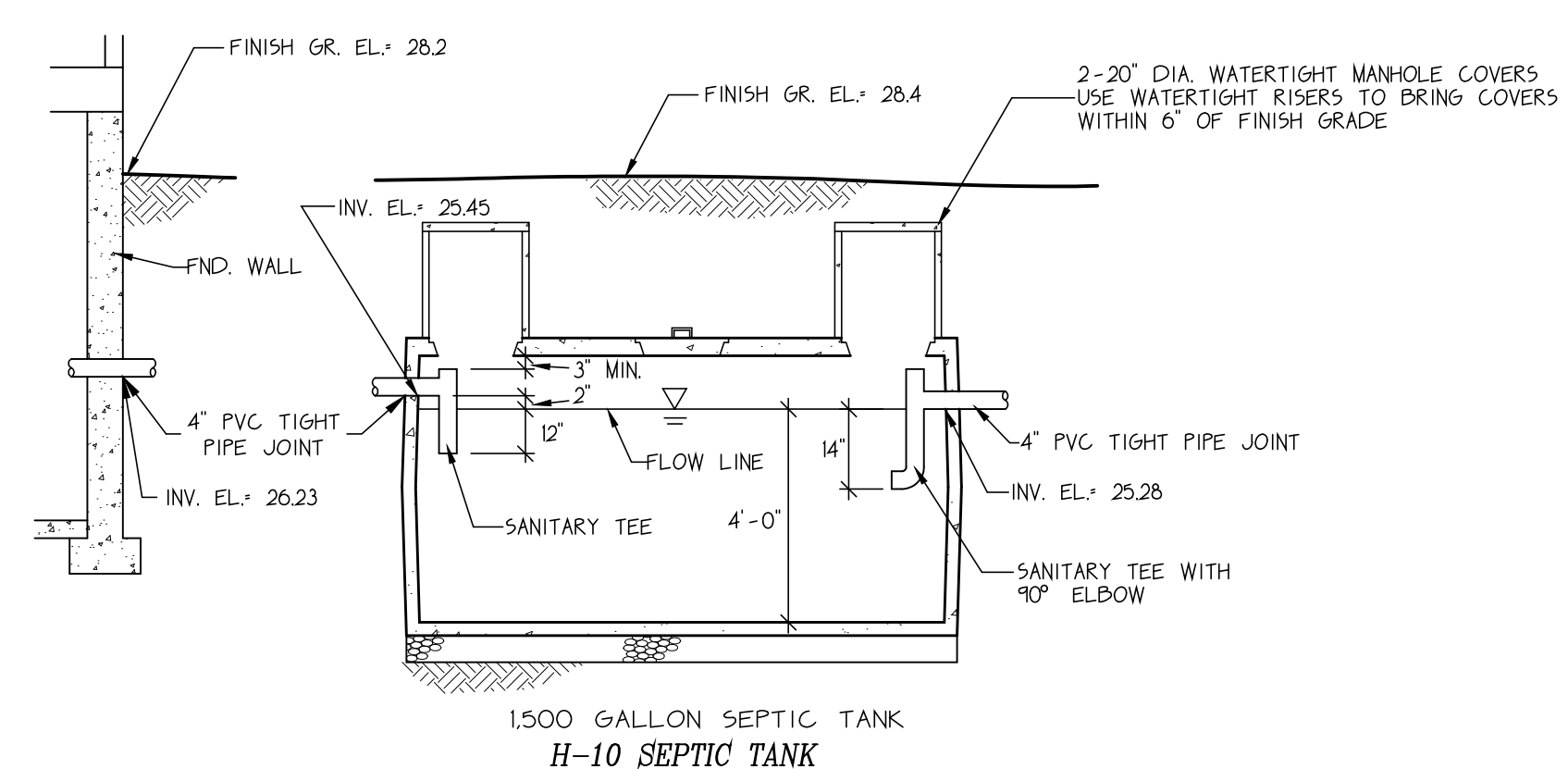
**HYDRAULIC LOADING:**  
 6 BEDROOMS AT 110 GPD = 660 GPD  
 A GARBAGE DISPOSAL IS NOT ALLOWED IN THIS DESIGN.

**SEPTIC TANK SIZE:**  
 INCREASE FLOW TO 200% (TITLE VI) = 1,320 GALLONS USE 1,500 GALLON SEPTIC TANK.

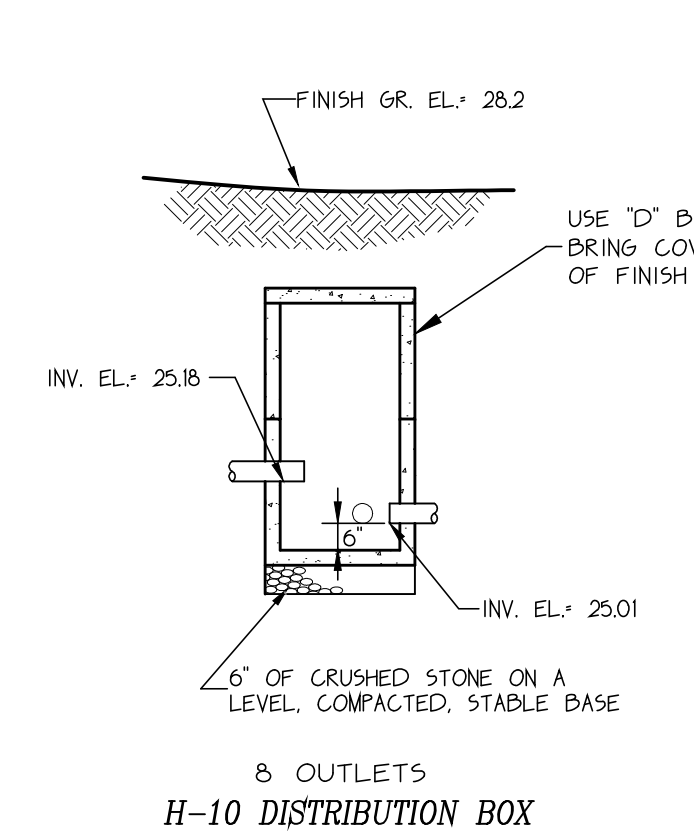
**LEACHING CAPACITY:**  
 DESIGN PERCOLATION RATE IS 5 MIN/INCH SOIL TYPE: CLASS I  
 EFFLUENT LOADING RATE (0.74 G/5F/D)  
 USE 1 LEACHING FIELD WITH 32 CHAMBERS.

TOTAL AREA OF FIELD = 32 CHAMBERS X 6.25 LF/CHAMBER X 4.73 SF/LF. = 946 SF.  
 TOTAL LEACHING CAPACITY PROVIDED = 946 SF. X 0.74 G/5F/D = 700 G/D.  
 TOTAL LEACHING CAPACITY PROVIDED = 700 G/D.  
 TOTAL HYDRAULIC LOADING REQUIRED = 660 G/D.

WORKSHEET REFERENCE: 102232W5

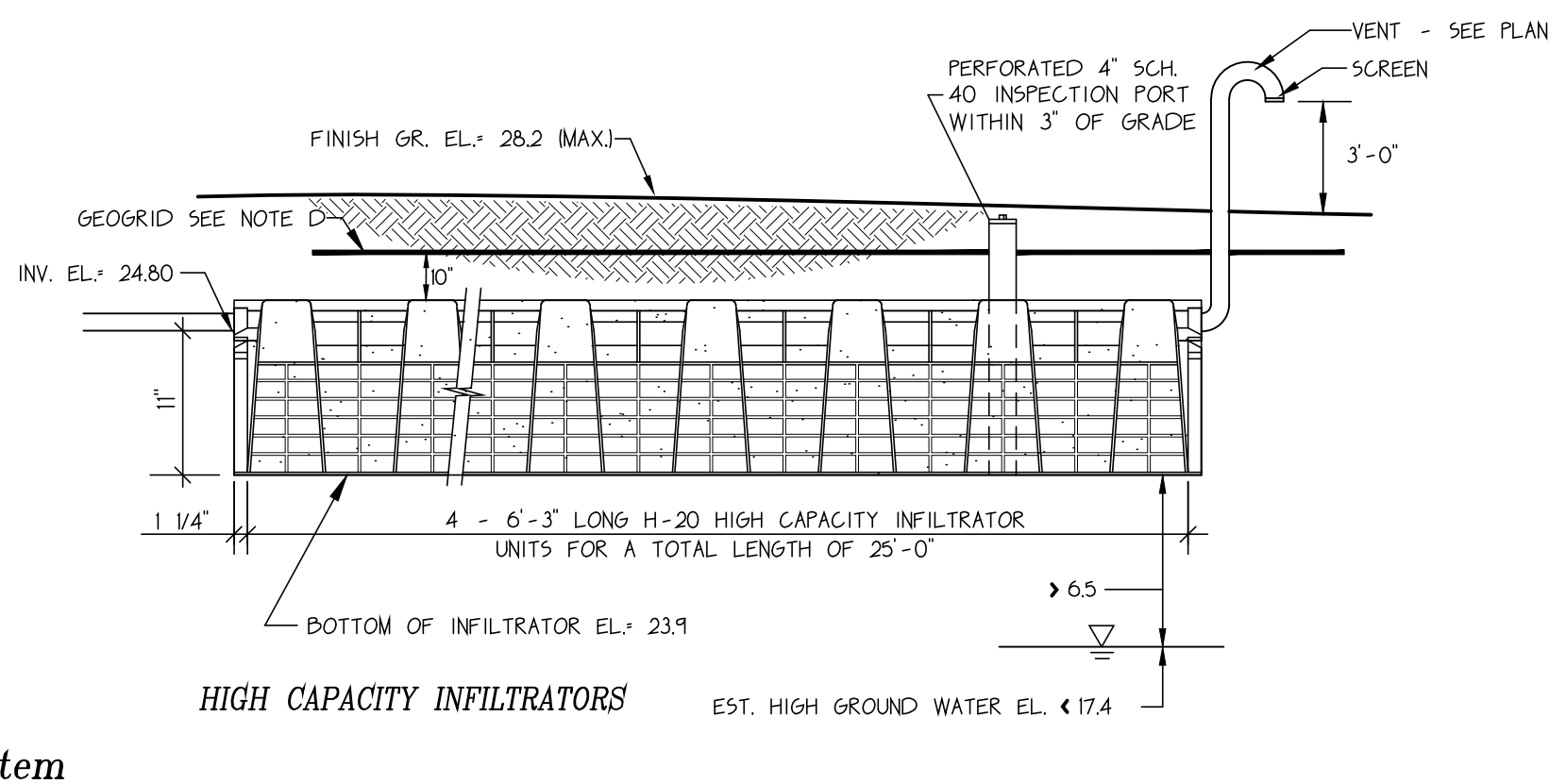


**1500 GALLON SEPTIC TANK**  
 H-10 SEPTIC TANK



**8 OUTLETS**  
 H-10 DISTRIBUTION BOX

**Profile of System**  
 Not To Scale



**HIGH CAPACITY INFILTRATORS**

EST. HIGH GROUND WATER EL. < 17.4

**Sewage Disposal System Upgrade**  
 In The Town Of  
**Oak Bluffs**

Site:  
 Existing Six Bedroom House  
 Map 3, Parcel 19  
 19 Mill Square Road

Owner:  
 Wright A. W. & Wendy M. Burnham  
 C/O Rick Merner  
 1534 Serrano Circle  
 Naples, FL 34105

Scale: As Shown  
 Job No.: 102232  
 Drawing No.: 102232SP  
 Sheet 1 of 1

Date: November 8, 2019  
 Drawn By: H. Chen  
 Designed By: H. Chen  
 Checked By: G. Sourati

Professional civil engineers  
**Sourati Engineering Group**  
 Professional Land surveyors

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