

**Plan of Land**  
 SCALE: 1"=20'  
 MAP NO.: 3  
 PARCEL NO.: 15  
 AREA: 25,478 SF.



**Legend**

- 100 — EXISTING CONTOUR
- 100 — PROPOSED CONTOUR
- ⊠ THI PERCOLATION TEST
- X SEWAGE LINE
- W — WATER LINE
- W — WATER LINE
- — APPROXIMATE PROPERTY LINE
- EXISTING TREES
- TREES TO BE REMOVED
- ~ EDGE OF CLEARING/LAWN

- 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 ABSORPTION SYSTEM, OR WITHIN 50' FROM THE SEPTIC TANK.
  - FINISHED SURFACE OF LEACHING AREA SHALL BE GRADED TO INSURE RUNOFF 12% MINIMUM SLOPE.
  - THE SEPTIC TANK AND THE DISTRIBUTION BOX SHALL BE EITHER:
    - WATERTIGHT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WARRANTY, OR
    - MADE WATERTIGHT 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.

**SOILS LOG**

TEST HOLE #1	DATE: 09/14/11	ELEV. + 27.5
DEPTH	HORIZON	TEXTURE
00-04"	A	LOAMY SAND
04-28"	B	LOAMY SAND
28-120"	C	SAND

TEST HOLE #2	DATE: 09/14/11	ELEV. + 26.9
DEPTH	HORIZON	TEXTURE
00-04"	A	LOAMY SAND
04-28"	B	LOAMY SAND
28-120"	C	SAND

**CONSTRUCTION IN FILL:**

1. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL. THE FILL SHALL BE COMPRISED 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 425 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:

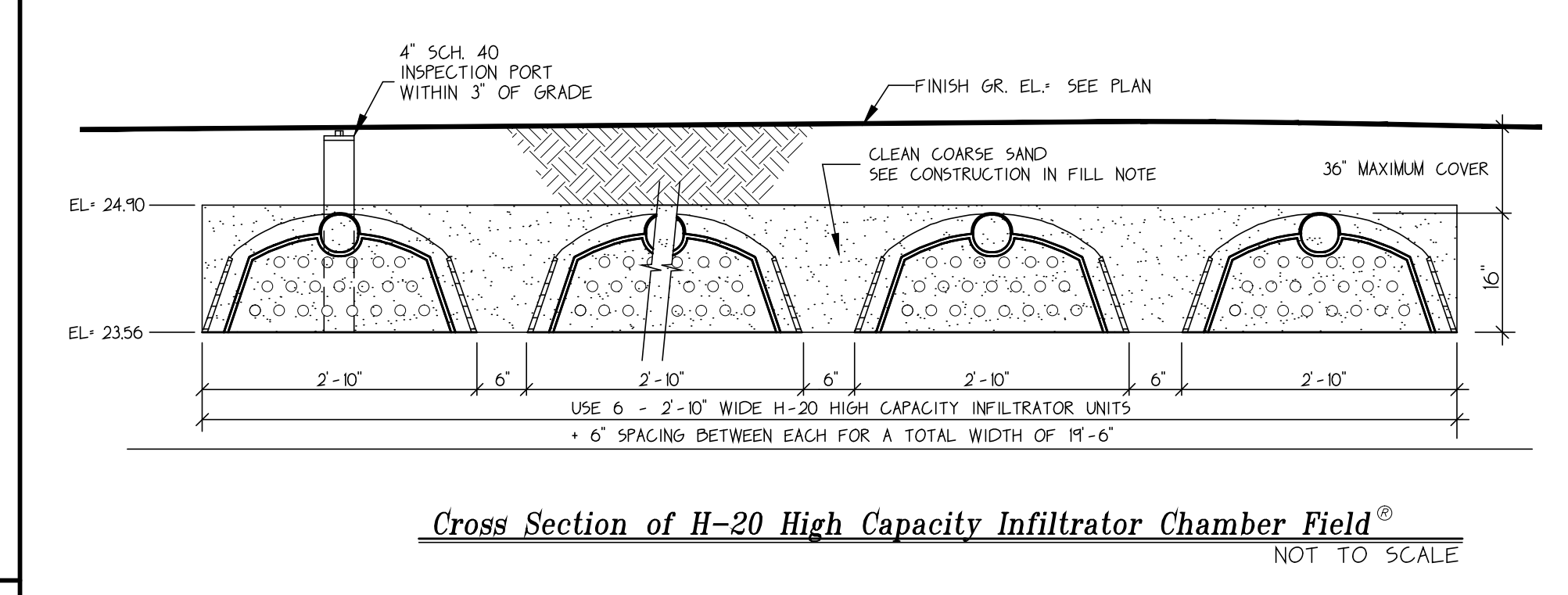
SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
#4	>75 MM	100%
#50	0.30 MM	10% - 100%
#100	0.15 MM	0% - 20%
#200	0.075 MM	0% - 5%

**HIGH CAPACITY INFILTRATOR CHAMBER (SOIL ABSORPTION 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 SYSTEMS INC. MUST BE CONTACTED AT 1-888-344-7233 PRIOR TO ANY EXCAVATION.
  - ENGINEER SHALL INSPECT BOTTOM OF EXCAVATION PRIOR TO PLACEMENT OF ANY FILL.

DATUM: ALL ELEVATIONS ARE RELATIVE TO AN ASSUMED DATUM OF 30.00 SET ON A NAIL SET IN A PINE TREE. SEE PLAN FOR LOCATION.



**Design Computations:**

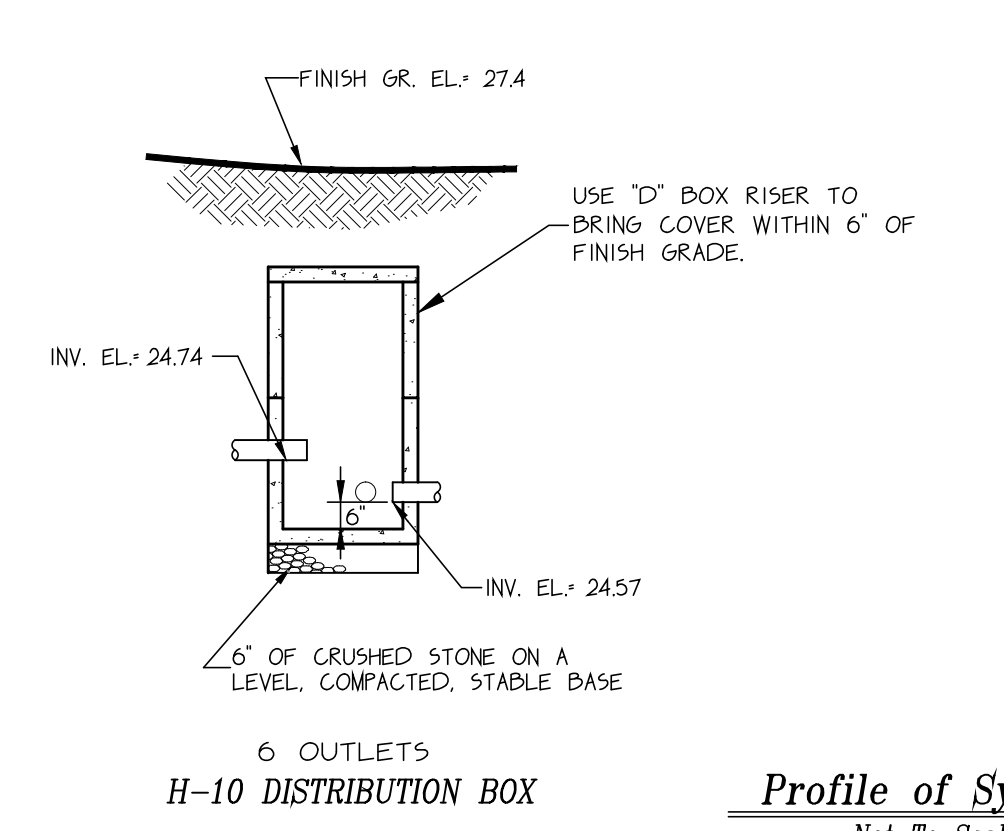
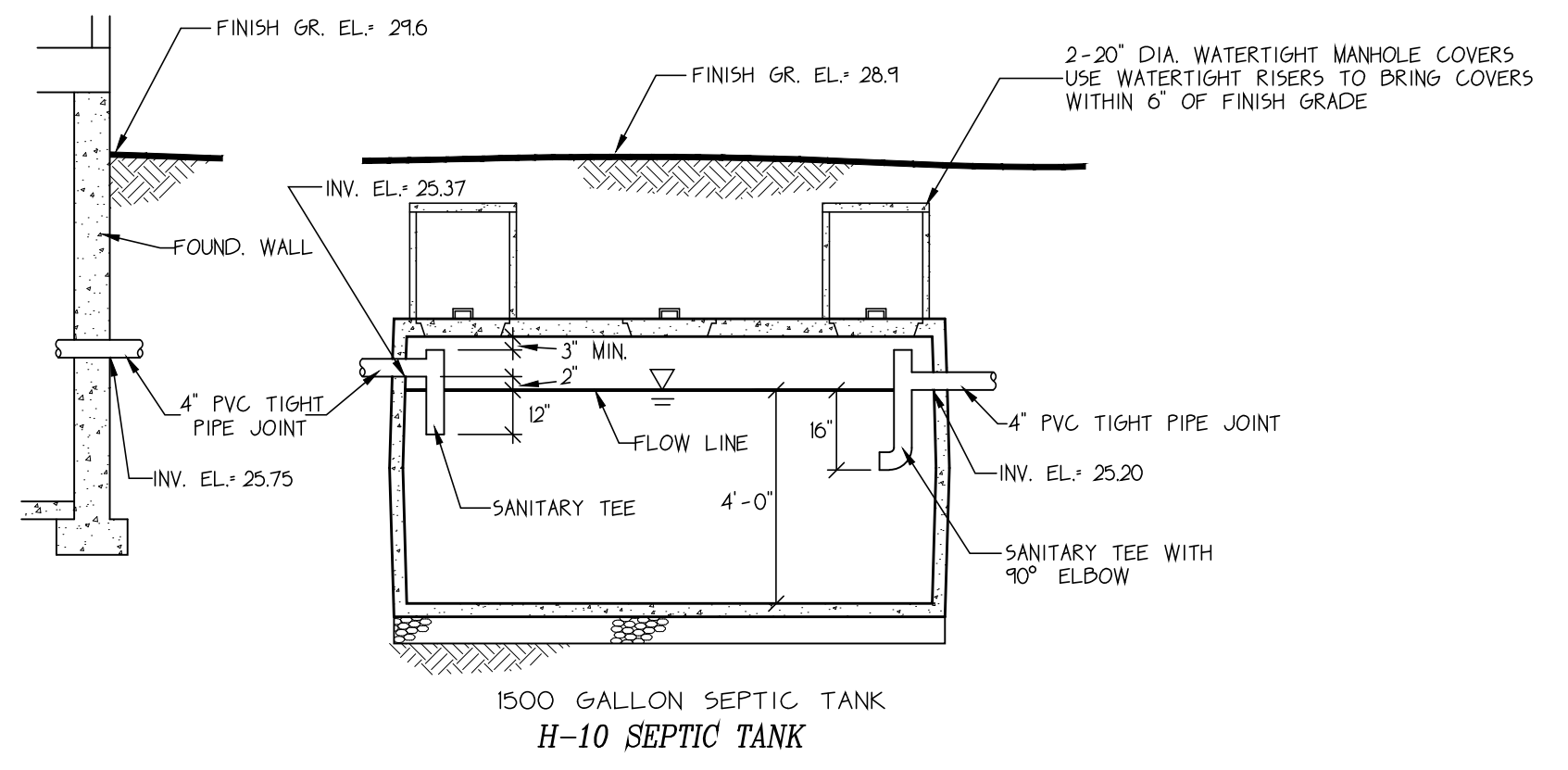
**HYDRAULIC LOADING:**  
 SIX BEDROOMS AT 110 GPD = 660 GPD  
 A GARBAGE DISPOSAL IS NOT ALLOWED IN THIS DESIGN.

**SEPTIC TANK SIZE:**  
 INCREASE FLOW TO 200% (TITLE VI) = 1320 GALLONS USE 1500 GALLON SEPTIC TANK.

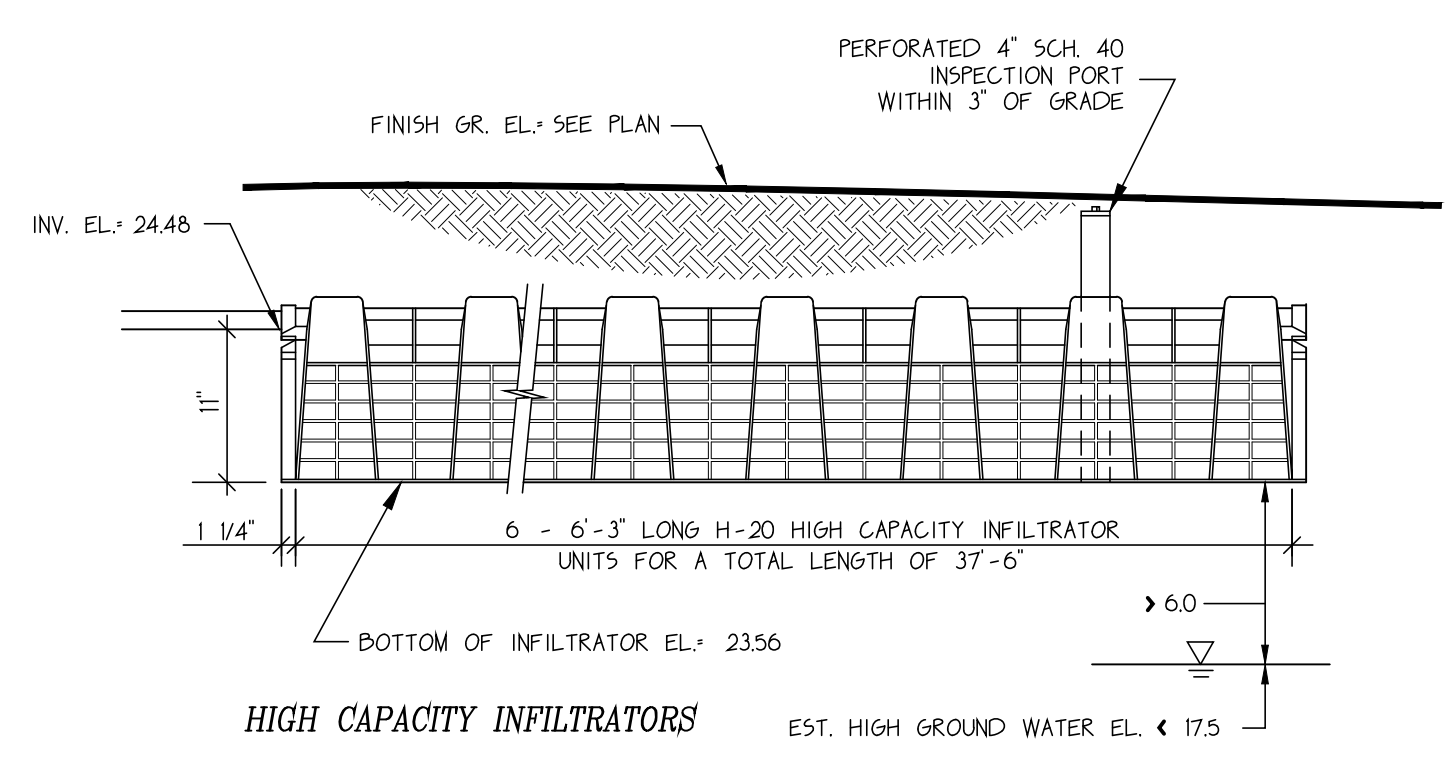
**LEACHING CAPACITY:**  
 DESIGN PERCOLATION RATE IS 2 MIN/INCH SOIL TYPE: CLASS 1  
 EFFLUENT LOADING RATE (0.74 G/5F/D)  
 USE 1 LEACHING FIELD WITH 36 CHAMBERS.

TOTAL AREA OF FIELD = 36 CHAMBERS X 6.25 LF/CHAMBER X 4.72 SF/LF = 1062 SF.  
 TOTAL LEACHING CAPACITY PROVIDED = 1062 SF X 0.74 G/5F/D = 785 G/D.  
 TOTAL LEACHING CAPACITY PROVIDED = 785 G/D.  
 TOTAL HYDRAULIC LOADING REQUIRED = 660 G/D.

WORKSHEET REFERENCE: 101178WS



**Profile of System**  
 Not To Scale



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

Site:  
 Existing Five Bedroom House,  
 Plus Future One Bedroom Addition,  
 For a Total of Six Bedrooms  
 Map 3, Parcel 15  
 7 Arlington Avenue  
 Exeter, NH 03833

Owner:  
 Pauline E. Freidrichs, Et Al  
 Carl T., Paul E. & Robin Moriarty  
 10 White Oaks Dr. #125  
 Exeter, NH 03833

Scale: As Shown Date: September 22, 2011  
 Job No.: 101178 Drawn By: J. Calderone  
 Drawing No.: 101178SP Designed By: J. Calderone  
 Sheet 1 of 1 Checked By: G. Sourati

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

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