

NOTES & SPECIFICATIONS

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF 310 CMR 15 (TITLE V) OF THE COMMONWEALTH OF MASSACHUSETTS AND THOSE OF THE TOWN BOARD OF HEALTH.

THE REQUIRED INSPECTION SCHEDULE DURING THE PROCESS OF CONSTRUCTION SHALL BE ARRANGED BY THE CONTRACTOR WITH THE BOARD OF HEALTH & DESIGN ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE SEPTIC TANK, PUMP CHAMBER AND DISTRIBUTION BOX SHALL BE STANDARD DUTY (H-10) OR HEAVY DUTY (H-20) IF LOCATED UNDER A DRIVEWAY. USE MONOLITHIC TANK AND PUMP CHAMBER. TANK AND PUMP CHAMBER TO HAVE WATER TIGHT PRECAST PIPE INVERT RUBBER BOOTS.

ALL PIPING SHALL BE 4" DIA. SCH. 40 NSF PVC (H-20 RATED), WITH ALL JOINTS SEALED WATERTIGHT UNLESS SHOWN OTHERWISE.

ALL STONE SHALL BE DOUBLE WASHED AND FREE OF IRONS, CLAY OR FINES AND SHALL BE SATISFACTORY TO THE TOWN BOARD OF HEALTH.

THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE DISPOSAL OR OTHER HIGH WATER USE UNITS.

THE PROPOSED SEPTIC SYSTEM IS NOT LOCATED WITHIN THE CONE OF INFLUENCE OF ANY MUNICIPAL WELL NOR ARE THERE ANY PRIVATE DRINKING WATER WELLS LOCATED WITHIN 100 FEET (RADIAL) OF THE PROPOSED SYSTEM. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.

EXCAVATE ALL TOP, SUB AND ANY OTHER SOILS ENCOUNTERED DOWN TO THE BOTTOM OF EXCAVATION (SEE CROSS SECTION) FOR A HORIZONTAL DISTANCE OF 5' ON ALL SIDES OF THE PROPOSED SYSTEM. BACK FILL TO TOP OF STONE ELEVATION WITH SELECT ON SITE OR IMPORTED SOIL MATERIAL CONSISTING OF CLEAN GRANULAR SAND, FREE OF ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCES AND MEETING THE SIEVE SIZE REQUIREMENTS OF 310 CMR 15.255(3) & (5) (CONSTRUCTION IN FILL).

ELEVATIONS SHOWN ON THIS PLAN ARE BASED ON AN ASSUMED DATUM.

CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO THE CONTINUATION OF CONSTRUCTION.

~~THE PROPOSED WORK DOES NOT LIE IN A CRITICAL FLOOD HAZARD ZONE.~~

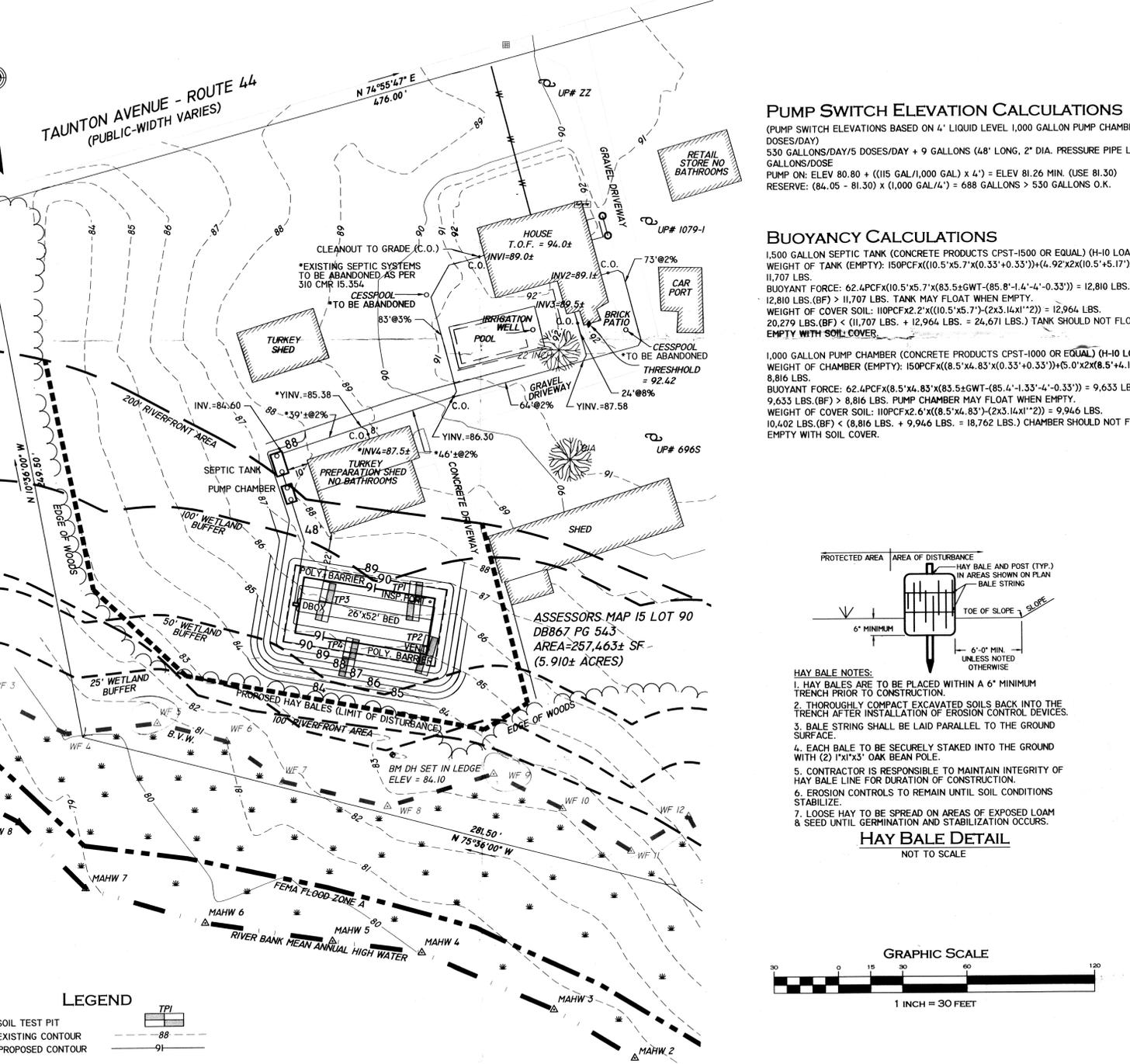
THE LOT DOES NOT LIE IN AN OVERLAY DISTRICT FOR GROUNDWATER AQUIFER PROTECTION.

THE CONTRACTOR IS TO VERIFY THE BENCHMARK WITH THE SURVEYOR PRIOR TO CONSTRUCTION.

I CERTIFY THAT THE WATER SERVICE SHOWN ON THIS PLAN IS IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SEEKONK WATER DISTRICT. WATER SERVICE LOCATION PER TOWN RECORDS.

PER THE LAST TWO YEARS OF TOWN WATER METER RECORDS AVERAGE MAXIMUM DAILY FLOW WAS 209 GALLONS PER DAY BASED ON 37,530 GALLONS MAXIMUM FOR THE 6 MONTH RECORD INTERVALS.

THE RETAIL STORE IS IN OPERATION ONLY DURING THE THANKSGIVING HOLIDAY SEASON AND HAS NO BATHROOMS.



PUMP SWITCH ELEVATION CALCULATIONS

(PUMP SWITCH ELEVATIONS BASED ON 4" LIQUID LEVEL 1,000 GALLON PUMP CHAMBER, 5 DOSES/DAY)

530 GALLONS/DAY/5 DOSES/DAY + 9 GALLONS (48" LONG, 2" DIA. PRESSURE PIPE LINE) = 115 GALLONS/DAY

PUMP ON: ELEV 80.80 + ((115 GAL/1,000 GAL) x 4") = ELEV 81.26 MIN. (USE 81.30)

RESERVE: (84.05 - 81.30) x (1,000 GAL/4") = 688 GALLONS > 530 GALLONS O.K.

BUOYANCY CALCULATIONS

1,500 GALLON SEPTIC TANK (CONCRETE PRODUCTS CPST-1500 OR EQUAL) (H-10 LOADING)

WEIGHT OF TANK (EMPTY): 150PCFX((10.5'x5.7'(0.33'+0.33'))+(4.92'x2(10.5'+5.17')x0.25')) = 11,707 LBS.

BOUYANT FORCE: 62.4PCFX(10.5'x5.7'(83.5xGWT-(85.8'-1.4'-4'-0.33')) = 12,810 LBS.(BF)

12,810 LBS.(BF) > 11,707 LBS. TANK MAY FLOAT WHEN EMPTY.

WEIGHT OF COVER SOIL: 110PCFX2.2'(10.5'x5.7')-(2x3.14x1'x2') = 12,964 LBS.

20,279 LBS.(BF) < (11,707 LBS. + 12,964 LBS. = 24,671 LBS.) TANK SHOULD NOT FLOAT WHEN EMPTY WITH SOIL COVER.

1,000 GALLON PUMP CHAMBER (CONCRETE PRODUCTS CPST-1000 OR EQUAL) (H-10 LOADING)

WEIGHT OF CHAMBER (EMPTY): 150PCFX((8.5'x4.83'(0.33'+0.33'))+(5.0'x2(8.5'+4.17')x0.25')) = 8,816 LBS.

BOUYANT FORCE: 62.4PCFX(8.5'x4.83'(83.5xGWT-(85.4'-1.33'-4'-0.33')) = 9,633 LBS.(BF)

9,633 LBS.(BF) > 8,816 LBS. PUMP CHAMBER MAY FLOAT WHEN EMPTY.

WEIGHT OF COVER SOIL: 110PCFX2.6'(8.5'x4.83')-(2x3.14x1'x2') = 9,946 LBS.

10,402 LBS.(BF) < (8,816 LBS. + 9,946 LBS. = 18,762 LBS.) CHAMBER SHOULD NOT FLOAT WHEN EMPTY WITH SOIL COVER.

PUMP & CHAMBER NOTES

PUMP SHALL BE MYERS MODEL WHRS 1/2 HORSEPOWER POWER SUPPLY SHALL BE 115 VOLT, SINGLE PHASE. PUMP SYSTEM SHALL BE SIMPLEX OPERATION, WITH VORTEX TYPE IMPELLER. ALTERNATIVE PUMP TO BE EQUAL OR BETTER TO SPECIFIED PUMP.

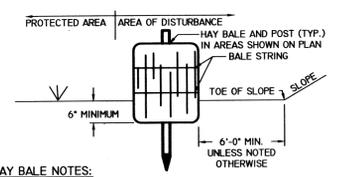
PUMP CONTROLS SHALL BE MYERS CE-115 TYPE. CONTROL PANEL TO BE MOUNTED IN MECHANICAL ROOM OR OTHER CONVENIENT LOCATION IN BUILDING AND ENCLOSED IN A NEMA 1 BOX WITH MAIN CIRCUIT BREAKER THAT LOCKS COVER, MAGNETIC CONTACTOR FOR PUMP, OVERRIDE RELAY, H-O-A SWITCH, RUNNING LIGHT AND BUZZER ALARM WITH ON-OFF-TEST SWITCH.

FLOAT SWITCHES SHALL BE SET IN PUMP CHAMBER TO OPERATE AT WATER LEVELS SHOWN. ALL POWER AND CONTROL CIRCUITS SHALL BE ENCASED IN WATERTIGHT CONDUITS AND CONTROL BOX. MANUAL OVER-RIDE SWITCH FOR THE PUMP IS REQUIRED. SEPARATE CIRCUIT FOR ALARM SYSTEM IS REQUIRED. ELECTRICAL CONNECTIONS FOR PUMP AND FLOAT CONTROLS SHALL BE INSTALLED IN SEPARATE ELECTRICAL CHAMBER AS SHOWN. ELECTRICAL CHAMBER SHALL BE PRECAST CONCRETE 24" DIAMETER RISER WITH A WATERTIGHT SEAL TO INVERTED CONC. COVER AND WATER TIGHT MANHOLE TO GRADE AS SHOWN.

ELECTRICAL CONTRACTOR SHALL SIZE WIRING FROM BUILDING TO CHAMBER TO PROVIDE SUFFICIENT POWER SUPPLY AND CONTROL CIRCUITS. STANDBY POWER SOURCE IS NOT REQUIRED FOR THIS LOCATION, BUT MAY BE PROVIDED AT THE OWNER'S OPTION.

ALL PIPING SHALL BE PVC OR SDR PLASTIC WITH WATERTIGHT JOINTS AND VALVING AND/OR AS SHOWN ON THE DETAIL. PUMP LOCATION, UNION AND GATE VALVE SHALL BE SET ON DISCHARGE LINE IN CONVENIENT LOCATIONS WITHIN CHAMBER AS DETERMINED BY SPATIAL LIMITATIONS AND ACCESS. EFFLUENT IN 2" PRESSURE LINE TO FLOW BACK INTO PUMP CHAMBER BETWEEN DOSES BY WEEP HOLE AS SHOWN. NO LOW POINTS IN PRESSURE LINE.

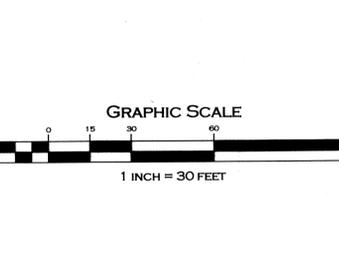
ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND THE MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO NOTIFY TOWN ELECTRICAL INSPECTOR TO CERTIFY INSTALLATION. USE EXPLOSION PROOF MEASURES: AIR TIGHT CONDUITS SEALED AT BOTH ENDS, AND SILICONE SEALED ELECTRICAL CONNECTIONS. ALL SYSTEM COMPONENTS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. TEST PUMP FLOAT SWITCHES FOR PROPER OPERATION. CLEAR WATER TEST REQUIRED. ADJUST GATE VALVE AS REQUIRED TO CONTROL DISCHARGE RATE. PUMP MANUFACTURER TO VERIFY PUMP SYSTEM ADEQUACY, USE ALTERNATE (AS REQUIRED).



- #### HAY BALE NOTES:
- HAY BALES ARE TO BE PLACED WITHIN A 6" MINIMUM TRENCH PRIOR TO CONSTRUCTION.
 - THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO THE TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICES.
 - BALE STRING SHALL BE LAID PARALLEL TO THE GROUND SURFACE.
 - EACH BALE TO BE SECURELY STAKED INTO THE GROUND WITH (2) 1"x1"x3" OAK BEAN POLE.
 - CONTRACTOR IS RESPONSIBLE TO MAINTAIN INTEGRITY OF HAY BALE LINE FOR DURATION OF CONSTRUCTION.
 - EROSION CONTROLS TO REMAIN UNTIL SOIL CONDITIONS STABILIZE.
 - LOOSE HAY TO BE SPREAD ON AREAS OF EXPOSED LOAM & SEED UNTIL GERMINATION AND STABILIZATION OCCURS.

HAY BALE DETAIL

NOT TO SCALE



Modified DEP Forms 11 & 12 - Soil Suitability Assessment & Percolation Test for On-Site Sewage Disposal									
CLIENT:		DATE:		SITE:		INSITE JOB# 11-071			
NAME: BELWING TURKEY FARMS		10-24-2011		STREET: 773 TAUNTON AVENUE		TOWN: SEEKONK, MA 02771			
ADDRESS: 773 TAUNTON AVENUE		SEEKONK, MA 02771		PHONE #: 508-336-9142		WEATHER: 80% F SUNNY		MAP/PLOT: A.P. 15/LOT 90	
PERFORMED BY: MICHAEL S. FARIA RI, PE, MA SE708		VEGETATION: LAWN		LAND USE: COMMERCIAL		SITE SKETCH: SEE SEPTIC SYSTEM DESIGN PLAN			
WITNESSED BY: BETH HALLAL		EXCAVATION CO.: NONE		DEPTH TO BEDROCK: NONE OBSERVED BUT BY REFUSAL DUE TO LARGE BOULDERS		PERCOLATION TEST: SEE PERCOLATION TEST LOG			
SURFACE STONES: NONE									
DEEP OBSERVATION HOLE LOG									
Deep Hole #	Depth from surface in.	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Moisture in.	Other (Structure, Stones, Consistency, % Gravel)			
TP1	0-8	Ap	SANDY LOAM	10YR5/2					
	8-16	Bw	SANDY LOAM	10YR5/6					
	16-84	C	SANDY LOAM	10YR6/2	24" 7.5YR5/6	FRABLE 8% GWNL COBBLES STONES & BOULDERS			
TP2	0-8	Ap	SANDY LOAM	10YR3/2					
	8-16	Bw	SANDY LOAM	10YR5/8					
	16-84	C	SANDY LOAM	10YR6/2	24" 7.5YR5/6	FRABLE 8% GWNL COBBLES STONES & BOULDERS			
TP3	0-8	Ap	SANDY LOAM	10YR3/2					
	8-16	Bw	SANDY LOAM	10YR5/8					
	16-84	C	SANDY LOAM	10YR6/2	24" 7.5YR5/6	FRABLE 8% GWNL COBBLES STONES & BOULDERS			
TP4	0-8	Ap	SANDY LOAM	10YR3/2					
	8-24	Bw	SANDY LOAM	10YR5/8					
	24-84	C	SANDY LOAM	10YR6/2	24" 7.5YR5/6	FRABLE 8% GWNL COBBLES STONES & BOULDERS			
DISTANCES FROM (R.)		Hole #	TP1	TP2	TP3	TP4	MOTTLING: Abundance		
APPROXIMATE		Open Water Body	>200	>200	>200	>200	f. few	f. fine	f. faint
(VERIFY)		Possible Wet Area	>100	>100	>100	>100	c. common	m. medium	d. distinct
		Drinking Water Well	>100	>100	>100	>100	m. many	c. coarse	p. prominent
		Drainage way	>50	>50	>50	>50	PERCOLATION TEST		
		Property Line	>10	>10	>10	>10	Hole #		
		Other (specify)					Depth of Perc. (inches)		
DEPTH TO GROUND WATER: (in.)		Standing Water in the Hole	80	80	72	72	42		
		Weeping from Pit Face	72	72	72	48	8-49		
		Est. High Ground Water	24	24	24	24	9-07		
							10-07		
							10-25		
							Time (hr) (min)		
							78		
							Ratio (min/hr)		
							28		
ASSESSMENT OF DEEP HOLE:		SUITABLE	X	X	X	X	ADDITIONAL TESTING NEEDED: NO		
		UNSATURABLE					COMMENTS: NONE		
							<small>(DEP CERTIFIED SOIL EVALUATOR) PRINTED: MICHAEL S. FARIA RI, PE, MA SE708. SIGNED:</small> <small>I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.07 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSES HAVE BEEN PERFORMED BY ME IN CONFORMANCE WITH THE REQUIRED TRAINING, EXPERIENCE AND CREDENTIALS DESCRIBED IN 310 CMR 15.07. I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION, AS INDICATED ON THIS SOIL EVALUATION FORM, ARE ACCURATE AND IN ACCORDANCE TO 310 CMR 15.07.</small>		

DESIGN CALCULATIONS

AVERAGE DAILY SEWAGE FLOW (GALLONS PER DAY)

3 BEDROOM DWELLING @ 110 GPD PER BEDROOM = 330 GPD

820 SF RETAIL STORE @ 50 GPD PER 1,000 = 41 GPD (REQUIRES 200 GPD MINIMUM)

TOTAL = 530 GPD

SEPTIC TANK SIZING (GALLONS)

200% AVERAGE DAILY FLOW = 2 (530) = 1,060 GALLONS

REQUIRES 1,500 GALLON TANK (MINIMUM).

DESIGN SOIL TYPE AND PERCOLATION RATE

SOIL CLASS II (SANDY LOAM)

PERC RATE IN TP 1 WAS 26 MPH

DESIGN FOR 30 MPH PER TITLE V

REQUIRED MINIMUM LEACHING AREA:

REQUIRED AREA = 530 GPD / 0.33 GPD / SF = 1,607 SF MINIMUM

LEACHING FIELD BED: 26' x 62' = 1,612 SF

RESERVE AREA: 26' x 62' = 1,612 SF



"EMERGENCY REPAIR SEPTIC SYSTEM DESIGN & NOI PLAN"

"BELWING TURKEY FARM"
773 TAUNTON AVENUE, SEEKONK, MASSACHUSETTS 02771
ASSESSORS MAP 15 LOT 90

OWNERS: PHYLLIS AND ROSALYN DICKENS
773 TAUNTON AVENUE, SEEKONK, MASSACHUSETTS 02771

JOB #	SCALE:	DESIGN BY:	DATE:
11-071	1"=30'	MSF	SEPTEMBER 3, 2013

REVISID:

PROFESSIONAL SEAL

SHEET 1 OF 1

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