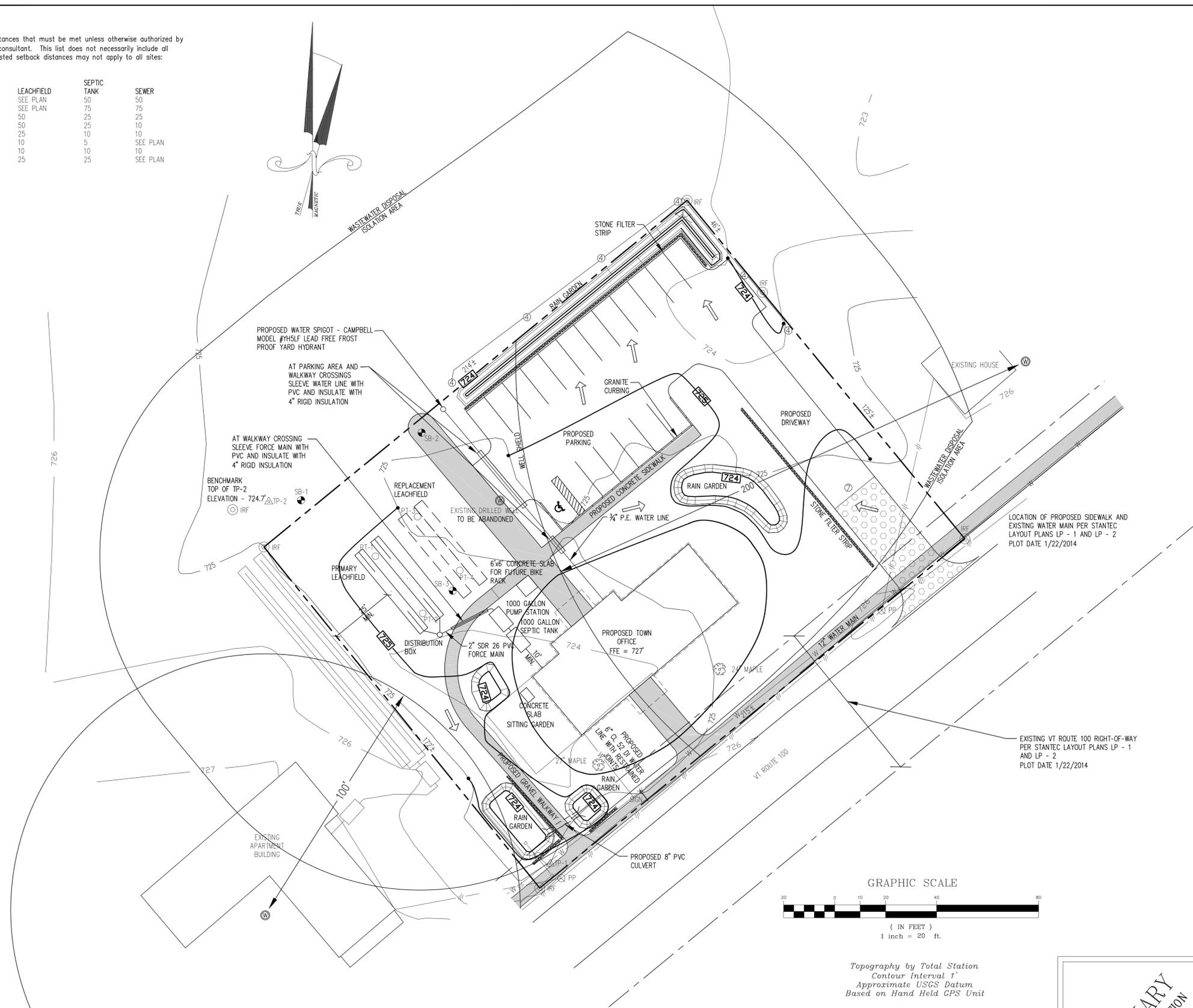
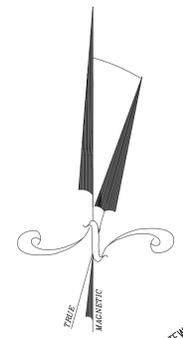


Setbacks:

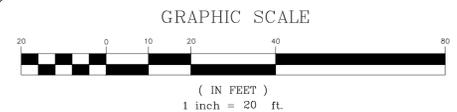
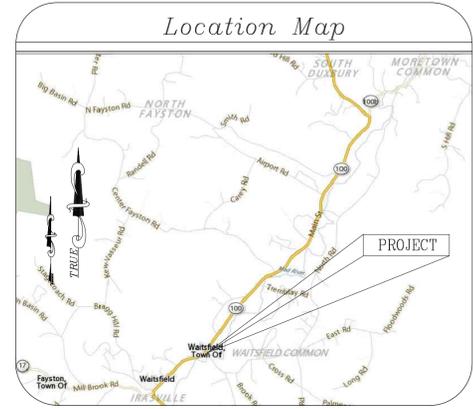
The following are general setback distances that must be met unless otherwise authorized by the permitting authority and/or the consultant. This list does not necessarily include all required setback distances and the listed setback distances may not apply to all sites:

ITEM	LEACHFIELD	SEPTIC TANK	SEWER
DRILLED WELL	SEE PLAN	50	50
SPRING	SEE PLAN	75	75
LAKES, PONDS, IMPOUNDMENTS	50	25	25
RIVERS, STREAMS	50	25	10
PROPERTY LINE	25	10	10
ROADWAY, DRIVEWAY, PARKING LOTS	10	5	SEE PLAN
TREES	10	10	10
SERVICE WATER LINE	25	25	SEE PLAN



LEGEND

- △ TP-1 Traverse point
- ⊙ Drilled well
- ⊙ IRF Iron rod found
- ⊙ PP Utility pole
- ⊙ Tree
- ⊙ Guy wire
- Overhead power lines
- 725 5' contours
- 724 1' contours
- Property line
- Right-of-way line
- Vinyl fence
- W Water line
- Proposed contour
- ④ Sit fence
- ⊙ Stabilized construction entrance
- ➔ Sheet flow direction (grade to drain)



Topography by Total Station
Contour Interval 1'
Approximate USGS Datum
Based on Hand Held GPS Unit

THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

**PRELIMINARY
NOT FOR CONSTRUCTION**

ENGINEER:
PETER C. LAZORCHAK, P.E.
VT P.E. 8930

REVISIONS	
06/18/14	REVISE VT ROUTE 100 RIGHT-OF-WAY
06/03/14	ADD EROSION CONTROL, STONE FILTER STRIPS, MISCELLANEOUS
05/21/14	GRADING PLAN

SITE PLAN

TOWN OF WAITSFIELD

TOWN OFFICE PROJECT

ROUTE 100 WAITSFIELD, VT

SCALE : 1" = 20'

DESIGNED BY: PCL PROJECT #31069

DRAWN BY: WDB

CHECKED BY: PCL

MCCAIN CONSULTING, INC.

93 SOUTH MAIN STREET

WATERBURY, VERMONT 05676

DATE: MAY 1, 2014

SHEET S-1

NOTES

Septic Tank and Building Sewer:

- 1) Use a 1000 gallon concrete septic tank with an access riser to grade, and an effluent filter.
- 2) Place tank a minimum of 10' from the building.
- 3) Use 4" cast iron or SCH 40 PVC from building to tank with one pipe joint placed on undisturbed soil to absorb settling.
- 4) Slope pipe from building to tank at 1/4" per foot.

Force Main:

- 1) Perform a hydrostatic leakage test of the force main at 50 psi and hold pressure for two hours.

Distribution Box:

- 1) Use concrete distribution box. Installation is to include a riser to grade for access and maintenance.
- 2) Use 4" solid PVC out of box. Slope solid PVC at 1/4" per foot for 5' minimum.
- 3) Use grout or rubber seals to make inlet and outlets watertight.
- 4) All outlets are to be level.
 - a) Use water test to level outlets. All outlets are to be at the same elevation, or use a "dial-a-flow" type device.
 - b) Add water to box to verify equal flow out of pipes. Adjust and retest as required.

Design Calculations:

- 1) 10 employees @ 15 gpd = 150 gpd, and 60 visitors @ 5 gpd = 300 gpd, total = 450 gpd
- 2) Percolation rate $t = 4$ minute/inch
- 3) Application rate (AR) $= (3/\sqrt{t}) = (3/\sqrt{4}) = 1.5$ gal/sf/day. Maximum application rate for effluent in an absorption trench = 1.5 gal/sf/day.
- 4) Required trench area: $DF/AR = 450/1.5 = 300$ sf
- 5) Actual area: two trenches @ 4' x 40' = 320 sf

Leachfield - Construction Notes:

- 1) Bottom of trenches to be approximately 6" below grade on downslope side and level.
- 2) Scarify sides and bottom of trenches prior to placing stone.
- 3) Place 6" of 1"-1 1/2" clean hard crushed stone or washed stone.
- 4) Place 4" perforated PVC pipe in center of trench.
- 5) Cap end of all pipes 2' from trench end.
- 6) Cover distribution lateral with a minimum of 2" of stone.
- 7) Cover stone with filter fabric.
- 8) Grade surface of leachfield to direct surface water away from leachfield.
- 9) Topsoil, seed, and mulch all disturbed areas to establish vegetation.

Water Supply Basis of Design:

10 Employees @ 15 gpd = 150 gpd
 60 Visitors @ 5 gpd = 300 gpd
 450 gpd
 Less 10% low flow fixtures -45 gpd
Total 405 gpd

Inspections and Certifications:

- 1) It is the owner's/ contractor's responsibility to contact the consultant (McCain Consulting - 802-244-5093) for the following:
 - a) For stakeout of the leachfield location - Please provide 2 weeks notice.
 - b) For inspection of the scarification of the soil prior to placing stone - Please provide 72 hours notice.
 - c) For inspection of the pressurization of the force main to 50 psi.
 - d) To observe pump operation and to verify discharge to the distribution box.

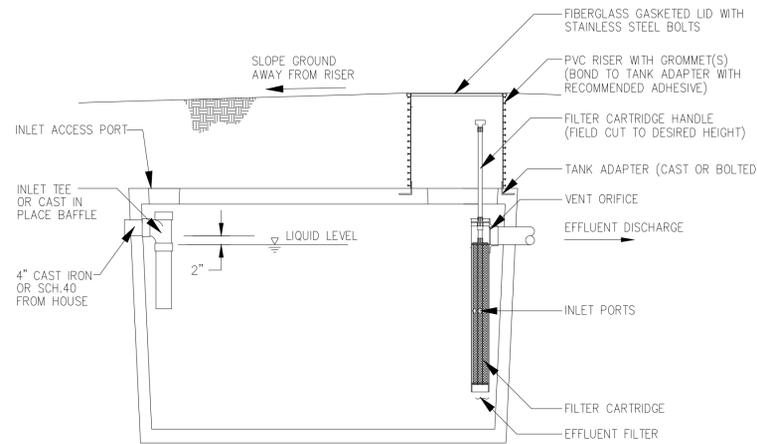
- 2) The septic system installer will provide the consultant with a signed and dated statement as follows:

I hereby certify that the installation-related information submitted is true and correct, and that in the exercise of my reasonable professional judgment, the wastewater system has been installed in accordance with the permitted design and all permit conditions, was inspected, was properly tested, and has successfully met those performance tests.

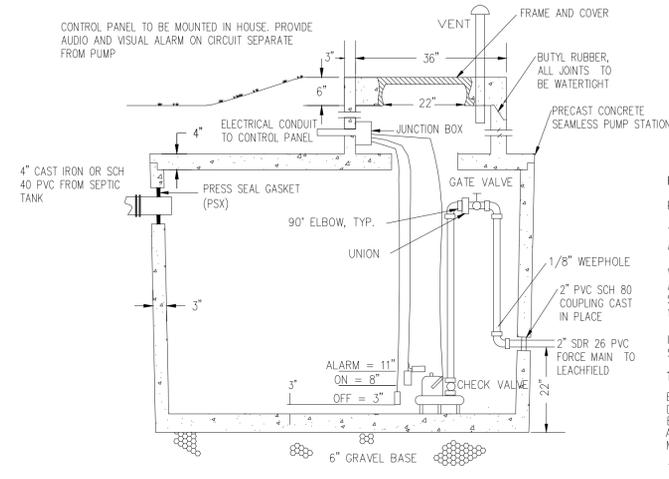
- 3) The certification of construction as required by section 1-308(a) of the Environmental Protection Rules may not be provided by the designer if the procedures outlined herein are not followed.

Maintenance:

- (1) At least once a year, the depth of sludge and scum in the septic tank should be measured. The tank should be pumped if:
 - (a) The sludge is closer than twelve inches to the outlet baffle, or
 - (b) The scum layer is closer than three inches to the septic tank outlet baffle.
 - (c) Following septic tank cleaning in units over 5,000 gallons, all interior surfaces of the tank should be inspected for leaks and cracks.
- (2) At least twice a year, the outlet filter on the septic tank should be removed and cleaned by spraying it with water under normal household pressure.
- (3) At least once a year, dosing tanks and distribution boxes should be opened and settled solids removed as necessary and the dosing tank or distribution box checked for levelness.
- (4) At least once a year, pump stations should be inspected:
 - (a) Remove settled solids as necessary. Solids and scum accumulation in the pump station may be indicative of a septic tank outlet filter malfunction, septic tank overloading, or other cause that should be investigated and remedied.
 - (b) On/off and alarm floats should be tripped to ensure proper operation.
 - (c) Inspect delivery of effluent to the distribution box. Slow delivery may indicate impending pump failure.
- (5) Toxic or hazardous substances should in general not be disposed of in septic systems. These substances may pass through the system in an unaltered state and contaminate groundwater or remain in the septicage and subsequently contaminate the soil or crops at the site of ultimate disposal.
- (6) The leachfields are not designed for the disposal of filter backwash or other byproducts of water treatment, filtration or purification systems.



TYPICAL SEPTIC TANK (NOT TO SCALE)



TYPICAL 1000 GALLON PUMP STATION (NOT TO SCALE)

PUMP PARAMETERS:
 PUMP IS TO DELIVER 25 GPM AT 10 FEET TDH.
 THE PUMP IS TO BE SUPPLIED WITH STANDARD ALARM AND CONTROLS AS SUPPLIED BY THE MANUFACTURER.
 VOLUMES AND FLOAT SETTINGS ARE BASED ON A 1000 GALLON PUMP STATION MANUFACTURED BY S.T. GRISWOLD AND COMPANY INC., CATALOG FILE 1000 2PC PS.
 INSIDE DIMENSIONS VARY WITH EACH TANK SUPPLIER.

TANK VOLUMES

BELOW OFF FLOAT	62 GALLONS
DOSE VOLUME	105 GALLONS
BETWEEN ON AND ALARM FLOATS	62 GALLONS
ABOVE ALARM FLOAT (EMERGENCY STORAGE)	923 GALLONS
MINIMUM REQUIRED EMERGENCY STORAGE	450 GALLONS
TOTAL TANK VOLUME	1152 GALLONS

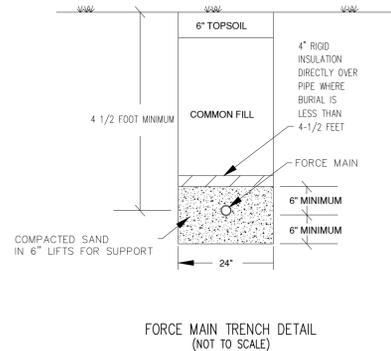
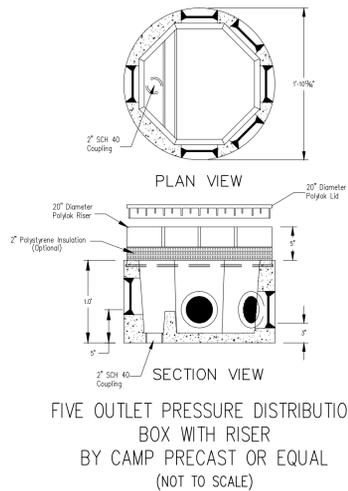
Soil Information

Test pits excavated 02/07/14 by backhoe
 Dana Nagy, ANR, Barre, Present to observe

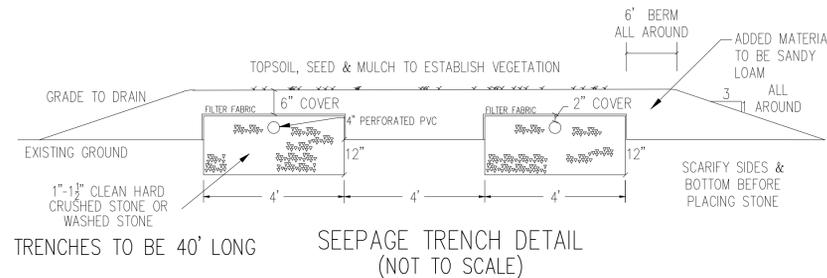
SB-1	0' - 21"	Brown fine sandy loam
	21" - 36"	Brown loamy fine sand
	36" - 77"	Gravelly medium-coarse sand
SB-2	0' - 24"	Brown fine sandy loam
	24" - 72"	Very gravelly coarse sand
SB-3	0' - 38"	Brown loamy fine sand
	38" - 72"	Gravelly medium-coarse sand Some staining @ 60"

Percolation Tests

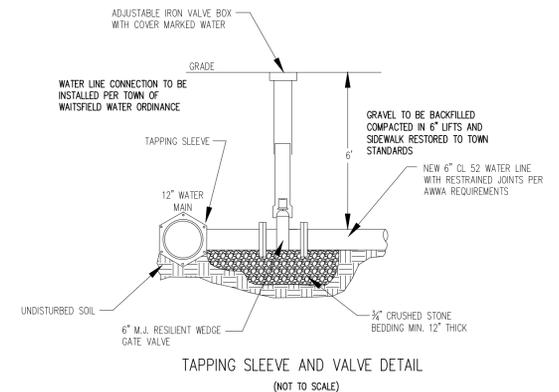
PT-1	4 Min/In	@ 30"
PT-2	4 Min/In	@ 30"
PT-3	3 Min/In	@ 30"
PT-4	8 Min/In	@ 30"



FORCE MAIN TRENCH DETAIL (NOT TO SCALE)



TRENCHES TO BE 40' LONG



DETAILS
 TOWN OF WAITSFIELD
 TOWN OFFICE PROJECT

ROUTE 100 WAITSFIELD, VT

SCALE : NTS
 DESIGNED BY: PCL PROJECT #31069
 DRAWN BY: WDB
 CHECKED BY: PCL

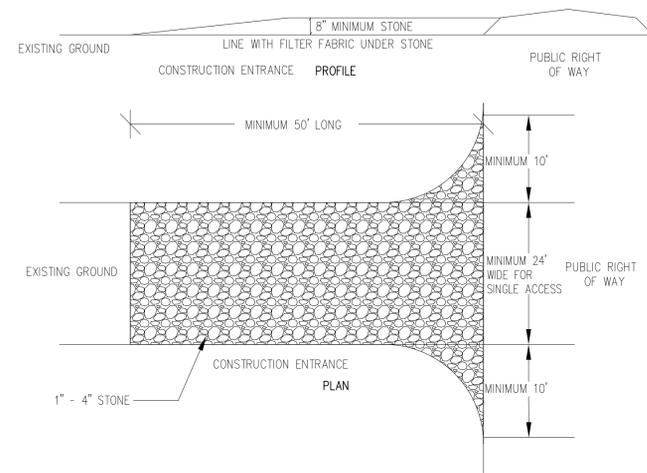
McCain Consulting, Inc.
 93 SOUTH MAIN STREET
 WATERBURY, VERMONT 05676

DATE: MAY 1, 2014

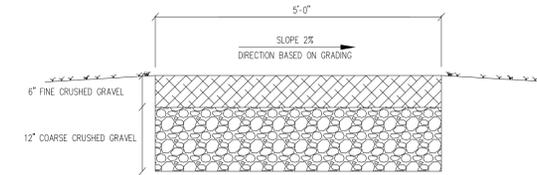
SHEET S-2

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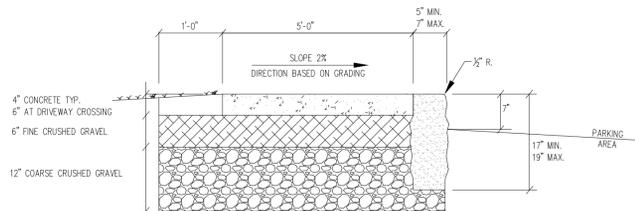
ENGINEER:
 PETER C. LAZORCHAK, P.E.
 VT P.E. 8930



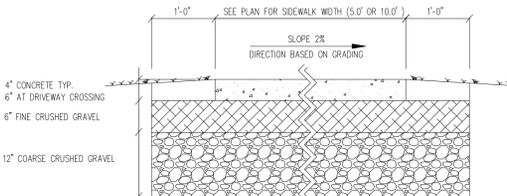
EROSION CONTROL NUMBER 7
STABILIZED CONSTRUCTION
ENTRANCE
(NOT TO SCALE)



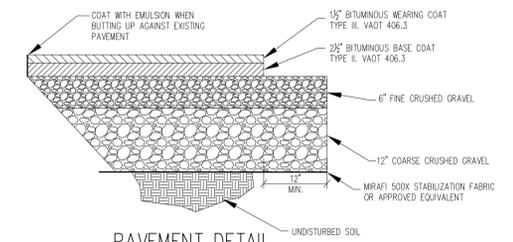
GRAVEL SIDEWALK DETAIL
(NOT TO SCALE)



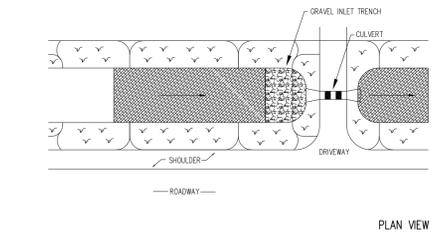
CONCRETE SIDEWALK
WITH VERTICAL GRANITE CURB DETAIL
(NOT TO SCALE)



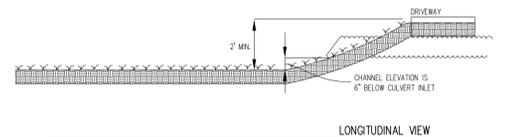
CONCRETE SIDEWALK DETAIL
(NOT TO SCALE)



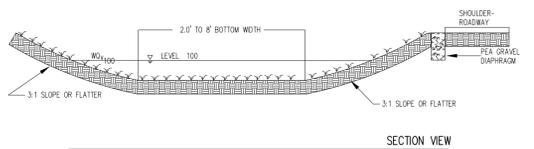
PAVEMENT DETAIL
(ALTERNATE BID OPTION)
(NOT TO SCALE)



PLAN VIEW

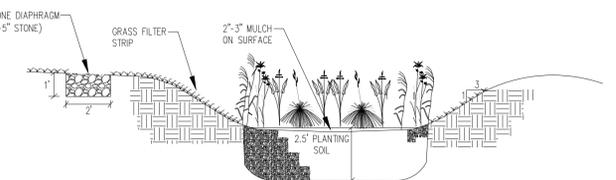


LONGITUDINAL VIEW

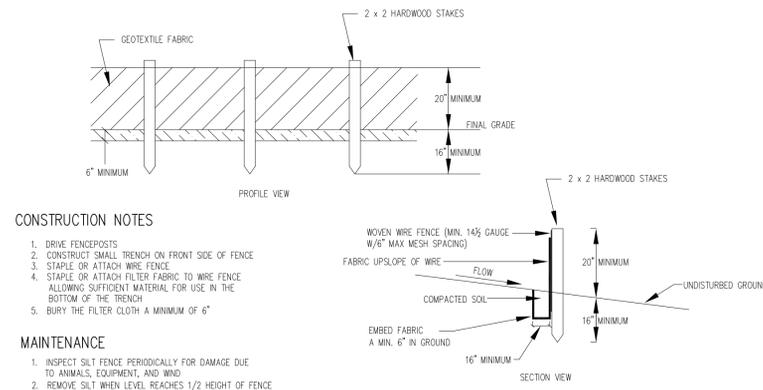


SECTION VIEW

EROSION CONTROL NUMBER 8
GRASS CHANNEL
(NOT TO SCALE)



BIORETENTION POND (RAIN GARDEN)
(NOT TO SCALE)



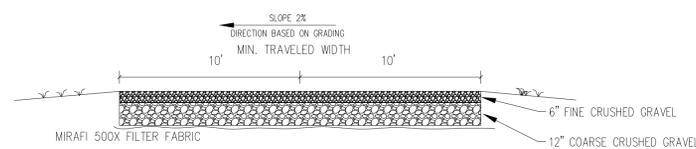
CONSTRUCTION NOTES

1. DRIVE FENCEPOSTS
2. CONSTRUCT SMALL TRENCH ON FRONT SIDE OF FENCE
3. STAPLE OR ATTACH WIRE FENCE
4. STAPLE OR ATTACH FILTER FABRIC TO WIRE FENCE ALLOWING SUFFICIENT MATERIAL FOR USE IN THE BOTTOM OF THE TRENCH
5. BURY THE FILTER CLOTH A MINIMUM OF 6"

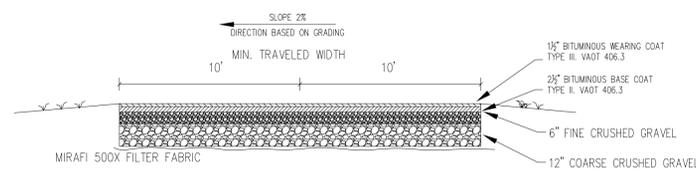
MAINTENANCE

1. INSPECT SILT FENCE PERIODICALLY FOR DAMAGE DUE TO ANIMALS, EQUIPMENT, AND WIND
2. REMOVE SILT WHEN LEVEL REACHES 1/2 HEIGHT OF FENCE

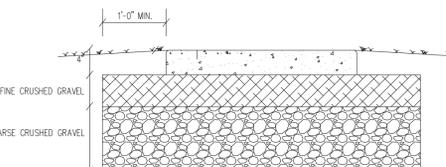
EROSION CONTROL NUMBER 4
SILT FENCE DETAIL
(NOT TO SCALE)



GRAVEL ROAD SECTION
(NOT TO SCALE)



PAVED ROAD SECTION
(ALTERNATE BID OPTION)
(NOT TO SCALE)



6'X6' CONCRETE BIKEPAD DETAIL
(NOT TO SCALE)

- Notes:
1. Concrete to be 4000 psi fiberglass reinforced with 5-7% air entrainment.
 2. Broom finish with smooth troweled edges. Treat with silane-siloxane or approved equivalent.
 3. Refer to plan for size and location

6'X6' CONCRETE BIKEPAD DETAIL
(NOT TO SCALE)

- CONCRETE SIDEWALK NOTES:
1. PLACE A TOOLED JOINT 1/8" WIDE AND AT LEAST 1/2" OF THE DEPTH, TYPICALLY AT INTERVALS MATCHING THE SIDEWALK WIDTH, OR AS NOTED ON PLANS (NOT TO EXCEED 10'-0")
 2. PLACE EXPANSION JOINT AS INDICATED ON PLANS, NOT TO EXCEED 20'-0" MAX.
 3. BROOM FINISH WITH SMOOTH TROWELED EDGES. TREAT WITH SILANE-SILOXANE OR EQUAL.
 4. CAST-IN-PLACE CONCRETE TO BE 4000 PSI FIBERMESH REINFORCED CONCRETE, 5%-7% AIR ENTRAINMENT

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<p>PRELIMINARY NOT FOR CONSTRUCTION</p>	<p>SITE DETAILS</p> <p>TOWN OF WAITSFIELD</p> <p>TOWN OFFICE PROJECT</p>	
	<p>ROUTE 100</p>	<p>WAITSFIELD, VT</p>
<p>SCALE : NTS DESIGNED BY: PCL DRAWN BY: WDB CHECKED BY: PCL</p>	<p>PROJECT #31069</p>	<p>McCain Consulting, Inc. 93 SOUTH MAIN STREET WATERBURY, VERMONT 05676</p>
<p>ENGINEER: PETER C. LAZORCHAK, P.E. VT P.E. 8930</p>	<p>DATE: JUNE 6, 2014</p>	<p>SHEET S-3</p>