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PROJECT DESCRIPTION: THE Town of East Montpelier used VT Community Development Program (VCDP) funds together with Other Resources to hire consultants to determine the potential for affordable, independent living housing for senior citizens on a site located in East Montpelier. The senior housing effort is lead by the East Montpelier Senior Living Initiative (EMSLI), a group of concerned citizens that has been in existence since 2005.

TASK	CONSULTANT	PAGES
SEPTIC CAPACITY ANALYSIS	DUFRESNE GROUP	1-26
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CONCEPTUAL BUILDING ELEVATIONS & FLOOR PLANS	MACLAY ARCHITECTS	28-68
FINANCIAL PRO FORMA	CENTRAL VT COMMUNITY LAND TRUST	69-73

DUFRESNE GROUP CONSULTING ENGINEERS

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September 10, 2010

Craig Kleman, Town Administrator
 Town of East Montpelier
 PO Box 157
 East Montpelier, VT 05651-0157

Re: East Montpelier Senior Housing Senior Living, Predevelopment Services
 DG W.O. #7100006

Dear Craig,

Thank you for the opportunity to work with the Town of East Montpelier and the East Montpelier Senior Living Initiative on the Predevelopment Services for the Winston Parcel. We have completed the work outlined in the Scope of Services

Please find enclosed the following:

1. Existing Conditions Site Plan outlining potential building areas, well locations and leachfield areas, and detailed wastewater disposal area site plan.
2. The hydrological study with the induced mounding analysis.
3. Permit review sheet from the Agency of Natural Resources

Based on the hydrological study, test pit observations and site conditions it is our opinion that the wastewater capacity of the site is approximately 1,600 gallons per day without the use of an approved pretreatment device. If an approved pretreatment device is used, the capacity of the site is increased to approximately 2,500 to 2,800 gallons per day. The mounding analysis identifies the required height of sand required for several different design flows, and based on isolation distances required by the State of Vermont Environmental Protection Rules (EPR's), the site is limited to approximately 30-inches of sand prior to encroachment to steep slopes or property lines in the immediate vicinity.

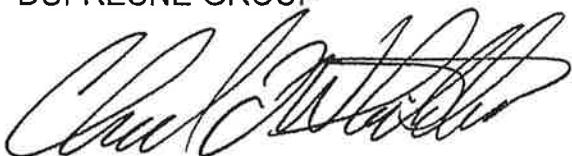
Based on the VT EPR's design flow rate of 70 gallons per person, per day, and occupancy of 1.5 people per unit, this would allow for 23-27 units using an approved pretreatment system, depending on final designs. As we have discussed previously, The State of Vermont does not give credits for water saving devices such as composting toilets prior to installation of the system. If a water saving system is installed and meter information is collected for a period of one year, the meter data can be used to allow for additional flow to system

components, but improvements are required to be designed based on the design flows provided in the EPR's.

As outlined in the hydrological evaluation, more extensive hydrological evaluations can be completed which may allow for additional capacity at this site. These evaluations include recording seasonal water elevations in monitoring wells during the spring melt, and completion of additional hydraulic conductivity testing that may result in higher conductivity values and increase the capacity or reduce construction costs.

Please distribute this information to the members of the group for review and we will discuss further at your next meeting. If you have any questions, please contact our office.

Sincerely,
DUFRESNE GROUP



Chad L. Whitehead, PE
Office Manager

Enclosure

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Jefferson P. Hoffer, PG
 Groundwater Supply Development
 Hydrogeologic Site Investigations
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September 5, 2010

Chad Whitehead, PE
 Dufresne Group
 459 Portland Street
 St. Johnsbury, Vermont 05819

Re: Wastewater Disposal Capacity Evaluation,
 EMSLI - Winston Parcel, Route 2/14, East Montpelier, Vermont

Dear Chad:

This letter summarizes my hydrogeologic evaluation of the proposed wastewater disposal site on the Winston parcel in East Montpelier. I evaluated the wastewater loading that the site can likely sustain while maintaining a sufficient unsaturated zone beneath the leachfield. Vermont regulations require maintaining an unsaturated zone of 36 inches for septic tank effluent and 18 inches for filtrate effluent.

Steady-state groundwater mound heights were calculated with the Darcy equation, using site-measured hydraulic conductivity values, estimates of the hydraulic gradient, and an assumed disposal system length of 160 feet based on the site setback distances. The estimated seasonal high groundwater level at the site is 40 inches. The thickness of mound sand required between the bottom of the disposal trench and the native ground surface is also calculated. A summary is provided below for the two hydraulic gradient estimates used in the calculations.

at 5% gradient

Disposal Volume (gpd) =	2800	2400	2000	1600
H "GW Mound" Height (ft) =	4.7	4.0	3.3	2.7
Sand (inches) Needed for Septic Tank =	52.1	44.1	36.1	28.1
Sand (inches) Needed for Filtrate =	34.1	26.1	18.1	10.1

at 8% gradient

Disposal Volume (gpc) =	2800	2400	2000	1600
H "GW Mound" Height (ft) =	2.9	2.5	2.1	1.7
Sand (inches) Needed for Septic Tank =	31.1	26.1	21.1	16.1
Sand (inches) Needed for Filtrate =	13.1	8.1	3.1	0.0

In the absence of site measurements of the actual hydraulic gradient, I would recommend using the more conservative 5% gradient estimates. It is possible that additional site data may allow for a higher estimated capacity and/or reduced mound sand and construction costs. The installation of groundwater monitoring wells would allow for the monitoring of the spring time high groundwater levels, hydraulic conductivity testing by slug testing (which often show higher values than point permeability tests), and actual determination of the site hydraulic gradient.

Chad Whitehead, PE
 September 5, 2010
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SITE DESCRIPTION & TEST PITS

Site location maps are provided on Figures 1 – 3. The area identified for wastewater disposal is a level two to three acre meadow located on the northeast corner of the 49-acre parcel. Figure 4 is a site map I prepared using your site plan, and includes two-foot elevation contours, test pit locations, and other pertinent site features. Figure 4 includes setbacks for a disposal system, and a preliminary 160 ft x 20 ft disposal system paralleling the site contours. The 160 foot length is the maximum length available based on the setbacks identified on your site plan. The width of the disposal system does not impact the mounding analysis, as the analysis is based on the linear loading rate.

The site is a rectangular area of relatively flat topography, surrounded on three sides by steep slopes. As shown on Figures 1 and 3, the site is near the terminus of a small promontory situated between the westward flowing Winooski River and smaller streams draining from the north including Sodom Pond Brook. The nearest mapped surface water feature is a small tributary of Sodom Pond Brook, and is located over 300 feet to the north of the site.

The NRCS soil map of the vicinity is enclosed, and identifies soils on the site as Salmon very fine sandy loam, within the 3% to 8% slope class. Soils on the steep slopes surrounding the site are identified as Buxton silt loams, within the 25% to 45% slope class. Parent material for the Salmon map unit is "coarse-silty glaciolacustrine deposits" and "clayey glaciolacustrine deposits" for the Buxton silt loam.

Dufresne Group logs for the five test pits excavated at the site on 30 July 2010 are enclosed. In general, the test pits exposed fine-grained glaciolacustrine sediments. Surficial soil textures included fine sandy loam, very fine sandy loam, with loose to friable consistence. Soil texture at depth (> 40 inches) was generally very fine sandy loam with some silt loam. At several locations, small (< 1 inch) continuous layers of silt were observed. Wet soil was encountered at a depth of 90 inches in test pit #1. Based on soil mottling, the estimated depth to seasonal high groundwater at each of the test pits is given below.

Test Pit	Depth to ESHGW (inches)
TP #1	40
TP #2	47
TP #3	72
TP #4	41
TP #5	70

Apparent groundwater seeps were observed at several locations on the steep banks surrounding the site. Although no significant seepage was observed on 30 July 2010, groundwater discharge likely occurs at these locations under high groundwater conditions.

Chad Whitehead, PE
September 5, 2010
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HYDROGEOLOGIC SETTING

Figure 5 depicts a conceptual model of groundwater flow conditions at the site. The plan view illustrates inferred groundwater contours, drawn to mimic the surface topography. The cross sections include high and low groundwater stands. As illustrated on the cross sections, groundwater discharges to the surface at the seep areas during high groundwater stands.

The inferred radial groundwater flow patterns are very favorable for dispersing hydraulic loadings at the site.

Wastewater disposal at the site will likely increase the volume of water discharging at the seeps during high groundwater stands. Since the preliminary system design meets the 50 feet setback requirement for surface water, the presumption is that any effluent reaching the groundwater seeps has been sufficiently treated.

HYDRAULIC CONDUCTIVITY MEASUREMENTS

Point hydraulic conductivity measurements were made at seven locations using a Guelph Permeameter. Measurements were made at depths ranging from 18 to 48 inches. Results are summarized on Table 1, and field measurements and calculations are enclosed. Hydraulic conductivity values ranged from 5 to 15 feet/day, with a geometric mean of 10 feet/day (3.5×10^{-3} cm/sec).

HYDRAULIC GRADIENT

The hydraulic gradient, or water-table slope, is often assumed to approximate the ground surface slope. Figure 6 provides ground slope measurements, which range from 3% in the middle of the site, to 5% to 10% across the entire level portion of the site.

The actual water table slope between TP #1 and the seep to the northwest can be determined using the estimated seasonal high water table (40 inches) and the elevation of the seep. By assuming an elevation of 493 feet for the high water table stand at TP#1, and an elevation of 482 feet for the seep, the gradient is $493 - 482 = 11$ feet/150 feet = 7.3%.

For the purposes of this evaluation, the hydraulic gradient is estimated to be in the range of 5% to 8% beneath the proposed disposal area.

MOUNDING EVALUATION

In Vermont, the standard practice to evaluate groundwater mounding beneath a wastewater disposal system is to utilize the Darcy equation. This approach is utilized in the Vermont Simplified Method for Prescriptive Desktop Mounding Analysis, which is valid for mound systems less than 1000 gpd and in-ground/at-grade systems less than 2000 gpd. The Darcy equation describes the steady state flow of water through a porous medium.

Chad Whitehead, PE
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$$Q = KIA$$

Q = flow, ft^3/day
 K = hydraulic conductivity, ft/day
 I = hydraulic gradient, ft/ft
 A = area, ft^2 (Height x Length)

Rearrange and solve for H ,
 $H = Q / K I L$

H = height or thickness needed to transmit Q under gradient of I
 along a length of L with a given K

Table 2 is a spreadsheet that calculates "H" for various disposal volumes and at hydraulic gradient values of 5% and 8%. The calculations include the site-measured hydraulic conductivity of 10 feet/day, and an assumed system length of 160 feet.

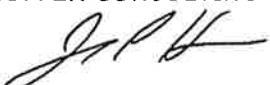
For example, the calculated groundwater mound height (H) for a disposal volume of 2000 gpd is 3.3 feet with a gradient of 5%, and 2.1 feet with a gradient of 8%. By subtracting the thickness of native soil available for mounding (4 inches for septic tank effluent, 22 inches for filtrate effluent), the thickness of mound sand needed to maintain the required unsaturated zone can be calculated.

In the absence of site measurements of the actual hydraulic gradient, I would recommend using the more conservative 5% gradient estimates to design the system or assess the site's maximum capacity.

It is possible that additional site data may allow for a higher estimated capacity and/or reduced mound sand and construction costs. The installation of groundwater monitoring wells would allow for the monitoring of the spring time high groundwater levels, hydraulic conductivity testing by slug testing (which often show higher values than point permeability tests), and actual determination of the site hydraulic gradient.

If you have any questions regarding this evaluation, please feel free to e-mail me at jeffhoffer@charter.net or call me at (802) 626 – 4519.

Sincerely,
 HOFFER CONSULTING INC.

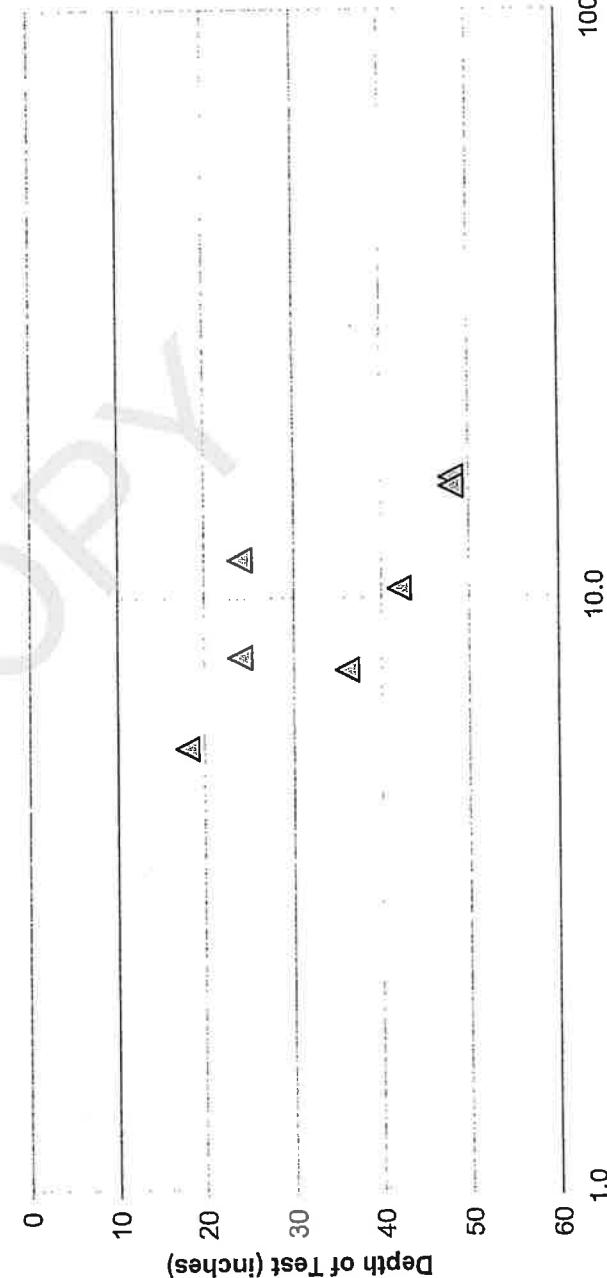


Jefferson P. Hoffer, PG
 Senior Hydrogeologist

enc.

TABLE 1
Summary of Guelph Permeameter Hydraulic Conductivity Test Results,
EMSLI - Winston Site, East Montpelier, VT.

TEST #	Near TP#	Depth (inches)	Soil Texture	Guelph Permeameter Drop in 30 Seconds (cm)			Hydraulic Conductivity feet/day
				5 CM	10 CM	5 CM	
GP-1	TP-1	18	fine sandy loam	1.00	1.37	6.11	5.05
GP-2	TP-1	48	mottled fine sandy loam w/ roots	3.00	3.67	18.33	13.53
GP-3	TP-2	48	fine sandy loam	2.72	3.83	16.62	14.12
GP-4	TP-2	36	silty fine sand/fine sandy loam	1.43	1.73	8.74	6.38
GP-5	TP-3	24	fine sandy loam	2.00	3.00	12.22	11.06
GP-6	TP-4	24	fine sandy loam	1.60	1.67	9.77	6.16
GP-7	TP-4	42	mottled silty fine sand/fine sandy loam	2.00	2.30	12.22	8.48
				geometric mean = 9.99			



Hydraulic Conductivity (ft/day)
Hoffer Consulting Inc.
9/5/2010

TABLE 2
Groundwater Mounding Evaluation Using Darcy Equation,
EMSLI - Winston Site, East Montpelier, Vermont
Prepared for: Dufresne Group

METHODOLOGY: Use Rearrangement of Darcy Equation ($H=Q/KI$) to calculate height (H) needed to transmit various disposal volumes (Q) at K of 10 ft/day. I values of 5% and 8%.

Assume Seasonal High Groundwater at 40 Inches

- Must maintain 36" unsaturated for septic tank effluent (4 inches native soil available)

- Must maintain 18" unsaturated for septic tank effluent (22 inches native soil available)

Calculation Thickness of Additional Mound Sand Needed

MOULDING EVALUATION (Gradient = 5%)

Disposal Volume (gpd) =	3200	2800	2400	2000	1600	1200	800
Disposal Volume (ft ³ /day) =	427.8	374.3	320.9	267.4	213.9	160.4	107.0
Disposal Area							
Length (ft) =	160	160	160	160	160	160	160
Width (ft) =	20	20	20	20	20	20	20
Total Area (ft ²) =	3200	3200	3200	3200	3200	3200	3200

Application Rate (gpd/ft²) =

$$1.0 \quad 0.88 \quad 0.75 \quad 0.63 \quad 0.50 \quad 0.38 \quad 0.25$$

Linear Loading Rate (gpd/linear foot) =

$$20 \quad 17.5 \quad 15.0 \quad 12.5 \quad 10.0 \quad 7.5 \quad 5.0$$

Hydraulic Conductivity (ft/day) =

$$10 \quad 10 \quad 10 \quad 10 \quad 10 \quad 10 \quad 10$$

H "GW Mound" Height (ft) with Gradient of 5% =

$$5.3 \quad 4.7 \quad 4.0 \quad 3.3 \quad 2.7 \quad 2.0 \quad 1.3$$

Native Soil Thickness Available for Mounding/Septic Tank (feet) =

$$0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33$$

Native Soil Thickness Available for Mounding/Filtrate (feet) =

$$1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83$$

MOUND SAND THICKNESS (inches) needed for septic tank effluent

$$60.2 \quad 52.1 \quad 44.1 \quad 36.1 \quad 28.1 \quad 20.1 \quad 12.0$$

MOUND SAND THICKNESS (inches) needed for filtrate effluent

$$42.2 \quad 34.1 \quad 26.1 \quad 18.1 \quad 10.1 \quad 2.1 \quad 0.0$$

MOULDING EVALUATION (Gradient = 8%)

Disposal Volume (gpd) =	3200	2800	2400	2000	1600	1200	800
Disposal Volume (ft ³ /day) =	427.8	374.3	320.9	267.4	213.9	160.4	107.0
Disposal Area							
Length (ft) =	160	160	160	160	160	160	160
Width (ft) =	20	20	20	20	20	20	20
Total Area (ft ²) =	3200	3200	3200	3200	3200	3200	3200

Application Rate (gpd/ft²) =

$$1.0 \quad 0.88 \quad 0.75 \quad 0.63 \quad 0.50 \quad 0.38 \quad 0.25$$

Linear Loading Rate (gpd/linear foot) =

$$20 \quad 10 \quad 10 \quad 10 \quad 10 \quad 10 \quad 10$$

H "GW Mound" Height (ft) with Gradient of 8% =

$$3.3 \quad 2.9 \quad 2.5 \quad 2.1 \quad 1.7 \quad 1.3 \quad 0.8$$

Native Soil Thickness Available for Mounding/Septic Tank (feet) =

$$0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33 \quad 0.33$$

Native Soil Thickness Available for Mounding/Filtrate (feet) =

$$1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83 \quad 1.83$$

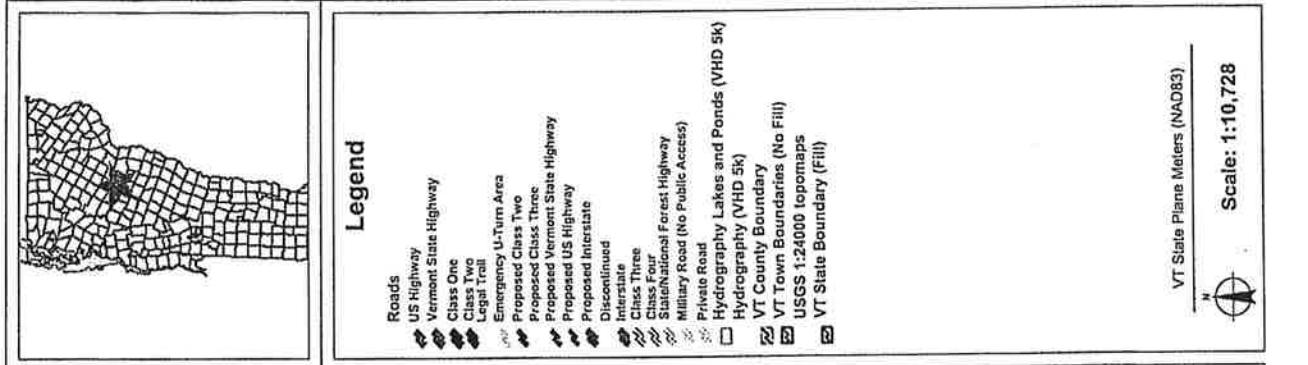
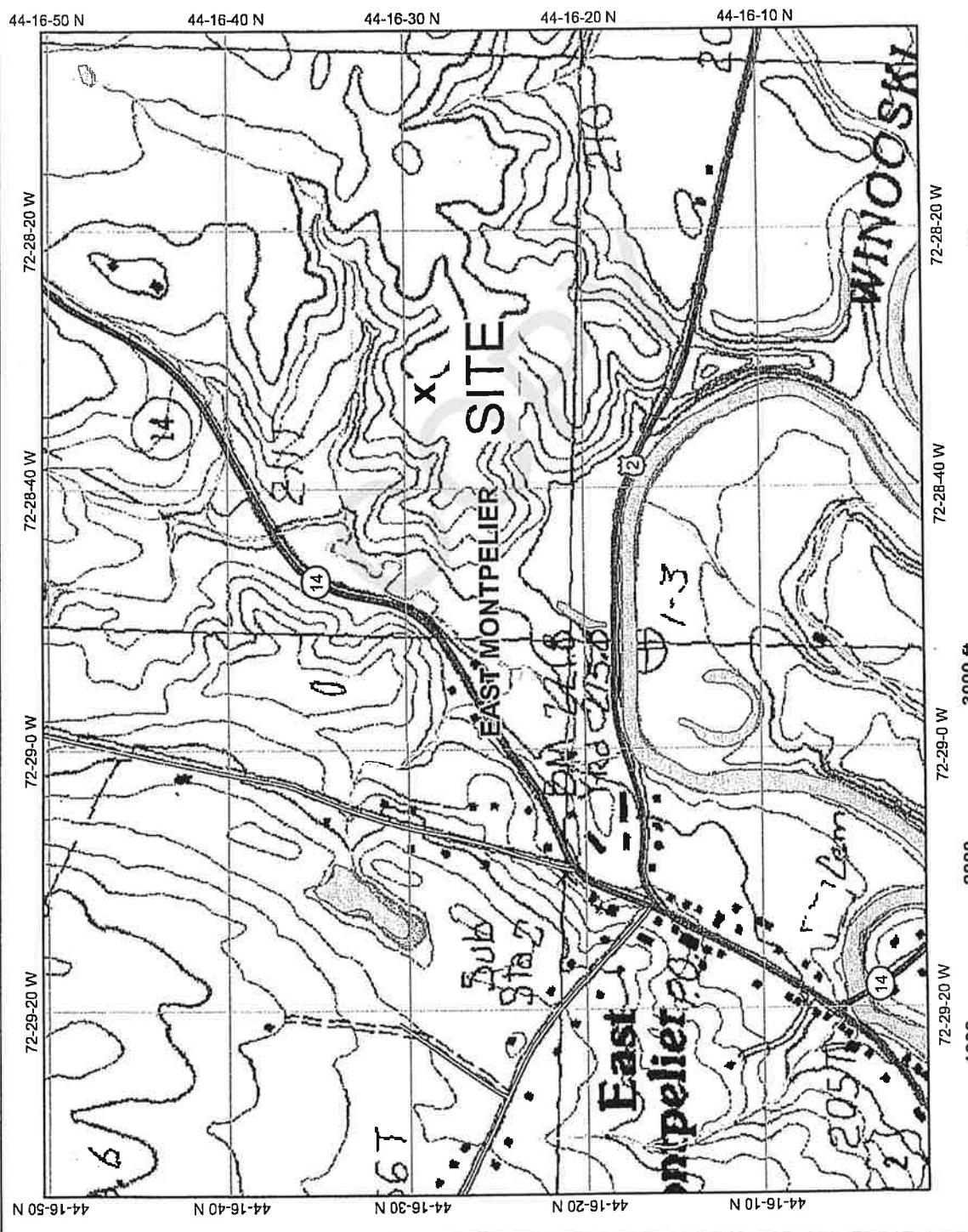
MOUND SAND THICKNESS (inches) needed for septic tank effluent

$$36.1 \quad 31.1 \quad 26.1 \quad 21.1 \quad 16.1 \quad 11.0 \quad 6.0$$

MOUND SAND THICKNESS (inches) needed for filtrate effluent

$$18.1 \quad 13.1 \quad 8.1 \quad 3.1 \quad 0.0 \quad 0.0 \quad 0.0$$

VERMONT
ANR Environmental Interest Locator
Vermont Agency of Natural Resources (ANR)

FIGURE 1

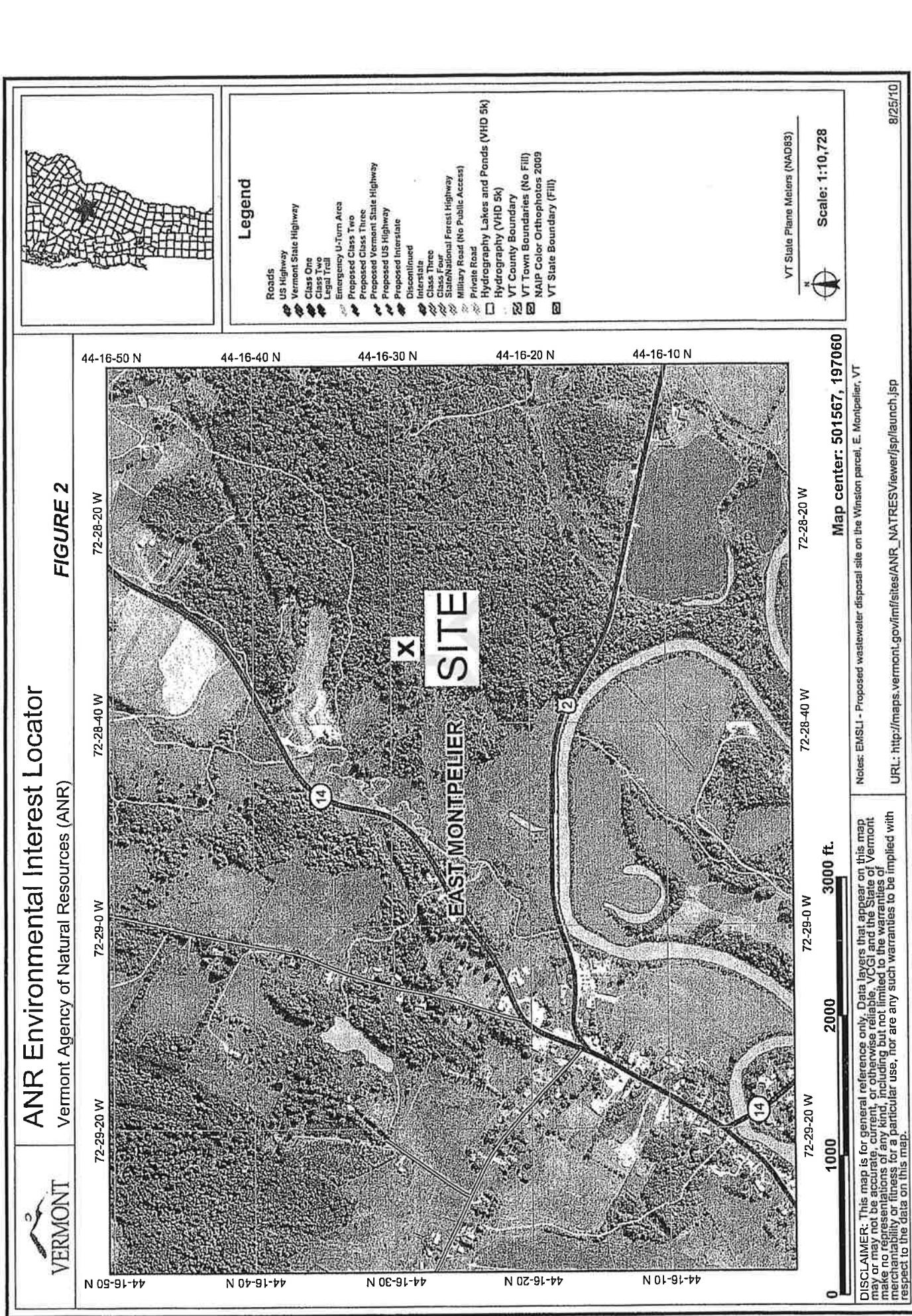
8/25/10

Map center: 501567, 197060

Scale: 1:10,728

Notes: EMSLI - Proposed Wastewater Disposal Site on the Winston Parcel, E. Montpelier, VT
URL: http://maps.vermont.gov/mf/sites/ANR_NATRESVIEWER/jsp/launch.jsp

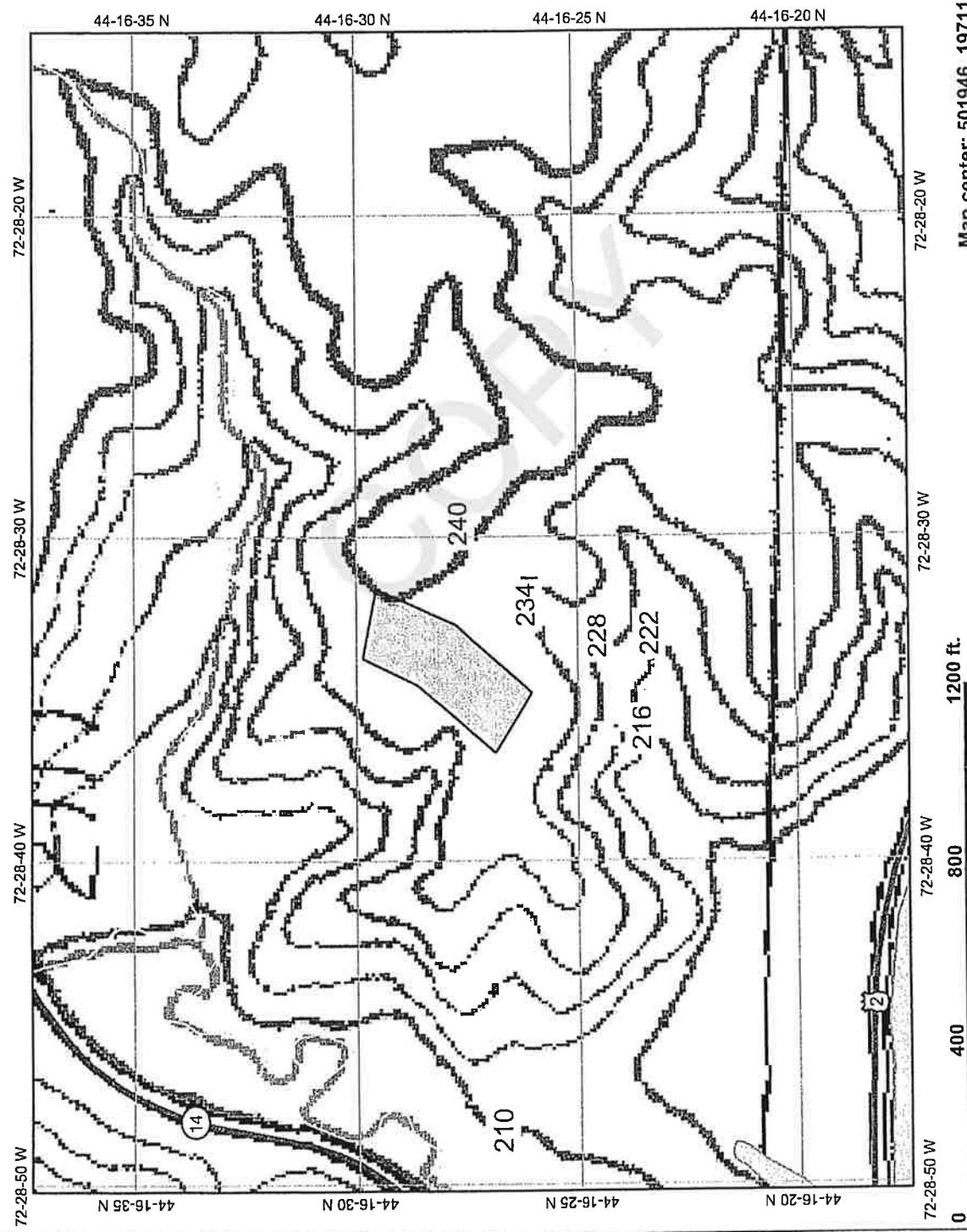
DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable, VCGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.





ANR Environmental Interest Locator
Vermont Agency of Natural Resources (ANR)

FIGURE 3



DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. VCGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

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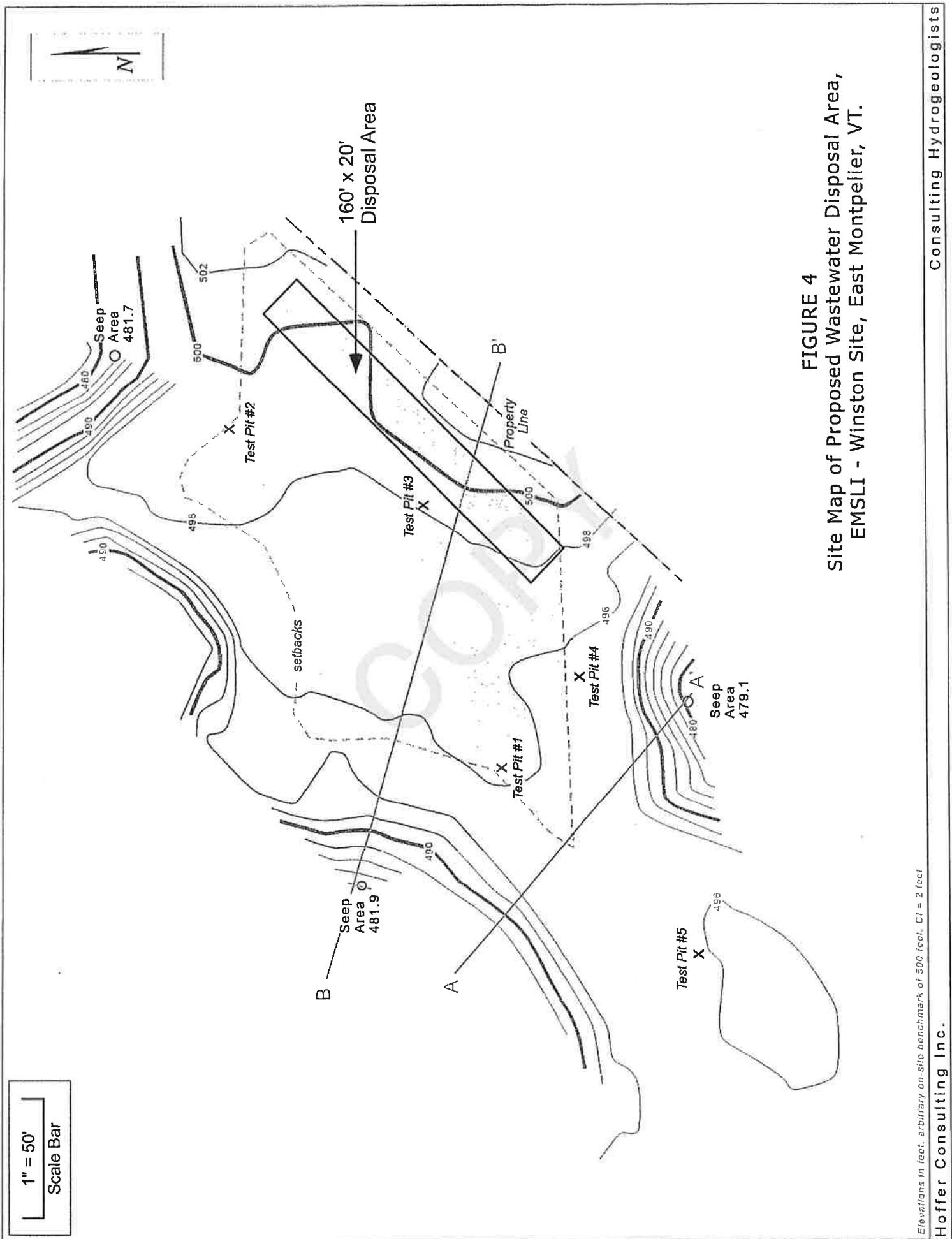


FIGURE 4
Site Map of Proposed Wastewater Disposal Area,
EMSLI - Winston Site, East Montpelier, VT.

Consulting Hydrogeologists

Ergonomics in Design, Vol. 11, No. 1, March 2000, pp. 21–24.

Hoffer Consulting Inc.

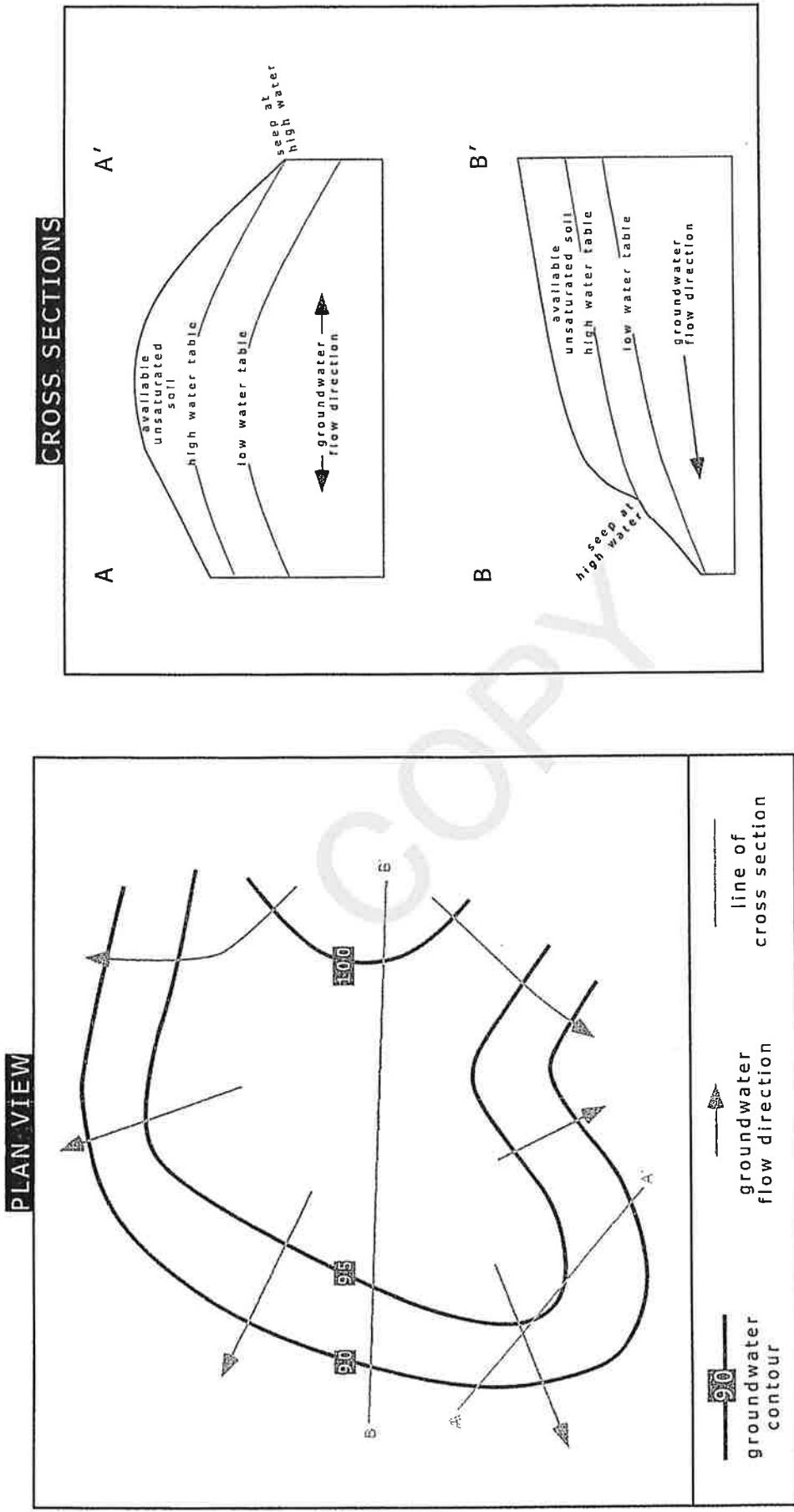
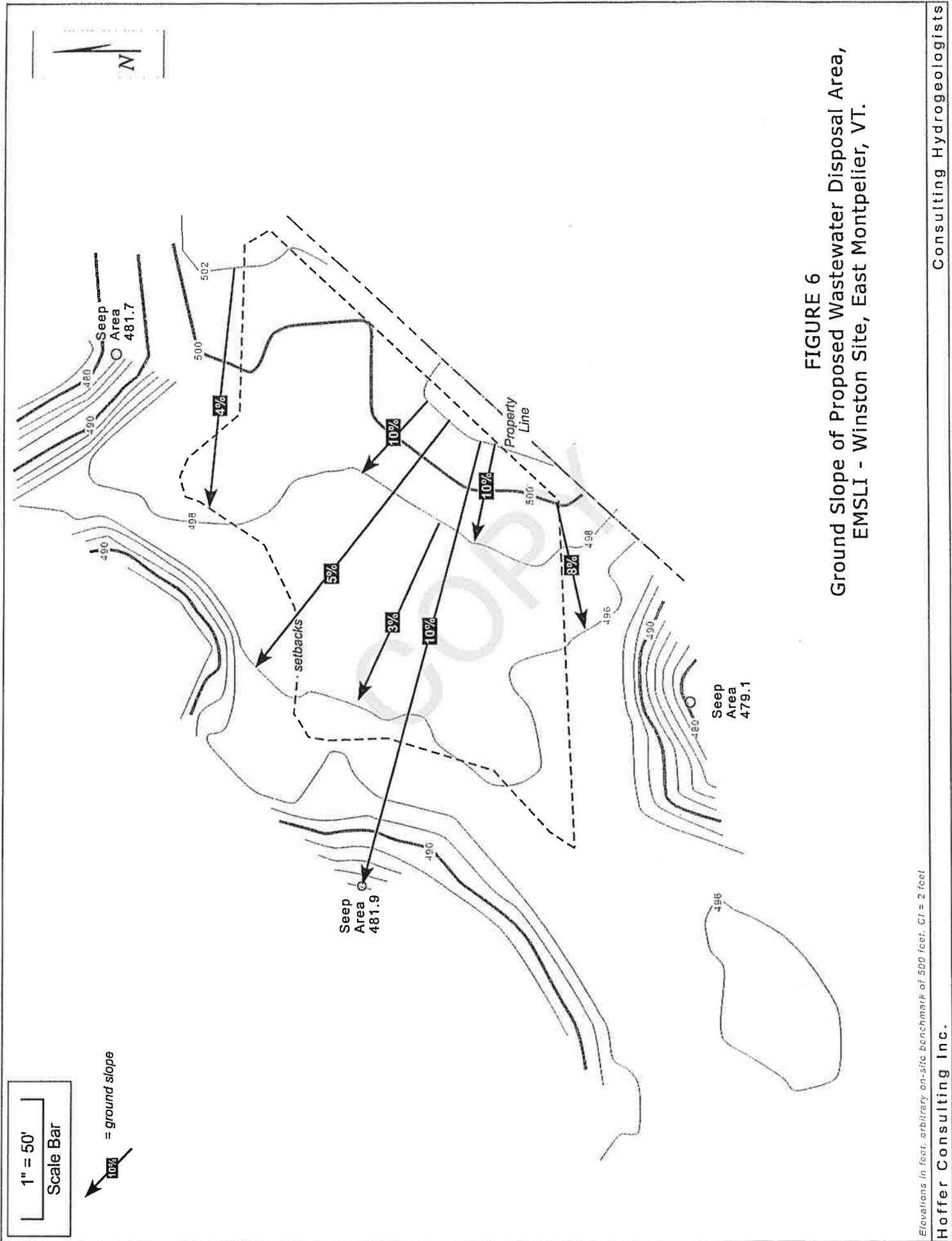


FIGURE 5
Conceptual model of groundwater flow patterns,
EMSLI - Winston Site, East Montpelier, VT.



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Memo

To: Jeff Hoffer, File
CC:
From: Chad Whitehead
Date: August 25, 2010
Re: EMSLI Test Pit Logs

Please find below my logs for the soils observed in Test Pits dug on site on July 30, 2010 by Kevin Hudson Excavation in East Montpelier. See attached map for Test Pit Locations.

Soil Descriptions are based on "Field Book for Describing and Sampling Soils, Version 2.0" from the National Soil Survey Center, Natural Resources Conservation Service. Color is based on The Munsell Color System.

Test Pit 1

Depth (inches)	Texture	Consistency	Color	Notes
0-6	fsl	Loose	Dark brown	Topsoil
6-21	vfs	Friable	10YR5/6	Void of redox features
21-40	vfs	Friable	10YR5/4	Silt deposits with few redox masses, red in color
40-70	vfs	Friable	10YR3/3	Many redox masses, prominent, red in color
Notes: restrictive layer at 40", due to apparent seasonal high water table. Excavated to approximately 114 inches, silt loam layer below 70" observed, wet at 90". No ledge to depth.				

Test Pit 2

Depth (inches)	Texture	Consistane	Color	Notes
0-6	fsl	Loose	Dark brown	Topsoil
6-18	fsl	Friable	10YR4/6	Void of redox features
18-22	vfs	Friable	10YR5/4	Thin layers (>1") of silty/vfsI deposits with redox masses, red in color
22-47	vfs	Friable	10YR5/4	Void of redox masses
47-64	vfsI	Friable	10YR5/2	Many redox masses, prominent, red in color
64-81	sfl	Friable	10YR5/2	Moist, many redox masses, prominent, red in color
Notes: restrictive layer at 47 inches, due to apparent seasonal high water table.				

Test Pit 3

Depth (inches)	Texture	Consistane	Color	Notes
0-12	fsl	Loose	Dark brown	Topsoil
12-33	vfs	Friable	10YR5/6	Void of redox features
33-49	vfs	Friable	10YR5/6	Thin layers (>1") of silty/vfsI deposits with redox masses, red in color
49-72	vfs	Friable	10YR5/4	Void of redox features
72-96	vfsI	Friable	10YR3/3	Many redox masses, prominent, red in color
Notes: restrictive layer at 72 inches, due to apparent seasonal high water table.				

Test Pit 4

Depth (inches)	Texture	Consistance	Color	Notes
0-10	fsl	Loose	Dark brown	Topsoil
10-18	vfs	Friable	10YR5/4	Void of redox features
18-41	vfs	Friable	10YR5/4	Silty/vfsl deposits with redox masses, red in color
41-56	vfsl	Friable	10YR4/3	Many redox masses, prominent, red in color
72-96	vfsl	Friable	10YR4/2	Many redox depletions, grey in color, wet
Notes: restrictive layer at 41 inches, due to apparent seasonal high water table.				

Test Pit 5

Depth (inches)	Texture	Consistance	Color	Notes
0-6	fsl	Loose	Dark brown	Topsoil
6-29	vfs	Friable	10YR5/6	Void of redox features
29-37	vfsl	Friable	10YR4/3	Void of redox features
37-70	vfs	Friable	10YR5/4	Void of redox features
70-94	vfsl	Friable	10YR4/2	Many redox depletions, grey in color, wet
Notes: restrictive layer at 70 inches, due to apparent seasonal high water table.				

Dufresne Group/EMSL/Winston Site
 Guelph Permeameter Field Readings, 8/26/2010
 30 Second Increments

GP-1 (18")		
5 CM	delta	10 CM
11.6		36.2
12.5	0.9	37.8
13.8	1.3	39.1
14.8	1.0	40.6
15.8	1.0	42.0
16.9	1.1	43.3
17.9	1.0	44.6
18.8	0.9	46.0
19.9	1.1	47.3
		48.7
R ₁ =	1.00	50.0
		51.4
		R ₂ = 1.37
		R ₂ = 3.83

GP-3 (48")		
5 CM	delta	10 CM
27.7		36.3
30.5	2.8	41.3
33.3	2.8	44.6
35.7	2.4	47.6
38.7	3.0	51.0
41.7	3.0	54.7
43.3	1.6	57.5
46.3	3.0	60.3
49.3	3.0	63.0
		66.2
R ₁ =	2.72	71.0
		74.5
		R ₂ = 3.83

GP-6 (24")		
5 CM	delta	10 CM
30.0		24.8
31.7	1.7	26.6
33.4	1.7	28.8
35.0	1.6	31.0
36.7	1.7	33.0
38.3	1.6	34.8
39.9	1.6	37.0
41.5	1.6	39.0
43.1	1.6	41.9
		42.9
R ₁ =	1.60	45.0
		46.9
		R ₂ = 1.67

GP-2 (48")		
5 CM	delta	10 CM
36.5		47.7
40.3	3.8	49.4
43.5	3.2	51.0
46.5	3.0	52.7
50.5	4.0	54.5
53.5	3.0	56.0
56.5	3.0	57.6
61.5	5.0	59.4
64.5	3.0	60.5
67.5	3.0	62.5
71.5	4.0	64.2
75.5	4.0	65.7
		R ₂ = 3.67

GP-7 (42")		
5 CM	delta	10 CM
23.0		48.4
25.1	2.1	50.6
27.5	2.4	53.0
29.7	2.2	55.0
31.7	2.0	58.4
33.9	2.2	59.6
35.9	2.0	62.7
37.9	2.0	65.7
39.9	2.0	68.2
		R ₂ = 2.30
R ₁ =	2.00	73.0
		75.1

GP-4 (36")		
5 CM	delta	10 CM
17.3		47.7
18.7	1.4	49.4
19.8	1.1	51.0
21.3	1.5	52.7
22.8	1.5	54.5
24.1	1.3	56.0
25.6	1.5	57.6
27.0	1.4	59.4
28.5	1.5	60.5
		R ₂ = 1.73
R ₁ =	1.43	64.2
		65.7

Hoffer Consulting Inc.
 9/5/2010

Dufresne Group/EMSLI/Winston Site
Guelph Permeameter Calculations

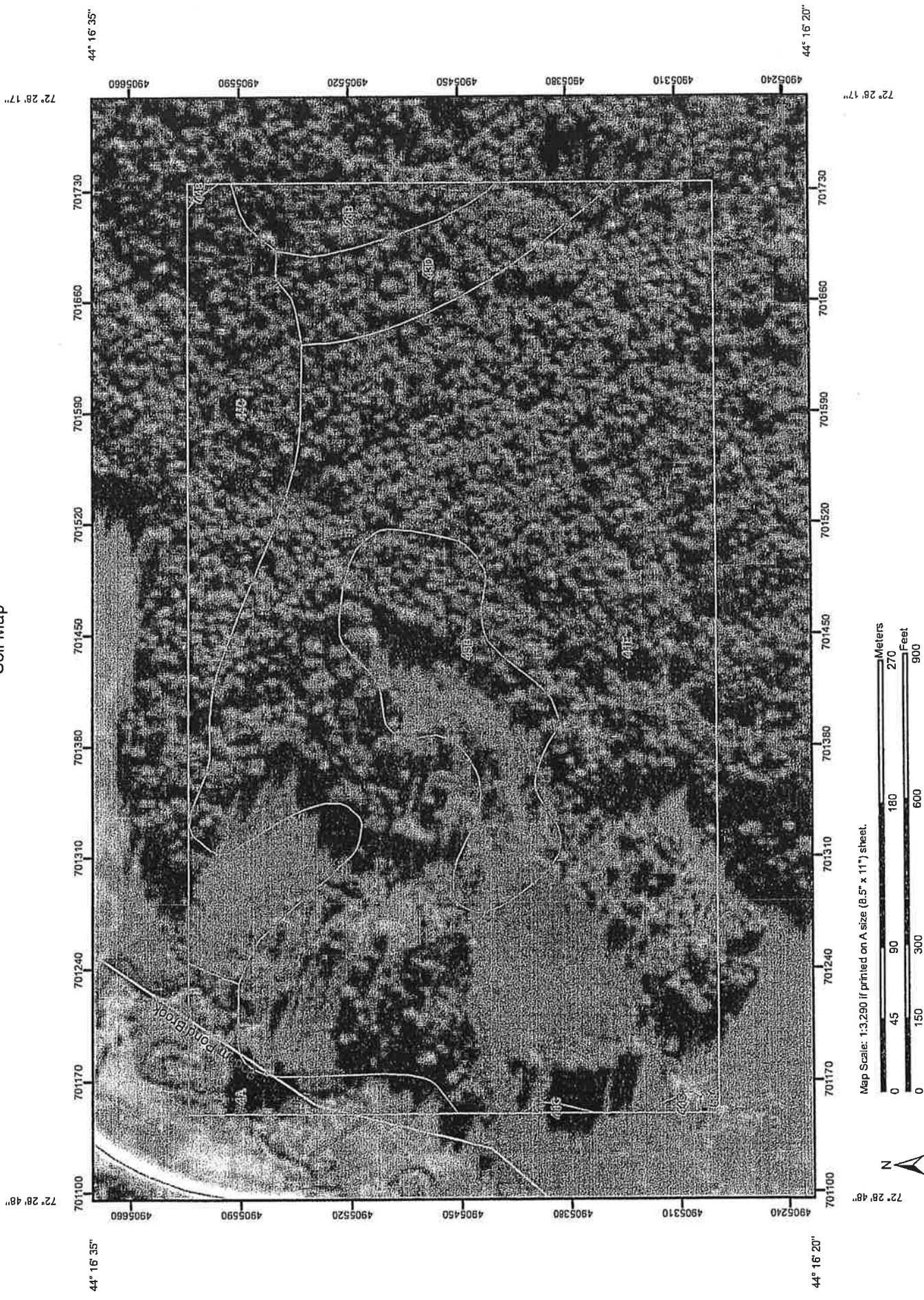
1	2	3.000
$K = CQ / [2\pi h^2 + C\pi a^2 + (2\pi h/a)]$ (Reynolds, 1993)		
$a = \text{soil texture-structure parameter}$		
$C = \text{shape factor}$		
$a = \text{well radius}$		
$Q = \text{flow rate}$		
$\pi = 3.1415$		
$H = \text{water ponding head}$		

FOR EMSLI SITE											
$a = 0.12$ ("most structured soils and medium sands")											
$C = 0.8$ (5 cm)											
$C = 1.3$ (10 cm)											
$Q^* = 35.74 \text{ cm}^2 \text{ reservoir constant} \times V$											

CM	GP-1	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	1.00	0.033	1.191	0.8	0.95	157.08	22.62	261.79	441.49	2.16E-03 6.11
10	10 CM	1.37	0.046	1.632	1.3	2.12	628.30	36.76	523.58	1188.64	1.79E-03 5.05
CM	GP-2	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	3.00	0.100	3.574	0.8	2.86	157.08	22.62	261.79	441.49	6.48E-03 18.33
10	10 CM	3.67	0.122	4.372	1.3	5.68	628.30	36.76	523.58	1188.64	4.78E-03 13.53
CM	GP-3	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	2.72	0.091	3.240	0.8	2.59	157.08	22.62	261.79	441.49	5.87E-03 16.62
10	10 CM	3.83	0.128	4.563	1.3	5.93	628.30	36.76	523.58	1188.64	4.99E-03 14.12
CM	GP-4	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	1.43	0.048	1.704	0.8	1.36	157.08	22.62	261.79	441.49	3.09E-03 8.74
10	10 CM	1.73	0.058	2.061	1.3	2.68	628.30	36.76	523.58	1188.64	2.25E-03 6.38
CM	GP-5	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	2.00	0.067	2.383	0.8	1.91	157.08	22.62	261.79	441.49	4.32E-03 12.22
10	10 CM	3.00	0.100	3.574	1.3	4.65	628.30	36.76	523.58	1188.64	3.91E-03 11.06
CM	GP-6	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	1.60	0.053	1.906	0.8	1.52	157.08	22.62	261.79	441.49	3.45E-03 9.77
10	10 CM	1.67	0.056	1.990	1.3	2.59	628.30	36.76	523.58	1188.64	2.18E-03 6.16
CM	GP-7	30 second drop (cm)	V cm/sec	Q* cm ³ /sec	C	CQ	K cm/sec			1+2+3 cm/sec	FT/DAY
							1	2	3		
5	5 CM	2.00	0.067	2.383	0.8	1.91	157.08	22.62	261.79	441.49	4.32E-03 12.22
10	10 CM	2.30	0.077	2.740	1.3	3.56	628.30	36.76	523.58	1188.64	3.00E-03 8.48

Reynolds, W. D. 1993. Saturated hydraulic conductivity: field measurement. In *Soil Sampling and Methods of Analysis*, ed. M. R. Carter, 599-613. Ann Arbor, Mich.: Canadian Soc. Soil Sci. Lewis Publishers.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)	<input type="checkbox"/>	Area of Interest (AOI)		Very Stony Spot
Soils	<input checked="" type="checkbox"/>	Soil Map Units		Wet Spot
				Other
Special Point Features				Special Line Features
Blowout				Gully
Borrow Pit	<input checked="" type="checkbox"/>			Short Steep Slope
Clay Spot				Other
Closed Depression				Political Features
Gravel Pit				Cities
Gravelly Spot				Water Features
Landfill				Oceans
Lava Flow				Streams and Canals
Marsh or swamp				Transportation
Mine or Quarry				Rails
Miscellaneous Water				Interstate Highways
Perennial Water				US Routes
Rock Outcrop				Major Roads
Saline Spot				Local Roads
Sandy Spot				
Severely Eroded Spot				
Sinkhole				
Slide or Slip				
Sodic Spot				
Spoil Area				
Stony Spot				

MAP INFORMATION

Map Scale: 1:3,280 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Vermont
Survey Area Data: Version 15, Jan 19, 2010

Date(s) aerial images were photographed: 8/24/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Map Unit Legend

Washington County, Vermont (VT023)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4A	Sunny silt loam, 0 to 2 percent slopes	1.5	3.0%
26B	Adams loamy fine sand, 3 to 8 percent slopes	1.3	2.7%
41E	Buxton silt loam, 25 to 45 percent slopes	33.2	67.9%
43B	Salmon very fine sandy loam, 3 to 8 percent slopes	4.2	8.7%
43D	Salmon very fine sandy loam, 15 to 25 percent slopes	2.4	5.0%
44B	Lamoine silt loam, 3 to 8 percent slopes	0.0	0.1%
44C	Lamoine silt loam, 8 to 15 percent slopes	6.1	12.5%
58A	Grange silt loam, 0 to 3 percent slopes	0.1	0.1%
Totals for Area of Interest		48.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the

AGENCY OF NATURAL RESOURCES (ANR) AND NATURAL RESOURCES BOARD

RECEIVED<http://www.anr.state.vt.us/dec/ead/pa/index.htm> / <http://www.nrb.state.vt.us/>**PROJECT REVIEW SHEET ONLY****THIS IS NOT A PERMIT**

AUG 25 2010

TOTAL # OF DEC PERMITS:
 RESPONSE DATE:
 DISTRICT: Johnsbury, VT

TOWN: East Montpelier

 PRE-APPLICATION REVIEW: _____
 PENDING APPLICATION #: _____
 PIN _____

OWNER OF PROJECT SITE:	APPLICANT OR REPRESENTATIVE:
East Montpelier Senior Living Initiative (EMSLI) (Option Holder)	Dufresne Group, NEK 459 Portland Street, Suite 106 St. Johnsbury, VT 05819
Telephone: _____	Telephone: 802-748-8605
Project Name: _____	_____

Based on a written or oral request or information provided by Chad Whitehead, PE received on August 18, 2010 a project was reviewed on a tract/tracts of land of >10 acres, located on US Route 2 and VT Route 14. The project is generally described as:

Construction of a 20-25 unit Senior Housing Project (not assisted living) with a community center. On-site potable water supply and wastewater systems are proposed. Project access will be on US Route 2.

Prior permits from this office: _____

**PERMITS NEEDED FROM THE DISTRICT ENVIRONMENTAL OFFICE
PRIOR TO COMMENCEMENT OF CONSTRUCTION**

I hereby request a jurisdictional opinion from the District Coordinator or Assistant District Coordinator regarding the jurisdiction of 10 V.S.A. Chapter 151 (Act 250) over the project described above. _____

John Miller _____

 Landowner/Agent Permit Specialist Other Person

1. ACT 250: THIS IS A JURISDICTIONAL OPINION BASED UPON AVAILABLE INFORMATION, AND A WRITTEN REQUEST FROM THE ANR PERMIT SPECIALIST, THE LANDOWNER/AGENT, OR OTHER PERSON. ANY NOTIFIED PERSON OR ENTITY WILL BE BOUND BY THIS OPINION UNLESS THAT PERSON OR ENTITY FILES A REQUEST FOR RECONSIDERATION WITH THE DISTRICT COORDINATOR (10 V.S.A. § 6007 (c) AND ACT 250 RULE 3 (B)) OR AN APPEAL WITH THE ENVIRONMENTAL COURT WITHIN 30 DAYS OF THE ISSUANCE OF THIS OPINION (10 V. S.A. Chapter 220). (#47) **

Project: Commercial Residential Municipal

Has the landowner subdivided before? Yes No When/where: _____

of lots: _____

AN ACT 250 PERMIT IS REQUIRED: Yes No Copies sent to Owner:

Applicant or Representative:

Other: (Attach certificate of service, if necessary) _____

BASIS FOR DECISION:

The project constitutes a development 6001(3)(A)(i) and 6001(3)(A)(iv).

SIGNATURE: *Susan Mirel* DATE: 8/20/10 ADDRESS: District # 5 Environmental Commission
(Assistant) District Coordinator Telephone: (802) 476-0185 5 Perry Street, Suite 80, Barre, VT 05641

- 2) WASTEWATER MANAGEMENT DIVISION REGIONAL OFFICE: PERMIT/APPROVAL REQUIRED? Yes No
- Wastewater System and Potable Water Supply Permit (#1 & #2)** Notice of Permit Requirements (deferral language) (#2)
 Floor Drains (#1.2) Campgrounds (#3) Extension of sewer lines (#5)

REGIONAL ENGINEER ASSIGNED: John Klimenok 476-0193 Kate Peyerl 476-0130 Ellen Parr Doering 479-7431

Construction of habitable structures with a potable water supply and wastewater system requires permit.

SIGNATURE: *John Klimenok* DATE: 8/20/10 ADDRESS: Dept. of Environmental Conservation
 Environmental Assistance Division, Permit Specialist Telephone: 476-0195 McFarland State Office Building
 Wastewater Management Division, Telephone: (802) 476-0190 5 Perry Street, Suite 80, Barre, VT 05641

THIS IS A PRELIMINARY, NON-BINDING DETERMINATION REGARDING THE FOLLOWING PERMITS WHICH YOU MAY NEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. PLEASE CONTACT THE DEPARTMENTS INDICATED BELOW.

FOR SYSTEMS WITH 76,600 gpd floors

3. WASTEWATER MANAGEMENT DIVISION, ANR (802-241-3822)

Contact: *John Akelaszek 241-3824*

Discharge Permits: pretreatment; industrial, municipal (#7.1, 7.2, & 8) Indirect Discharge Permits (#9 & 9.1) Residuals Management (#10)

4. AIR POLLUTION CONTROL DIVISION, ANR (888-520-4879)

Contact:

- Construction/modification of source (#14) Open Burning (#18)
- Furnace Boiler Conversion/Installation (#14) Industrial Process Air Emissions (#14)

- Wood Chip Burners (>90 HP) (#14)
- Diesel Engines (>450 bHP) (#14)

5. WATER SUPPLY DIVISION, ANR (802-241-3400) (800-823-8500 in VT) Contact: *Gregg Bootzak 241-3407*

- New Hydrants (#22) >500' waterline construction (#22) Community Water System (CWS) Bottled Water (#20) Operating permit (#21)
- Transient Non-Community water system (TNC) (#21) Capacity Review for Non-transient non-community water systems (NTNC) (#21)

6. WATER QUALITY DIVISION, ANR

Contact:

- River Management (241-3770) Ponds (#32.1)
- Shoreland Encroachment (241-3777) Steve Hanna (#28)

- Wetlands (241-3770) (#29) *Shannon Morrison 241-3762* Multi-Sector General Permit (MSGP) industrial activities w/ SIC codes (#6.4)
- Stream Alteration / Section 401 Water Quality Certification / Stream Crossings (476-2679) 879-5631 (#27 & 32) Floodplains (241-3759)

7. WASTE MANAGEMENT DIVISION, ANR

- Hazardous Waste Handler site ID (241-3888) (#36)
- Lined landfills; transfer stations, recycling facilities drop off (241-3444) (#37, 39, 40)
- Disposal of inert waste, untreated wood & stumps (241-3444) (#41 & 44)
- Waste oil burning (241-3888) Waste transporter permit (#35) Demolition waste 241-3477 Used septic system components/stone (#41)

8. FACILITIES ENGINEERING DIVISION, ANR

- Dam operations (greater than 500,000 cu. ft.) (241-3451) (#45)
- State-funded municipal water/sewer extensions/upgrades and Pollution Control Systems (241-3750)

Contact: _____

9. POLLUTION PREVENTION & MERCURY DISPOSAL HOTLINE (1-800-974-9559) (#46) Contact: _____

SMALL BUSINESS & MUNICIPAL COMPLIANCE ASSISTANCE (1-800-974-9559) Contact: Judy Mirro/John Daly
RECYCLING HOTLINE (1-800-932-7100) Contact: _____

10. FISH & WILDLIFE DEPARTMENT (802-241-3700)

- Nongame & Natural Heritage Program (Threatened & Endangered Species) (#47.4)

Contact: _____

- Stream Obstruction Approval (#47.5)

11. DEPARTMENT OF PUBLIC SAFETY (802-479-7561) or District Office (479-4434) Contact: *Mike Desrochers*

- Construction Permit fire prevention, electrical, plumbing, accessibility (Americans with Disabilities Act) (#49, 50, 50.1, 50.2)
- Storage of flammable liquids, explosives LP Gas Storage Hazardous Chemical Use/Tier II Reporting (800-347-0488)
- Plumbing in residences served by public water/sewer with 10 or more customers (#50.2) Boilers and pressure vessels (#50.3)

12. DEPARTMENT OF HEALTH (800-439-8550 in VT) (802-863-7221) (Lab 800-660-9997) Contact: _____

- Food, lodging, bakeries, food processors (#51, 51.1, 52, 53, 53.1) Program for asbestos control & lead certification (#54, 55, 55.1)
- Children's camps Hot Tub Installation & Inspection – Commercial (#51.1)

13. AGENCY OF HUMAN SERVICES

- Child care facilities (1-800-649-2642 or 802-241-2159) (#57)
- Nursing Homes (241-2345) (#59)

Contact: _____

- Residential care homes (241-2345) (Dept. of Aging & Disabilities) (#59)
- Assisted Living and Therapeutic Community Residences (241-2345) (#59)

14. AGENCY OF TRANSPORTATION

- Access to state highways (residential, commercial) (828-2653) (#66)
- Signs (Travel Information Council) (828-2651) (#63)
- Development within 500' of a limited access highway (828-2653) (#61)
- Construction within state highway right-of-way (Utilities, Grading, etc.) (828-2653) (#66)

Contact: *Shaun Corbett 828-5299*

- Junkyards (828-2053) (#62)
- Railroad crossings (828-2710) (#64)
- Airports and landing strips (828-2833) (#65)
- Motor vehicle dealer license (828-2067) (#68)

15. DEPARTMENT OF AGRICULTURE (800-675-9873) PRIME AG SOILS? Contact: *Brenda O'Shane*

- Use/sale of Pesticides (828-3429) (#72, 73, 74, 75, 76, 77, 78) Slaughter houses, poultry processing (828-3429) (#81)
- Milk Processing Facilities (828-3429) (#83, 83.1, 85, 87) Animal shelters/pet merchant/livestock dealers (828-3429) (#89, 89.1)
- Golf Courses (828-2431) (#71) Green Houses/Nurseries (828-2431) (#79) Weights and measures, Gas Pumps, Scales (828-2436) (#88)
- Medium and Large Farm Operations (828-2431) Retail Sales/Milk/Meat/Poultry/Frozen Dessert/Class "C" Pesticides (828-3429) (#75.1, 80)

16. VERMONT ENERGY CODE ASSISTANCE CENTER TOLL FREE 888-373-2255

17. DIVISION FOR HISTORIC PRESERVATION (802-828-3211) Historic Buildings (#47.1 & 101) Archeological Sites (#47.1 & 101)

18. DEPARTMENT OF LIQUOR CONTROL (1-800-832-2339) Liquor Licenses (#90) General Info (1-800-642-3134)

19. SECRETARY OF STATE (1-802-828-2386) Business Registration (#90.1) Professional Boards (1-800-439-8683) (#90.2)

20. DEPARTMENT OF TAXES (802-828-2551 & 828-5787) Income & business taxes (sales, meals/ rooms, etc) (#91, 92, 93, 94, 95, 96)

21. DEPARTMENT OF MOTOR VEHICLES (802-828-2070) Fuel Taxes; Commercial Vehicle (#69-70)

22. LOCAL PERMITS (SEE YOUR TOWN CLERK, ZONING ADMINISTRATOR, PLANNING COMMISSION, OR PUBLIC WORKS)

23. U.S. ARMY CORPS OF ENGINEERS, 8 Carmichael St., Ste. 205, Essex Jct., VT 05452 (802) 872-2893 (#97, 98, & 99)

24. OTHER: _____

Sections #3-#24 above have been completed by Permit Specialist John Miller Date: 8/20/10 I may be reached at 802-476-0195
Copies have been mailed to: _____ (TUES) St Johnsbury 751-0127

**NOTE: NUMBERS IN PARENTHESES (#) REFER TO PERMIT INFORMATION SHEETS IN THE VERMONT PERMIT HANDBOOK

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

**EAST MONTPELIER SENIOR LIVING INITIATIVE
ZONING/PERMITTING REVIEW SUMMARY**

November 10, 2010

Based on East Montpelier Land Use and Development Regulations, dated
November 8, 2010

Zone: Residential & Commercial District (Zone C) – see Zoning Map

Regulations (Table 2.3)

Planned Residential Development (PRD)**

Conditional Use: Dwelling, Multi-Family

Min. Lot Size: 1 acre

Per Article 5.5 (E) – In a Planned Residential Development (PRD), Planning Commission may grant a density increase of up to 50% of the allowable units when at least 20% of units are affordable. Parcel is 40 acres

Maximum Height: 35 feet

Road Frontage: 150'

Setbacks: 50' (front), 25' (sides and rear)

Supplemental Standards: PRDs are allowed in Zone C

Parking Requirements (Table 3.1)

Dwelling Unit/Multi-Family: 4 spaces per every 3 units

Required Applications/Permits/Review

Curb Cut Permit – VT AOT (submit to zoning administrator)

PRD/Subdivision Review (concurrent) – Development Review Board

Includes Subdivision Approval, Sketch Plan Approval, Preliminary Plan

Approval, Final Plan Approval, and Plat Recording

Conditional Use Review – Development Review Board

Wastewater – VT ANR

Other Considerations

Private Road

Fire Protection

Underground Utilities

**Should additional uses/owners be included in development, PUD classification may apply

**BUDGET ESTIMATE SUMMARY
EAST MONTPELIER HOUSING**

Base budget estimate

NOV 30 2010

ITEM	UNIT COST	TOTAL SF	TOTAL COST
Housing	\$205.71	16,740	\$3,443,585.40
common building	\$232.45	2,352	\$546,722.40
parking shed	\$43.93	4,780	\$209,985.40
site development			\$1,970,112.66
TOTAL PROJECT			\$6,170,405.86

Alternate #1 - sustainability package

ITEM	UNIT COST	TOTAL SF	TOTAL COST
Housing	\$9.71	16,740	\$162,545.40
Common Building	\$9.71	2,352	\$22,837.92
PV panels			\$630,000.00
SDHW			\$60,000.00
Air Source Heat Pumps			\$95,000.00
Sheds	\$0.00	4,780	\$0.00
Site			\$61,834.75
TOTAL			\$1,032,218.07

Alternate #2 - shed roof option

ITEM	UNIT COST	TOTAL SF	TOTAL COST
Housing	\$18.18	16,740	\$304,333.20
Common Building	\$0.00	2,352	\$0.00
Sheds	\$0.00	4,780	\$0.00
Site	\$0.00		\$0.00
TOTAL			\$304,333.20

Alternate #3 - finishes

ITEM	UNIT COST	TOTAL SF	TOTAL COST
Housing	-\$11.46	16,740	-\$191,840.40
Common Building	-\$7.81	2,352	-\$18,369.12
Sheds	\$0.00	4,780	\$0.00
Site	\$0.00		-\$70,885.13
TOTAL			-\$281,094.65

Alternate #4 - ICF foundations

ITEM	UNIT COST	TOTAL SF	TOTAL COST
Housing		16,740	\$0.00
Common Building		2,352	\$0.00
Sheds	\$0.00	4,780	\$0.00
Site	\$0.00		\$0.00
TOTAL			\$0.00

INDICATES MISSING OR INCOMPLETE FIGURE

Stephen Pitkin
Construction Consultant
P.O. Box 257
Albany, Vermont 05820
802-755-6772

BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
SITE

William MacLay
Architects and Planners
11/22/2010

DIV.	DESCRIPTION	unit	quantity	unit \$	MATERIAL	total \$	m.h.	hours	rate	total \$	amt.	total \$	SUBCONTRACT	TOTAL	DIV. TOTALS
022200	SITE WORK	0		\$0	LABOR	0.00	32	\$0		\$0		\$0		\$0	
022200	Survey and layout	ls	1.00	\$0		0.00	32	\$0		\$2,200		\$2,200			
022200	site mobilization	ls	1.00	\$0		0.00	32	\$0		\$4,500		\$4,500			
022200	clear and grub site	acrf	4.00	\$0		0.00	32	\$0		\$5,600		\$23,600			
022200	strip and stockpile top soil	4.00	\$0			0.00	32	\$0		\$1800		\$7,200			
022200	tough road cut	ls	1.00	\$0		0.00	32	\$0		\$28,000		\$28,000			
022200	site cuts and fills	ls	1.00	\$0		0.00	32	\$0		\$30,000		\$30,000			
022200	road ditching / culverts and drainage	ls	1.00	\$0		0.00	32	\$0		\$20,000		\$20,000			
022200	site drainage	ls	1.00	\$0		0.00	32	\$0		\$27,500		\$27,500			
022200	road gravel sub base	cy	2222.00	\$0		0.00	32	\$0		\$26,664		\$26,664			
022200	6" crusher run	cy	1111.00	\$0		0.00	32	\$0		\$31,108		\$31,108			
022200	fine grading	lf	1600.00	\$0		0.00	32	\$0		\$19,200		\$19,200			
022200	pavement	sy	5333.00	\$0		0.00	32	\$0		\$79,995		\$79,995			
022200	line striping	lf	1800.00	\$0		0.00	32	\$0		\$2,088		\$2,088			
022200	curbs and signs for road	ls	1.00	\$0		0.00	32	\$0		\$10,000		\$10,000			
022200	paved parking areas	sf	9800.00	\$0		0.00	32	\$0		\$39,200		\$39,200			
022200	paved walks	sf	6800.00	\$0		0.00	32	\$0		\$45,900		\$45,900			
022200	topsoil and lawns	sf	7000.00	\$0		0.00	32	\$0		\$63,000		\$63,000			
022200	stone retaining walls	sf	1500.00	\$0		0.00	32	\$0		\$97,500		\$97,500			
022200	planting allowances	l1	1.00	\$0		0.00	32	\$0		\$30,000		\$30,000			
022200	electrical service trenching		2800.00	\$0		0.00	32	\$0		\$56,000		\$56,000			
022200	site lighting trenching		1200.00	\$0		0.00	32	\$0		\$18,000		\$18,000			
022200	heat pipe trenching		700.00	\$0		0.00	32	\$0		\$12,600		\$12,600			
022200	sewer distribution		900.00	\$0		0.00	32	\$0		\$27,000		\$27,000			
022200	water main		700.00	\$0		0.00	32	\$0		\$24,500		\$24,500			
022200	water services		19.00	\$0		0.00	32	\$0		\$30,400		\$30,400			
022200	sewer system allowance		1.00	\$0		0.00	32	\$0		\$90,000		\$90,000			
022200	water system allowance		1.00	\$0		0.00	32	\$0		\$200,000		\$200,000			
022200	TOTAL SITE WORK	O		\$0		0.00	32	\$0		\$0		\$0		\$1,046,155	
022200	ELECTRICAL	0		\$0		0.00	32	\$0		\$115		\$184,000			
160000	primary feed to site	lr	1600.00	\$0		0.00	32	\$0		\$60,000		\$60,000			
160000	secondary to units		1200.00	\$0		0.00	32	\$0		\$1200		\$57,600			
160000	path lighting		48.00	\$0		0.00	32	\$0		\$2800		\$28,000			
160000	road and yard lights		10.00	\$0		0.00	32	\$0		\$0		\$329,600			
160000	ELECTRICAL TOTAL	O		\$0		0.00	32	\$0		\$0		\$0			
160000	BARE COST TOTAL			\$0		0.00	32	\$0		\$0		\$0		\$1,375,755	
	CONTRACTORS GENERAL CONDITIONS			6%										\$82,545	
	CONTRACTORS OVERHEAD AND PROFIT			10%										\$145,830	
	CONSTRUCTION CONTINGENCY			10%										\$16,413	
	BOND			1.50%										\$26,468	
	TOTAL GENERAL CONTRACT													\$1,791,012	
	VARIANCE													\$0	
														\$179,101	

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
SITE

William Macday
Architects and Planners
11/22/2010

TOTAL											\$1,970,113
EXCLUSIONS											

**BUDGET/ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
SITE**

BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
SITE

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
APARTMENT BUILDINGS

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DIV.	DESCRIPTION	unit	quantity	unit \$	total \$	MATERIAL	LABOR	m.h.	hours	rate	total \$	amt.	total \$	S.F.	DIV. TOTAL	UNIT
022200	SITE WORK	0		\$0	0.00			32	\$0		\$0		\$0		\$0.00	\$0
022200	excavage for idn	b1	cy	707.41		\$0		0.00	32	\$0		6	\$4,244		\$4,244	\$0.00
022200	import gravel int bfill	b1	cy	350.00		\$0		0.00	32	\$0		18	\$6,300		\$6,300	\$0.00
022200	12" stone fill at interior	b1	cy	193.75		\$0		0.00	32	\$0		35	\$6,781		\$6,781	\$0.00
022200	exterior native bfill	b1	cy	300.00		\$0		0.00	32	\$0		6	\$1,800		\$1,800	\$0.00
022200	interior trenching and bfill	b1	ls	1.00		\$0		0.00	32	\$0		4500	\$4,500		\$4,500	\$0.00
022200	fan and slab drainage	b1	lf	615.00		\$0		0.00	32	\$0		8	\$4,920		\$4,920	\$0.00
022200	daylight drainage	b1	lf	200.00		\$0		0.00	32	\$0		12	\$2,400		\$2,400	\$0.00
022200	radon collection	b1	lf	288.00		\$0		0.00	32	\$0		8	\$2,304		\$2,304	\$0.00
022200	TOTAL SITE WORK	O													\$0	\$0.00
022200																\$0
030000	CONCRETE	0														\$0.00
030000	footings	b1	cy	19.38		\$0		0.00	32	\$0		600	\$11,626		\$11,626	\$0.00
030000	foundation	b1	cy	49.54		\$0		0.00	32	\$0		600	\$29,726		\$29,726	\$0.00
030000	slab	b1	cy	56.78		\$0		0.00	32	\$0		450	\$25,549		\$25,549	\$0.00
030000	sono tube piers	b1	ea	29.00		\$0		0.00	32	\$0		125	\$3,625		\$3,625	\$0.00
030000	CONCRETE TOTAL	O														\$0.00
030000																\$0
055000	MISC. METALS	0														\$0.00
055000	metal grating at doors	b1	lf	72.00		\$0		0.00	32	\$0		20	\$1,440		\$1,440	\$0.34
055000	MISC. METALS TOTAL	O														\$240
055000																\$0.00
061000	ROUGH CARP	0														\$0.00
061000	2x6 studs	b1	lf	2888.00	0.4	\$1,155	.019	54.87	32	\$1,756		\$0	\$2,911		\$2,911	\$0.00
061000	pt plates	b1		420.20	0.7	\$294	.030	12.61	32	\$403		\$0	\$698		\$698	\$0.00
061000	plates	b1		1260.60	0.4	\$504	.020	25.21	32	\$807		\$0	\$1,311		\$1,311	\$0.00
061000	headers	b1	lf	174.00	2	\$348	.055	9.57	32	\$306		\$0	\$654		\$654	\$0.00
061000	wall sheathing	b1	sf	3300.00	0.47	\$1,551	.020	66.00	32	\$2,112		\$0	\$3,663		\$3,663	\$0.00
061000	2x4 framing at closets & 1/2 wall	b1	lf	1080.00	0.3	\$324	.020	21.60	32	\$691		\$0	\$1,015		\$1,015	\$0.00
061000	sheathing @closets & 1/2 wall	b1	sf	960.00	0.47	\$451	.020	19.20	32	\$614		\$0	\$1,066		\$1,066	\$0.00
061000	end wall framing	b1	lf	480.00	0.4	\$192	.035	16.80	32	\$538		\$0	\$730		\$730	\$0.00
061000	end wall sheathing	b1	sf	338.80	0.47	\$159	.030	10.16	32	\$325		\$0	\$484		\$484	\$0.00
061000	roof trusses	b1	sf	4185.00	2.1	\$8,789	.014	58.59	32	\$1,875	0.26	\$1,088	\$11,751		\$11,751	\$0.00
061000	truss bracing	b1	lf	1152.00	0.3	\$346	.025	28.80	32	\$922		\$0	\$1,267		\$1,267	\$0.00
061000	wind bracing	b1	lf	96.00	0.03	\$3	.035	3.36	32	\$108		\$0	\$110		\$110	\$0.00
061000	root sheathing	b1	sf	6336.00	0.55	\$3,485	.020	126.72	32	\$4,055		\$0	\$7,540		\$7,540	\$0.00
061000	draft stop framing	b1	ea	5.00	75	\$375	6,000	30.00	32	\$960		\$0	\$1,335		\$1,335	\$0.00
061000	extra truss for draft stops	b1	ea	5.00	120	\$600	.500	2.50	32	\$80		\$0	\$680		\$680	\$0.00
061000	gable overhang framing	b1	lf	185.00	1.62	\$300	.130	24.05	32	\$770		\$0	\$1,069		\$1,069	\$0.00
061000	leave sub framing	b1	lf	288.00	0.6	\$173	.045	12.96	32	\$415		\$0	\$588		\$588	\$0.00
061000	interior 2x4 studs	b1	lf	5760.00	0.3	\$1,728	.020	115.20	32	\$3,686		\$0	\$5,414		\$5,414	\$0.00

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APARTMENT BUILDINGS

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061000	int 2x6 stud	b1	lf	864.00	0.4	\$346	.020	17.28	32	\$553	\$0	\$899	\$0.00
061000	pt 2x4 plate	b1	lf	270.00	0.4	\$108	.035	9.45	32	\$302	\$0	\$410	\$0.00
061000	pf2x6 plate	b1	lf	114.00	0.7	\$80	.035	3.99	32	\$128	\$0	\$207	\$0.00
061000	2x4 plate	b1	lf	810.00	0.3	\$243	.030	24.30	32	\$778	\$0	\$1,021	\$0.00
061000	2x6 plate	b1	lf	450.00	0.4	\$180	.400	180.00	32	\$5,760	\$0	\$5,940	\$0.00
061000	misc blocking	b1	lf	420.00	0.4	\$168	.040	16.80	32	\$538	\$0	\$706	\$0.00
061000	ceiling strapping	b1	lf	4032.00	0.15	\$605	.014	56.45	32	\$1,806	\$0	\$2,411	\$0.00
061000	ledger at porch flor	b1	lf	240.00	1	\$240	.075	18.00	32	\$576	\$0	\$816	\$0.00
061000	bolts to concrete	b1	ea	250.00	1.5	\$375	.100	25.00	32	\$800	\$0	\$1,175	\$0.00
061000	2x10 pt porchfloor framing	b1	lf	1348.20	1	\$1,348	.020	26.96	32	\$863	\$0	\$2,211	\$0.00
061000	hangars	b1	ea	156.00	1	\$156	.045	7.02	32	\$225	\$0	\$381	\$0.00
061000	dbl hangers	b1	ea	72.00	1.75	\$126	.045	3.24	32	\$104	\$0	\$230	\$0.00
061000	hold downs to sono tubes	b1	ea	42.00	7	\$294	.500	21.00	32	\$672	\$0	\$966	\$0.00
061000	trx decking	b1	lf	3854.40	3.05	\$11,756	.020	77.09	32	\$2,467	\$0	\$4,223	\$0.00
061000	porch roof framing	b1	lf	1116.00	0.55	\$614	.035	39.06	32	\$1,250	\$0	\$1,864	\$0.00
061000	caps and bases	b1	ea	36.00	8	\$288	.300	10.80	32	\$346	\$0	\$634	\$0.00
061000	columns	b1	lf	144.00	6.5	\$936	.080	11.52	32	\$369	\$0	\$1,305	\$0.00
061000	roof beam	b1	lf	156.00	2.2	\$343	.090	14.04	32	\$449	\$0	\$792	\$0.00
061000	plate on main roof	b1	lf	120.00	55	\$6,600	.045	5.40	32	\$173	\$0	\$6,773	\$0.00
061000	porch roof sheathing	b1	sf	1452.00	0.55	\$799	.020	29.04	32	\$229	\$0	\$1,728	\$0.00
061000	fron tporch ceiling firmg	b1	lf	156.00	0.4	\$62	.025	3.90	32	\$125	\$0	\$187	\$0.00
061000	insulation dams	b1	lf	288.00	1.25	\$360	.060	17.28	32	\$553	\$0	\$913	\$0.00
061000	strapping over 2" rigid	b1	lf	3000.00	0.15	\$450	.015	45.00	32	\$1,440	\$0	\$1,890	\$0.00
061000	turing around windows	b1	lf	900.00	0.6	\$540	.015	13.50	32	\$432	\$0	\$972	\$0.00
061000	ROUGH CARP TOTAL	O				\$0		0.00	32	\$0	\$0	\$90,939	\$15,157
061000	INT FINISH CARP	O				\$0		0.00	32	\$0	\$0	\$0.00	\$0.00
062100	base board	b1	lf	1174.80	0.8	\$940	.030	35.24	32	\$1,128	\$0	\$2,068	\$0.00
062100	window stools	b1	lf	77.00	3.75	\$289	.080	6.16	32	\$197	\$0	\$486	\$0.00
062100	door and window casing	b1	lf	756.80	0.8	\$605	.035	26.49	32	\$848	\$0	\$1,453	\$0.00
062100	window lamb extensions	b1	lf	756.00	0.55	\$416	.045	34.02	32	\$1,089	\$0	\$1,504	\$0.00
062100	misc int finish	b1	ea	6.00	30	\$180	1.250	7.50	32	\$240	\$0	\$420	\$0.00
062100	closet shelving	b1	lf	90.00	0.0	\$0	0.00	32	4	\$360	\$0	\$0.00	\$0.00
062100	linen & pantry shelving	b1	lf	90.00	0.0	\$0	0.00	32	3.75	\$338	\$0	\$0.00	\$0.00
062100	INT FINISH CARP TOTAL	O				\$0		0.00	32	\$0	\$0	\$6,629	\$1,105
062100						\$0		0.00	32	\$0	\$0	\$0.00	\$0.00
062200	EXT FINISH CARP	O				\$0		0.00	32	\$0	\$0	\$0.00	\$0.00
062200	corner board	b1	lf	246.40	1.75	\$431	.040	9.86	32	\$315	\$0	\$747	\$0.00
062200	feize	b1	lf	400.40	2.25	\$901	.045	18.02	32	\$577	\$0	\$1,477	\$0.00
062200	porch beam casing	b1	lf	145.20	6.25	\$908	.135	19.60	32	\$627	\$0	\$1,535	\$0.00
062200	eave and rake trim	b1	lf	516.00	4.8	\$2,477	.180	92.88	32	\$2,972	\$0	\$5,449	\$0.00
062200	porch ceiling	b1	sf	528.00	2	\$1,056	.065	34.32	32	\$1,098	\$0	\$2,154	\$0.00

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
APARTMENT BUILDINGS

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062200	1/2 wall cap	b1	lf	92.40	1.55	\$143	.045	4.16	32	\$133		\$0	\$276		\$0.00	\$0
062200	door and window casing	b1	lf	756.00	1.5	\$1,134	.040	30.24	32	\$968		\$0	\$2,102		\$0.00	\$0
062200	siding	b1	sf	2883.10	1.34	\$3,863	.040	115.32	32	\$3,690		\$0	\$7,554		\$0.00	\$0
062200	EXT FINISH CARP TOTAL	O				\$0		0.00	32	\$0		\$0	\$21,294		\$5.09	\$3,549
062200	CABINETS	0				\$0		0.00	32	\$0		\$0	\$0		\$0.00	\$0
064000	base cabinets and tops	b1	lf	78.00	\$0	\$0	0.00	32	\$0	210	\$16,380		\$16,380		\$0.00	\$0
064000	solid surface tops	b1	lf	78.00	\$0	\$0	0.00	32	\$0	105	\$8,190		\$8,190		\$0.00	\$0
064000	upper cabinets	b1	lf	114.00	\$0	\$0	0.00	32	\$0	176	\$20,064		\$20,064		\$0.00	\$0
064000	vaniities	b1	ea	6.00	\$0	\$0	0.00	32	\$0	455	\$2,730		\$2,730		\$0.00	\$0
064000	CABINETS TOTAL	O				\$0		0.00	32	\$0		\$0	\$47,364		\$11.32	\$7,894
064000						\$0		0.00	32	\$0		\$0	\$0		\$0.00	\$0
072000	INSULATION	0				\$0		0.00	32	\$0		\$0	\$0		\$0.10	\$0
072000	attic insulation	b1	sf	4185.00	\$0	\$0	0.00	32	\$0	2.35	\$9,835		\$9,835		\$0.00	\$0
072000	dense pack cellulose exterior w/ ^w	b1	sf	2700.00	\$0	\$0	0.00	32	\$0	1.7	\$4,590		\$4,590		\$0.00	\$0
072000	rigid at ext walls	b1	sf	2883.10	1	\$2,883	.016	46.13	32	\$1,476		\$0	\$4,359		\$0.00	\$0
072000	rigid under slab	b1	sf	4268.70	1	\$4,269	.014	59.76	32	\$1,912		\$0	\$6,181		\$0.00	\$0
072000	rigid at foundation walls	b1	sf	401.10	1	\$401	.016	6.42	32	\$205		\$0	\$606		\$0.00	\$0
072000	air sealing	b1	ea	6.00	75	\$450	3.000	18.00	32	\$576		\$0	\$1,026		\$0.00	\$0
072000	raffles at 2 br	b1	sf	180.00	\$0	0.00	0.00	32	\$0	5.74	\$1,033		\$1,033		\$0.00	\$0
072000	acoustic insulation	b1	sf	3008.00	0.65	\$1,955	.007	21.06	32	\$674		\$0	\$2,629		\$0.00	\$0
072000	infra red and blower door	b1	ls	1.00	\$0	0.00	0.00	32	\$0	2200	\$2,200		\$2,200		\$0.00	\$0
072000	TOTAL INSULATION	O				\$0		0.00	32	\$0		\$0	\$32,460		\$7.76	\$5,410
072000						\$0		0.00	32	\$0		\$0	\$0		\$0.00	\$0

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152000	sinks	6.00	\$0	0.00	32	\$0	1900	\$11,400	\$11,400	\$0	\$48,000	\$11,47	\$0.00	\$0	
152000	PLUMBING TOTAL	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0	
152000	HEATING	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0	
155000	heating	b1	4185.00	\$0	0.00	32	\$0	12	\$50,220	\$50,220	\$0	\$0.00	\$0	\$0	
155000	HEATING TOTAL	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$50,220	\$12.00	\$8,370	\$0	
155000	VENTILATION	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0	
157000	kitchen venting	b1 ea	6.00	\$0	0.00	32	\$0	625	\$3,750	\$3,750	\$0	\$0.00	\$0	\$0	
157000	bathroom vents	b1 ea	6.00	\$0	0.00	32	\$0	450	\$2,700	\$2,700	\$0	\$0.00	\$0	\$0	
157000	VENTILATION TOTAL	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$6,450	\$1.54	\$1,075	\$0	
157000	ELECTRICAL	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0	
160000	electrical	b1 sf	4185.00	\$0	0.00	32	\$0	11	\$46,035	\$46,035	\$0	\$11.00	\$7,673	\$0	
160000	ELECTRICAL TOTAL	0	\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$46,035	\$11.00	\$7,673	\$0	
160000			\$0	0.00	32	\$0	0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0	
160000	BARE COST TOTAL										\$601,179	\$601,179	\$143.66	\$100,197	
	CONTRACTORS GENERAL CONDITIONS	6%									\$36,071	\$8.62	\$6,012		
	CONTRACTORS OVERHEAD AND PROFIT	10%									\$63,725	\$15.23	\$10,621		
	CONSTRUCTION CONTINGENCY	10%									\$70,097	\$16.75	\$11,683		
	BOND	1.50%									\$11,566	\$2.76	\$1,928		
	TOTAL GENERAL CONTRACT										\$782,638	\$187.01	\$130,440		
	VARIANCE	10.00%									\$0	\$0.00	\$0		
	TOTAL										\$78,264	\$18.70	\$13,044		
	EXCLUSIONS										\$860,902	\$205.71	\$143,484		

VARIANCE = Costs associated with changes in the scope of work
which evolve during the design development
and changes in the market conditions at bid time

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ALTERNATE - SHED ROOF									
DIV.	DESCRIPTION	unit	quantity	unit \$	total \$	m.h.	hours	rate	total \$
				MATERIAL	LABOR			SUBCONTRACT	TOTAL
061000	roof trusses	sf	-4185.00	2.1	(\$8,789)	.014	-58.59	32 (\$1,875)	0.26 (\$1,088)
061000	truss bracing	lf	-1152.00	0.3	(\$346)	.025	-28.80	32 (\$922)	\$0 (\$1,267)
061000	wind bracing	lf	-96.00	0.03	(\$3)	.035	-3.36	32 (\$108)	\$0 (\$110)
061000	raft stop framing	ea	-5.00	75	(\$375)	6.000	-30.00	32 (\$960)	\$0 (\$1,335)
061000	extra trusse for draft stops	ea	-5.00	120	(\$600)	.500	-2.50	32 (\$80)	\$0 (\$680)
072000	attic insulation	sf	-4185.00		\$0	0.00	32	\$0	2.35 (\$9,835)
073000	veneering ridge	lf	-144.00	1.2	(\$173)	.030	-4.32	32 (\$138)	\$0 (\$311)
	additional wall framing	lf	800.00	0.4	\$320	.019	15.20	32 \$486	\$0 \$806
	additional wall sheathing		633.60	0.47	\$298	.020	12.67	32 \$406	\$0 \$703
	furring		633.00	0.15	\$95	.015	9.50	32 \$304	\$0 \$399
	additional wall siding		500.00	1.34	\$670	.040	20.00	32 \$640	\$0 \$1,310
	additional wall insulation		500.00		\$0	0.00	32	\$0	1.7 \$850
	additional rigid wall insul		500.00	1	\$500	.016	8.00	32 \$256	\$0 \$756
	additional wall gypsum board		500.00	0.25	\$125	.020	10.00	32 \$320	0.35 \$620
	additional ext paint		500.00		\$0	0.00	32	\$0	1.6 \$800
	additional int paint		500.00		\$0	0.00	32	\$0	0.65 \$325
	footing for int bearing	Cy	7.80		\$0	0.00	32	\$0	600 \$4,682
	additional int firming at bearing wall	lf	600.00	0.4	\$240	.020	12.00	32 \$384	\$0 \$624
	beam at bearing wall	lf	108.00	14	\$1,512	.100	10.80	32 \$346	\$0 \$1,858
	TJI rafters	lf	2508.00	2.95	\$7,399	.073	181.83	32 \$5,819	\$0 \$13,217
	2x12 rafters	lf	912.00	1.4	\$1,277	.055	50.16	32 \$1,605	\$0 \$2,882
	additional eave and rake	lf	144.00	4.8	\$691	.180	25.92	32 \$829	\$0 \$1,521
	wil roof flashing	lf	144.00	5	\$720	.020	2.88	32 \$92	\$0 \$812
	spray foam insulation	sf	4320.00		\$0	0.00	32	\$0	8.2 \$35,424
	clerestory windows	ea	36.00	210	\$7,560	1.500	54.00	32 \$1,728	\$0 \$9,288
	door and window casing	lf	396.00	0.8	\$317	.035	13.86	32 \$444	\$0 \$760
	window jamb ex/gensions	b1 lf	396.00	0.55	\$218	.045	17.82	32 \$570	\$0 \$788
					\$0	0.00	32	\$0	\$0 \$0.00
	BARE COST TOTAL							\$53,135	\$12,70 \$8,856
	CONTRACTORS GENERAL CONDITIONS							\$3,188	\$0.76 531
	CONTRACTORS OVERHEAD AND PROFIT							\$5,632	\$1.35 939
	CONSTRUCTION CONTINGENCY							\$6,196	\$1.48 1,033
	BOND							\$1,022	\$0.24 170
	TOTAL GENERAL CONTRACT							\$69,173	\$16.53 11,529
	VARIANCE							\$0	\$0.00 0
	TOTAL							\$6,917	\$1.65 1,153
								\$76,091	\$18.18 12,682

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
APARTMENT BUILDINGS
802-755-6772

William MacLay
Architects and Planners
11/22/2010

ALTERNATE #3 FINISHES

DIV.	DESCRIPTION	unit quantity	unit \$	total \$	m.h.	hours	rate	total \$	amt.	total \$	SUBCONTRACT	TOTAL	DIV. TOTALS
061000	strapping over 2" rigid	b1 lf	-3000.00	0.15	(\$450)	.015	-45.00	32	(\$1,440)	\$0	(\$1,890)	\$0.00	\$0
061000	furring around windows	b1 lf	-900.00	0.6	(\$540)	.015	-13.50	32	(\$432)	\$0	(\$972)	\$0.00	\$0
061000	columns	b1 lf	-144.00	6.5	(\$936)	.080	-11.52	32	(\$369)	\$0	(\$1,305)	\$0.00	\$0
061000	PT columns	b1 lf	144.00	2.5	\$360	.080	11.52	32	\$369	\$0	\$729	\$0.00	\$0
062100	base board	b1 lf	-348.00	0.8	(\$278)	.030	-10.44	32	(\$334)	\$0	(\$612)	\$0.00	\$0
062100	vinyl base board	b1 lf	348.00	\$0	0.00	32	\$0	2.25	\$783	\$783	\$0.00	\$0	\$0
064000	solid surface tops	b1 lf	-78.00	\$0	0.00	32	\$0	105	(\$8,190)	\$0	(\$8,190)	\$0.00	\$0
064000	laminate counter tops	b1 lf	78.00	\$0	0.00	32	\$0	33	\$2,574	\$2,574	\$0.00	\$0	\$0
096000	hardwood floors on sleepers	b1 sf	-2298.00	\$0	0.00	32	\$0	12	(\$27,576)	(\$27,576)	\$0.00	\$0	\$0
096000	engineered wood floor	b1 sf	2298.00	\$0	0.00	32	\$0	5.5	\$12,639	\$12,639	\$0.00	\$0	\$0
093000	quarry tile floors	b1 sf	-1254.00	\$0	0.00	32	\$0	10	(\$12,540)	(\$12,540)	\$0.00	\$0	\$0
093000	vinyl floors	b1 sf	1254.00	\$0	0.00	32	\$0	4.75	\$5,957	\$5,957	\$0.00	\$0	\$0
062200	corner board	b1 lf	-246.40	1.75	(\$431)	.040	-9.86	32	(\$315)	\$0	(\$747)	\$0.00	\$0
062200	PVC corner board	b1 lf	246.40	2.57	\$633	.040	9.86	32	\$315	\$0	\$949	\$0.00	\$0
062200	feize	b1 lf	-400.40	2.25	(\$901)	.045	-18.02	32	(\$577)	\$0	(\$1,477)	\$0.00	\$0
062200	PVC feize	b1 lf	400.40	3.38	\$1,353	.045	18.02	32	\$577	\$0	\$1,930	\$0.00	\$0
062200	porch beam casing	b1 lf	-145.20	6.25	(\$908)	.135	-19.60	32	(\$677)	\$0	(\$1,535)	\$0.00	\$0
062200	PVC porch beam casing	b1 lf	145.20	7.34	\$1,066	.135	19.60	32	\$627	\$0	\$1,693	\$0.00	\$0
062200	eave and rake trim	b1 lf	-516.00	4.8	(\$2,477)	.180	-92.88	32	(\$2,972)	\$0	(\$5,449)	\$0.00	\$0
062200	PVC eave and rake trim	b1 lf	516.00	7.64	\$3,942	.180	92.88	32	\$2,972	\$0	\$6,914	\$0.00	\$0
062200	1/2 wall cap	b1 lf	-92.40	1.55	(\$143)	.045	-4.16	32	(\$133)	\$0	(\$276)	\$0.00	\$0
062200	PVC 1/2 wall cap	b1 lf	92.40	1.75	\$162	.045	4.16	32	\$133	\$0	\$295	\$0.00	\$0
062200	door and window casing	b1 lf	-756.00	1.5	(\$1,134)	.040	-30.24	32	(\$968)	\$0	(\$2,102)	\$0.00	\$0
062200	PVC door and window casing	b1 lf	756.00	1.63	\$1,232	.040	30.24	32	\$968	\$0	\$2,200	\$0.00	\$0
062200	vinyl siding	b1 sf	2883.10	\$0	0.00	32	\$0	2.92	\$8,419	\$8,419	\$0.00	\$0	\$0
062200	siding	b1 sf	-2883.10	1.34	(\$3,863)	.040	-115.32	32	(\$3,690)	\$0	(\$7,554)	\$0.00	\$0
099000	exterior painting	b1 sf	-3968.00	\$0	0.00	32	\$0	1.6	(\$6,349)	(\$6,349)	\$0.00	\$0	0
	BARE COST TOTAL								(\$33,493)	(\$33,493)	(\$8,00)	-5,582	
	CONTRACTORS GENERAL CONDITIONS			6%							(\$2,010)	(\$0.48)	-335
	CONTRACTORS OVERHEAD AND PROFIT			10%							(\$3,550)	(\$0.85)	-592
	CONSTRUCTION CONTINGENCY			10%							(\$3,905)	(\$0.93)	-651
	BOND			1.50%							(\$644)	(\$0.15)	-107
	TOTAL GENERAL CONTRACT										(\$43,602)	(\$10.42)	-7,267
	VARIANCE			0.00%							\$0	\$0.00	0
	TOTAL			0.00%							(\$4,360)	(\$1.04)	-727
				10.00%							(\$47,963)	(\$11.46)	-7,994

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
APARTMENT BUILDINGS

William MacLay
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11/22/2010

INDICATES MISSING OR INCOMPLETE FIGURE

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BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
COMMON BUILDING

William Macday
Architects and Planner
11/22/2010

DIV.	DESCRIPTION	unit	quantity	unit \$	total \$	m.h.	hours	rate	total \$	amt.	total \$	DIV. TOTAL	S.F.
				MATERIAL	LABOR				SUBCONTRACT				
022200	SITE WORK	0		\$0	0.00	32	\$0	\$0	\$0	\$0	\$0	\$0.00	
022200	excavate for fdn	b1	cy	377.78	\$0	0.00	32	\$0	6	\$2,267	\$2,267		
022200	import gravel int bfill	b1	cy	190.00	\$0	0.00	32	\$0	18	\$3,420	\$3,420		
022200	12' stone fill at interior	b1	cy	108.89	\$0	0.00	32	\$0	35	\$3,811	\$3,811		
022200	exterior native bfill	b1	cy	175.00	\$0	0.00	32	\$0	6	\$1,050	\$1,050		
022200	interior trenching and bfill	b1	ls	1.00	\$0	0.00	32	\$0	1200	\$1,200	\$1,200		
022200	brick pavers at patio	b1	sf	580.00	\$0	0.00	32	\$0	13	\$7,540	\$7,540		
022200	concrete and slab drainage	b1	lf	345.00	\$0	0.00	32	\$0	8	\$2,760	\$2,760		
022200	driveway drainage	b1	lf	200.00	\$0	0.00	32	\$0	12	\$2,400	\$2,400		
022200	radon collection	b1	lf	160.00	\$0	0.00	32	\$0	8	\$1,280	\$1,280		
022200	TOTAL SITE WORK	O		\$0	0.00	32	\$0	\$0	\$0	\$25,728	\$25,728		
022200				\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
030000	CONCRETE	0		\$0	0.00	32	\$0	\$0	\$0	\$0	\$0	\$0.00	
030000	b1 cy	10.35		\$0	0.00	32	\$0	\$0	600	\$6,208	\$6,208		
030000	footings	b1	cy	26.46	\$0	0.00	32	\$0	600	\$15,875	\$15,875		
030000	foundation	b1	cy	31.91	\$0	0.00	32	\$0	450	\$14,359	\$14,359		
030000	slab	b1	ea	16.00	\$0	0.00	32	\$0	125	\$2,000	\$2,000		
030000	sono tube, piers	b1	lf	9.00	\$0	0.00	32	\$0	\$0	\$38,442	\$38,442		
030000	CONCRETE TOTAL	O		\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
030000				\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
055000	MISC. METALS	0		\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
055000	metal grating at doors	b1	lf	0.00	\$0	0.00	32	\$0	40	\$360	\$360		
055000	MISC. METALS TOTAL	O		\$0	0.00	32	\$0	\$0	\$0	\$360	\$360		
055000				\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
061000	ROUGH CARP	0		\$0	0.00	32	\$0	\$0	\$0	\$0.00	\$0.00		
061000	b1 lf	1683.00	0.4	\$673	.019	31.98	32	\$1,023	\$0	\$1,696	\$1,696		
061000	2x6 studs	b1	lf	224.40	0.7	\$157	.030	6.73	32	\$215	\$215		
061000	pt plates	b1	lf	673.20	0.4	\$269	.020	13.46	32	\$431	\$431		
061000	headers	b1	lf	103.00	6	\$618	.055	5.67	32	\$181	\$181		
061000	wall sheathing	b1	sf	2120.00	0.47	\$996	.020	42.40	32	\$1,357	\$1,357		
061000	2x4 framing at closets & 1/2 wall	b1	lf	160.00	0.3	\$48	.020	3.20	32	\$102	\$102		
061000	sheathing @closets & 1/2 wall	b1	sf	120.00	0.47	\$56	.020	2.40	32	\$77	\$77		
061000	end wall framing	b1	lf	536.00	0.4	\$214	.035	18.76	32	\$600	\$600		
061000	end wall sheathing	b1	sf	528.00	0.47	\$248	.030	15.84	32	\$507	\$507		
061000	roof sizer trusses	b1	sf	2160.00	3.75	\$8,100	.014	30.24	32	\$968	\$968		
061000	truss bracing	b1	lf	432.00	0.3	\$130	.025	10.80	32	\$346	\$346		
										\$475	\$475		

BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
COMMON BUILDING

William Macday
Architects and Planner
11/22/2010

**BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
COMMON BUILDING**

06610000	wind bracing	b1	lf	96.00	0.03	\$3	.035	3.36	32	\$108	\$0	\$1110
06610000	root sheathing	b1	sf	3489.20	0.55	\$1,919	.020	69.78	32	\$2,233	\$0	\$4,152
06610000	Gable overhang framing	b1	lf	104.00	1.62	\$168	.130	13.52	32	\$433	\$0	\$601
06610000	eave sub framing	b1	lf	134.00	0.6	\$80	.045	6.03	32	\$193	\$0	\$273
06610000	interior 2x4 studs	b1	lf	1080.00	0.3	\$324	.020	21.60	32	\$691	\$0	\$1,015
06610000	interior 2x6 stud	b1	lf	1464.00	0.4	\$586	.020	29.28	32	\$937	\$0	\$1,523
06610000	int 2x6 stud	b1	lf	99.00	0.4	\$40	.035	3.47	32	\$111	\$0	\$150
06610000	pi 2x4 plate	b1	lf	134.20	0.7	\$94	.035	4.70	32	\$150	\$0	\$244
06610000	pi2x5 plate	b1	lf	270.00	0.3	\$81	.030	8.10	32	\$259	\$0	\$340
06610000	2x4 plate	b1	lf	366.00	0.4	\$146	.040	146.40	32	\$4,685	\$0	\$4,831
06610000	2x6 plate	b1	lf	1040.00	0.15	\$156	.014	14.56	32	\$466	2	\$2,080
06610000	ceiling framing	b1	sf	240.00	0.15	\$360	.014	33.60	32	\$1,075	\$0	\$1,435
06610000	ceiling strapping	b1	lf	176.00	0.4	\$70	.025	4.40	32	\$141	2	\$352
06610000	ceiling Framing 1 mailboxes	b1	lf	1800.00	0.15	\$270	.015	27.00	32	\$864	\$0	\$1,134
06610000	strapping over 2" rigid	b1	lf	200.00	0.6	\$120	.015	3.00	32	\$96	\$0	\$216
06610000	furring around windows	b1	lf	200.00	0.6	\$120	.015	3.00	32	\$96	\$0	\$216
06610000	mailbox root framing	b1	sf	260.00	\$0	\$0	0.00	32	\$0	4	\$1,040	\$1,040
06610000	ROUGH CARP TOTAL	O									\$0	\$38,211
06610000	INT FINISH CARP	0									\$0	\$16,25
06621000	base board	b1	lf	243.00	0.8	\$194	.030	7.29	32	\$233	\$0	\$228
06621000	window stool	b1	lf	75.00	3.75	\$281	.080	6.00	32	\$192	\$0	\$473
06621000	door and window casing	b1	lf	402.00	0.8	\$322	.035	14.07	32	\$450	\$0	\$772
06621000	window jamb extensions	b1	lf	402.00	0.55	\$221	.045	18.09	32	\$579	\$0	\$800
06621000	miss int finish	b1	ea	1.00	300	\$300	32,000	32	\$1,024	\$0	\$1,324	
06621000	INT FINISH CARP TOTAL	O									\$0	\$3,797
06621000	EXT FINISH CARP	0									\$0	\$1,61
06622000	corner board	b1	lf	100.00	1.75	\$175	.040	4.00	32	\$128	\$0	\$303
06622000	feize	b1	lf	240.00	2.25	\$540	.045	10.80	32	\$346	\$0	\$886
06622000	eave and rake trim	b1	lf	262.00	4.8	\$1,258	.180	47.16	32	\$1,509	\$0	\$2,767
06622000	porch arbor cedar columns	b1	lf	144.00	7.5	\$1,080	.075	10.80	32	\$346	\$0	\$1,426
06622000	arbor beam	b1	lf	130.00	8.50	\$1,105	.080	10.40	32	\$333	\$0	\$1,438
06622000	arbor slats	b1	lf	204.00	6.00	\$1,224	.080	16.32	32	\$522	\$0	\$1,746
06622000	arbor hardware and connectors	b1	ls	1.00	800.00	\$800	48.000	32	\$1,536	\$0	\$2,336	
06622000	door and window casing	b1	lf	502.00	1.5	\$753	.040	20.08	32	\$643	\$0	\$1,396
06622000	siding	b1	sf	2292.40	1.34	\$3,072	.040	91.70	32	\$2,934	\$0	\$6,006
06622000	EXT FINISH CARP TOTAL	O									\$0	\$18,303

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**BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
COMMON BUILDING**

William MacLay
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11/22/2010

064000	CABINETS	0		\$0	0.00	32	\$0	\$0	\$0	\$0.00
064000	base cabinets:		b1	if	42.00		\$0	0.00	32	\$8,820
064000	solid surface tops	b1	if	42.00		\$0	0.00	32	\$0	\$0.00
064000	upper cabinets	b1	if	25.00		\$0	0.00	32	\$0	\$4,410
064000	vanities	b1	ea	2.00		\$0	0.00	32	\$0	\$4,400
064000	CABINETS TOTAL	O				\$0	0.00	32	\$0	\$910
064000	INSULATION	0				\$0	0.00	32	\$0	\$18,540
072000	spray foam all roof	b1	sf	2724.00		\$0	0.00	32	\$0	\$0.00
072000	dense pack cellulose exterior wall	b1	sf	2200.00	1	\$2,200	.016	35.20	\$0	\$3,740
072000	rigid at ext walls	b1	sf	2200.00	1	\$2,200	.014	34.57	\$0	\$3,326
072000	rigid under slab	b1	sf	2469.60	1	\$2,470	.016	32	\$0	\$3,576
072000	rigid at foundation walls	b1	sf	1122.00	1	\$1,122	.016	17.95	\$0	\$1,696
072000	air sealing	b1	ea	1.00	200	\$200	10,000	32	\$0	\$520
072000	acoustic insulation	b1	sf	700.00	0.65	\$455	.007	4.90	\$0	\$612
072000	irfa red and blower door	b1	ls	1.00		\$0	0.00	32	\$0	\$0.00
072000	TOTAL INSULATION	O				\$0	0.00	32	\$0	\$36,707
073000	ROOFING	0				\$0	0.00	32	\$0	\$0.00
073000	ice and water	b1	sf	759.00	0.7	\$531	.010	7.59	\$0	\$774
073000	30 lbfelt	b1	sf	3752.90	0.08	\$303	.005	18.91	\$0	\$908
073000	drip edge	b1	lf	294.80	0.45	\$133	.020	5.90	\$0	\$221
073000	valley flashing	b1	lf	32.00	10	\$320	.080	2.56	\$0	\$402
073000	shingles	b1	sf	3439.80	1.1	\$3,784	.030	103.19	\$0	\$7,086
073000	sub mark up.	b1	ls	1.00		\$0	0.00	32	\$0	\$663
073000	ROOFING TOTAL	O				\$0	0.00	32	\$0	\$10,154
074000	FLASHING & WATERPROOFING	0				\$0	0.00	32	\$0	\$0.00
074000	house wrap and tape	b1	sf	2292.40	0.14	\$321	.004	9.17	\$0	\$0.00
074000	window door flashing	b1	ea	24.00	18	\$32	.750	18.00	\$0	\$1,008
074000	foundation damp proofing	b1	sf	1122.00		\$0	0.00	32	\$0	\$785
074000	steep wrap under floor slab	b1	sf	2470.00	0.1	\$247	.004	9.88	\$0	\$563
074000	misc flashings	b1	ls	1.00	100	\$100	2,000	32	\$0	\$164
074000	TOTAL FLASHING & WP	O				\$0	0.00	32	\$0	\$3,135
074000	DOORS AND HARDWARE	0				\$0	0.00	32	\$0	\$0.00
082000	aluminum entry with sidelight	b1	lf	2.00		\$0	0.00	32	\$0	\$4,800
082000	entry door	b1	lf	1.00	750	\$750	3,000	32	\$0	\$846
082000	single mt doors frm	b1	lf	6.00		\$0	0.00	32	\$0	\$5,250
082000	exterior frm door	b1	lf	3.00		\$0	0.00	32	\$0	\$2,850
082000	TOTAL DOORS AND HWR	O				\$0	0.00	32	\$0	\$13,746
082000						\$0	0.00	32	\$0	\$0.00

BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
COMMON BUILDING

BUDGET ESTIMATE
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BUDGET ESTIMATE
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Costs associated with changes in the scope of work which evolve during the design development and changes in the market conditions at bid time

BUDGET ESTIMATE
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SENIOR HOUSING
COMMON BUILDING

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ALTERNATE #3 FINISHES													
Div.	Description	Unit	Quantity	Unit \$	Total \$	m.h.	Hours	Rate	Total \$	amt.	SubContract	Total	DIV. TOTALS
061000	strapping over 2" rigid	b1 lf	-1800.00	0.15	(\$270)	.015	-27.00	\$2	(\$864)	\$0	(\$1,134)	\$0.00	\$0.00
061000	tuning around windows	b1 lf	-200.00	0.6	(\$120)	.015	-3.00	\$2	(\$96)	\$0	(\$216)	\$0.00	\$0.00
062100	base board	b1 lf	-243.00	0.8	(\$194)	.030	-7.29	\$2	(\$233)	\$0	(\$428)	\$0.00	\$0.00
062100	vinyl base board	b1 lf	337.00	\$0	\$0.00	32	\$0	2.25	\$568	\$753	\$4410	\$0.00	\$0.00
064000	solid surface tops	b1 lf	-42.00	\$0	\$0.00	32	\$0	105	(\$4,410)	\$0	(\$4,410)	\$0.00	\$0.00
064000	laminate counter tops	b1 lf	42.00	\$0	\$0.00	32	\$0	33	\$386	\$1,386	\$0.00	\$0.00	\$0.00
093000	quarry lime floors	b1 sf	-1079.00	\$0	\$0.00	32	\$0	10	(\$10,790)	\$0	(\$10,790)	\$0.00	\$0.00
093000	tile cove bases	b1 lf	-94.00	\$0	\$0.00	32	\$0	10	(\$940)	\$0	(\$940)	\$0.00	\$0.00
093000	VINYL floors	b1 sf	1079.00	\$0	\$0.00	32	\$0	4.75	\$5,125	\$5,125	\$0.00	\$0.00	\$0.00
062200	comer board	b1 lf	-100.00	1.75	(\$175)	.040	-4.00	\$2	(\$128)	\$0	(\$303)	\$0.00	\$0.00
062200	PVC corner board	b1 lf	100.00	2.57	(\$257)	.040	4.00	\$2	(\$128)	\$0	(\$385)	\$0.00	\$0.00
062200	feize	b1 lf	-240.00	2.25	(\$540)	.045	-10.80	\$2	(\$546)	\$0	(\$886)	\$0.00	\$0.00
062200	PVC feize	b1 lf	240.00	3.38	(\$811)	.045	10.80	\$2	(\$346)	\$0	(\$1,157)	\$0.00	\$0.00
062200	eave and rake trim	b1 lf	-262.00	4.8	(\$1,258)	.180	-47.16	\$2	(\$1,509)	\$0	(\$2,767)	\$0.00	\$0.00
062200	PVC eave and rake trim	b1 lf	262.00	7.64	(\$2,002)	.180	-47.16	\$2	(\$1,509)	\$0	(\$3,511)	\$0.00	\$0.00
062200	door and window casing	b1 lf	-502.00	1.5	(\$753)	.040	-20.08	\$2	(\$643)	\$0	(\$1,396)	\$0.00	\$0.00
062200	PVC door and window casing	b1 lf	502.00	1.63	(\$818)	.040	20.08	\$2	(\$643)	\$0	(\$1,461)	\$0.00	\$0.00
062200	vinyl siding	b1 sf	292.00	\$0	\$0.00	32	\$0	2.92	\$6,693	\$6,693	\$0.00	\$0.00	\$0.00
062200	siding	b1 sf	-292.00	1.34	(\$3,071)	.040	-91.68	\$2	(\$2,934)	\$0	(\$6,055)	\$0.00	\$0.00
099000	exterior paininig	b1 sf	-2520.00	\$0	\$0.00	32	\$0	1.6	(\$4,032)	\$0	(\$4,032)	\$0.00	\$0.00
										\$0	\$0	\$0.00	\$0.00
	BARE COST TOTAL									(\$12,830)	(\$12,830)	(\$5,45)	
	CONTRACTORS GENERAL CONDITIONS											(\$770)	(\$0.33)
	CONTRACTORS OVERHEAD AND PROFIT											(\$1,360)	(\$0.58)
	CONSTRUCTION CONTINGENCY											(\$1,496)	(\$0.64)
	BOND											(\$247)	(\$0.10)
	TOTAL GENERAL CONTRACT											(\$16,705)	(\$7.10)
	VARIANCE											(\$1,670)	(\$0.71)
	TOTAL											(\$16,373)	(\$7.81)

Stephen Pitkin
Construction Consultant
P.O. Box 257
Albany, Vermont 05820
802-755-6772

BUDGET ESTIMATE
EAST MONTPELIER
SENIOR HOUSING
GARAGE SHEDS

William Macday
Architects and Planner
11/22/2010

Div.	Description	unit	quantity	unit \$	total \$	m/h	hours	rate	total \$	amt.	total \$	Subcontract	Total	Div. Total S.F.
022200	SITE WORK	0										\$0	\$0	\$0.00
022200	excavate for grade	b1	ls	1.00	\$0	0.00	32	\$0	\$0			\$600	\$600	\$0.00
022200	excavate and fill sono tubes	b1	ea	10.00	\$0	0.00	32	\$0	\$0			\$750	\$750	\$0.00
022200	gravel base infill	b1	cy	45.83	\$0	0.00	32	\$0	\$0			\$1,604	\$1,604	\$0.00
022200	fdn and slab drainage	b1	lf	80.00	\$0	0.00	32	\$0	\$0			\$960	\$960	\$0.00
022200	daylight drainage	b1	lf	100.00	\$0	0.00	32	\$0	\$0			\$1,200	\$1,200	\$0.00
022200	TOTAL SITE WORK	O										\$0	\$0	\$5,114
022200												\$0	\$0	\$9.13
030000	CONCRETE	0										\$0	\$0	\$0.00
030000	sono tube piers	b1	ea	10.00	\$0	0.00	32	\$0	\$0			\$250	\$250	\$0.00
030000	CONCRETE TOTAL	O										\$0	\$0	\$2.23
030000												\$0	\$0	\$0.00
055000	MISC. METALS	0										\$0	\$0	\$0.00
055000	misce. connectors for posts	b1	ls	20.00	\$0	0.00	32	\$0	\$0			\$640	\$640	\$0.00
055000	MISC. METALS TOTAL	O										\$800	\$800	\$1,940
055000												\$0	\$0	\$3.46
061000	ROUGH CARP	0										\$0	\$0	\$0.00
061000	6x6 pl posts	b1	lf	80.00	\$0	0.00	32	\$0	\$0			\$0	\$0	\$0.00
061000	2x6 wall girls	b1	lf	272.00	\$0	0.00	32	\$0	\$0			\$261	\$261	\$0.00
061000	framing connectors for girls	b1	ea	56.00	\$0	0.00	32	\$0	\$0			\$1,940	\$1,940	\$0.00
061000	6x6 perimeter beam	b1	lf	68.00	\$0	0.00	32	\$0	\$0			\$1,250	\$1,250	\$0.00
061000	root trusses	b1	sf	560.00	\$0	0.00	32	\$0	\$0			\$0	\$0	\$0.00
061000	truss bracing	b1	lf	224.00	\$0	0.00	32	\$0	\$0			\$192	\$192	\$0.00
061000	wind bracing	b1	lf	80.00	\$0	0.00	32	\$0	\$0			\$261	\$261	\$0.00
061000	root sheathing	b1	sf	700.00	\$0	0.00	32	\$0	\$0			\$452	\$452	\$0.00
061000	misic framing & bracing	b1	ls	1.00	\$0	0.00	32	\$0	\$0			\$81	\$81	\$0.00
061000	root fibbing for metal roof	b1	lf	360.00	\$0	0.00	32	\$0	\$0			\$163	\$163	\$0.00
061000	ROUGH CARP TOTAL	O										\$146	\$146	\$1,572
061000												\$246	\$246	\$0.00
062200	EXT FINISH CARP	0										\$0	\$0	\$0.00
062200	vertical shiplap siding	b1	lf	871.20	\$0	0.00	32	\$0	\$0			\$833	\$833	\$0.00
062200	EXT FINISH CARP TOTAL	O										\$392	\$392	\$0.00
062200												\$327	\$327	\$0.00
099000	PAINTING	0										\$0	\$0	\$4,736
099000	staining lumber	b1	sf	1600.00	\$0	0.00	32	\$0	\$0			\$219	\$219	\$8.46
099000	PAINTING TOTAL	O										\$0	\$0	\$0.00
099000												\$92	\$92	\$0.00
099000	BARE COST TOTAL	O										\$0	\$0	\$0.00
099000	CONTRACTORS GENERAL CONDITIONS											\$0	\$0	\$0.00
099000	CONTRACTORS OVERHEAD AND PROFIT											\$2,858	\$2,858	\$5.10
099000	CONSTRUCTION CONTINGENCY											\$0	\$0	\$0.00
099000	BOND											\$0	\$0	\$0.00
099000	TOTAL GENERAL CONTRACT											\$22,363	\$22,363	\$39.93
099000	VARIANCE											\$0	\$0	\$0.00
099000	TOTAL EXCLUSIONS											\$2,236	\$2,236	\$3.99
099000												\$24,599	\$24,599	\$43.93

VARIANCE = Costs associated with changes in the scope of work which evolve during the design development and changes in the market conditions at bid time

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

PROJECT PURPOSE: To create a beautiful, caring, sharing community

Design Action Report #3

PROJECT:	EAST MONTPELIER SENIOR HOUSING
MEETING DATE:	11.09.10 & 11.16.10 MEETINGS – DESIGN DIRECTION & FINAL APPROVAL
ATTENDEES:	Craig Kleman (TEM), Eileen Peltier (CVCLT), EMSLI Members, Maclay Architects (MA)
MEETING PURPOSE:	To confirm drawings for cost estimate
DESIGN PHASE:	Predevelopment

Architect X does does not anticipate completion of (current phase) by 11.22.10.
The Project Design schedule X is is not current.

A. Due Dates / Milestones

Date	Project milestone
11.22.10	Cost Estimate, Phase Completion – COMPLETE (waiting for ASHP pricing)

B. Budget

Item #	Issue/Date/Action	Responsibility/ Due Date

C. Permit / Regulatory / Land Use Issues

Item #	Issue/Date/Action	Responsibility/ Due Date
C2	Permitting Summary: (10.26.10) Summary complete. (11.02.10) CK distributed updated Land Use and Development Regulations. MA to review, provide update and revise permitting summary if required. (11.16.10) Permitting Summary Complete.	CLOSED
C3	Sprinkler System: (11.16.10) MA to investigate sprinkler requirements. (Post-meeting) Code does not require sprinklers. MA to check with fire district.	TBD

D. Owner Issues & Approvals

Item #	Issue/Date/Action	Responsibility/ Due Date
D1	(11.09.10) Team to consider possible collaboration with Twin Valley Senior Center.	TBD

E. Existing Conditions

Item #	Issue/Date/Action	Responsibility/ Due Date
E1	Power Company: (10.26.10) For possible future energy credits, rates, JW to confirm GMP is power supplier to land. (11.16.10) No power to site on site side of road. According to GMP engineer, GMP is likely power supplier at site.	CLOSED

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

F. Project and Environmental Goals		Responsibility/ Due Date
Item #	Issue/Date/Action	
F2	Energy/LEED Goals: (10.26.10) MA to include item on 11.16 meeting agenda to review goals in conjunction with estimate. (11.02.10) MA will include the following in the outline specification for cost estimating: two levels of envelope design (micro-load and high performance), a ventilation system, two options for heating (air-source heat pumps and a central boiler), and a SDHW system. (11.16.10) Specification includes above.	CLOSED
F3	LEED Documentation: (11.16.10) LEED documentation costs are not included in project estimate.	CLOSED

G. Programming / Building Design		Responsibility/ Due Date
Item #	Issue/Date/Action	
G1	Building and Site Program: (10.26.10) Program distributed. MA to include additional items based on discussion at meeting. (11.02.10) Updated program distributed. EMSLI to review and comment. (11.09.10) Program approved.	CLOSED
G3	Site Concept Design: (10.26.10) MA to proceed with option combining Courtyard and Linear Solar Schemes for review at next meeting. (11.02.10) MA to develop two options based on the Village Street concept, showing road to north and south. Concepts to include closer parking and drop-off zones. (11.09.10) Revised concepts presented. Village Scheme North Road to be used for pricing. MA to investigate Loop Road option and option with Common House near entry with sketches for possible future development when project restarts. (11.16.10) Committee prefers Common House in center of village cluster and North Road Scheme over new options.	CLOSED
G4	Water/Sewer Outbuildings: (11.02.10) MA to check with DuFresne as to whether he anticipates any outbuildings associated with the water/sewer system will be required. (11.09.10) Pump; Station will likely be buried. Water treatment/storage needs to be determined with future well testing, at which point a building may be required.	CLOSED
G5	Future Items: (11.09.10) Team to consider the following when project restarts: <ul style="list-style-type: none"> • Size of Common House (consider with Twin Valley discussion) • Overflow parking • Solartubes • Roll-in shower v. Tub • # of Adaptable/Accessible Units (2 required adaptable) 	TBD

K. Future Meeting Agendas
Date/Meeting Purpose / Agenda

This is the official record of items discussed and agreements made. Recipients are requested to review and as soon as possible, notify the undersigned of any errors or disagreements.

⊗ Constitutes a red-flag high priority item

By: Eileen Hee
 CC: Attendees, Team

MA -Maclay Architects (TB - Tom Bodell, WTM - Bill Maclay, EH - Eileen Hee)
 TEM - Town of East Montpelier (CK - Craig Kleman)
 EMSLI - East Montpelier Senior Living Initiative Group
 JW - John Winston, Landowner

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

EAST MONTPELIER SENIOR LIVING INITIATIVE

SPECIFICATION REVIEW

November 16, 2010

FINISHES FOR DISCUSSION

Siding and Trim (Ext)	Base Bid: Hardi Siding and Trim Deduct Alternate: Vinyl Siding and PVC Trim
Roofing	Base Bid: Architectural Shingles (Asphalt)
Interior Trim	Base Bid: Painted Wood Deduct Alternate: Vinyl
Flooring	Base Bid: Tile (entry, kitchen and bath), Maple (living/dining/bedroom) Deduct Alternate: Sheet vinyl (entry and bath) Engineered Wood (living/dining/bedroom) Carpet?
Countertops	Base Bid: Solid surface (Corian or equal) Deduct Alternate: Plastic Laminate (Formica or equal)

OTHER ITEMS FOR DISCUSSION

- Screen/storm doors – front and back doors
- Grab bars (or just blocking)
- Window type and finish
- Lighting
- Heat Recovery Ventilation
- Tubs/showers

SUSTAINABILITY PACKAGE

- o SDHW
- o PV System (for micro-load building envelope)
- o Pervious pavers for walkways in 'village' area
- o Rainwater collection system for ½ roof area
- o Sewage pretreatment (?)
- o FSC-certified lumber for all framing, sheathing, rails, posts, trusses
- o Fly ash in concrete 30%
- o Air Source Heat Pumps in lieu of central boiler
- o LEED Documentation and Implementation by contractor (waste management and durability)
- o Micro-load Building Envelope (R-20, R-40, R-60), Base Bid (R-10, R-30, R-50)
- o Water-conserving fixtures (meet or exceed LEED criteria)



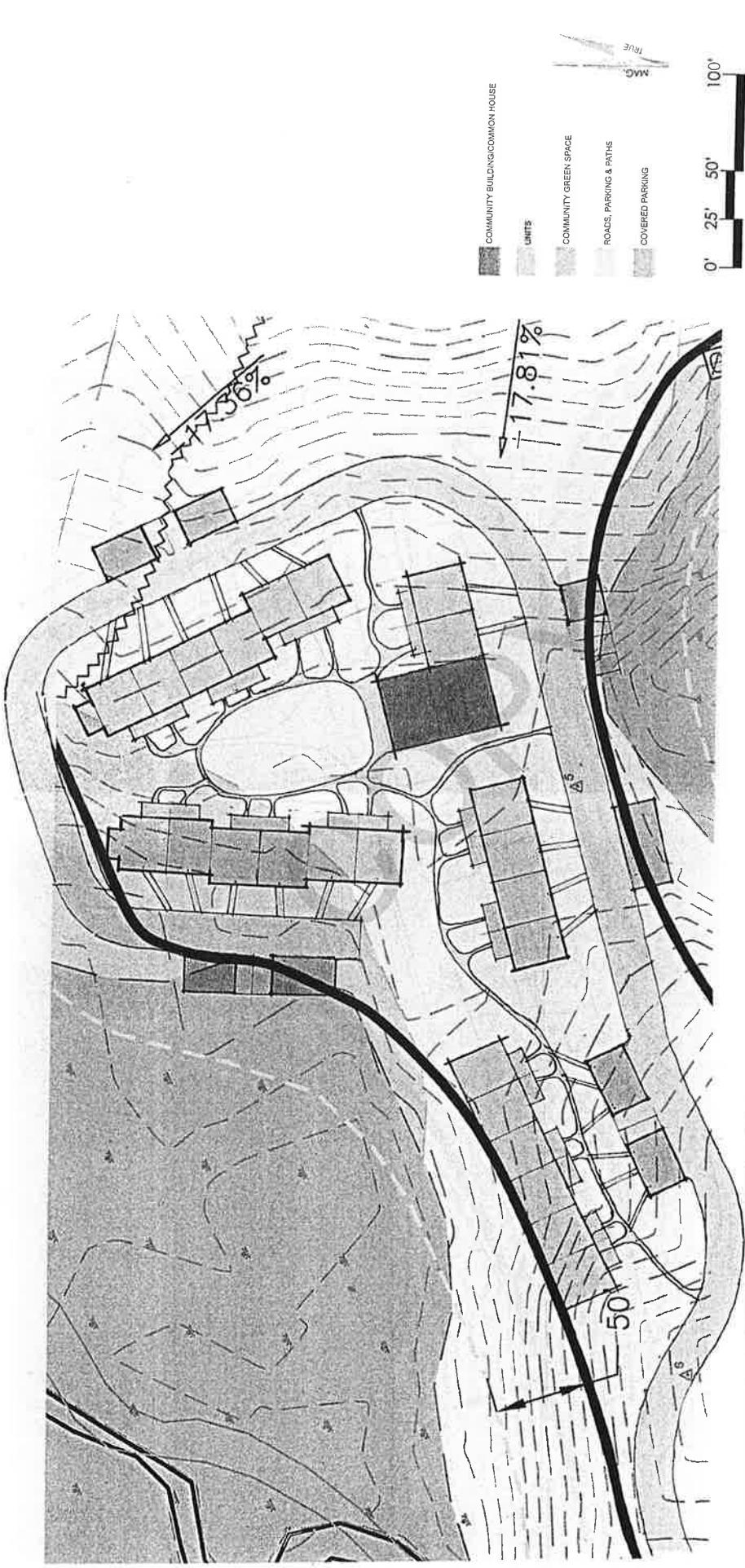
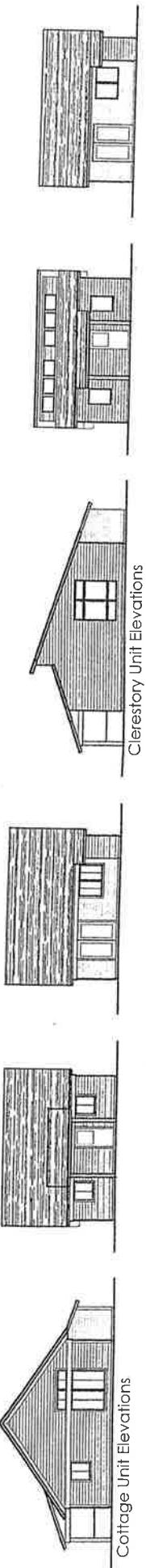
Maclay Architects
CHOICES in SUSTAINABILITY

EAST MONTPELIER SENIOR HOUSING INITIATIVE



Cottage Unit Elevations

Cottage Unit Elevations



MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

NOV 9 2010

**EAST MONTPELIER SENIOR LIVING INITIATIVE
BUILDING CONCEPT MEETING AGENDA**
November 9, 2010

PURPOSE: To select final site scheme, review building massing and unit layouts and establish direction.

AGENDA/KEY QUESTIONS

- Site Scheme
 - North road access
 - South road access
- Building Massing
 - Cottage Unit
 - Clerestory Unit
- Review One Bedroom Unit Options
- Review Common House Floor Plans
- Permitting/Zoning Review
- Schedule
 - Future meetings and milestones

11/16 – FINAL APPROVAL MEETING
Review Final Site Concept
Confirm Schematic Building Design

11/22 – Delivery of Cost Estimate

Outcomes: Establish final site scheme, establish building concept direction and review schedule for next steps

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

EAST MONTPELIER SENIOR LIVING INITIATIVE CONCEPT DESIGN MEETING AGENDA

November 2, 2010

NOV 2 2010

PURPOSE: To review program updates and site concept options and confirm direction

AGENDA/KEY QUESTIONS

- Overview
- Review and Refine Program (16 one bedroom, 4 studio, 4 two-bedroom)
- Site Investigation Update - wetlands/floodplain - assumptions only
- Site Concepts
 - Courtyard Scheme
 - Solar Scheme
 - Village Street Scheme
- Energy Goals - options for estimating (micro-load, high performance, base case)
- Sustainability Package for Pricing
- Permitting/Zoning Status
- Schedule
 - Future meetings and milestones
 - 11/9 – DESIGN DIRECTION MEETING
 - Confirm Site Concept
 - Establish Building Concept Direction
 - 11/16 – FINAL APPROVAL MEETING
 - Review Final Site Concept
 - Confirm Schematic Building Design
 - 11/22 – Delivery of Cost Estimate

Outcomes: Establish Site Concept Direction and Review schedule for next steps

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

EAST MONTPELIER SENIOR LIVING INITIATIVE REVISED PROGRAM November 2, 2010

OVERALL

Create a beautiful caring, sharing community

Vernacular Design with modern materials
Model environmental building (LEED/Net-Zero)
Mixed project (affordable/market)
Village context blends into site
Energy/Activity/Connection

BUILDING(S)

24 Units

flats

Mix of studio, one bedroom, two bedroom (few) views and light
porches connecting units/covered walkways
front and back doors/cross ventilation
unit laundry hook-ups
Sense of privacy
Sound attenuation between units
Storage for tires, etc (could be in covered parking)
Innovative heating
Active/passive solar
Possible modular

Common House

Gathering room (40 people)
Kitchen
Restrooms
Multiple smaller rooms (guest sleeping, social, exercise, craft, clinic visits, office, etc)
Shared laundry facilities

SITE

gardens (vegetable and flower)
covered parking (power for future solar cars)
visitor parking
sewage pretreatment
water catchment
buffer from road noise
permeable paving
permaculture
linkage to community
land conservation
✓greywater for irrigation/rainwater collection

OCT 26 2010

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

EAST MONTPELIER SENIOR LIVING INITIATIVE**KICK-OFF MEETING AGENDA**

October 26, 2010

PURPOSE: To introduce the project team, develop project goals, address key questions, begin design discussions, and confirm schedule

AGENDA/KEY QUESTIONS

- Introductions – Establish Communication Procedures
- Review and Refine Program
 - Unit configurations
- Site Investigation
 - Delineation of wetlands
 - ANR Conditional Use Determination (50' setback)
 - Floodplain delineation (per actual elevation)
- Site Concepts
 - Courtyard
 - Village
 - Linear
 - Combinations
- Energy Goals/LEED Certification
- Budget Considerations
- Permitting/Zoning Summary
- Schedule
 - Future meetings and milestones
 - 11/2 - CONCEPT DESIGN MEETING
 - Establish Site Direction
 - Review Initial Building Concepts
 - 11/9 - DESIGN DIRECTION MEETING
 - Confirm Site Concept
 - Establish Building Concept Direction
 - 11/16 - FINAL APPROVAL MEETING
 - Review Final Site Concept
 - Confirm Schematic Building Design
 - 11/22 - Delivery of Cost Estimate

Outcomes: Establishment of goals for the project; refinement of the building program; development of a shared understanding of the issues to be resolved; development of a schedule for moving forward.

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

EAST MONTPELIER SENIOR LIVING INITIATIVE**INITIAL PROGRAM**

October 26, 2010.

OVERALL

Village Context
Aesthetics
LEED
Section 8 designation

BUILDING(S)

24 Units

townhouses, flats?
studio, one bedroom, two bedroom
views and light
porches connecting units
front and back doors
unit laundries
cross ventilation

**Community Space/
Common House**

gathering room
kitchen
guest sleeping quarters
laundry for larger items
energy/activity/connection

SITE

gardens (vegetable and flower)
covered parking
visitor parking
sewage pretreatment
water catchment
buffer from road noise
permeable paving
permaculture
linkage to community
land conservation

MACLAY ARCHITECTS

4509 MAIN STREET WAITSFIELD, VT 05673

OCT 27 2010

EAST MONTPELIER SENIOR LIVING INITIATIVE
ZONING/PERMITTING REVIEW SUMMARY

October 26, 2010

Based on East Montpelier Land Use and Development Regulations, dated January 6, 2009

Zone: Residential & Commercial District (Zone C) – see Zoning Map

Regulations (Table 2.3)

Conditional Use: Dwelling, Multi-Family

Min. Lot Size: 1 acre

Per Article 5.5 (E) – In a Planned Residential Development (PRD), Planning Commission may grant a density increase of up to 50% of the allowable units when at least 20% of units are affordable. Parcel is 40 acres

Maximum Height: 35 feet

Road Frontage: 150'

Setbacks: 50' (front), 25' (sides and rear)

Supplemental Standards: PRDs are allowed in Zone C

Parking Requirements (Table 3.1)

Dwelling Unit/Multi-Family: 4 spaces per every 3 units

Required Applications/Permits/Review

Curb Cut Permit – VT AOT (submit to zoning administrator)

PRD/Subdivision Review (concurrent) – E Mplr Planning Commission

Includes Subdivision Approval, Sketch Plan Approval, Preliminary Plan Approval, Final Plan Approval, and Plat Recording

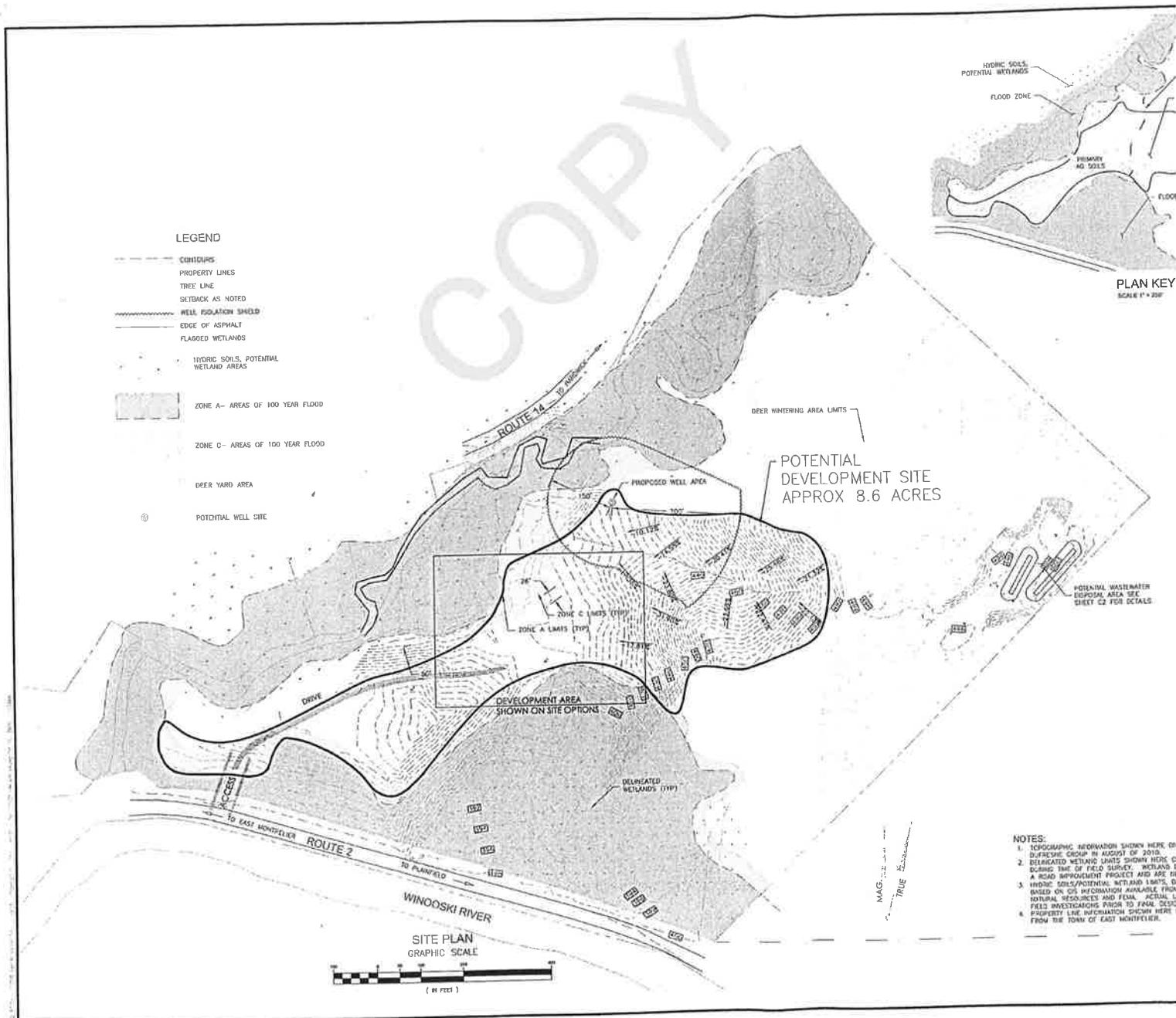
Conditional Use Review – E Mplr Board of Adjustment

Other Considerations

Private Road

Fire Protection

Underground Utilities



East Montpelier Senior Living Initiative

PO Box 62, East Montpelier, VT 05651

October 15, 2010

Desired Characteristics of the EMSLI Proposed Senior Housing

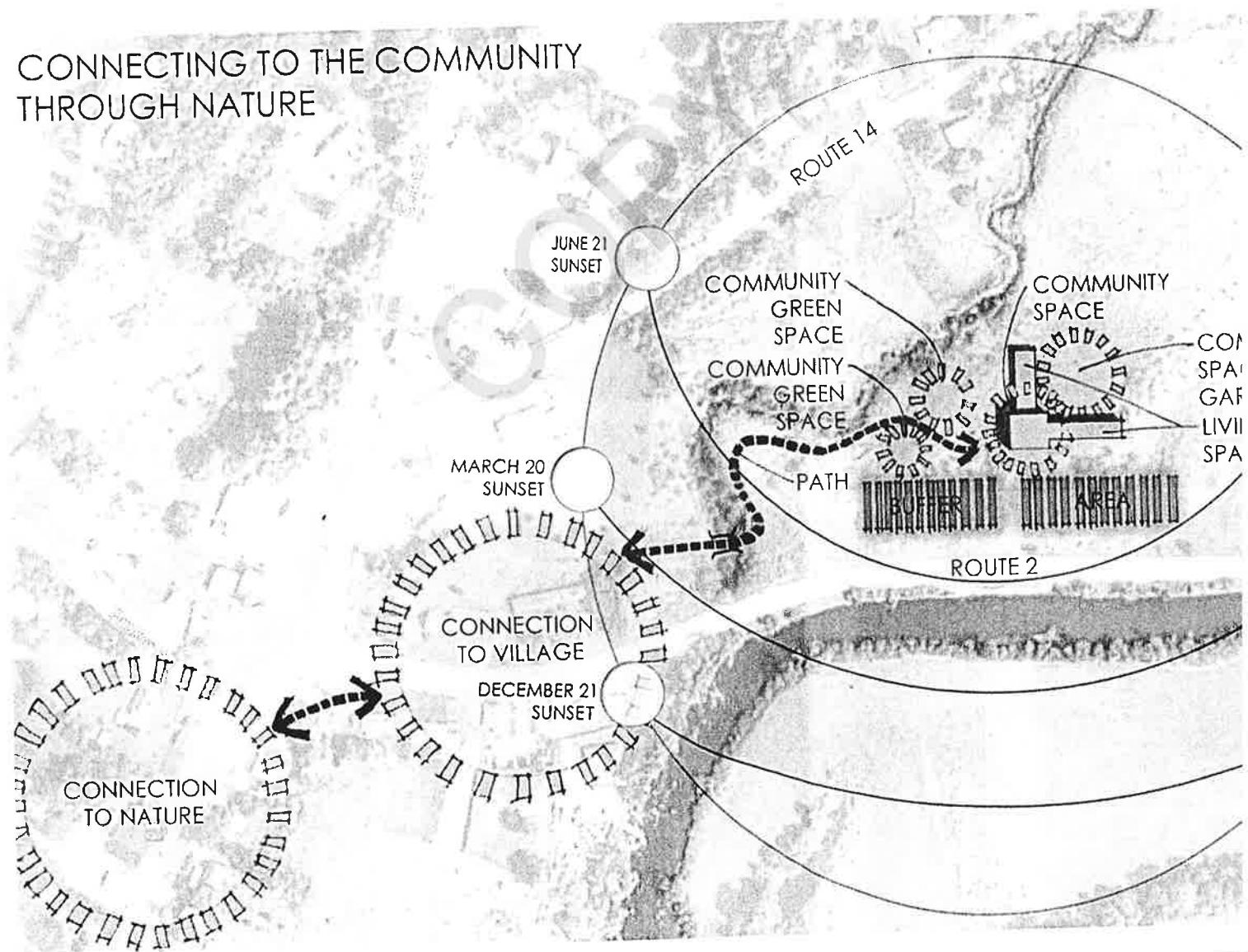
The purpose of the East Montpelier Senior Living Initiative is to study and make the community aware of the various kinds of housing for elders; and to develop and carry forward a plan for housing East Montpelier Seniors. We are building independent living for a clientele of capable seniors, providing for management of the facility and maintenance of grounds through landlord/tenant relationship.

We would like the facility to have the following features:

- Provision for maintenance and services
- Esthetically pleasing
- Relate to architecture in the village
- Car shelters
- Parking for visitors
- Porches connecting units
- Sun rooms
- Cross ventilation
- In-unit laundries and a communal laundry for big items
- Community room with at least a kitchen
- Choice of size of apartments (studio, one bedroom, two bedroom)
- A variety of buildings so that it doesn't seem like an apartment building
- Separate bedroom space for visitors
- Highest LEED certification
- Sewage pretreatment system
- Leave space for future expansion if septic usage proves expansion is possible
- Reduction of noise from road traffic
- Garden space for both flowers and vegetables
- Water catchment
- Permeable paving
- Permaculture landscaping
- Units should be designed for section 8 certification.
- Window sills in the living area sufficiently low so that one can see out while sitting down.
- A front and back door in each unit

We would prefer heat using heat pumps with radiant heat in floors.

CONNECTING TO THE COMMUNITY THROUGH NATURE



EAST MONTPELIER SENIOR
HOUSING INITIATIVE

Maclay Apartments
Montpelier, VT

COURTYARD SCHEME

MacLay Architects
CHOICES IN SUSTAINABILITY

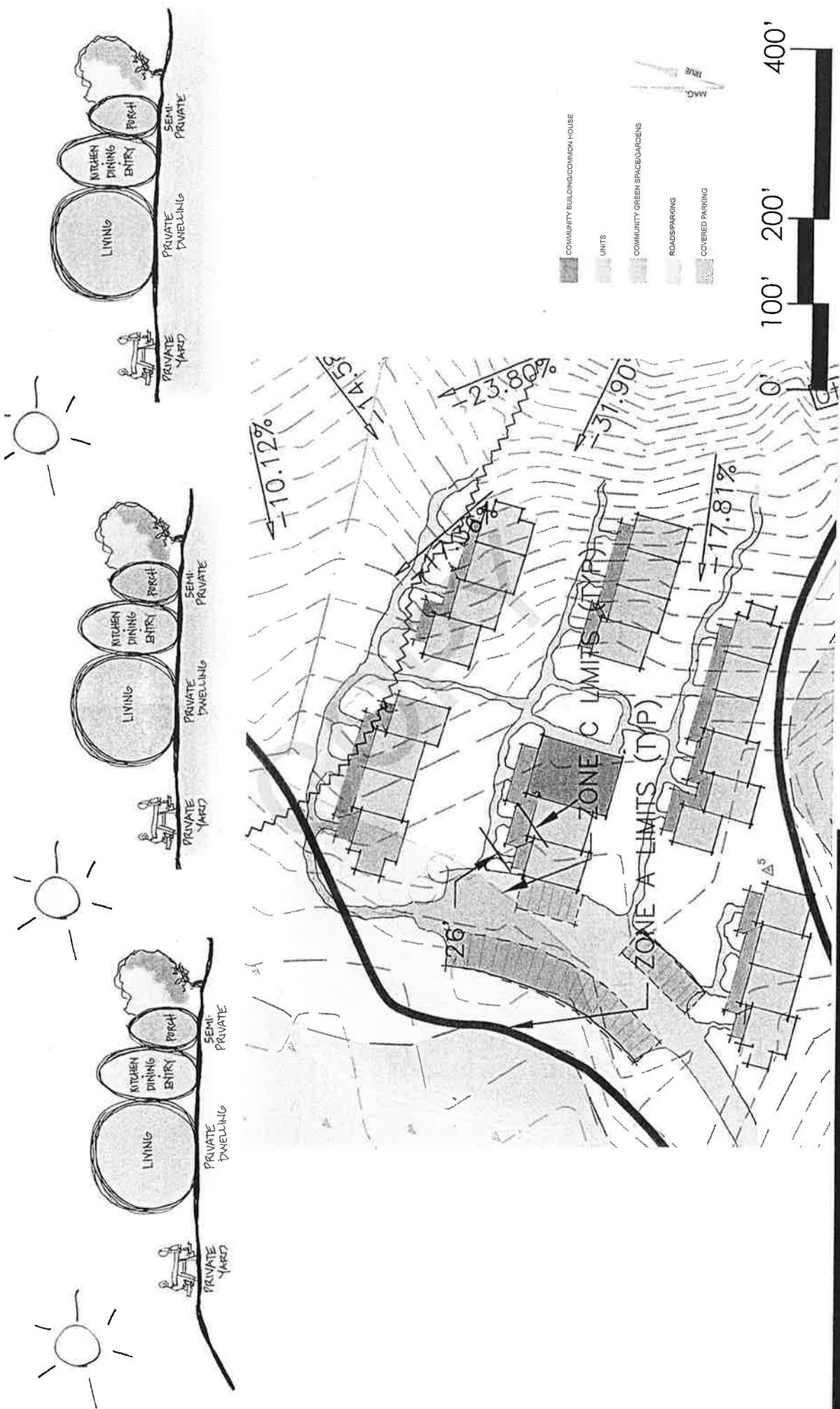
EAST MONTPELIER SENIOR HOUSING INITIATIVE



SOUTH SCHEME

Maclay Architects
CHICAGO, ILLINOIS, USA

EAST MONTPELIER SENIOR
HOUSING INITIATIVE



VILLAGE STREET SCHEME

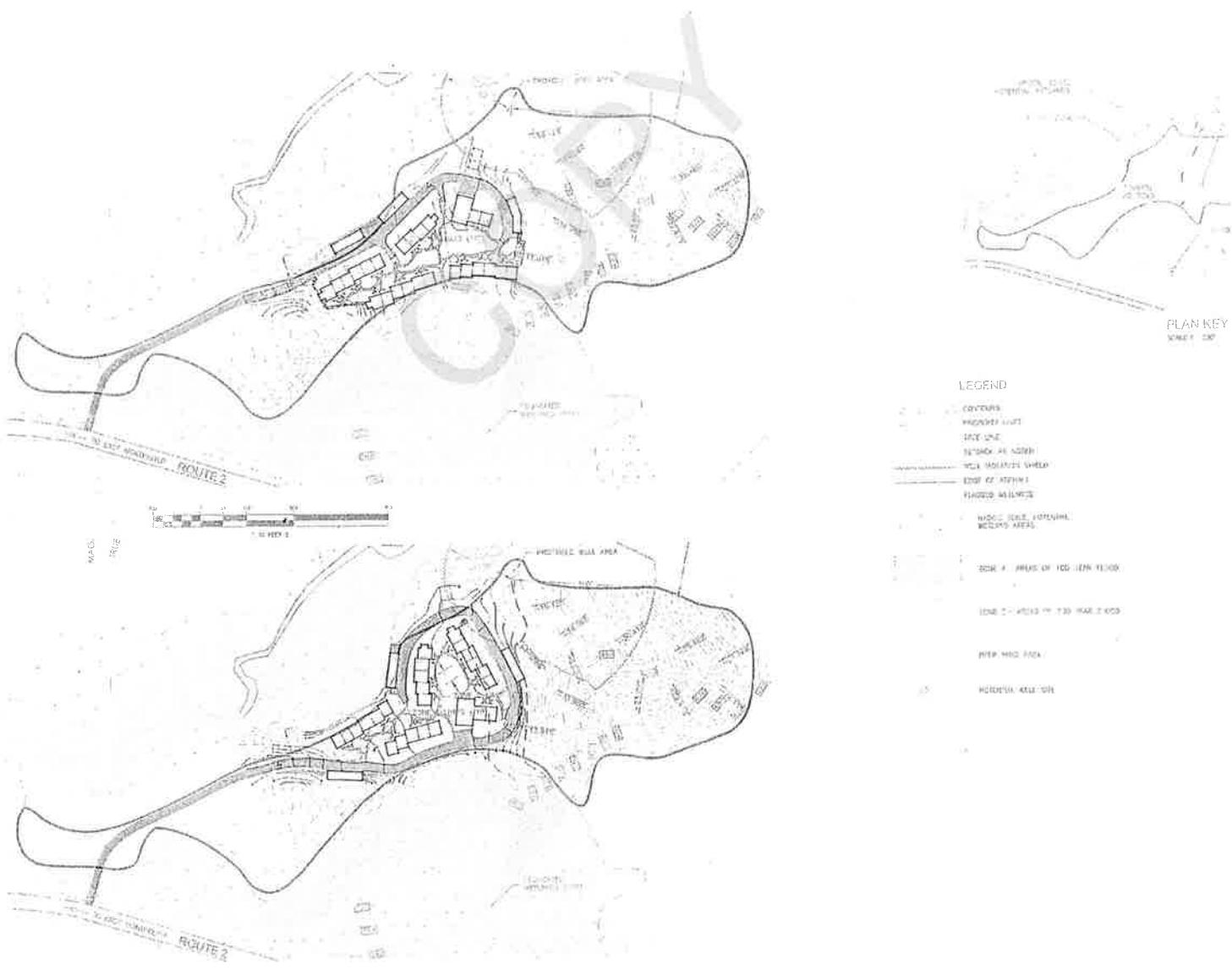
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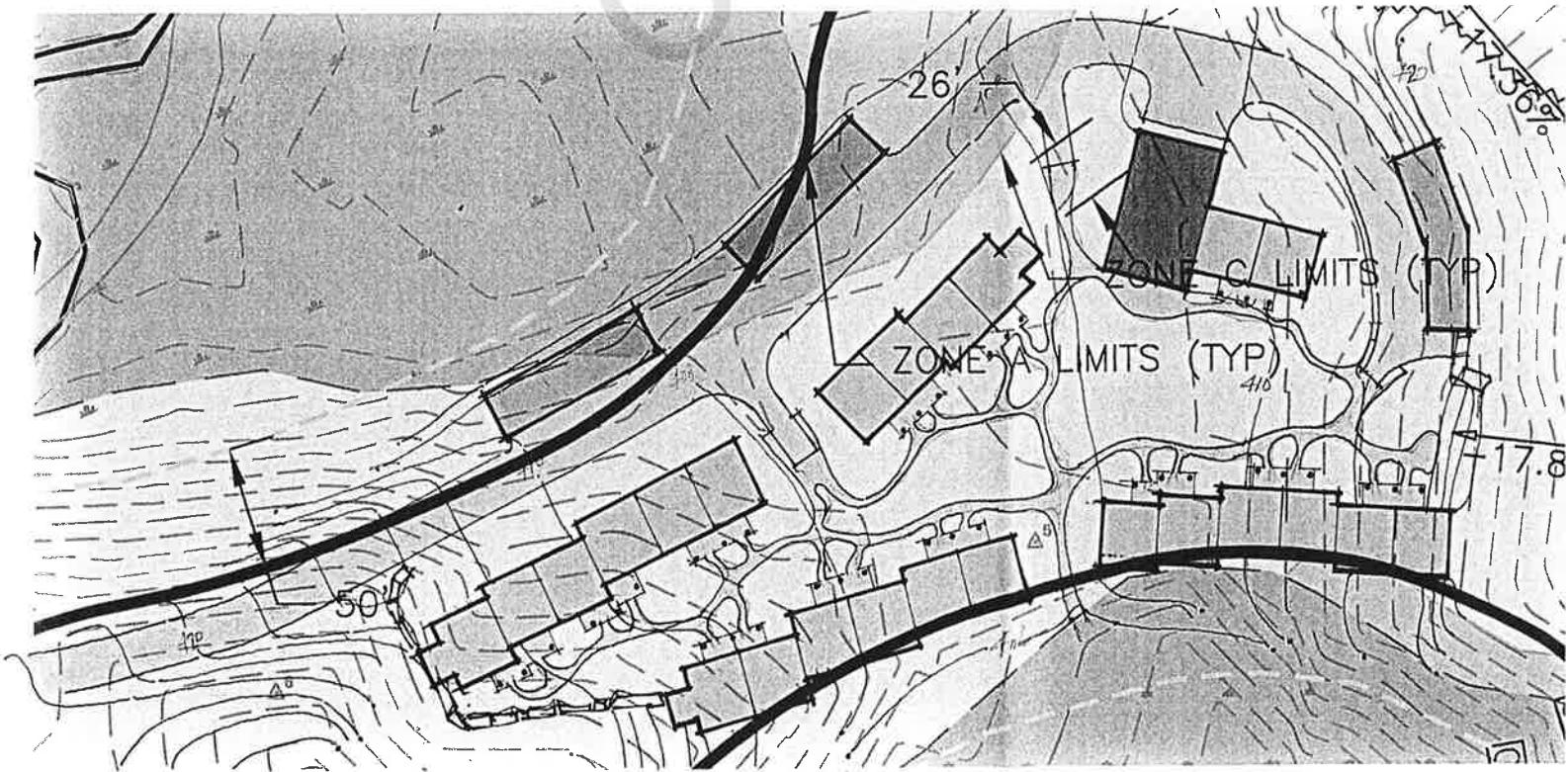


EAST MONTPELIER SENIOR HOUSING INITIATIVE



Maclay Architects
CHICAGO | SUSTAINABILITY

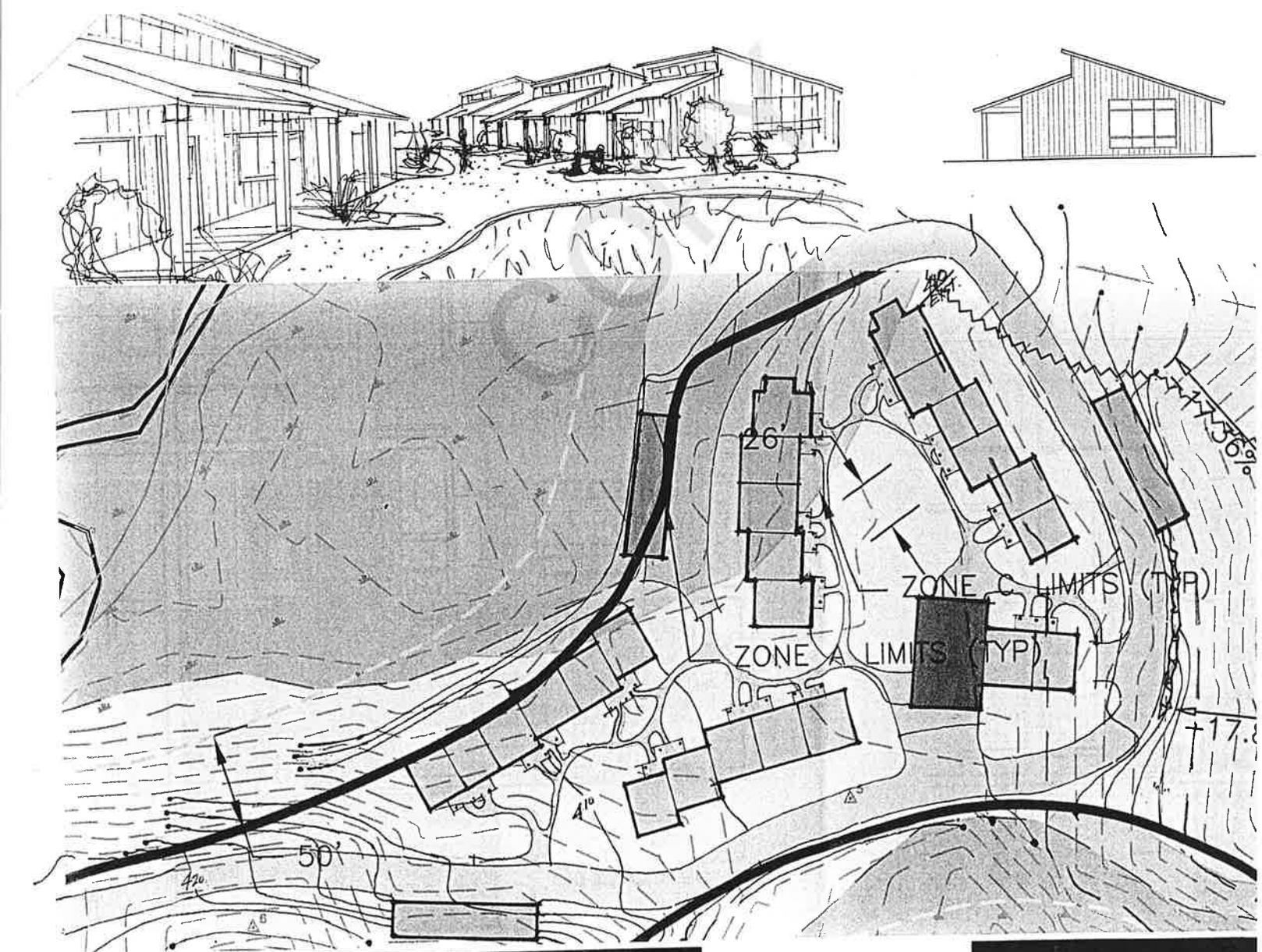




EAST MONTPELIER SENIOR
HOUSING INITIATIVE

Maclay Architects
CHARACTER IN SUSTAINABILITY

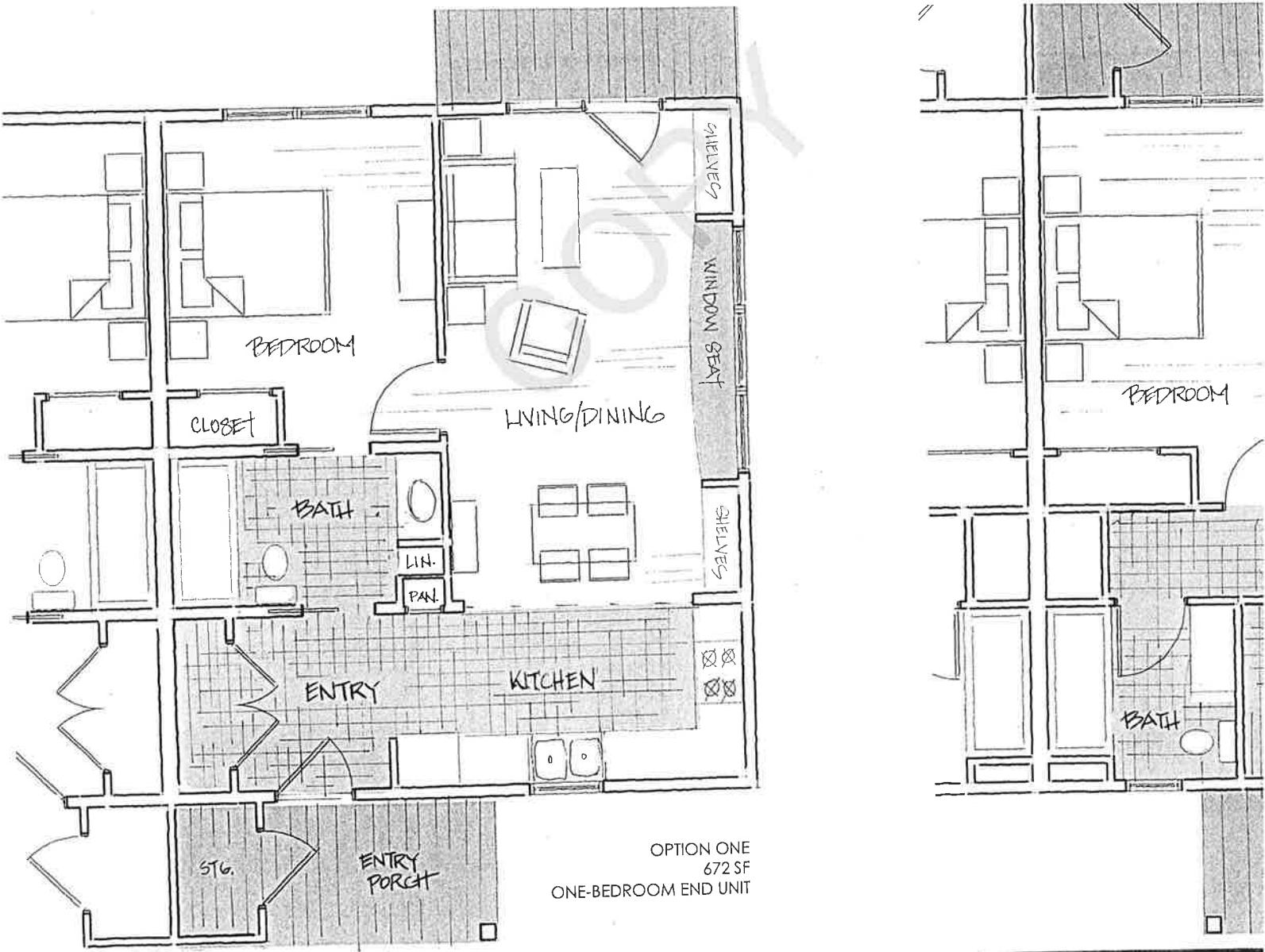
VILLAGE



EAST MONTPELIER SENIOR
HOUSING INITIATIVE

Maclay Architects
FORCES IN SUSTAINABILITY

VILLA



EAST MONTPELIER SENIOR
HOUSING INITIATIVE

Maclay



1/8" = 1'-0"



EAST MONTPELIER SENIOR
HOUSING INITIATIVE

Maclay architects
Montpelier, Vermont

COM

EMSLI Housing Preliminary Sources and Uses Narrative Analysis

Executive Summary Comments

The preliminary development budget proforma reflects a very conservative estimate of revenue and expenses meaning the revenue is low and the expenses are high for where we will likely end up for a budget. The goal of this proforma was to answer the feasibility question, not to come to a final workable proforma. Based on the preliminary pro-forma and the analysis below, the answer to the feasibility question for the project as designed is that the project is not feasible from a proforma perspective. I say this primarily because of the size of the gap and the nature of some of the challenges presented.

That is the bad news. The good news is that there are many options to be discussed that may allow us to close the gap and to make the project feasible.

They include:

1. A discussion of the number of tax credit units
2. A discussion of private fundraising and foundation grant potential
3. A review of the project design with a goal of reducing construction costs

In looking at how we are ending up with such a significant gap, I think there are a few factors that are atypical to this project. They are the high cost of site development, the multi-building design with a common building and parking sheds, and the number of units of tax credit housing which directly affects capital available for the project. Please find below detailed comments by line item that will shed more light on this preliminary proforma.

Detailed Comments by Line Item

1. LIHTC Equity – This is a calculation based primarily on an estimate of the basis(or expenses that are allowable for tax credit calculation) and an estimate of the rate at which the credits will sell. In the case of this project, I am assuming that 50% of the units will be tax credit units and 50% will be market rate units.

1A. HUD 202 – This is the estimate of capital funding through HUD 202 at \$125,000 per unit for 8 units which restricts those 8 units to 50% of median income. Based this on a conversation with Cathedral Square.

2. Through 4 – All predevelopment revenue is an in and out meaning the expense is the same amount below in the spreadsheet. At this time, it is not clear what else will be needed for predevelopment that will not be funded through an existing source so I did not estimate any further new predevelopment costs.

5. VCDP Implementation Grant – This would be a grant through the Town for development of the project. It would be conveyed to the project as a deferred loan so that it can be included in the basis calculation but the expectation would be that it would not be repaid.
6. VHCB Grant – State dollars based on a current amount of \$20,000 per unit of affordable housing. Limits units to 80% of median income.
7. HUD Home – Funds administered through VHCB at a set amount of \$30,000 for affordable units. I have used 8 units as these units will be restricted to 60% of median income.
8. FHLBB AH grant – A very competitive grant source through the Federal Home loan Banks and is based on bank net income. In recent years has not been funded but it is expected to have funding available in 2011. First step would be to do an initial determination of scoring in order to decide whether or not to apply. It is a costly application process. I would estimate that this source is 50/50 right now.
9. Not a likely source for the EMSLI project
10. State Tax Credits – This is not a calculation I am explicitly familiar with but I have estimated based on CVCLT's most recent new development WB and the comparable project.
11. VHFA Mortgage – This would be hard debt on the project. The maximum the operating budget could support would likely be this \$300,000 although the current thinking is that projects with affordability covenants like these should have no hard debt.
12. Private foundation Grants – Something for the group to consider
13. Developer loan – This is an offset of the developer fee that typically gets added as a payable loan over 10 years. It is not recommended to have a developer loan.
14. Private Fundraising – Something for the group to discuss
15. Efficiency Vermont REEP Grant – A small grant for energy efficiencies.
16. Total Sources of Revenue – I have chosen to approach this from a more conservative perspective and to leave a large gap in funding/expenses in order that we can discuss options.
17. N/A
18. Land – This is really a very big guess and is based on a comment John made at a prior meeting but will obviously need to be adjusted when the appraisal is completed.
19. N/A
20. Title/insurance Recording
21. Appraisal –
22. Total Acquisition – Overall for the project, this is a reasonable number.
23. Construction Costs – see Construction costs below
24. General Conditions – See Construction costs below
25. Site Costs – This estimate is very high compared to other projects I am familiar with. It reflects a total site cost of \$82,000 per unit. For the comparable, it is \$18,000 per unit and for a recent project that CVCLT completed it was \$56,000 which was very high for us but included a water source that was on an adjacent site and required the water to be pumped up hill a long distance. According to the architects, these costs are the reality of a challenging site but some opportunities to reduce costs would likely be achievable if we were to revisit the design plans.
26. Construction Contingency at 5% - This is a typical percent contingency
27. GC Bond – typical costs

28. Construction Costs apartments – as per the cost estimate without any of the alternates
29. Construction Costs Common Building – as per the cost estimate without any of the alternates
30. Construction Costs parking sheds – as per the cost estimate without any of the alternates
31. Through 37 – predevelopment see comment #2
38. Architectural and Engineering – Reasonable as compared to recent CVCLT project. Comparable has donated services.
39. Legal
40. Permit Fees
41. Insurance/Taxes
42. Construction loan interest
43. Staff payroll start up – Not relevant to EMSLI, for assisted living project
44. Rent up Reserve – This is an operating reserve for losses from vacancies during lease-up.
45. Operating reserve – Most tax credit investors and our likely funders are now looking for operating reserves to fund any future operating deficit.
46. Replacement reserves – This is an initial funding of the reserves for future capital improvements to the buildings
47. Historic/Archeological - A minimal estimate for an architectural consultant
48. LIHTC Fee
49. Marketing
50. Loan/Lender Fees – typical for this type of project
51. Working Capital – Essentially another form of operating reserve as discussed in #45
52. Developer Fee – This is the fee paid to the developer/owner of the project. It is typically between 10 % and 12%. I have estimated a bit below 10%.
53. Soft Cost contingency – Typical for this type of project
54. Total Soft Costs – Overall, they are in line with similar projects although a healthier reserve would make the project more secure and attractive to investors.
55. Total uses of Funds – see below
56. Price per unit – CVCLT's most recent new development was \$220,000. This was the project mentioned above with the high costs for site work. This project at \$357,000 per unit is very high. Some of it is the high site costs which are at least \$25,000 to \$30,000 per unit higher than CVCLT's most expensive project. To really understand the balance, we would need to go line by line with the cost estimator tool and revisit the assumptions we gave the architect. I am guessing we could reduce the cost from \$10,000 to \$40,000 per unit through this exercise. A reasonable total development cost that would be acceptable to funders and investors is in the range of \$225,000 to a max of \$275,000.
57. Over/Under – This is the gap in funding. The challenge with this project is a combination of both a high total development cost and a maximum of 50% tax credit units. For example, if we were to go with 100% tax credits which was how the most recent CVCLT project was structured, we would have a \$200,000 gap which is reasonable at this point in a preliminary budget. I am in no way saying we should consider a 100% tax credit project as that is not the goal of the group or would it likely be marketable. I am just explaining the challenge.

EMSLI Housing - Preliminary Sources and Uses			
prepared by E Peltier 1/4/11			
Out of Basis			
Source	Comparable new project Bradford Asst. Living 32 un	EMSLI Housing 24 units	Comment
1 Low-Income Housing Tax Credit Equity	\$ 1,935,212.14	\$ 2,695,412.45	\$6.251 mill basis x 50% x 130% x 8.09% x 10 x \$0.82
1A HUD 202	\$ -	\$ 1,000,000.00	\$125,000 for eight units
2 Town endowment Carry Fund (predevelopment)	\$ 320,000.00	\$ 5,000.00	only portion for predevelopment, estimate (in and out)
3 VHCB Feasability \$	\$ 44,865.57	\$ 10,000.00	received (in and out)
4 VCDP Planning Grant	\$ 46,664.12	\$ 30,000.00	received (in and out)
5 VCDP Implementation Grant	\$ 550,000.00	\$ 600,000.00	through Town, can ask for up to \$800000
6 VHCB Grant	\$ 260,000.00	\$ 240,000.00	at \$20,000 per unit, 12 units
7 HUD HOME	\$ 240,000.00	\$ 240,000.00	for 8 very low income units (designate Medicaid units in ALF)
8 FHBLB Affordable Housing Grant	\$ 250,000.00	\$ 250,000.00	note: could apply for direct subsidy - 400K limit
9 HUD Special Purpose	\$ 500,000.00	\$ -	through Leahy or Sander's Office, not likely for this type of project
10 State Tax Credits	\$ 300,000.00	\$ 350,000.00	estimated amount
11 VHFA Mortgage	\$ 300,000.00	\$ 300,000.00	as per operating pro forma, ideally no hard debt
12 Private Foundation Grants	\$ 275,680.00	\$ -	
13 Developer Loan	\$ 1,400,000.00	\$ -	local funds to raise
14 Private Fundraising	\$ 13,000.00	\$ 12,000.00	at \$1,000 per affordable unit
15 Efficient VT REEP Program Grant	\$ -	\$ -	
16 TOTAL	\$ 6,735,421.83	\$ 5,732,412.45	Comment
Expense	\$ -	\$ -	
17 Acquisition	\$ 320,000.00	\$ 150,000.00	estimate until appraisal is complete
18 Land	\$ -	\$ -	
19 Buildings	\$ 3,500.00	\$ 3,500.00	
20 Title Insurance/Recording	\$ 4,000.00	\$ 1,500.00	
21 Appraisal	\$ 327,500.00	\$ 155,000.00	
22 TOTAL ACQ	\$ -	\$ -	
23 Construction Cost	\$ 287,795.00	\$ 144,288.00	
24 General Conditions	\$ 578,194.00	\$ 1,970,112.00	very high
25 Site Cost	\$ 213,150.00	\$ -	
Concrete	\$ 248,141.00	\$ -	
Rough and Finish Carpentry	\$ 6,017.00	\$ -	
Metals	\$ 194,565.00	\$ -	
Moisture Control	\$ 57,285.00	\$ -	
Doors, Windows	\$ 155,921.00	\$ -	
Furnishes	\$ 82,550.00	\$ -	
Specialties	\$ 1,195,405.00	\$ -	
Special Construction	\$ 601,976.00	\$ -	
Mechanical	\$ 280,690.00	\$ -	
Electrical	\$ 19,500.00	\$ -	
Appliances	\$ 60,000.00	\$ -	
Commercial Kitchen	\$ 20,000.00	\$ -	
Furnishings	\$ 200,059.45	\$ 600,000.00	
26 Construction Contingency at 10%	\$ -	\$ -	

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Source	Out of Basis	Comparable new project	Comment
27 GC Bond	\$ 32,167.00	\$ 46,272.00	
CM Fee at 3.25%	\$ 136,540.57		
ALTA Survey	\$ 2,500.00		
Environmental	\$ 2,500.00		
Clerk of the Works	\$ 10,000.00		
Architectural/Engineering (7%)	\$ 294,087.39	\$ 2,972,634.86	
28 Construction costs apartments	\$ 546,722.00		
29 Construction costs common building	\$ 209,985.00		
30 Construction costs parking sheds	\$ 4,679,043.42	\$ 6,490,013.86	
TOTAL CON			
Soft Costs - Pre-Development			
Pre-Development Costs	\$ 42,028.94	\$ 7,500.00	in and out
31 Architectural and Engineering	\$ 4,606.62	\$ 2,500.00	in and out
32 Legal	\$ 2,936.08	\$ 5,000.00	in and out
33 Taxes and Insurance	\$ 30,463.82	\$ 4,500.00	in and out
34 Initial Market Analysis, Program Consultant	\$ 10,406.70	\$ 4,500.00	in and out
35 Revised Market Analysis, Revised Program	\$ 2,178.78	\$ 21,000.00	in and out
36 Other Pre-Development Cost	\$ 92,620.94	\$ 45,000.00	in and out
37 TOTAL PRE-DEVELOPMENT COST			
Soft Costs - Development			
38 Architectural and Engineering	\$ 10,000.00	\$ 360,000.00	comparable to WB partnership and real estate
39 Legal	\$ 45,000.00	\$ 50,000.00	
40 Permit Fees	\$ 36,500.00	\$ 40,000.00	Act 250, WW, Storm, Local
41 Insurance/Taxes	\$ 25,000.00	\$ 25,000.00	During Construction
42 Construction loan interest	\$ 75,000.00	\$ 140,000.00	based on WB development estimates
43 Staff Payroll - Start Up	\$ 21,320.00	\$ -	
44 Rent Up Reserve	\$ 72,430.00	\$ 40,000.00	
45 Operating Reserve	\$ 550,000.00	\$ 200,000.00	
46 Replacement Reserve	\$ 14,000.00	\$ 100,000.00	
47 Historic/Archeological	\$ 1,500.00	\$ 1,500.00	
48 LIHTC Fee	\$ 8,000.00	\$ 12,000.00	
49 Marketing	\$ 3,000.00	\$ 4,000.00	
50 Loan/Lender Fees	\$ 20,000.00	\$ 60,000.00	
51 Working Capital	\$ 75,000.00	\$ 100,000.00	
52 Developer Fee	\$ 689,200.00	\$ 700,000.00	
53 Soft Cost Contingency	\$ 7,500.00	\$ 50,000.00	
54 TOTAL SOFT COSTS	\$ 1,653,450.00	\$ 1,882,500.00	
55 TOTAL USE OF FUNDS	\$ 6,752,614.36	\$ 8,572,513.86	
56 PRICE PER UNIT	\$ 241,164.80	\$ 357,188.08	
57 Over/Under	\$ (17,192.53)	\$ (2,840,101.41)	\$ 6,251,614.36