

ACT 250: CRITERION 9(L)

Greg Boulbol, NRB

Jen Mojo, ANR

Kirsten Sultan, NRB

Agenda: ACT 250 9(L)

- History of Criteria 9(L)
- 9(L) Implementation
- Overview of 9(L)
Guidance
- Walk through Examples
- Q&A

Criterion 9(L) 10 VSA 6086(a)(9)(L)

Purpose Settlement patterns. To promote Vermont's historic settlement pattern of compact village and urban centers separated by rural countryside,

Step 1 a permit will be granted for a development or subdivision outside an existing settlement when it is demonstrated by the applicant that, in addition to all other applicable criteria, the development or subdivision:

Step 2 i. Will make efficient use of land, energy, roads, utilities, and other supporting infrastructure; and

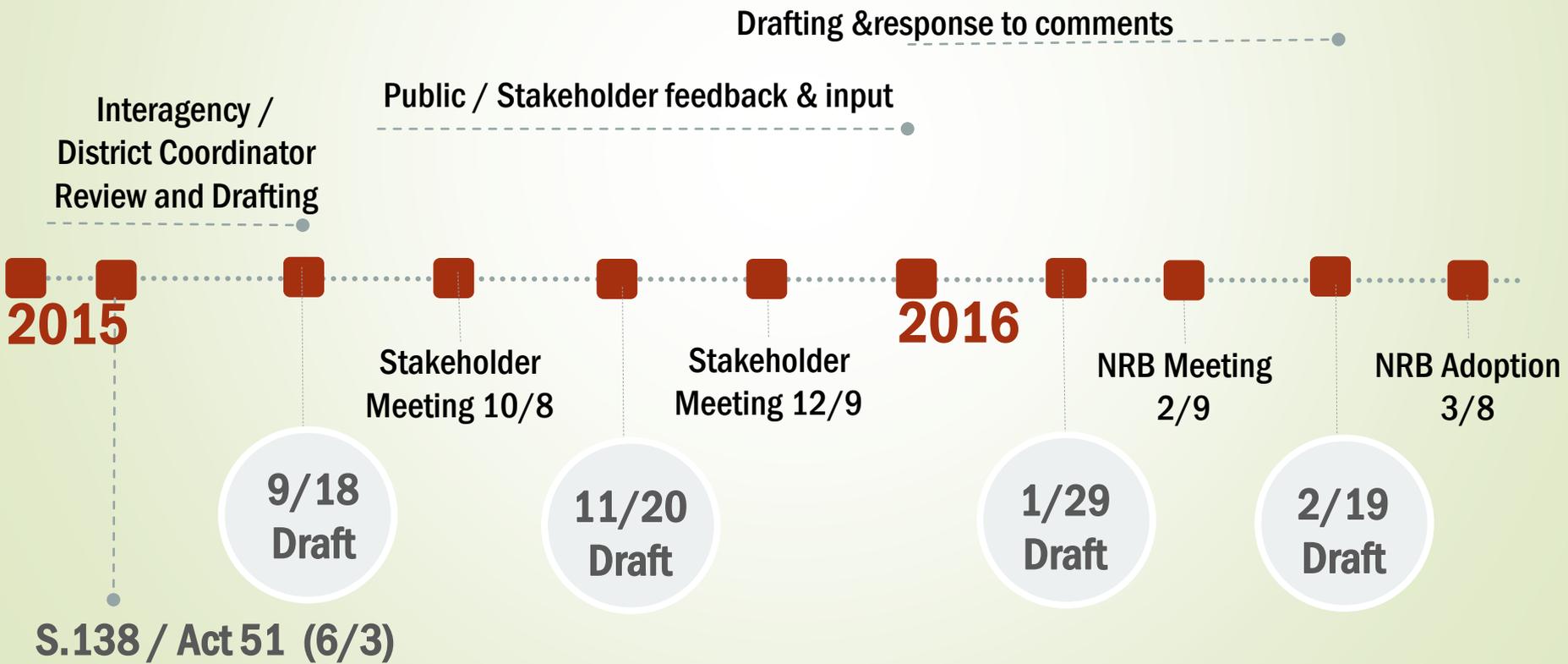
ii. I) will not contribute to a pattern of strip development along public highways [pathway 1]; or

Step 3 II) if the development or subdivision will be confined to an area that already constitutes strip development, will incorporate infill as defined in 24 V.S.A. § 2791 and is designed to reasonably minimize the characteristics listed in the definition of strip development under subdivision 6001 (36) of this title. [pathway 2]

Legislative mandate regarding 9(L) Guidance

S.138 / Act 51

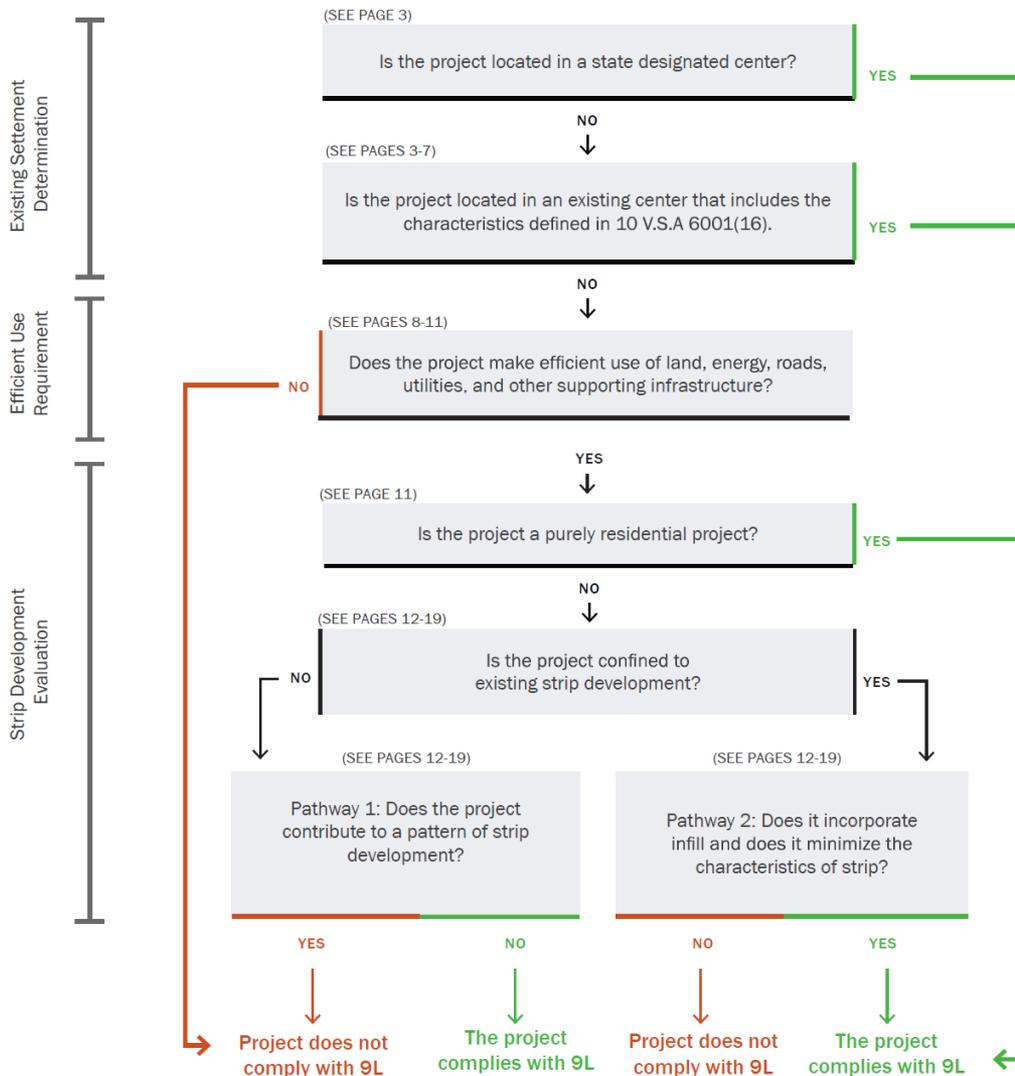
“The General Assembly determines that additional opportunity for public comment on the Criterion 9L Procedure, as well as additional education and improved guidance, would be beneficial in implementing the criterion.”



Participants in the Stakeholder Process:

- Barre Area Development Corporation
- Chittenden County Regional Planning Commission
- Conservation Law Foundation
- Downs Rachlin Martin
- Greater Burlington Industrial Corporation
- Homebuilders and Remodelers of Northern Vermont
- Hollister Hill Consulting
- Lake Champlain Chamber of Commerce
- Lamoille County Regional Planning Commission
- MMR; Northwest Regional Planning Commission
- Northeastern Vermont Development Association
- Preservation Trust Vermont
- S.D. Ireland Companies
- Two Rivers-Ottawaquechee Regional Commission
- Vermont Association of Planning and Development Agencies Vermont Association of Realtors
- Vermont Chamber of Commerce
- Vermont League of Cities and Towns
- Vermont Natural Resources Council
- Vermont Planners Association
- White & Burke
- Individuals from across Vermont

STATE OF VERMONT NATURAL RESOURCES BOARD GUIDANCE: CRITERION 9(L) FLOWCHART



STEP 1: Existing Settlement Determination: 10 VSA 6001(16)(A)

- i. State Designated Center; or
-
- ii. An existing center that is compact in form and size; that contains a mixture of uses that include a substantial residential component and that are within walking distance of each other; that has significantly higher densities than densities that occur outside the settlement; and that is typically served by municipal infrastructure such as water, wastewater, sidewalks, paths, transit and public parks or greens.
-

State Designated Centers



Downtowns



Village Centers



Growth Centers



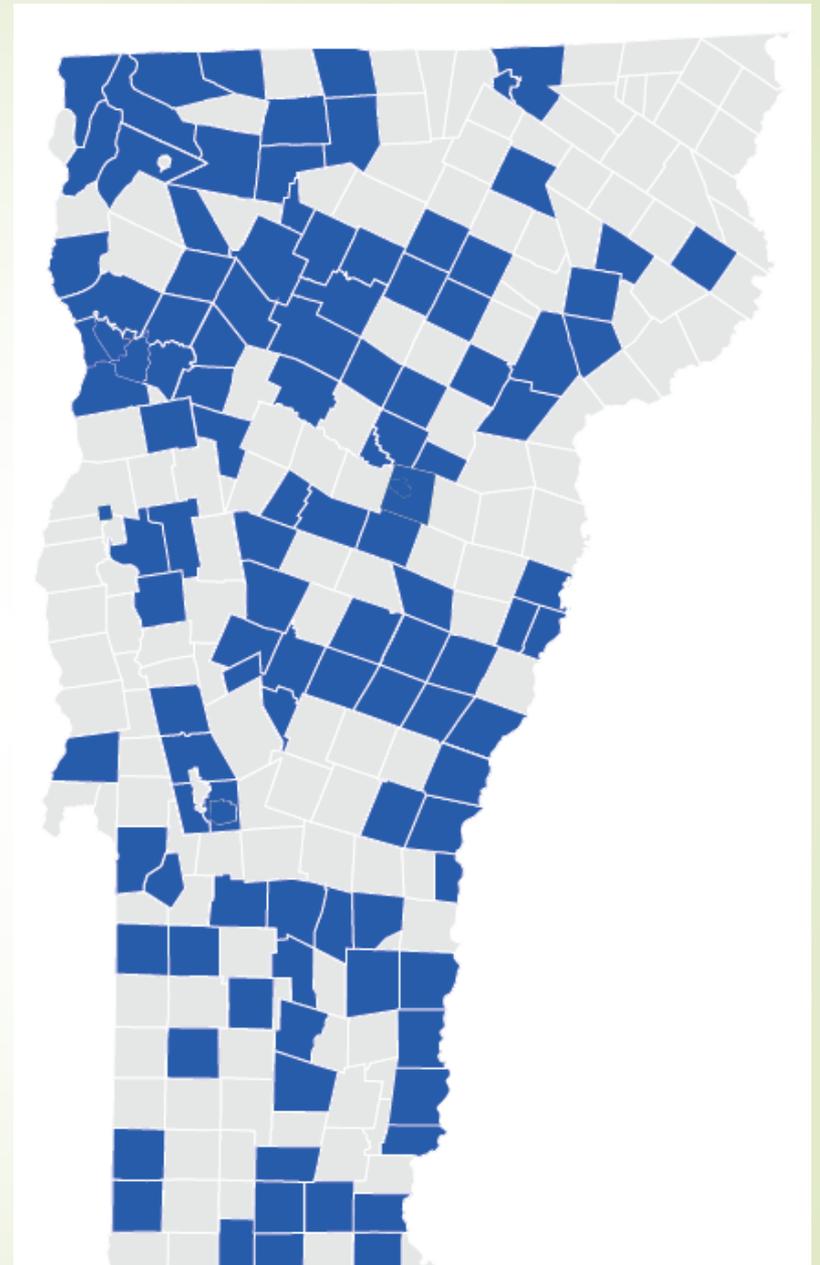
New Town
Centers



Neighborhood
Development Areas

160

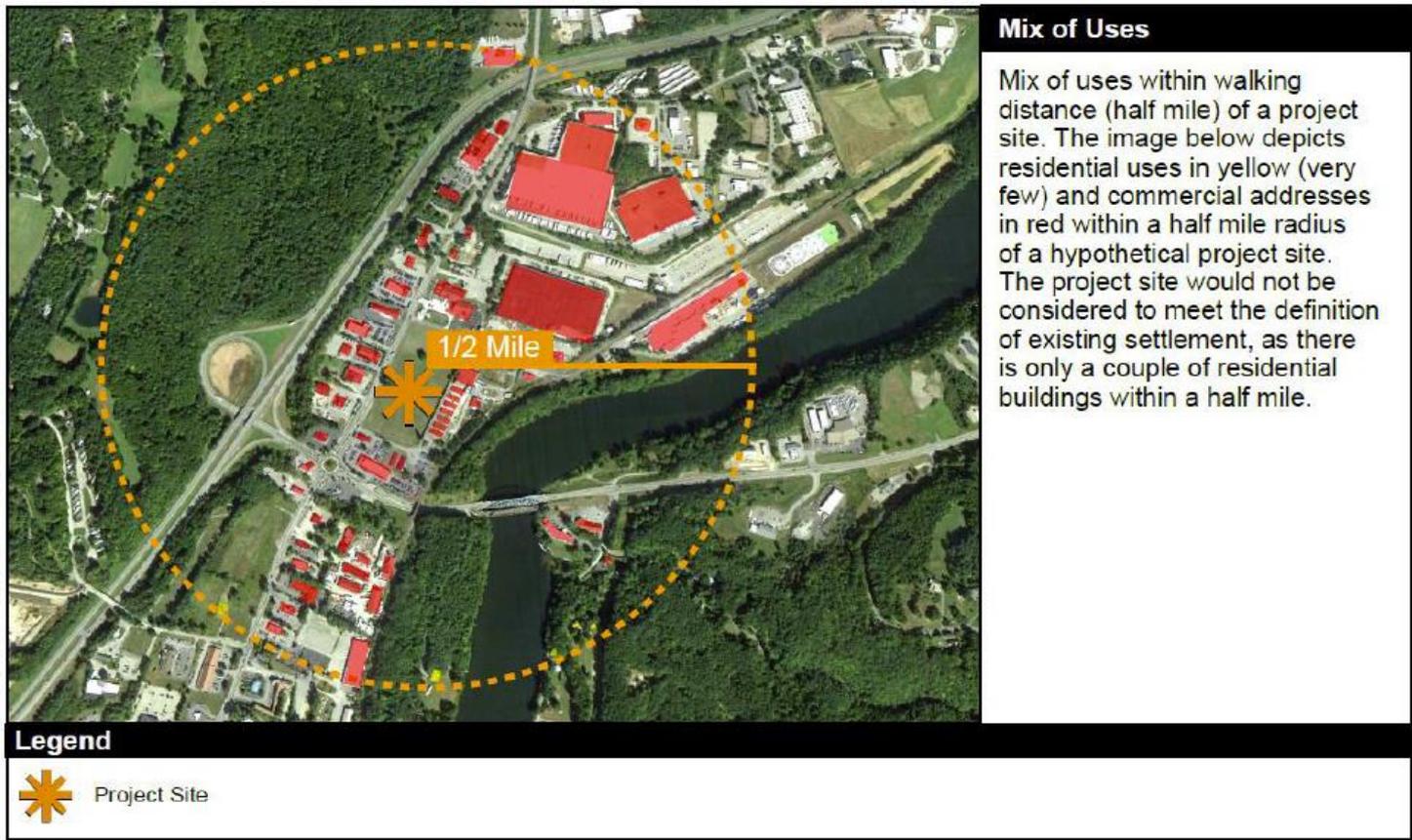
Designated Centers



Municipalities with State Designated Centers

Existing Settlement Determination

Mixture of uses that include a substantial residential component and that are within walking distance of each other;



Existing Settlement Determination

Has significantly higher densities than densities that occur outside the settlement;



E-911 Point Density for habitable structures

STEP 2: Efficient Use Requirement

Efficient use of land, energy, roads, utilities and other infrastructure.

General strategies to increase efficient use include:

- consolidating and coordinating utilities;
- consolidating and coordinating access;
- mixing uses, such as residential, office and retail;
- multistory buildings;
- clustering development;
- minimizing off street parking and using shared parking;
- using on street parking, which generally utilize half the space of off-street lots;
- planning to accommodate future development;
- design that fosters a grid network of roads;
- redeveloping existing buildings and site;
- minimizing setbacks;
- building energy efficient structures;
- integrating renewable energy generation.

FIGURE 6: Efficient Use – Residential, Office and Retail Example



Project includes 122 dwelling units, 55,200 square feet of retail and 26,000 square feet of office on 16 acres of land with 3300 linear feet of road. The project redevelops a driving range and effectively mixes uses, uses on-street parking, shared parking, minimizes setbacks, connects to adjacent water and wastewater infrastructure, connects to an adjacent neighborhood, accommodates future connections, consolidates access to an arterial road and is served by public transit. All buildings in the project are multi-story.

Legend

-  Commercial Mixed Use
-  Multi-family Residential
-  Two-family Residential

FIGURE 7: Inefficient Use – Residential and Office Example



Development includes 175 single family homes and 50,657 square feet of single story office on approximately 300 acres. 17,000 linear feet of road and approximately 6 times the amount of public water and sewer infrastructure as the mixed use project above. The project does not include: shared parking, on-street parking, shared access, accommodate future development, or connect the residential and commercial development.

STEP 3: Strip Development Evaluation

Definition of Strip Development (10 VSA 6001(36))

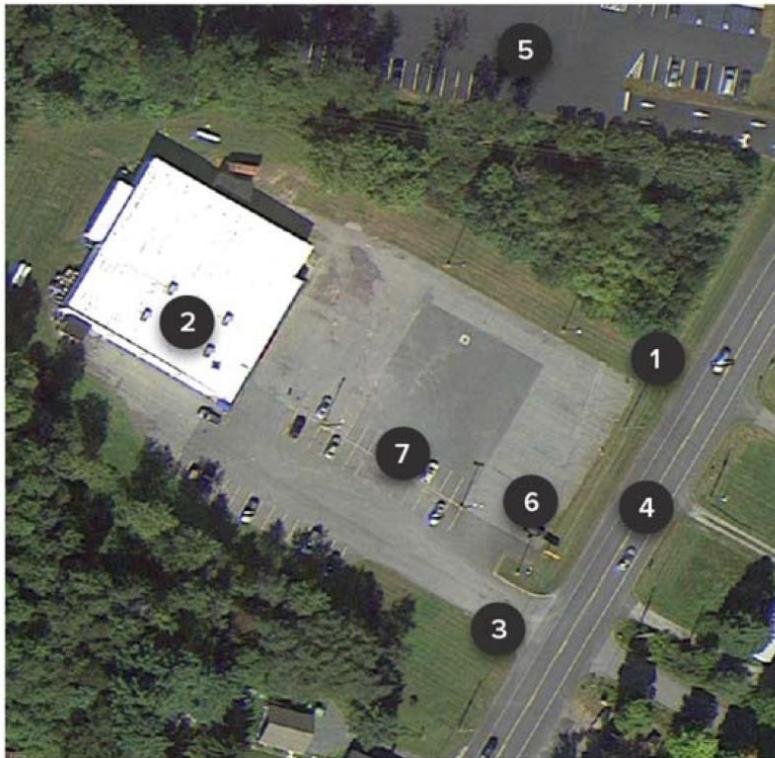
Strip development means linear **commercial development** along a public highway that includes three or more of the following characteristics:

1. broad road frontage
2. predominance of single-story buildings
3. limited reliance on shared highway access
4. lack of connection to any existing settlement except by highway
5. lack of connection to surrounding land uses except by highway
6. lack of coordination with surrounding land uses
7. limited accessibility for pedestrians

In determining whether a proposed development or subdivision constitutes strip development, the District Commission shall consider the topographic constraints in the area in which the development or subdivision is to be located.

Strip Development Evaluation

Definition of Strip Development



- 1 Broad road frontage
- 2 Single story
- 3 Exclusive access drive
- 4 Lack of connection to existing settlement except by highway
- 5 Lack of connection to surrounding land uses except by highway
- 6 Lack of coordination with surrounding land uses
- 7 Limited accessibility for pedestrians

Strip Development Evaluation (step 3)

PATHWAY 1: Does the project contribute to a pattern of strip development along public highways? (may make sense to analyze pathway 2 first)

Consider:

- Does the project meet the definition of strip development?
- Considering context and character of the area, are there circumstances that make the project more or less likely to contribute to a pattern of strip development?

Strip Development Evaluation (step 3)

PATHWAY 2: If a project is [1]confined to an area that already constitutes strip development, compliance with 9(L) may be demonstrated if the projects [2]incorporates infill and is designed to reasonably [3]minimize the characteristics of strip development.

1. A project is “confined to” existing strip development if it is surrounded by strip development on both sides of the project along the same side of the public highway, not merely near other strip development or in an area of scattered development or sprawl.
2. Infill is defined as “the use of vacant land or property within a built-up area for further construction or development” 24 V.S.A. § 2791

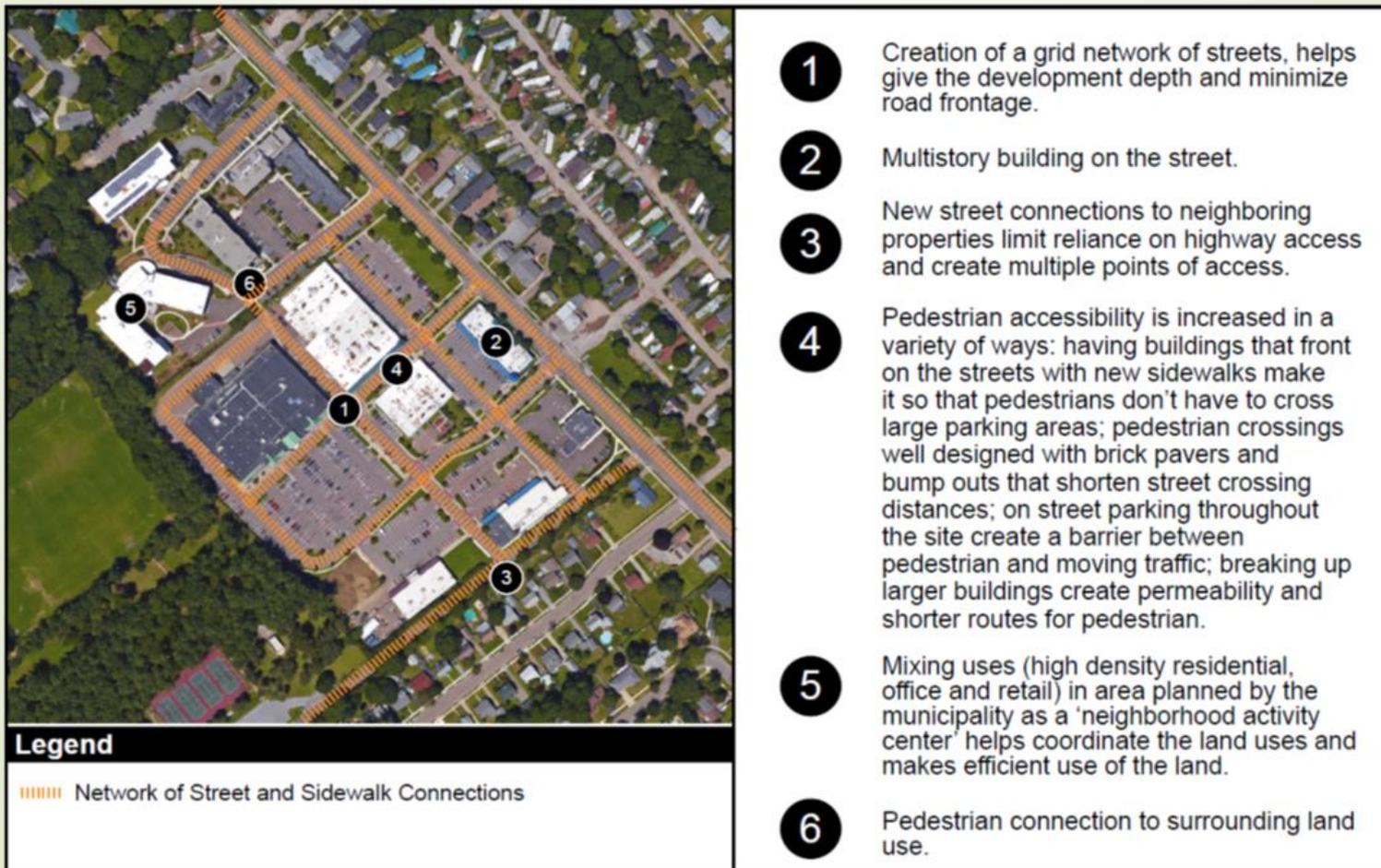
Strip Development Evaluation

Is the project confined to an area that already constitutes strip development?



Strip Development Evaluation

Reasonably minimizing the characteristics of strip development.

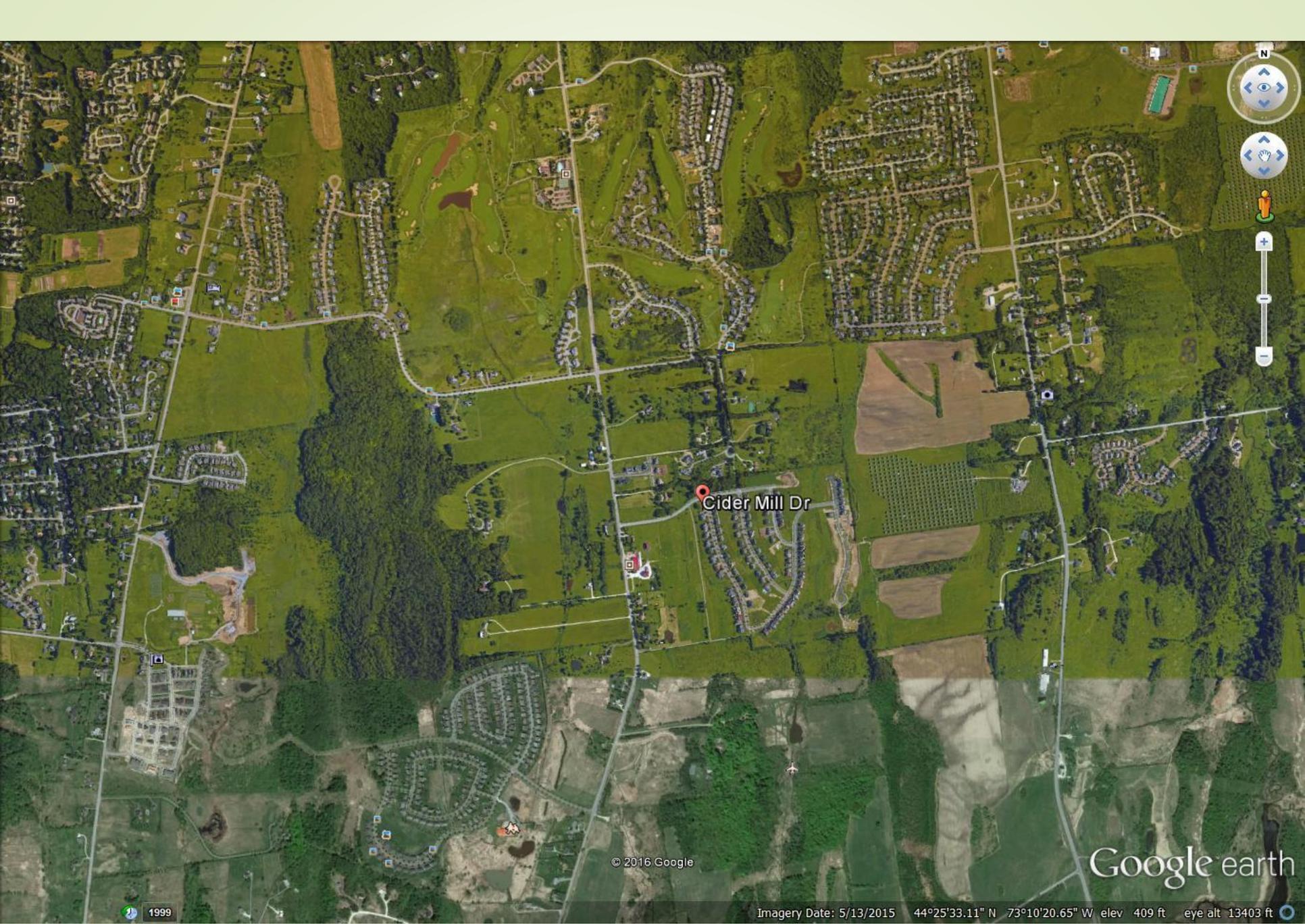


EXAMPLES:

- 1) The Cider Mill
- 2) The Hill Farm
- 3) Champlain Valley
Equipment
- 4) McMahon
Chevrolet

South Burlington The Cider Mill

Residential development--109 residential units and infrastructure. The tracts of land consist of 65.5 acres.



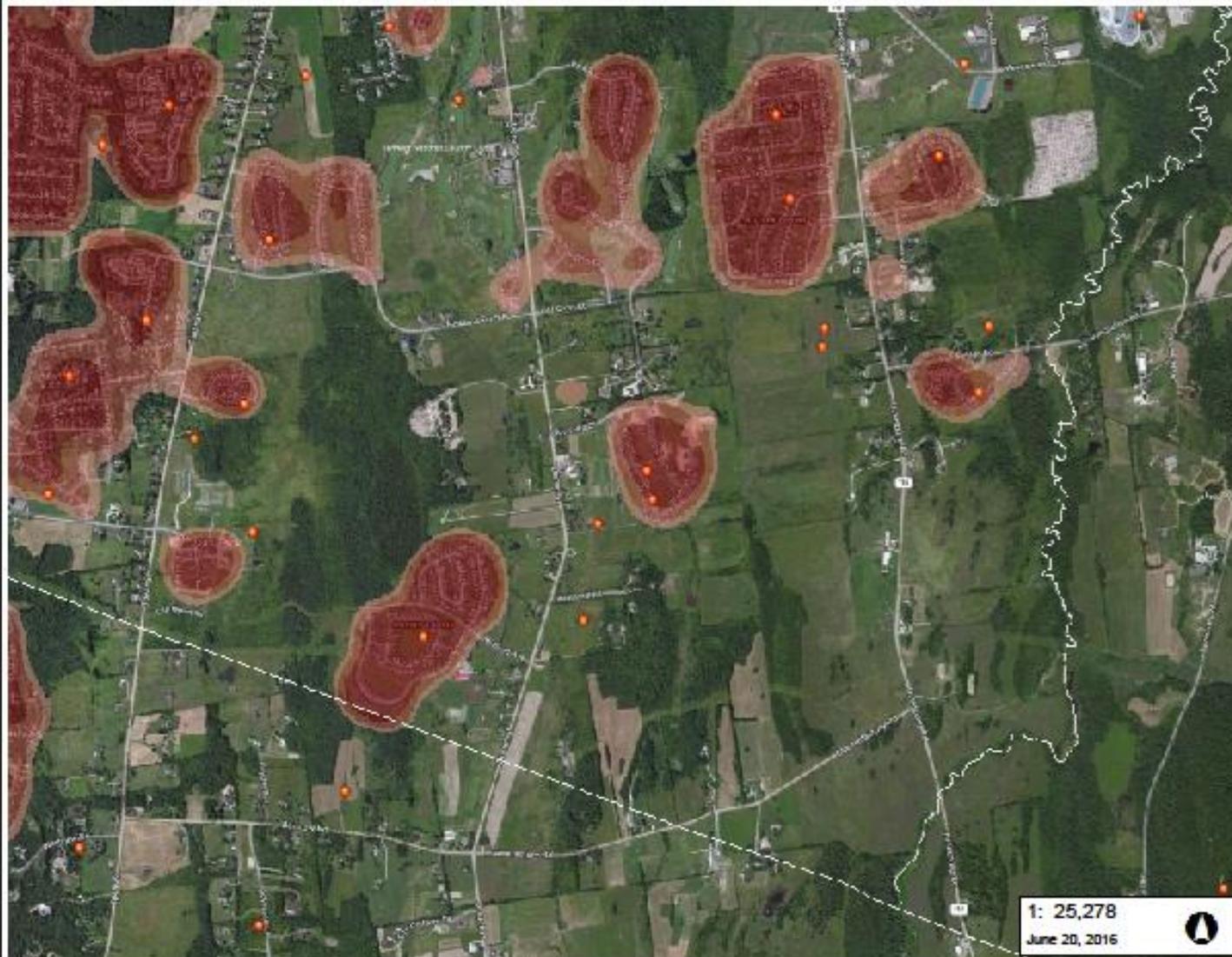
Cider Mill Dr

© 2016 Google

Google earth

1999

Imagery Date: 5/13/2015 44°25'33.11" N 73°10'20.65" W elev 409 ft eye alt 13403 ft



LEGEND

-  ACT250 PERMIT
-  Commercial Mining
-  Dredging
-  Gravel Mining
-  Dam
-  Ledge
-  Waterfall
-  Weir
-  Avulsion
-  Braiding
-  Flood Chute
-  Neck Cut Off
-  Migration
-  Animal Crossing
-  Stream Ford
-  Berm
-  Road
-  Improved Path
-  Railroad
- Bank Erosion**
 -  Left Bank
 -  Right Bank
- Mass Failure**
 -  Left Bank
 -  Right Bank
- Town Boundary**
- Density of Habitable Buildings**

1: 25,278
June 20, 2016



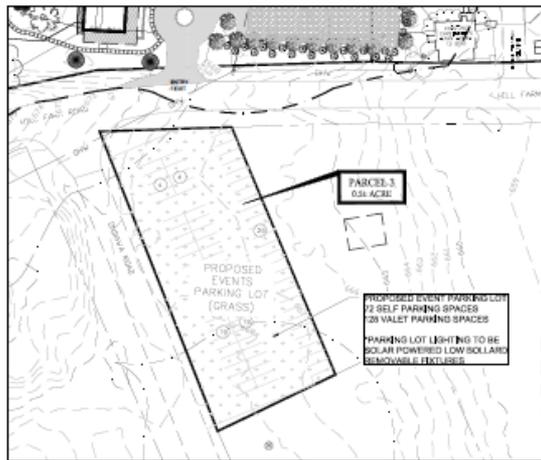
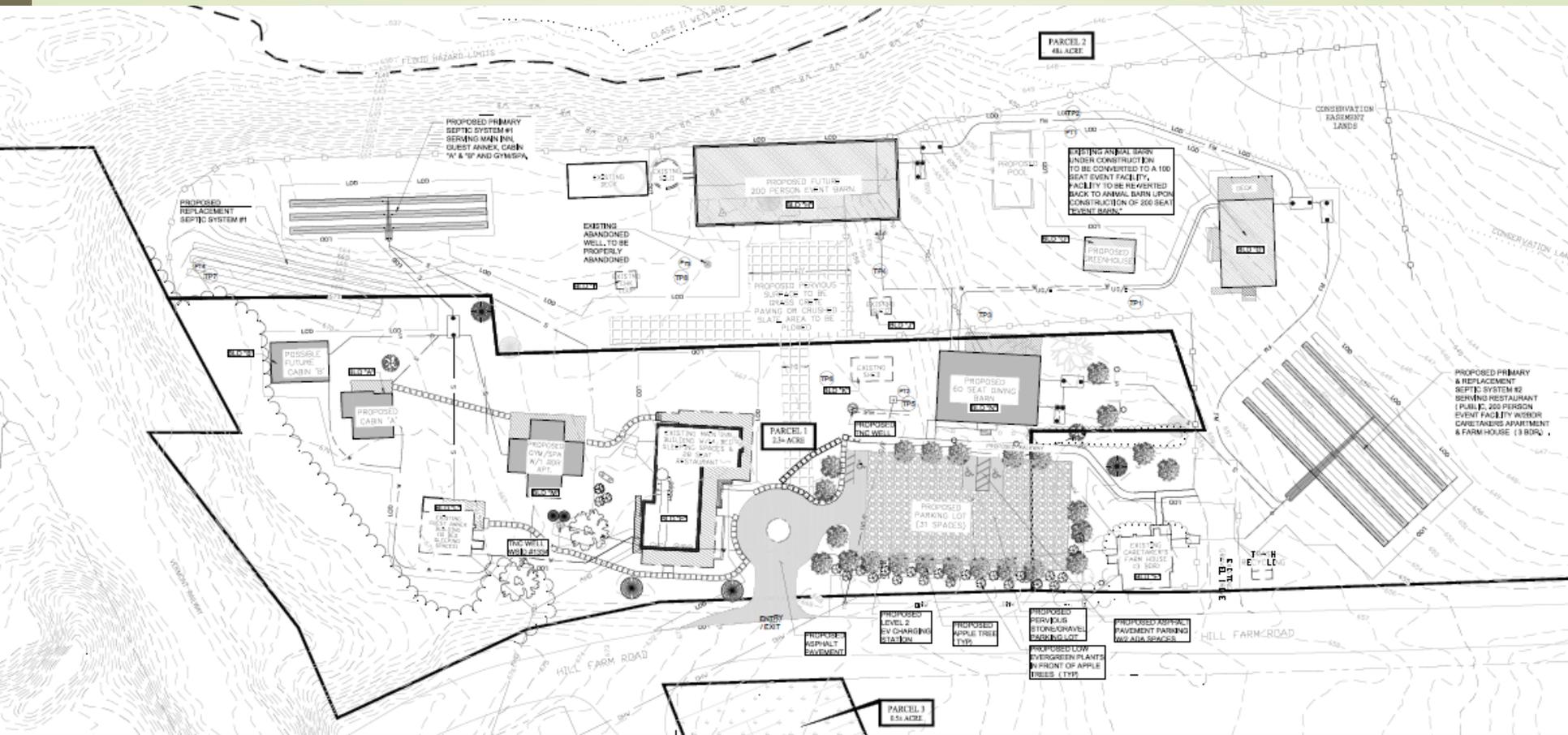
1,284.0 0 642.00 1,284.0 Meters
 WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 2106 Ft 1cm = 253 Meters
 © Vermont Agency of Natural Resources THIS MAP IS NOT TO BE USED FOR NAVIGATION

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. ANR 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.

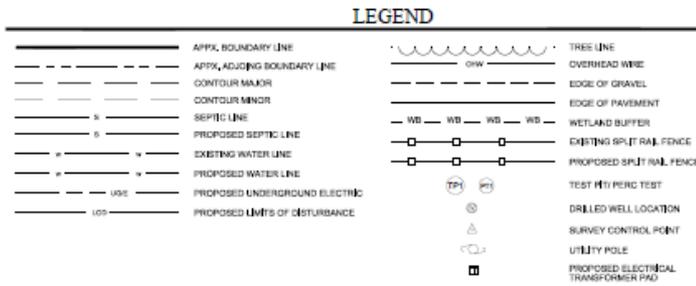
NOTES
 Map created using ANR's Natural Resources Atlas

Sunderland Hill Farm Inn

Construct gym/spa building, 60 seat restaurant, 2 cottages, small event barn, greenhouse, in-ground pool, and overflow parking at the existing permitted facility.



1 PROPOSED ONE-FLOW EVENT PARKING

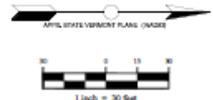


IMPERVIOUS AREA TABLE

PERC TEST IMPERVIOUS	35,200 SQ FT (1.072 ACRES)
ADDITIONAL IMPERVIOUS	1,488 SQ FT (0.033 ACRES)
TOTAL PROJECT IMPERVIOUS	36,688 SQ FT (1.076 ACRES)

PROPOSED EARTH DISTURBANCE

AREA OF DISTURBANCE	0.24 ACRES
---------------------	------------





7A

7A

7A

Lat: 43.10960
Lon: -73.12015

Broken Hill River

Green Hill River

Hill Ln

Lois Rd

Broken Hill River

Ondawa Rd

Sunderland Hill Rd

Sunderland Hill Rd

Appalachian Mountains

Green Mountains

Outham Rd

Randall Rd

1: 9,829

November 13, 2014



Hill Farm Rd



Hill Farm Inn

Hill Rd



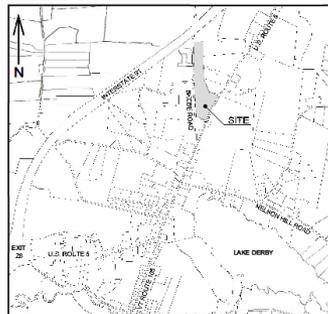
Derby Champlain Valley Equipment

Construct 28,000 square foot commercial building for equipment sales and service with outside storage and display, drives, parking and utilities.

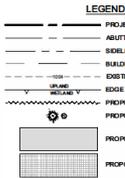
THE CONTRACTOR SHALL NOTIFY DCS SAFETY AT 811 PRIOR TO ANY EXCAVATION.

SEE ADJACENT PARCELS, PAGES 416-417 OF THE SCRY LAND RECORDS FOR A COMPLETE DESCRIPTION OF THE TYPICAL UTILITY POLES. NO STRUCTURES OF ANY KIND WITHIN 50 FEET OF THE POLE LINE. NO TREES OF ANY KIND WITHIN 50 FEET OF THE POLE LINE UNLESS A MARK IS MADE TO THE OWNER FOR MAINTENANCE AND REPAIR.

SIGHT DISTANCES ON BEEBE ROAD AT THE PROPOSED COMMERCIAL DRIVE EXCEED 800 FEET TO THE NORTH AND SOUTH.



LOCATION MAP
SCALE: 1" = 200'

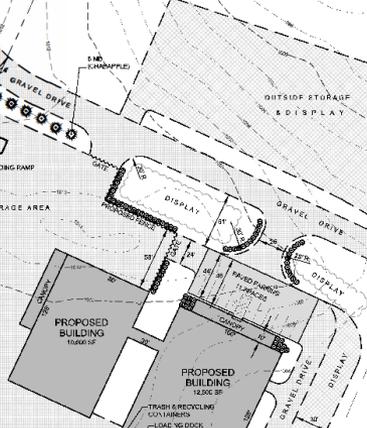


PARCEL DATA

PARCEL NUMBER: RT008 017 05
 TOTAL PROJECT AREA: 30 ACRES +/-
 ZONING DISTRICT: COMMERCIAL ZONING DISTRICT
 WATER & SEWER: CLASS 2 (2 IN LOT WATER & SEWER)
 BUILDING SETBACKS: FRONT YARD 25 FEET, SIDE YARD 10 FEET, REAR YARD 10 FEET
 MAX. BUILDING HEIGHT: 25 FEET (SETBACKS SHALL BE INCREASED BY 1 FOOT FOR EACH VERTICAL FOOT IN EXCESS OF 25 FEET HEIGHT)
 PROPOSED BUILDING HEIGHT: 25 FEET
 PARKING REQUIRED: 2750 SF RETAIL X 1 SPACE PER 50 SF + 11 SPACES
 24 EMPLOYEES 8000 X 1 SPACE PER EMPLOYEE + 24 SPACES
 PARKING PROPOSED: 38 SPACES PROPOSED

BEEBE ROAD

31 CROSS 21 CROSS AT 4' ON CENTER



SIGHT DISTANCES ON U.S. ROUTES AT THE PROPOSED COMMERCIAL DRIVE EXCEED 800 FEET TO THE NORTH AND SOUTH.

FUTURE DRIVE TO PROPOSED HOUSING RESIDENTIAL PROJECT

PROPOSED FREE STANDING NON-ILLUMINATED SIGNS

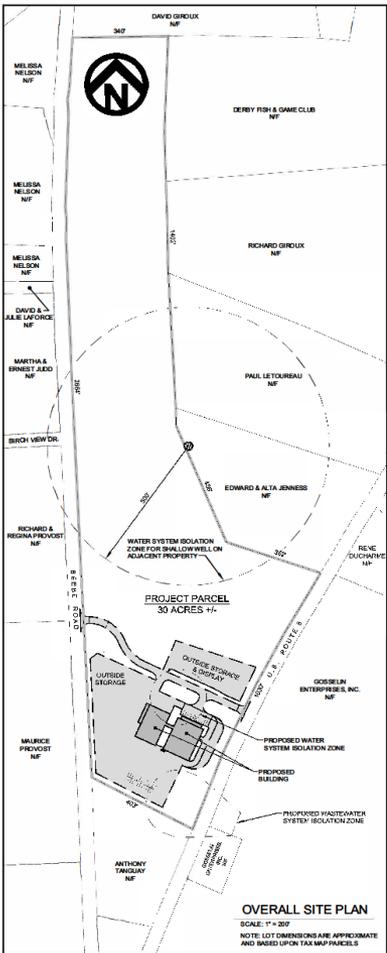
LANDSCAPING NOTES:
 DERRY ZONING BY-LAW 270 REQUIRES THE FOLLOWING FOR EVERY 25' LINEAR FEET OF STREET FRONTAGE FOR COMMERCIAL PROJECTS (MINIMUM 50%):
 1 DECIDUOUS TREE (2 1/2" - 3" CAL OR 1 CONIFEROUS TREE (8'-8' HEIGHT)
 4 DECIDUOUS SHRUBS (2 1/2" GALLON POT)
 2 EVERGREEN SHRUBS (2 1/2" GALLON POT)
 THE PROJECT HAS 100 FEET OF DEVELOPED FRONTAGE ALONG U.S. ROUTES 5

PLANT LIST

Key	Botanical Name	Common Name	Quantity	Size	Remarks
Trees					
PN	<i>Pinus nigra</i>	Autumn Pine	14	5' to 6' height	M&B
PS	<i>Pinus strobus</i>	White Pine	23	5' to 6' height	M&B
MB	<i>Malus baccata 'Redpur'</i>	Flowering Crabapple	6	2 1/2" to 3" Cal.	M&B
	TOTAL TREES		43		
	Deciduous Shrubs				
AA	<i>Aronia arbutifolia 'Triumphante'</i>	Red Chokeberry	14	2 to 3 gal	Container
AM	<i>Aronia melanocarpa 'Nighting'</i>	Black Chokeberry	14	2 to 3 gal	Container
CSL	<i>Cornus sericea 'Coralbloss'</i>	Red Twig Dogwood	31	2 to 3 gal	Container
CSF	<i>Cornus sericea 'Floralplum'</i>	Yellow Twig Dogwood	31	2 to 3 gal	Container
IVa	<i>Ilex verticillata 'Blueberry'</i>	Winterberry (F)	7	2 to 3 gal	Container
IVb	<i>Ilex verticillata 'Sue Daley'</i>	Winterberry (F)	1	2 to 3 gal	Container
SV	<i>Spiraea x vanhouttei</i>	Vanhouttei Spirea	18	2 to 3 gal	Container
	TOTAL DECIDUOUS SHRUBS		116		
	Evergreen Shrubs				
K	<i>Juniperus communis 'Soffens'</i>	Common Juniper	12	3 gal	Container
IV	<i>Juniperus horizontalis 'Crown Blue'</i>	Eastern Red Cedar	24	3 gal	Container
BP	<i>Buxus sempervirens 'Green'</i>	Small Leaf Boxwood	12	3 gal	Container
	TOTAL EVERGREEN SHRUBS		48		

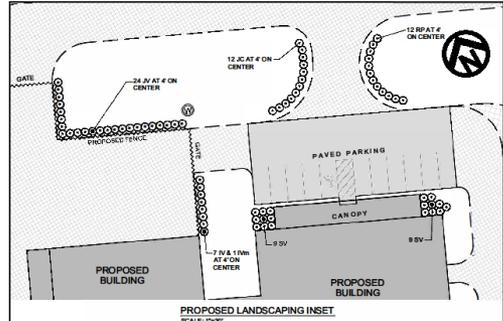
PLANT LIST

Key	Botanical Name	Common Name	Quantity	Size	Remarks
Trees					
PN	<i>Pinus nigra</i>	Autumn Pine	14	5' to 6' height	M&B
PS	<i>Pinus strobus</i>	White Pine	23	5' to 6' height	M&B
MB	<i>Malus baccata 'Redpur'</i>	Flowering Crabapple	6	2 1/2" to 3" Cal.	M&B
	TOTAL TREES		43		
	Deciduous Shrubs				
AA	<i>Aronia arbutifolia 'Triumphante'</i>	Red Chokeberry	14	2 to 3 gal	Container
AM	<i>Aronia melanocarpa 'Nighting'</i>	Black Chokeberry	14	2 to 3 gal	Container
CSL	<i>Cornus sericea 'Coralbloss'</i>	Red Twig Dogwood	31	2 to 3 gal	Container
CSF	<i>Cornus sericea 'Floralplum'</i>	Yellow Twig Dogwood	31	2 to 3 gal	Container
IVa	<i>Ilex verticillata 'Blueberry'</i>	Winterberry (F)	7	2 to 3 gal	Container
IVb	<i>Ilex verticillata 'Sue Daley'</i>	Winterberry (F)	1	2 to 3 gal	Container
SV	<i>Spiraea x vanhouttei</i>	Vanhouttei Spirea	18	2 to 3 gal	Container
	TOTAL DECIDUOUS SHRUBS		116		
	Evergreen Shrubs				
K	<i>Juniperus communis 'Soffens'</i>	Common Juniper	12	3 gal	Container
IV	<i>Juniperus horizontalis 'Crown Blue'</i>	Eastern Red Cedar	24	3 gal	Container
BP	<i>Buxus sempervirens 'Green'</i>	Small Leaf Boxwood	12	3 gal	Container
	TOTAL EVERGREEN SHRUBS		48		



OVERALL SITE PLAN
SCALE: 1" = 200'

NOTE: LOT DIMENSIONS ARE APPROXIMATE AND BASED UPON TAX MAP PARCELS.



PROPOSED LANDSCAPING INSET
SCALE: 1" = 20'

SHEET INDEX

- OVERALL SITE PLAN
- UTILITY & GRADING PLAN
- EPSC PLAN & DETAILS
- WASTEWATER SYSTEM & WATER SUPPLY
- SITWORK DETAILS/SPECIFICATIONS
- LIGHTING PLAN

GENERAL NOTES:
 1. THE PURPOSE OF THESE PLANS IS TO PRESENT THE PROPOSED SITE IMPROVEMENTS. SEE ALSO PLANS BY OTHERS FOR ADDITIONAL DESIGN DETAILS AND UTILITY RELATED INFORMATION.
 2. THE BOUNDARY INFORMATION SHOWN IS BASED UPON LIMITED FIELD EVIDENCE. THE TANGIBLE PROPERTY LINES SHOWN ARE BASED UPON THE RECORDS OF THE CHAMPLAIN VALLEY EQUIPMENT RECORDS. THE PARCEL DESCRIPTION IN THE JAMES DEED, ASSUMED 3 ROD RIGHTS OF WAY FOR BEEBE ROAD AND U.S. ROUTES 5 AND 7A, WINDSOR, VT.
 3. THE PROJECT PARCEL MAY BE SUBJECT TO ADDITIONAL EASEMENTS AND/OR RIGHTS NOT SHOWN ON THESE PLANS.

APPLICANT/LANDOWNERS
 JOSHUA M. PROVOSE & BRADLEY CARPENTER
 610 CHAMPLAIN VALLEY EQUIPMENT
 P.O. BOX 505
 DERRY, VT 05829
 DEED BOOK 284, PAGE 70-71

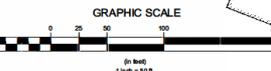
04-25-15	ADD FREE STANDING SIGNS	ABR
04-15-15	REVISED WITH A DESCRIPTION OF WELLO RIGHTS	ABR
03-11-15	REVISE SHRUBS IN ROW PER VELLO	ABR
Date	Revision	By

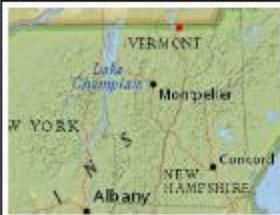
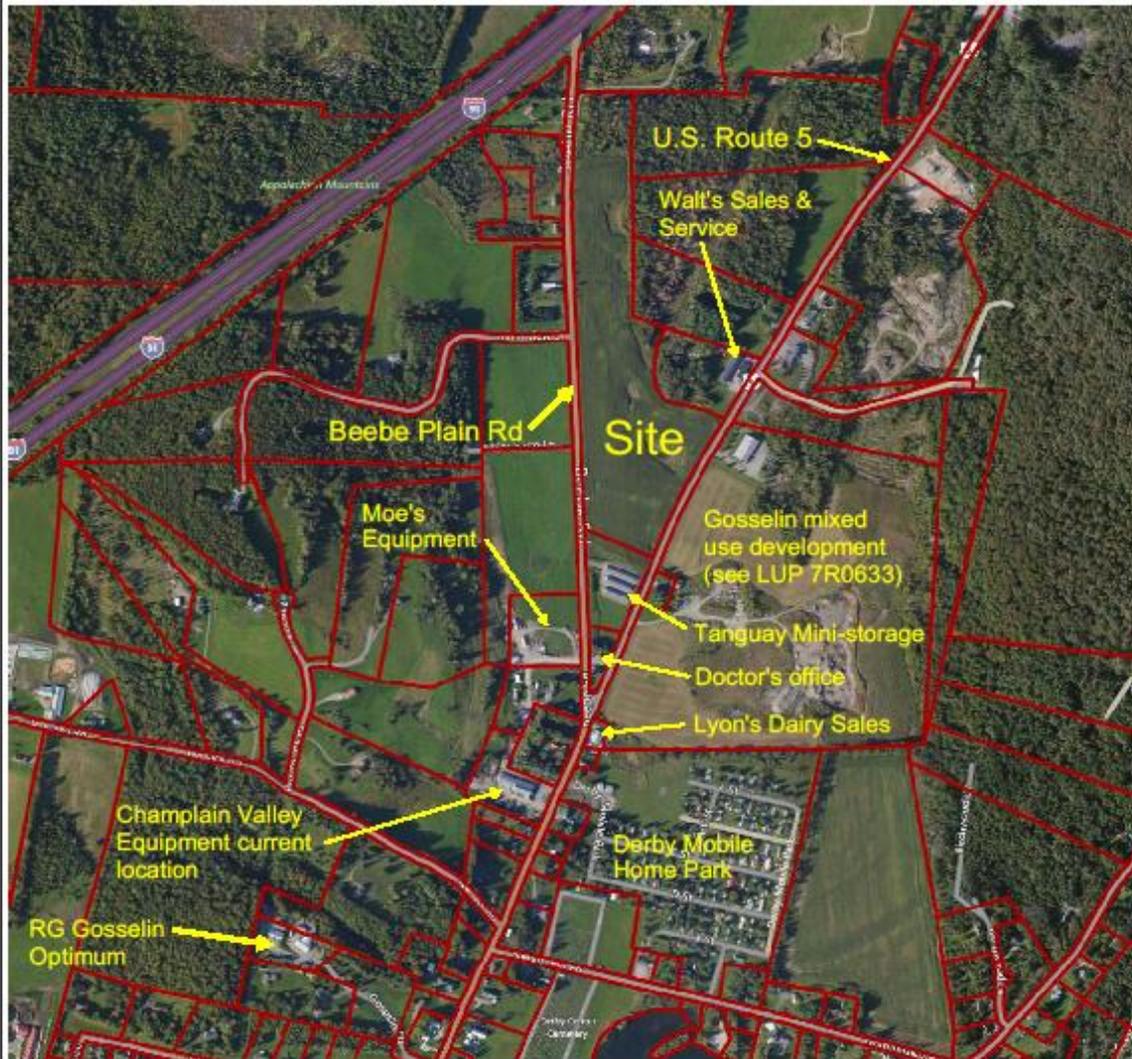
These plans shall only be used for the purpose shown below:

<input type="checkbox"/> Sketch/Concept	<input type="checkbox"/> Act 250 Review
<input type="checkbox"/> Preliminary	<input type="checkbox"/> Construction
<input checked="" type="checkbox"/> Final/As-Built Review	<input type="checkbox"/> Record Drawing

CHAMPLAIN VALLEY EQUIPMENT
 U.S. ROUTE 5 & BEEBE ROAD
 DERRY, VT

Project No. 14141
 Survey L&D
 Design L&D
 Drawn ABR
 Checked DJD
 Date 05-06-2015
 Scale AS SHOWN
 Sheet number 1





LEGEND

- Parcels (where available)
- Town Boundary

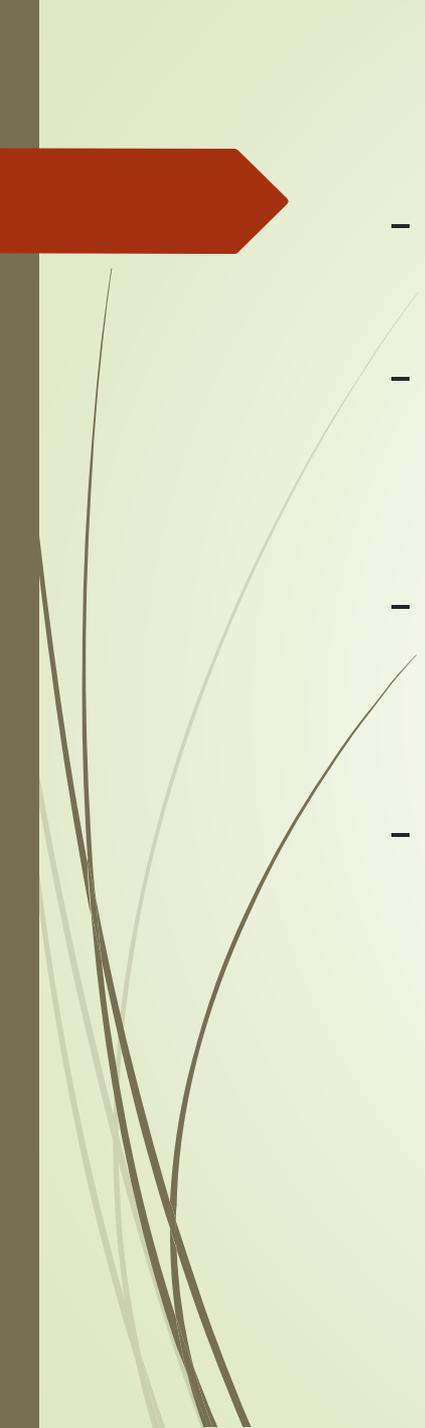
Note: Not all existing commercial enterprises are noted on the above plan.

NOTES

U.S. Route 5 & Beebe Plain Road

1: 10,000

November 20, 2014

- 
- located outside of an existing settlement
 - makes efficient use of land, energy, roads, utilities, and other supporting infrastructure
 - does not contribute to a pattern of strip development
 - site may qualify as an existing strip development in a built-up area; if so [...] design would qualify as “infill”, and minimizes the characteristics of strip development



** the nature of the Project requires space and sufficient land acreage (for large equipment storage and staging, and equipment demonstration operation) that would make it very difficult to site in an existing settlement, and probably create inefficient land use if so sited (by consuming land that should otherwise be made available for more traditional mixed use walkable development).

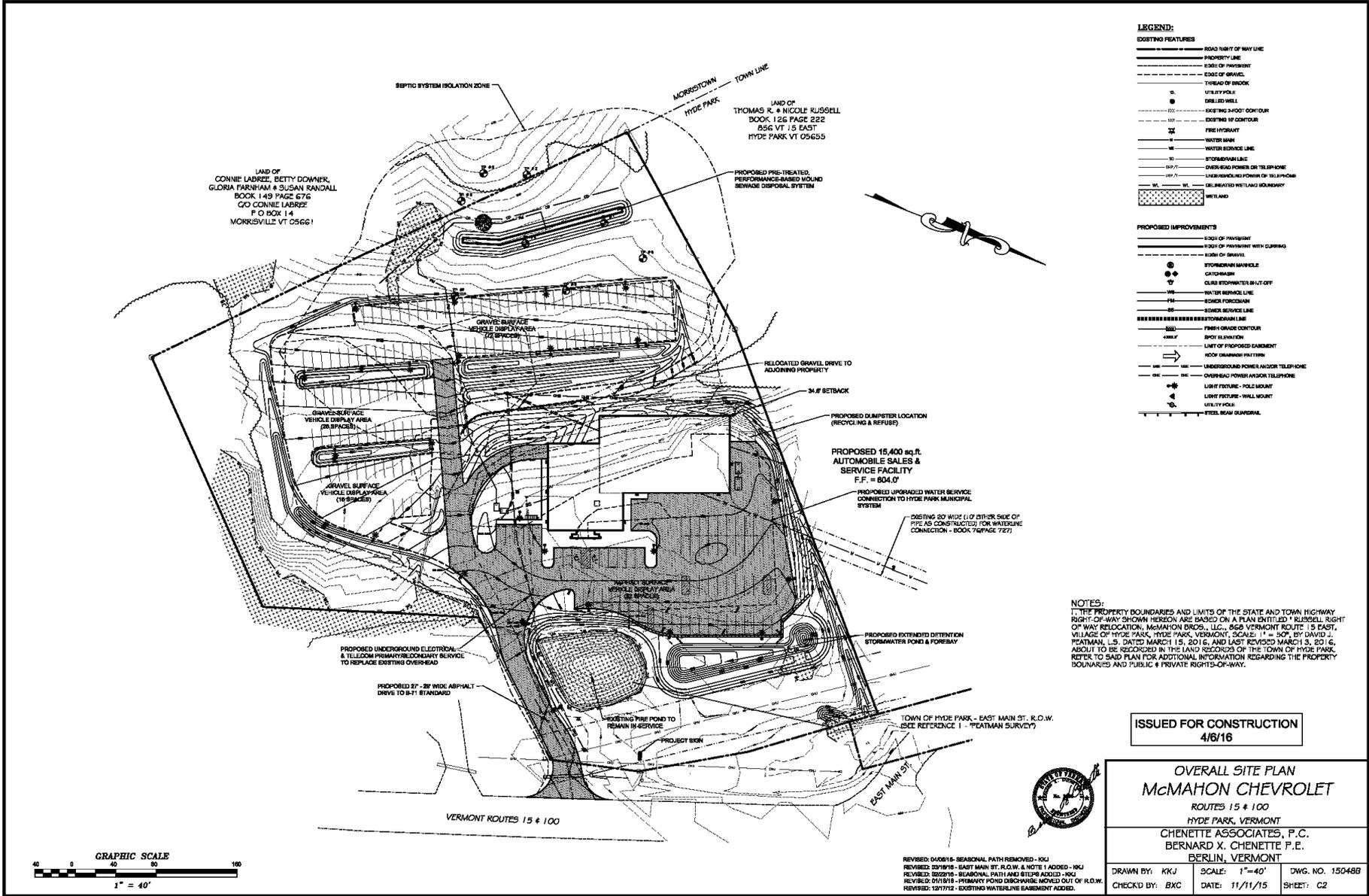


McMahon Chevrolet, Hyde Park

Construction of an automobile dealership for McMahon Chevrolet consisting of a 15,400 square foot building on 6.04 acres.

<https://anrweb.vt.gov/ANR/ANR/Act250SearchResults.aspx?Num=6L0170-2>





LAND OF
CONNIE LABREZ, BETTY DOWNER,
GLORIA FARINHAM & SUSAN RANDALL
BOOK 149 PAGE 676
CO CONNIE LABREZ
P O BOX 14
WORKSVILLE VT 05661

LAND OF
THOMAS R. & NICOLE RUSSELL
BOOK 126 PAGE 222
856 VT 15 EAST
HYDE PARK VT 05655

LEGEND:

EXISTING FEATURES

- ROAD RIGHT OF WAY LINE
- PROPERTY LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- THRESHOLD OF BROOK
- UTILITY POLE
- DEPLETED WELL
- EXISTING 3-FOOT CONTOUR
- EXISTING 1-FOOT CONTOUR
- FIRE HYDRANT
- WATER MAIN
- WATER SERVICE LINE
- STORMSEWER LINE
- OVERHEAD POWER OR TELEPHONE
- UNDERGROUND POWER OR TELEPHONE
- W.L. BELIEVED WETLAND BOUNDARY
- WETLAND

PROPOSED IMPROVEMENTS

- EDGE OF PAVEMENT
- EDGE OF PAVEMENT WITH CURBING
- EDGE OF GRAVEL
- STORMSEWER MANHOLE
- STORMSEWER
- CURB EXPOSED/BLIND/NOT
- WATER SERVICE LINE
- EDGER FORCEMAN
- SEWER SERVICE LINE
- SEWER SERVICE LINE
- FINISH GRADE CONTOUR
- SPOT ELEVATION
- LINE OF PROPOSED EASEMENT
- UNDERGROUND POWER
- UNDERGROUND POWER AND/OR TELEPHONE
- OVERHEAD POWER AND/OR TELEPHONE
- LIGHT FIXTURE - POLE MOUNT
- LIGHT FIXTURE - WALL MOUNT
- UTILITY POLE
- STEEL BROW SIGNAGE

NOTES:

1. THE PROPERTY BOUNDARIES AND LIMITS OF THE STATE AND TOWN HIGHWAY RIGHT-OF-WAY SHOWN HEREON ARE BASED ON A PLAN ENTITLED "RUSSELL RIGHT OF WAY RELOCATION, McMAHON CHEVROLET, LLC, 856 VERMONT ROUTE 15 EAST, VILLAGE OF HYDE PARK, HYDE PARK, VERMONT, SCALE: 1" = 50', BY DAVID J. FEATMAN, L.S., DATED MARCH 15, 2016, AND LAST REVISED MARCH 3, 2016, ABOUT TO BE RECORDED IN THE LAND RECORDS OF THE TOWN OF HYDE PARK. REFER TO SAID PLAN FOR ADDITIONAL INFORMATION REGARDING THE PROPERTY BOUNDARIES AND PUBLIC & PRIVATE RIGHTS-OF-WAY.

ISSUED FOR CONSTRUCTION
4/6/16



OVERALL SITE PLAN
McMAHON CHEVROLET
ROUTES 15 & 100
HYDE PARK, VERMONT
CHENETTE ASSOCIATES, P.C.
BERNARD X. CHENETTE P.E.
DERLIN, VERMONT

REVISED: 04/06/16 - SEASONAL PATH REMOVED - KJG
REVISED: 05/06/16 - EAST MAIN ST. R.O.W. & NOTE 1 ADDED - KJG
REVISED: 05/22/16 - SEASONAL PATH AND 812'S ADDED - KJG
REVISED: 05/18/16 - PRIMARY POND DISCHARGE MOVED OUT OF R.O.W.
REVISED: 10/17/16 - EXISTING WATERLINE EASEMENT ADDED.

DRAWN BY: KJK
CHECKED BY: BXC
SCALE: 1" = 40'
DATE: 11/11/15
DWG. NO. 150488
SHEET: C2



Takeaways

- ▶ Outside of an existing settlement
- ▶ Reuse of an existing industrial/commercial site
- ▶ Applicant will construct bike/ped lane within same year Town installs sidewalk
- ▶ No car displays along front grassy area or driveway
- ▶ Town planning/zoning component – Village recently adopted new zoning
 - ▶ Project was approved under old zoning, but worked with town to address some measures in new zoning.
 - ▶ Project is located in village gateway commercial
 - ▶ “Measures should be taken to prevent appearance of strip development along Route 15/100”
 - ▶ New zoning includes provisions regarding setbacks, lot coverages, height/roof/façade design standards that help minimize contributions to strip development

QUESTIONS?

New 9L Guidance

<http://www.nrb.state.vt.us/lup/publications/criterion2016.pdf>