

**From:** [Mangelinckx, Joelle](#)  
**To:** [Jesse Redd](#)  
**Cc:** [Natural Resources](#)  
**Subject:** RE: Enosburg, VT Telecommunication tower- EBI 6121010289 (EBI#250055980PR)  
**Date:** Thursday, February 26, 2026 8:33:37 AM  
**Attachments:** [image001.png](#)  
[image005.png](#)

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Hi Jesse,

I have previously reviewed this project within our state permitting process and am familiar with its history. Considering the slight modifications to project plans, I find that this project poses no apparent impacts to VT jurisdictional trust resources of VFWD.

Please keep in mind that the department reserves the right to re-evaluate the project and update our position should changes to project plans occur or additional information about the project be provided.

Thank you,

**Ellie Mangelinckx** (she/her) | Wildlife Biologist, Habitat Protection Biologist  
[Vermont Fish & Wildlife Department](#)  
5 Perry Street, Suite 40 | Barre, VT 05641  
802-522-0569 | [Joelle.Mangelinckx@vermont.gov](mailto:Joelle.Mangelinckx@vermont.gov)

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**From:** Jesse Redd <jredd@ebiconsulting.com>  
**Sent:** Thursday, February 26, 2026 8:12 AM  
**To:** Mangelinckx, Joelle <Joelle.Mangelinckx@vermont.gov>  
**Cc:** Natural Resources <NaturalResources@ebiconsulting.com>  
**Subject:** Enosburg, VT Telecommunication tower- EBI 6121010289 (EBI#250055980PR)

You don't often get email from [jredd@ebiconsulting.com](mailto:jredd@ebiconsulting.com). [Learn why this is important](#)

**EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.**

Good morning, Joelle, we previously submitted this project for review in 2022, with Noel Dodge providing the attached response. Since that time there have been slight modification to the proposed project and based on the previous comments, I wanted to send this NR Update to make you aware of the changes and ask for your review and comments.

Please let me know if you need any additional information.

Thanks,

**Jesse Redd**  
Senior Biologist

## NATURAL RESOURCES REVIEW UPDATE

February 25, 2026

**Site Identifier:** IC - Enosburg

**Site Address:** Bordoville Road, Enosburgh, Vermont 05450

**EBI Project #:** 250055980PR

*EBI Consulting (EBI)* has prepared the following Natural Resources Review Update (NR Update) letter for the above-referenced proposed wireless communications facility. The potential impacts of this facility on natural resources were originally evaluated by EBI in a January 5, 2022, Natural Resources Review (NR Review). The purpose of this NR Update is to either evaluate revisions to the original design and/or location of this facility or to obtain updated data used in the original assessment, which may no longer be valid or reliable. Specifically, *EBI* evaluated whether the original NR Review findings remain valid.

### Project Scope

As of the date of this NR Update, modifications to the proposed communications facility design include:

- Reduction in the overall height of the proposed self-support telecommunications tower to 133 feet.
- Re-routing the proposed underground utility route to the east side of the proposed access/utility easement.
- Shifting the proposed utility pole at the access entrance point to the south side of the proposed access/utility easement.
- Shifting the remaining three proposed utility poles to the north side of Bordoville Road.
- Extension of the proposed vehicle turn-around area on the north side of the facility.
- Expansion of proposed surface grading/leveling area.
- Expansion of proposed silt fencing.

Additionally, the location of the proposed facility has not shifted from the original proposed location. Please see the attached drawings for complete details.

### Protected Species

On January 26, 2026, EBI utilized the USFWS Information for Planning and Consultation (IPaC) online project review tool (Project Code: 2026-0019320) to identify species that are federal-listed or proposed for listing under the Endangered Species Act (ESA), and that are known to occur within the vicinity of the Project Site. EBI also utilized the USFWS IPaC and/or online Critical Habitat Portal mapping tool to determine if designated critical habitat is present at or in the immediate vicinity of the Project Site. Based on the updated IPaC, the following changes were made the species list:

- Removal of the northern long-eared bat (*Myotis septentrionalis*; Federal Endangered) from the species list.

- Uplisting of the monarch butterfly (*Danaus plexippus*) from Federal Candidate to Federal Proposed Threatened.

Proposed species are not protected by the take prohibitions of Section 9 of the ESA, and under Section 7 the USFWS must only be consulted if the proposed action will jeopardize the continued existence of the species. As such, no further coordination with the USFWS regarding the monarch butterfly is currently required. **However, should the monarch butterfly be listed under the ESA prior to construction, this determination must be re-evaluated by the USFWS to confirm it is still accurate.**

Furthermore, previous correspondence with the Vermont Fish and Wildlife Department (VFWD; dated January 6, 2022) indicated that that no state resources were anticipated to be adversely impacted by the proposed project. **However, due to changes in the designs of the proposed project, re-consultation with the VFWD is required. As such, a letter will be sent to the VFWD requesting their review of the proposed project, and all correspondence will be discussed in the final NEPA report.**

Based on the review completed as part of this NR Update, EBI makes no changes to the original finding of "No Effect" with regard to the proposed facility's potential effects on protected species, as summarized in the original NR Review. Please refer to the attached updated species data.

## Flood Zones

Based on the review completed as part of this NR Update, EBI makes no changes to the original finding that the proposed facility is not located within a 100-year flood zone. Please refer to the attached revised flood map.

## Wetlands

Based on the review completed as part of this NR Update, EBI makes no changes to the original finding that the proposed facility will not result in a significant change to surface features, specifically wetlands fill. **However, best management practices (BMPs) (i.e. silt fencing, wattles, erosion controls, etc.) should be employed during construction to ensure stormwater runoff does not carry construction related debris into nearby wetland features.** Please refer to the attached revised wetlands map.

## Conclusion

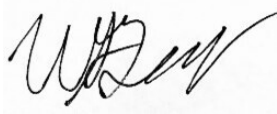
Based on the review completed for this NR Update, EBI makes no changes to the findings of the original January 5, 2022, NR Review with the exception of adding recommendations that best management practices (BMPs) to prevent impacts to nearby wetlands. Although no significant impacts are anticipated, re-consultation with the VFWD is required due to changes in plan designs. A letter will be sent to the VFWD requesting their review of the proposed project, and all correspondence will be discussed in the final NEPA report.

## Limitations

The Report was completed according to the terms and conditions authorized by you. There are no intended or unintended third-party beneficiaries to this Report, unless specifically named. EBI is an independent contractor, not an employee of either the property owner or the project proponent, and its compensation was not based on the findings or recommendations made in the Report or on the closing of any business transaction.

Thank you for the opportunity to prepare this Report and assist with this project. Please call us if you have any questions or if we may be of further assistance.

Sincerely,  
**EBI Consulting**



Bill Gowacki / Biologist



Jesse Redd / Senior Biologist  
jredd@ebiconsulting.com

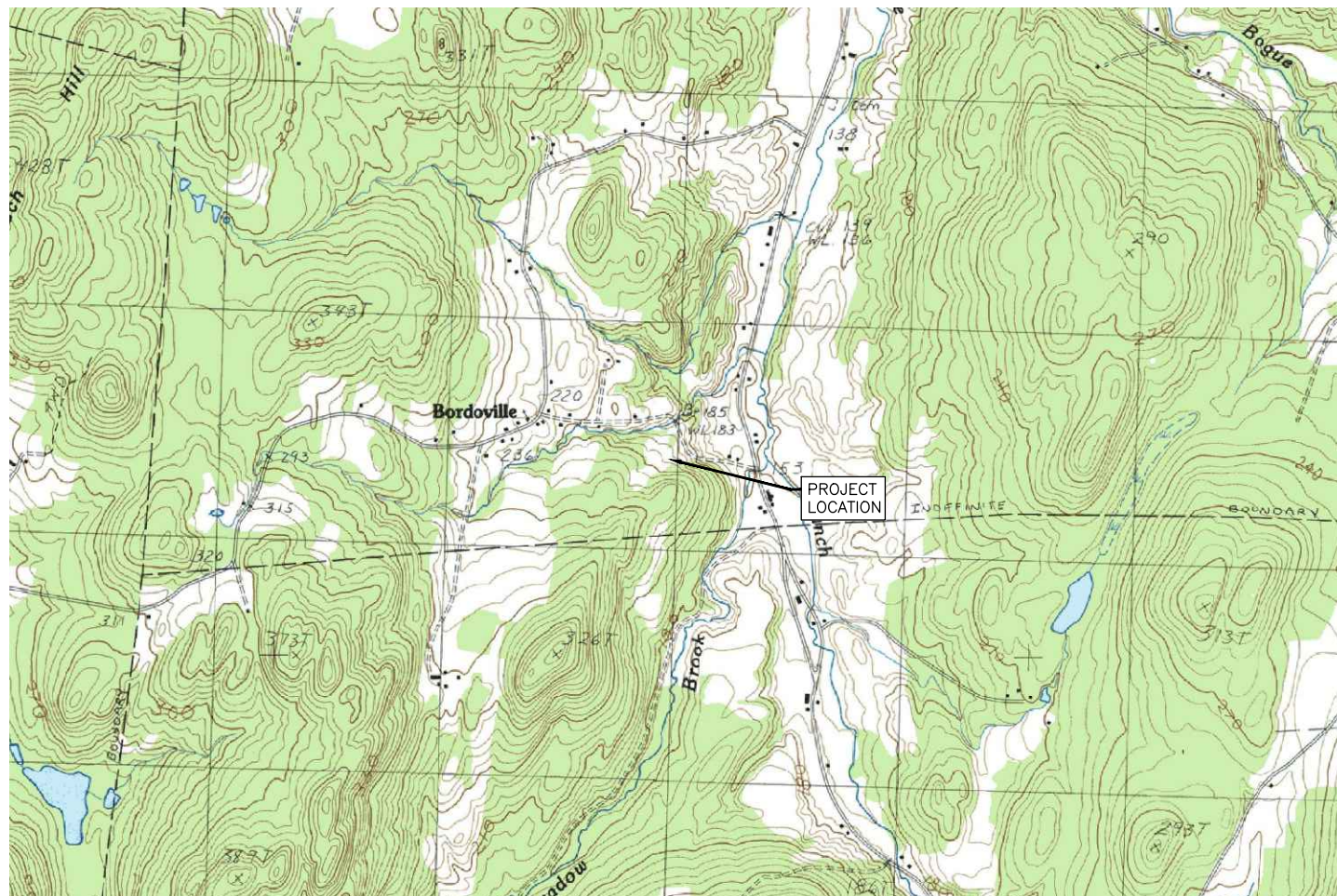
Attachments:  
Updated Supporting Documentation  
Qualifications



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## **Appendix A**

### **Updated Supporting Documentation**



|     |             |
|-----|-------------|
| T-1 | TITLE SHEET |
|-----|-------------|

- |      |                                 |
|------|---------------------------------|
| C-1  | GENERAL NOTES                   |
| C-2  | ORTHOPHOTO PLAN                 |
| C-3  | OVERALL SITE PLAN               |
| C-4  | ABUTTER PLAN                    |
| C-5  | OVERHEAD UTILITY LINE EXTENSION |
| C-6  | PLAN AND PROFILE                |
| C-7  | DETAIL SITE PLAN                |
| C-8  | TOWER ELEVATIONS                |
| C-9  | CIVIL DETAILS                   |
| C-10 | PERVIOUS TELECOMM. SURFACES     |
| C-11 | ANTENNA AND SIGNAGE DETAILS     |
| C-12 | EPSC LOW RISK HANDBOOK          |
| C-13 | EPSC LOW RISK HANDBOOK          |
| C-14 | EPSC LOW RISK HANDBOOK          |

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**ITW  
ENOSBURGH**

BOROVILLE ROAD  
ENOSBURGH, VT  
05450

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TITLE SHEET

PERMIT PLANS

|                          |                                  |
|--------------------------|----------------------------------|
| DRAWN BY<br><b>JWP</b>   | DATE<br><b>JAN. 2022</b>         |
| CHECKED BY<br><b>LJH</b> | D&K PROJECT #<br><b>427611L1</b> |
| PROJ. ENG.<br><b>LJH</b> | D&K ARCHIVE #                    |

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|  | SHEET NUMBER |

T-1



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PROJECT DESCRIPTION:

1. TYPE OF PROJECT: TELECOMMUNICATION FACILITY
2. DESCRIPTION OF MAJOR PROJECT COMPONENTS: UNMANNED 80'x80' TELECOMMUNICATIONS COMPOUND TO BE CONSTRUCTED ON A 506 ACRE FORESTED PARCEL. THE PROPERTY MAINTAINS AN ACTIVE FARM, INCLUDING A FARM SHED AND A SUGARHOUSE. THE COMPOUND LOCATION IS SITED IN AN UNDEVELOPED CLEARING WITHIN THE FORESTED AREA. ACCESS TO THE COMPOUND WILL FOLLOW AN EXISTING TRAIL INTO THE CLEARING TO THE SITE. ACCESS IMPROVEMENTS INCLUDE WIDENING THE EXISTING ACCESS ROUTE AND STABILIZING THE ROAD BED. UNDERGROUND UTILITY SERVICES WILL CONNECT TO THE LAST PROPOSED UTILITY POLE ON BORDOVILLE ROAD. PROPOSED OVERHEAD SERVICE LINE ON BORDOVILLE ROAD WILL CONNECT TO THE LAST EXISTING UTILITY POLE. TREE CLEARING WILL BE MINIMIZED TO THE MINIMUM AREA NECESSARY FOR SITE IMPROVEMENTS AND CONSTRUCTION VEHICLE ACCESS. FOLLOWING CONSTRUCTIONS ALL DISTURBED AREAS OUTSIDE THE ACCESS AND COMPOUND WILL BE SEEDED AND MULCHED AND ALLOWED TO NATURALLY REVEGETATE.
3. POSTED SPEED LIMIT: N/A
4. TOTAL ACREAGE OF TEMPORARY EARTH DISTURBANCE: 28,757 S.F. (0.66 ACRE)

4.1. STORMWATER CONSTRUCTION GENERAL PERMIT REQUIRED: NO
5. TOTAL ACREAGE OF TREE CLEARING: 25,256 S.F. (0.58 ACRE)
6. TOTAL AREA OF PERMANENT EARTH DISTURBANCE: 26,420 S.F. (0.61 ACRE)
7. IMPERVIOUS AREA

7.1. EXISTING = 26,475 S.F. (0.61 ACRE)

7.2. PROPOSED = 6,724 S.F. (0.15 ACRE)

7.3. TOTAL = 33,199 S.F. (0.76 ACRE)

7.4. STORMWATER OPERATIONAL PERMIT REQUIRED: NO
8. SEQUENCE OF MAJOR PROJECT COMPONENTS:

8.1. DEMARCATATE LIMITS OF CONSTRUCTION

8.2. INSTALL CONSTRUCTION ENTRANCE

8.3. TREE CLEARING

8.4. INSTALL EPSC MEASURES

8.5. ESTABLISH ROUGH ACCESS ROAD

8.6. POUR TOWER FOUNDATION

8.7. INSTALL UNDERGROUND ELECTRIC/TELCO & ACCESS ROAD GRADING

8.8. FINISH COMPOUND CONSTRUCTION INCLUDING TOWER ERECTION

8.9. SITE STABILIZATION, SURFACE TREATMENT, RE-SEEDING
9. PROPOSED POLLUTION PREVENTION STRATEGIES: CONTRACTOR TO ENSURE THAT THE SITE REMAINS CLEAN AND ALL DEBRIS AND UNUSED MATERIALS ARE REMOVED AT THE END OF EACH DAY.
10. MAXIMUM CONCURRENT EARTH DISTURBANCE: THE PROJECT WILL BE LIMITED TO ONE ACRE OR LESS OF EARTH DISTURBANCE AT ANY ONE TIME.
11. USE OF VEGETATED BUFFERS: THE PROJECT WILL HAVE STORMWATER DISCHARGES FROM THE CONSTRUCTION SITE TO WETLANDS AND DRAINAGE CHANNELS FROM THE ACCESS ROAD THAT DO NOT FIRST FILTER THROUGH A 50 FT. VEGETATED BUFFER. SILT FENCE WILL BE INSTALLED AT THESE LOCATIONS UNTIL FINAL STABILIZATION IS ESTABLISHED. THE ACCESS ROAD AND COMPOUND WILL BE GRADED TO PROVIDE A MILD CROSS-SLOPE TO DIRECT RUNOFF TO THE UNDISTURBED VEGETATED FOREST ADJACENT TO THE ROAD.
12. NAME OF RECEIVING WATERS: UNNAMED TRIBUTARY TO THE BRANCH
13. NUMBER OF PROPOSED STREAM CROSSINGS: 0

13.1. STREAM ALTERATION PERMIT REQUIRED: NO
14. WETLAND IMPACTS:

14.1. AREA OF WETLANDS IMPACTED BY PROPOSED ACTIVITIES: 0 S.F. (0.00 ACRE)

14.2. AREA OF WETLAND BUFFERS IMPACTED BY ROAD EXPANSION & GRADING LIMITS: 2,996 S.F. (0.07 ACRE)

14.3. AREA OF WETLAND BUFFERS IMPACTED BY EXISTING ROAD SURFACE IMPROVEMENTS: 2,197 S.F. (0.05 ACRE)

14.4. STATE WETLANDS PERMIT REQUIRED: YES

14.5. ARMY CORPS OF ENGINEERS PERMIT REQUIRED: NO
15. RIVER AND STREAM IMPACTS: NONE

15.1. LOCATED IN A FLOOD HAZARD AREA: NO

15.2. LOCATED IN A RIVER CORRIDOR: NO

15.3. LOCATED IN A RIPARIAN BUFFER: YES
16. RARE, THREATENED, OR ENDANGERED SPECIES IMPACTS: NO IDENTIFIED CONCERNS
17. SIGNIFICANT NATURAL COMMUNITY: NO IDENTIFIED CONCERNS
18. WATER SUPPLY SOURCE PROTECTION AREA IMPACTS: NONE
19. NATURAL RESOURCES HABITAT IMPACTS:

19.1. DEER WINTERING AREA: NO IDENTIFIED CONCERNS

19.2. BEAR HABITAT AREA: NO IDENTIFIED CONCERNS

19.3. SONG BIRD HABITAT: NO IDENTIFIED CONCERNS

19.4. BAT HABITAT AREA: NO IDENTIFIED ROOST TREES

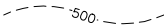
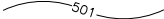
19.5. HABITAT BLOCK: MEDIUM PRIORITY LEVEL 6

19.6. BIOFINDER: ADJACENT TO PRIORITY INTERIOR FOREST BLOCK
20. LOCAL ZONING – TOWN OF ENOSBURGH

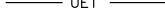
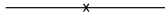
20.1. ZONING DISTRICT: RURAL RESIDENTIAL (RR)

20.2. OVERLAY DISTRICT:
21. PROPERTY LINE INFORMATION PROVIDED BY THE TOWN OF ENOSBURGH TAX MAPS. DUBOIS & KING, INC. DID NOT PERFORM A BOUNDARY SURVEY.
22. TOPOGRAPHIC SURVEY PERFORMED BY DUBOIS & KING, INC. ON NOVEMBER 4, 2021.
23. THE PROJECT WILL COMPLY WITH THE LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL BY THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, 2020 EDITION.
24. ELEVATIONS FROM GPS OBSERVATIONS.
25. WETLANDS DELINEATION AND HABITAT REVIEW PERFORMED BY DUBOIS & KING, INC. ON NOVEMBER 8, 2021.

EXISTING FEATURES LEGEND

-  APPROXIMATE PROPERTY LINE
-  OVERHEAD UTILITY LINE
-  EXISTING TREE LINE
-  DELINEATED STREAM
-  RIPARIAN BUFFER
-  50' WETLAND BUFFER
-  DELINEATED WETLAND
-  MINOR CONTOUR LINE
-  MAJOR CONTOUR LINE
-  UTILITY POLE
-  BENCHMARK
-  DECIDUOUS TREE
-  EVERGREEN TREE

PROPOSED FEATURES LEGEND

-  LIMITS OF DISTURBANCE
-  LIMITS OF CONSTRUCTION
-  ACCESS & UTILITY EASEMENT
-  REINFORCED SILT FENCE
-  PROPOSED TREE LINE
-  UNDERGROUND ELEC & TEL LINE
-  CHAIN LINK FENCE
-  PROPOSED WATER BAR
-  TEMPORARY WATER BAR

**DuBois & King**INC.

ENGINEERING • PLANNING •  
MANAGEMENT • DEVELOPMENT

6 GREEN TREE DRIVE  
SO. BURLINGTON, VT 05403  
TEL: (802) 878-7661  
FAX: (866) 783-7101  
[www.dubois-king.com](http://www.dubois-king.com)  
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|  |  |  |  | LJH                                                                                                                                                   | LJH     | LJH     | LJH     | LJH     | CK'D |
|  |  |  |  | JWP                                                                                                                                                   | JWP     | JWP     | JWP     | JWP     | BY   |
|  |  |  |  | REDUCED TOWER HEIGHT TO 120' A.G.L.<br>REVISED WETLAND BUFFER IMPACT<br>REVISED PER ITW COMMENTS<br>REVISED PER ITW COMMENTS<br>ISSUED FOR PERMITTING |         |         |         |         |      |
|  |  |  |  | 11-13-25                                                                                                                                              | 6-07-22 | 5-10-22 | 2-23-22 | 1-05-22 | DATE |
|  |  |  |  | 5                                                                                                                                                     | 4       | 3       | 2       | 1       | NO.  |



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ENOSBURGH**

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ENOSBURGH, VT  
05450

SHEET TITLE

GENERAL  
NOTES

PERMIT PLANS

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| DRAWN BY<br>JWP   | DATE<br>JAN. 2022         |
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SHEET NUMBER

C-1





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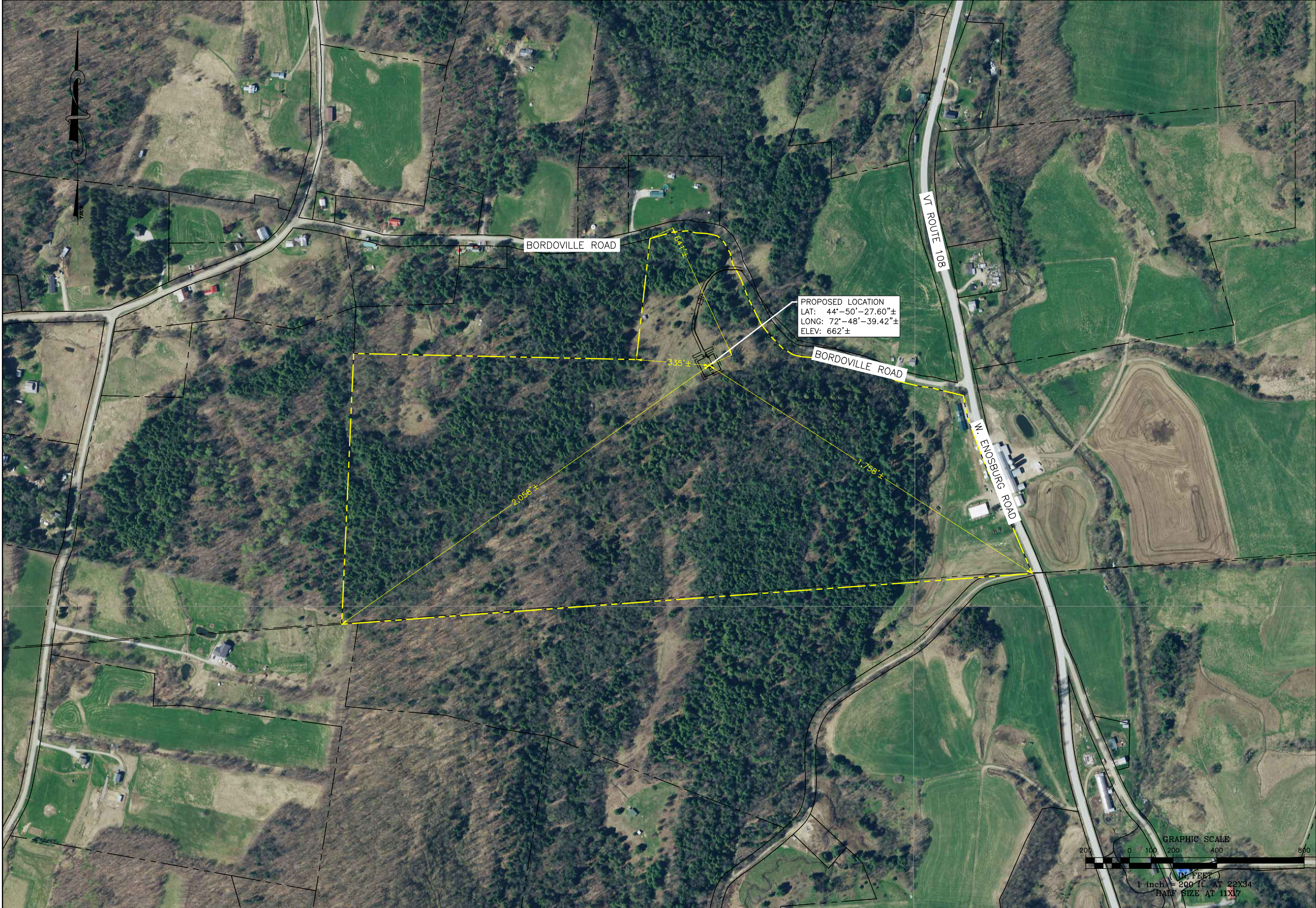
ORTHOPHOTO  
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PERMIT PLANS

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| DRAWN BY<br>JWP   | DATE<br>JAN. 2022         |
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SHEET NUMBER

C-2



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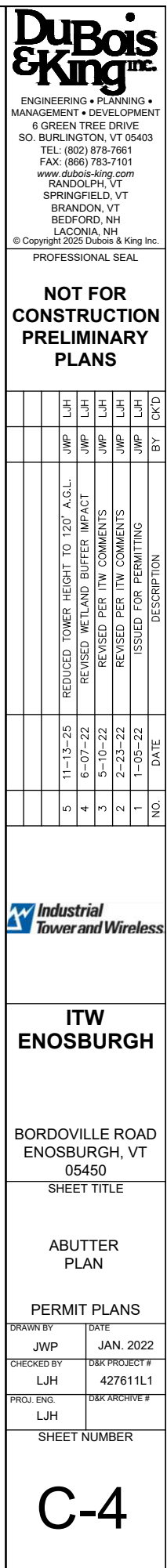
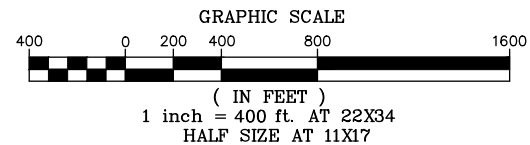
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ABUTTER LIST:

- A. PARCEL #: CA7961—  
N/F NANCY MURPHIE  
7961 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450
  - B. PARCEL #: CA8059—  
N/F LYNN McMORROW  
8059 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450
  - C. PARCEL #: CA8129—  
N/F BRIAN & SABRINA  
8129 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450
  - D. PARCEL #: CA8264—  
N/F MAURICE & PIERRETTE PARENT  
4001 EAST SHELDON ROAD  
ENOSBURG FALLS, VT 05450
  - E. PARCEL #: WE3895—  
N/F CAITLIN SHAW  
3895 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450
  - F. PARCEL #:  
N/F
  - G. PARCEL #: WE4072—  
N/F MARIE HULL  
4072 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450
  - H. PARCEL #: WE4232—  
N/F ERIC & DANIELLE HULL  
4232 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450
  - I. PARCEL #: WE4382—  
N/F NANCY BUZZELL  
4382 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450
  - J. PARCEL #: WE4569—  
N/F SHERWOOD & MONA JEAN SMITH  
4569 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450
  - K. PARCEL #: WE4543—  
N/F ELROY & LINDA HUNT  
P.O. BOX 328  
ENOSBURG FALLS, VT 05450
  - L. PARCEL #: 00V001.  
N/F DUANE OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450
  - M. PARCEL #: 00V001.  
N/F DUANE OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450
  - N. PARCEL #: 0CY110.  
N/F KRISTEN SLADE  
2326 VT ROUTE 109  
WATERVILLE, VT 05492
  - O. PARCEL #: 0CY130.  
N/F DUANE & ANDREW OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450
  - P. PARCEL #: 0CY111.  
N/F MICHAEL & HOLLY RIVERS  
27 O'BRIEN DRIVE  
SOUTH BURLINGTON, VT 05403
  - Q. PARCEL #: J0030A.  
N/F CHESTER & BRENDA HALL  
215 JONES ROAD  
ENOSBURG FALLS, VT 05450
  - R. PARCEL #: CA6880—  
N/F ARTHUR & JAYE LUNDBORG  
55 JONES ROAD  
ENOSBURG FALLS, VT 05450
  - S. PARCEL #: BV0537—  
N/F VICTOR & DEBRA TIRrito  
70 GAIL STREET  
WINOOSKI, VT 05404
  - T. PARCEL #: BV0394—  
N/F PHILIPPA DORFMANN  
394 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450
  - U. PARCEL #: BV0352—  
N/F WILLIAM & GLORIA HUGHES  
352 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450
  - V. PARCEL #: BV0494—  
N/F CYRUS HOUSE  
& TARA LOMBARDI  
494 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450
  - W. PARCEL #:  
N/F
  - X. PARCEL #:  
N/F
  - Y. PARCEL #: CA7984—  
N/F COURTNEY BENNETT  
7984 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450

LAND OWNER  
PARCEL #: WE4756-  
N/F MATTHEW HULL  
4014 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

PROPOSED LOCATION  
LAT: 44°-50'-27.60"±  
LONG: 72°-48'-39.42"±  
ELEV: 662'±







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PLANS**

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ENOSBURGH**

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ENOSBURGH, VT  
05450

|             |
|-------------|
| SHEET TITLE |
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OVERHEAD  
UTILITY LINE  
EXTENSION

PERMIT PLANS

|                   |                           |
|-------------------|---------------------------|
| DRAWN BY<br>JWP   | DATE<br>JAN. 2022         |
| CHECKED BY<br>LJH | D&K PROJECT #<br>427611L1 |
| PROJ. ENG.<br>LJH | D&K ARCHIVE #             |

SHEET NUMBER

C-5



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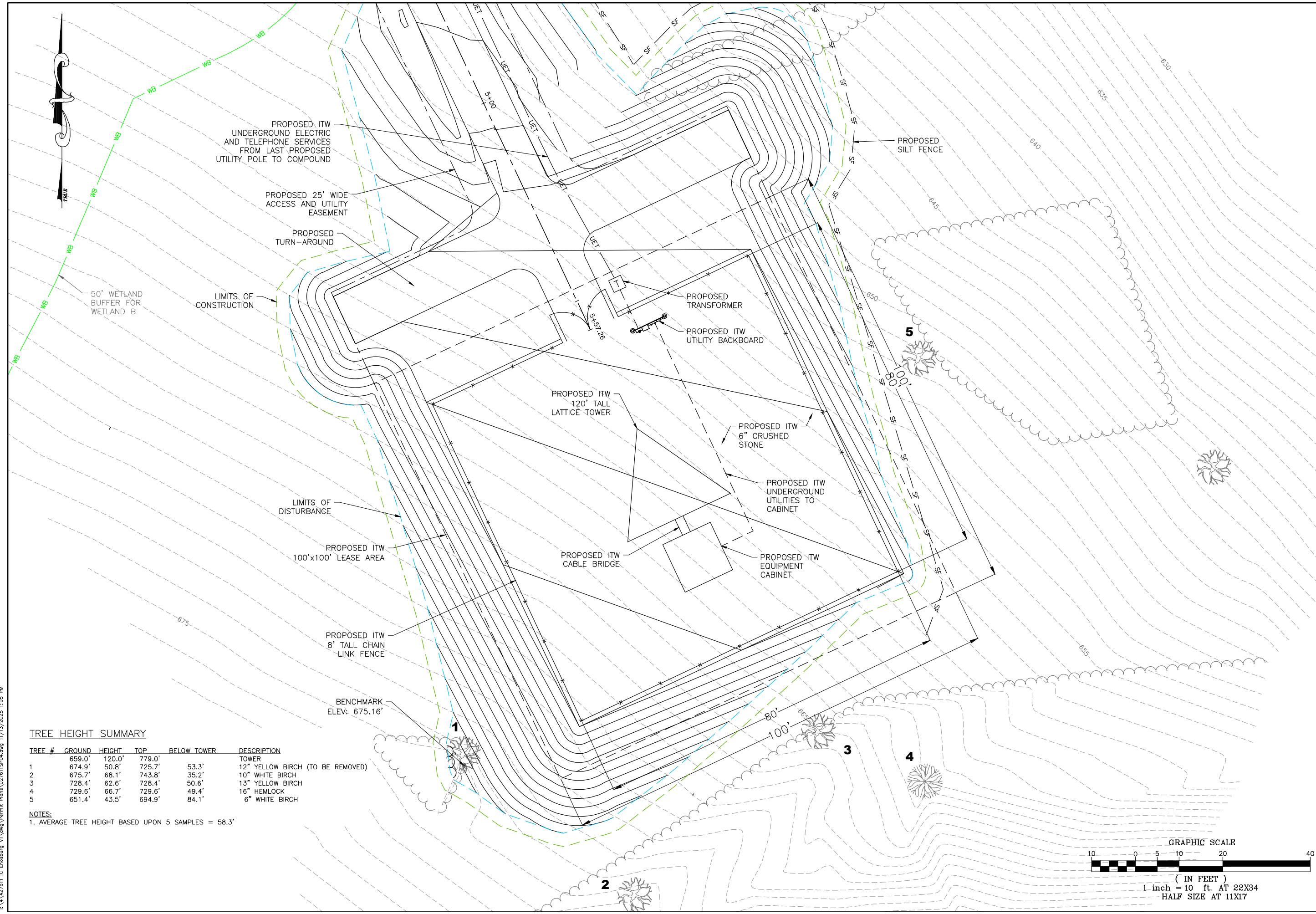
|  | No. | Date     | Description                         | By  | Ckd |
|--|-----|----------|-------------------------------------|-----|-----|
|  | 5   | 11-13-25 | REDUCED TOWER HEIGHT TO 120' A.G.L. | JWP | LJH |
|  | 4   | 6-07-22  | REVISED WETLAND BUFFER IMPACT       | JWP | LJH |
|  | 3   | 5-10-22  | REVISED PER ITW COMMENTS            | JWP | LJH |
|  | 2   | 2-23-22  | REVISED PER ITW COMMENTS            | JWP | LJH |
|  | 1   | 1-05-22  | ISSUED FOR PERMITTING               | JWP | LJH |



## DETAIL SITE PLAN

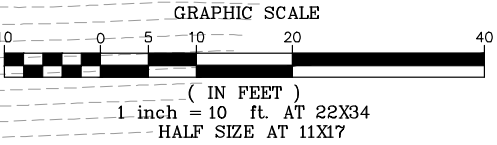
|                   |                           |
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| DRAWN BY<br>JWP   | DATE<br>JAN. 2022         |
| CHECKED BY<br>LJH | D&K PROJECT #<br>427611L1 |
| PROJ. ENG.<br>LJH | D&K ARCHIVE #             |

C-7

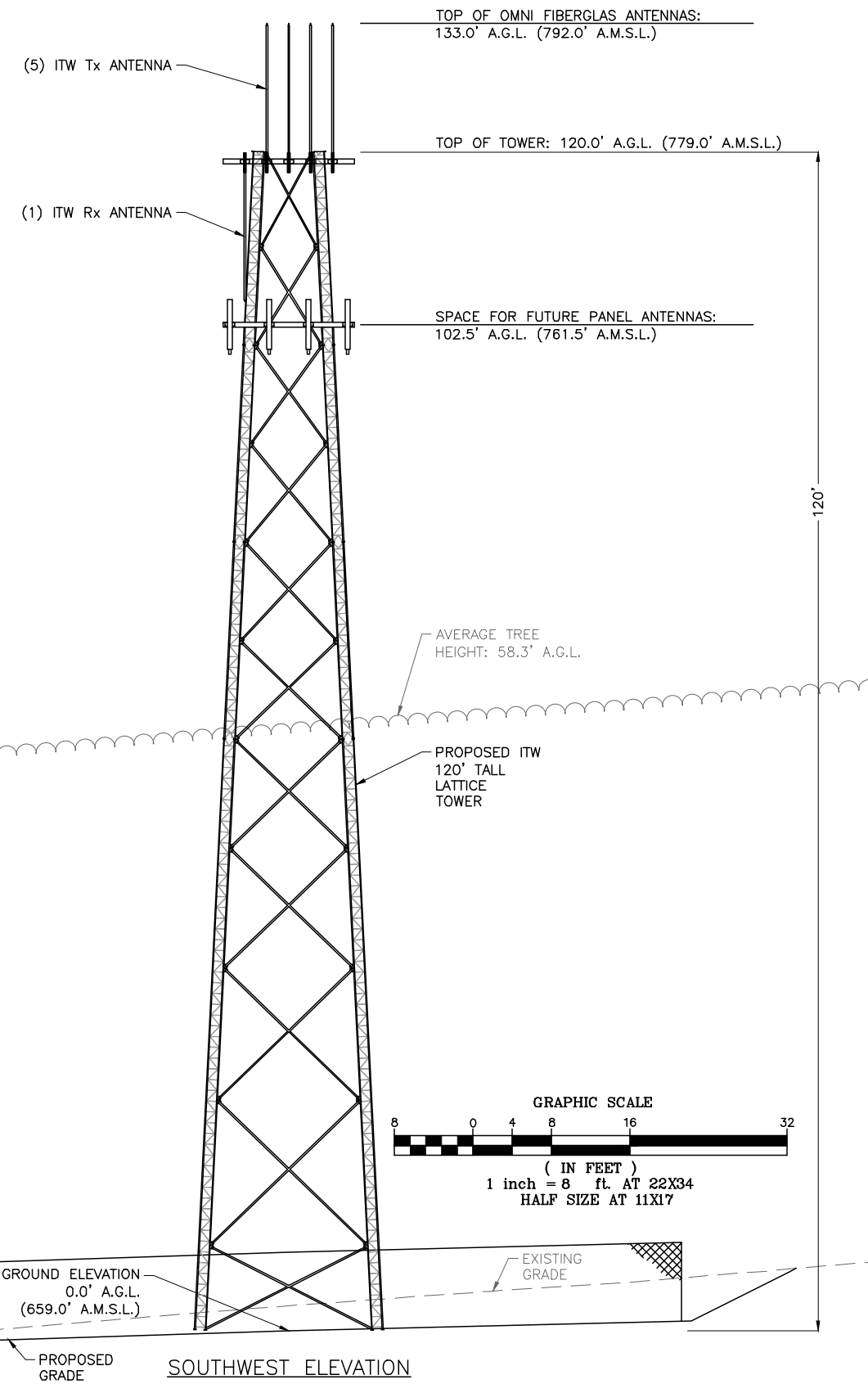
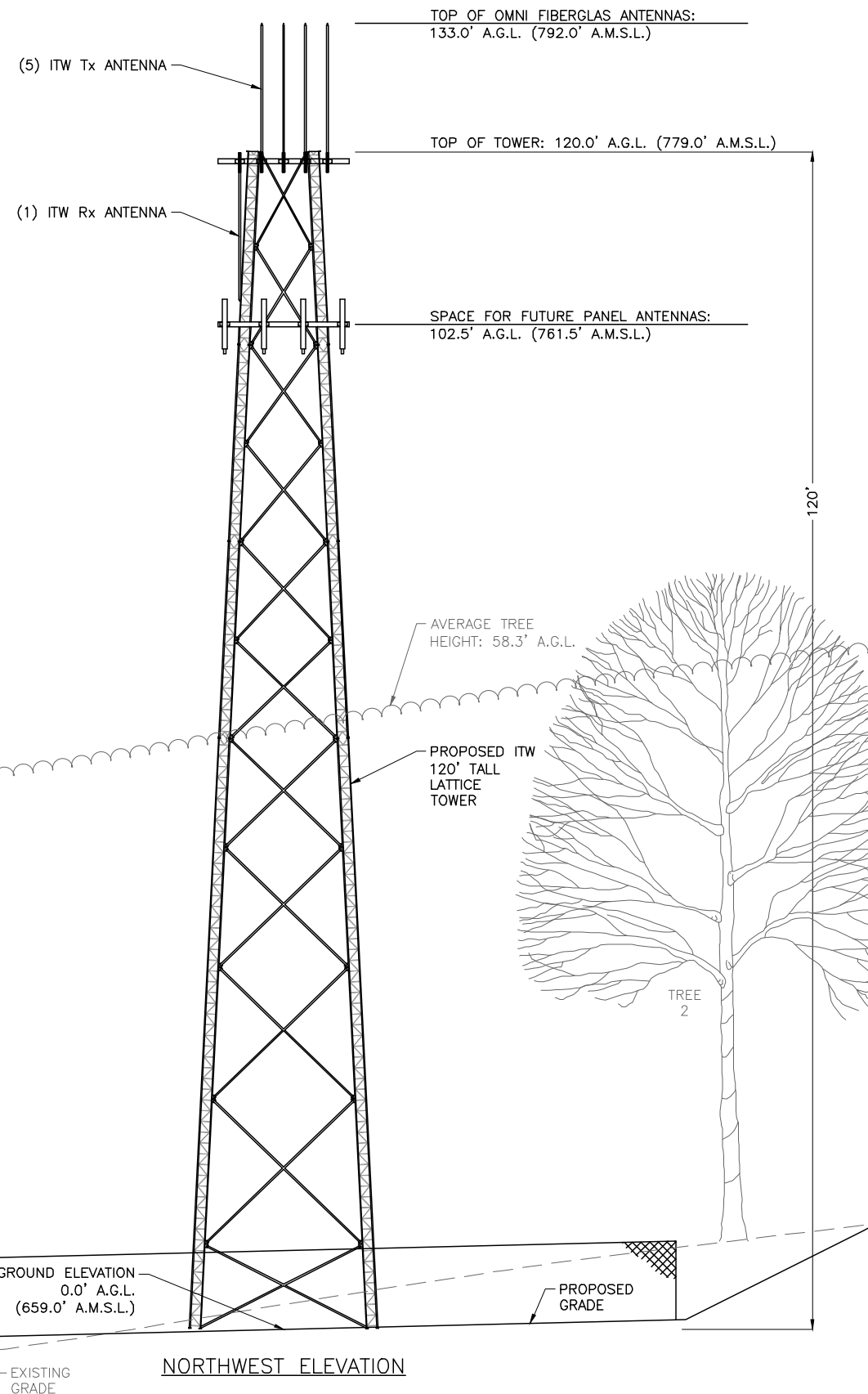


| <u>TREE #</u> | <u>GROUND</u> | <u>HEIGHT</u> | <u>TOP</u> | <u>BELOW TOWER</u> | <u>DESCRIPTION</u>               |
|---------------|---------------|---------------|------------|--------------------|----------------------------------|
|               | 659.0'        | 120.0'        | 779.0'     |                    | TOWER                            |
| 1             | 674.9'        | 50.8'         | 725.7'     | 53.3'              | 12" YELLOW BIRCH (TO BE REMOVED) |
| 2             | 675.7'        | 68.1'         | 743.8'     | 35.2'              | 10" WHITE BIRCH                  |
| 3             | 728.4'        | 62.6'         | 728.4'     | 50.6'              | 13" YELLOW BIRCH                 |
| 4             | 729.6'        | 66.7'         | 729.6'     | 49.4'              | 16" HEMLOCK                      |
| 5             | 651.4'        | 43.5'         | 694.9'     | 84.1'              | 6" WHITE BIRCH                   |

NOTES:  
1. AVERAGE TREE HEIGHT BASED UPON 5 SAMPLES = 58.3'







**NOT FOR  
CONSTRUCTION  
PRELIMINARY  
PLANS**

[illegible]

**ITW  
ENOSBURGH**

BOROVILLE ROAD  
ENOSBURGH, VT  
05450

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| SHEET TITLE |  |
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TOWER  
ELEVATIONS

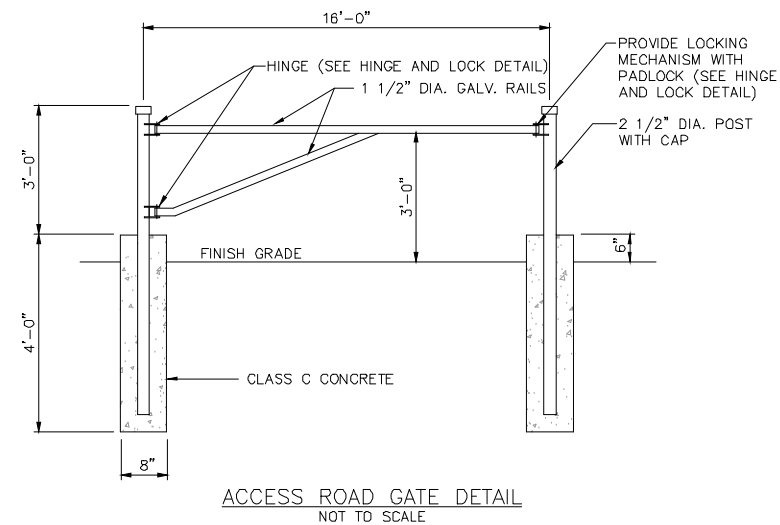
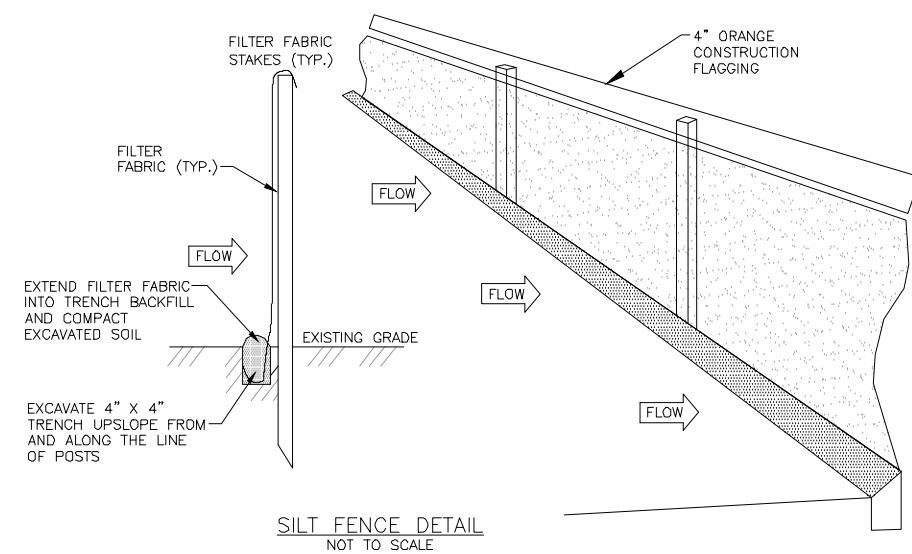
## PERMIT PLANS

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| DRAWN BY<br>JWP   | DATE<br>JAN. 2022         |
| CHECKED BY<br>LJH | D&K PROJECT #<br>427611L1 |
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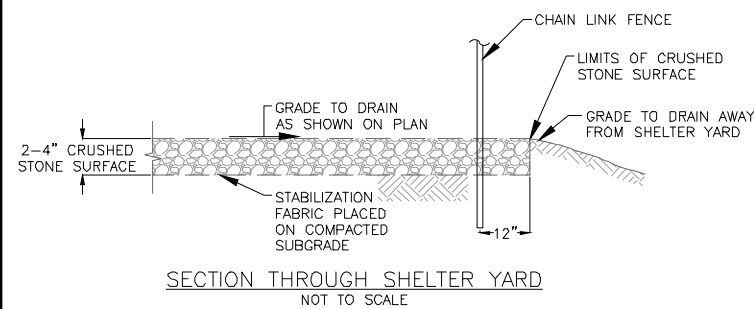
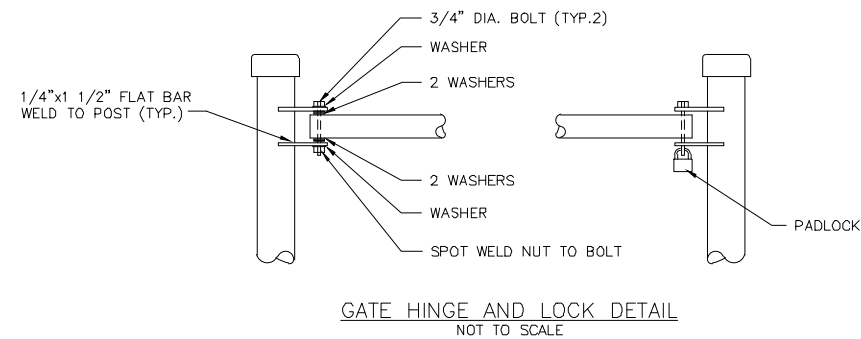
C-8





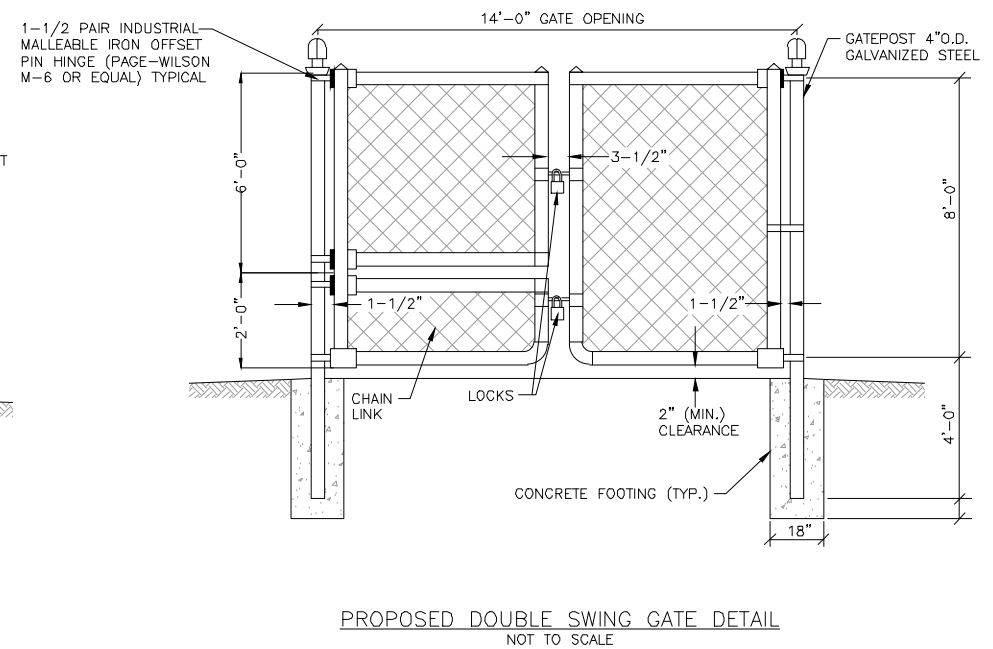
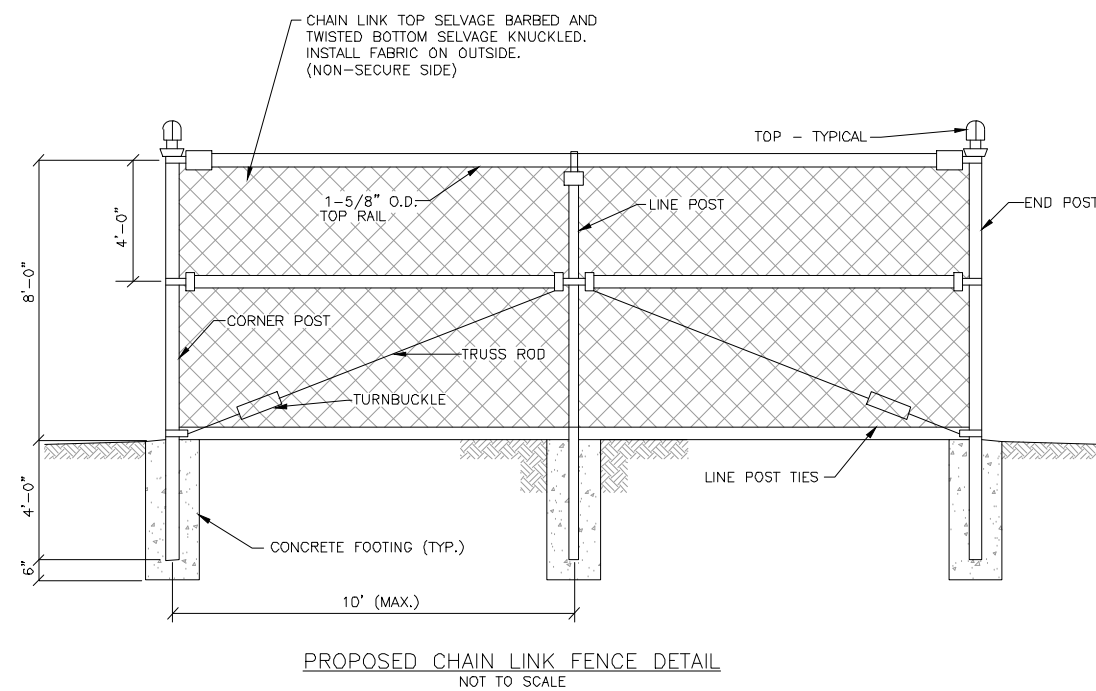
NOTES:

1. SEED AND MULCH ALL EXPOSED SOILS AS SOON AS FEASIBLE.
2. CONTRACTOR TO FOLLOW STATE OF VERMONT LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.



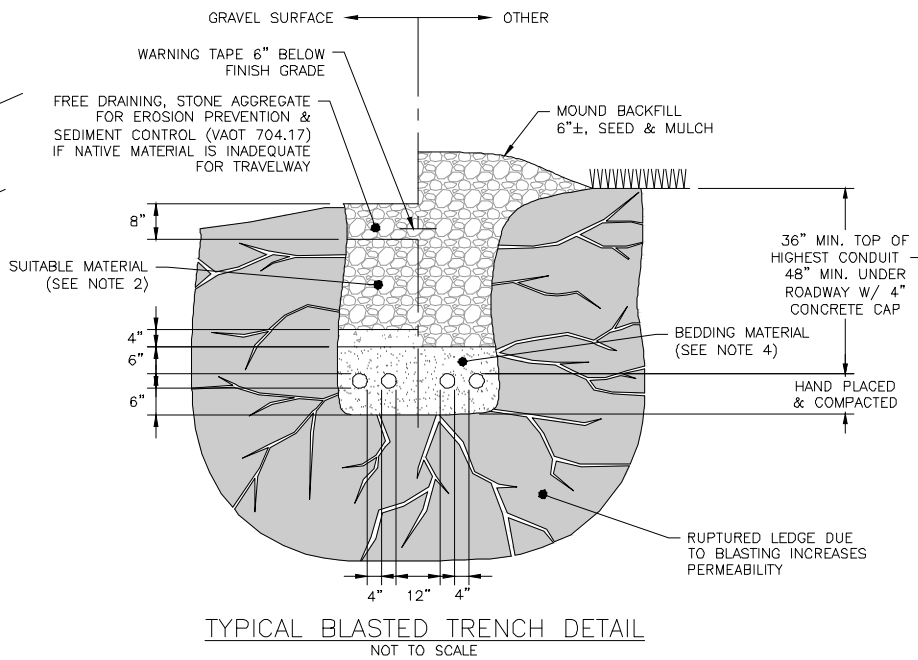
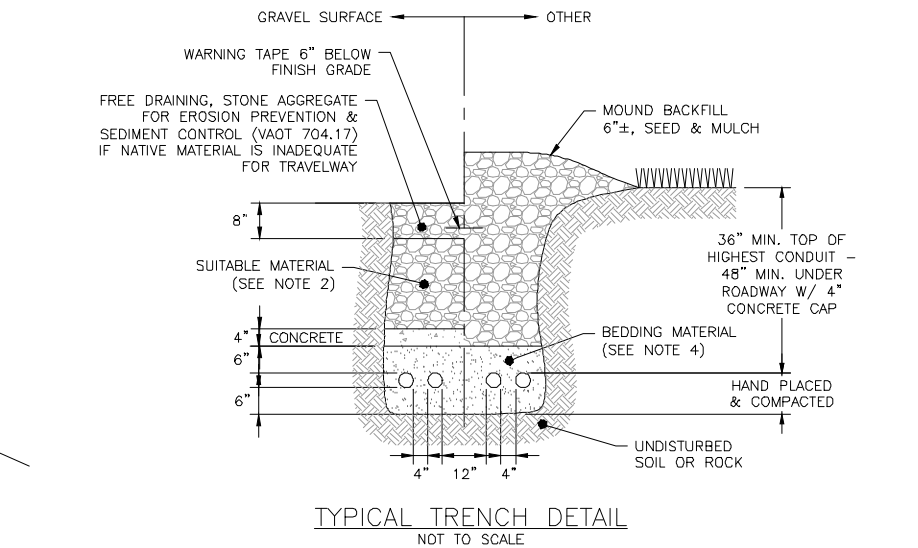
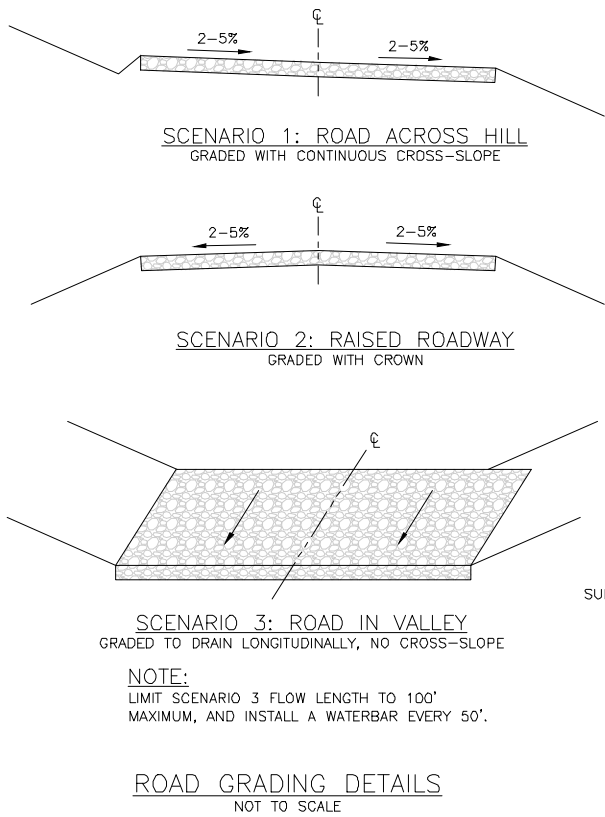
NOTE:

NOTE:  
REMOVE TOPSOIL FOR THE PLACEMENT  
OF YARD STONE AND STOCKPILE ON SITE.  
BLEND TOPSOIL INTO NEW GRADE IMMEDIATELY  
SURROUNDING THE FENCED-IN AREA, AND  
INSURE THAT IT REMAINS WITHIN THE TOP  
LAYER OF SOIL STRATA.

[illegible]

|                          |                                  |
|--------------------------|----------------------------------|
| DRAWN BY<br><b>JWP</b>   | DATE<br><b>JAN. 2022</b>         |
| CHECKED BY<br><b>LJH</b> | D&K PROJECT #<br><b>427611L1</b> |
| PROJ. ENG.<br><b>LJH</b> | D&K ARCHIVE #                    |





ACCESS ROAD NOTES:

1. ACCESS TO FOLLOW EXISTING PATHS WHENEVER FEASIBLE.
2. TREE CLEARING SHALL BE LIMITED TO THE MINIMUM REQUIRED TO PERMIT CONSTRUCTION VEHICLE ACCESS. SEE PLAN FOR CLEARING LIMITS. STUMPS OUTSIDE THE ACCESS, UTILITY TRENCH, OR FILL LIMITS SHALL BE LEFT IN PLACE.
3. CONSTRUCTION STANDARDS SHALL MEET OR EXCEED THOSE OUTLINED IN "THE ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT" HANDBOOK.
4. UTILITY TRENCH LOCATION SHOWN AS TYPICAL. REFER TO SITE PLAN FOR UTILITY PLACEMENT.
5. STABILIZE ALL EXPOSED SOILS IN CONFORMANCE WITH THE LOW RISK HANDBOOK OR STORMWATER CONSTRUCTION GENERAL PERMIT. AT A MINIMUM ALL SOILS SHALL BE STABILIZED WITHIN 14 DAYS.
6. CONTRACTOR TO FOLLOW STATE OF VERMONT LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL. SEE EPSC LOW RISK HANDBOOK.
7. REMOVE UNSUITABLE SUBGRADE MATERIAL AND REPLACE WITH CRUSHED STONE AGGREGATE OR NATIVE MATERIAL AND SLOPE TO PROVIDE STABLE WORKING SURFACE.
8. CUT/FILL SLOPES TO BE RE-SEEDDED AND STABILIZED WITH MULCH, EROSION CONTROL MATTING, STONE RIPRAP, AND/OR WOOD CHIPS ONCE FINAL GRADE HAS BEEN ESTABLISHED.
9. ACCESS ROAD TO BE GRADED WITH A MINIMUM OF 2% CROSS-SLOPE.
10. RE-VEGETATED SLOPES EXCEEDING 3H:1V UPON RESTORATION TO BE MATTED WITH JUTE MAT EROSION CONTROL BLANKETS, NORTH AMERICAN GREEN S150BN, OR APPROVED EQUIVALENT.
11. INSTALL EROSION CONTROLS IN ACCORDANCE WITH THE SITE PLANS AND PROJECT PERMITS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED AS DIRECTED BY THE PROJECT ENVIRONMENTAL COMPLIANCE INSPECTOR OR THE ON-SITE PLAN COORDINATOR.
12. INSTALL PERMANENT WATER BARS IN ACCORDANCE WITH TYPICAL DETAIL.
13. MINIMALLY COMPACT EXISTING SUBGRADE MATERIAL AS NECESSARY TO CREATE A STABLE WORKING SURFACE FOR CONSTRUCTION ACCESS, WITHOUT OVER-COMPACTING AND CREATING AN IMPERVIOUS SURFACE. FOLLOWING HEAVY CONSTRUCTION TRAFFIC, TILL OR BACK BLADE THE ACCESS ROAD SUBGRADE PRIOR TO SURFACE COURSE PLACEMENT TO PROMOTE INFILTRATION.

TRENCH NOTES:

1. WHERE BACKFILL IS DESIGNATED "COMPACTED", THIS MEANS 90% TO 95% STANDARD PROCTOR, AASHTO T-99. ALL FILL PLACED BELOW PIPES MUST MEET THIS REQUIREMENT.
2. SUITABLE MATERIAL SHALL CONTAIN NO STONES GREATER THAN 4" IN DIAMETER, NO FROZEN LUMPS, AND ONLY MINOR AMOUNTS OF CLAY OR ORGANIC MATERIAL. ALL MATERIAL TO BE PLACED IN MAXIMUM OF 12" LIFTS AND COMPACTED TO THE SAME LEVEL AS SURROUNDING EXISTING SUBGRADE BEFORE PLACING NEXT LIFT.
3. SEE ELECTRICAL PLANS FOR QUANTITY OF CONDUITS.
4. BEDDING MATERIAL MAY BE CRUSHED STONE, SAND, OR NATIVE MATERIAL FREE FROM ORGANICS AND STONES LARGE ENOUGH TO DAMAGE THE PIPE.

PROFESSIONAL SEAL

**NOT FOR  
CONSTRUCTION  
PRELIMINARY  
PLANS**

[illegible]

**ITW  
ENOSBURGH**

BOROVILLE ROAD  
ENOSBURGH, VT  
05450

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PERVIOUS  
TELECOMM.  
SURFACES

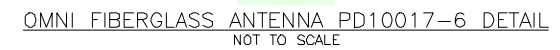
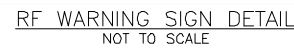
PERMIT PLANS

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| DRAWN BY<br><b>JWP</b>   | DATE<br><b>JAN. 2022</b>         |
| CHECKED BY<br><b>LJH</b> | D&K PROJECT #<br><b>427611L1</b> |
| PROJ. ENG.<br><b>LJH</b> | D&K ARCHIVE #                    |

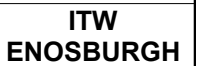
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C-10





| ANTENNA FACIAL SURFACE AREA |                |                  |                              |                    |                                       |                                         |
|-----------------------------|----------------|------------------|------------------------------|--------------------|---------------------------------------|-----------------------------------------|
| DESCRIPTION                 | HEIGHT<br>(in) | DIAMETER<br>(in) | SURFACE<br>AREA<br>(sq. ft.) | NUMBER<br>OF UNITS | TOTAL<br>SURFACE<br>AREA<br>(sq. ft.) | EXPOSED<br>SURFACE<br>AREA<br>(sq. ft.) |
| OMNI FIBERGLASS PD10017-6   | 159.00         | 2.00             | 6.95                         | 5                  | 34.77                                 | 34.77                                   |
|                             |                |                  |                              |                    | TOTAL =                               | 34.77                                   |

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| SHEET TITLE |
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PERMIT PLANS

|                          |                                  |
|--------------------------|----------------------------------|
| DRAWN BY<br><b>JWP</b>   | DATE<br><b>JAN. 2022</b>         |
| CHECKED BY<br><b>LJH</b> | D&K PROJECT #<br><b>427611L1</b> |
| PROJ. ENG.<br><b>LJH</b> | D&K ARCHIVE #                    |

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| SHEET NUMBER |  |
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C-11

















## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 3301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

11/24/2025 15:06:43 UTC

Project Code: 2026-0019320

Project Name: 250055980PR / IC - Enosburg

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

*Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.*

### **About Official Species Lists**

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

### **Endangered Species Act Project Review**

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed



species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

**\*NOTE\*** Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat - (Updated 4/12/2023)** The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at [newengland@fws.gov](mailto:newengland@fws.gov) to see if reinitiation is necessary.

#### *Additional Info About Section 7 of the Act*

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to



consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

### **Migratory Birds**

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**  
70 Commercial Street, Suite 300  
Concord, NH 3301-5094  
(603) 223-2541

## PROJECT SUMMARY

Project Code: 2026-0019320  
Project Name: 250055980PR / IC - Enosburg  
Project Type: Communication Tower New Construction  
Project Description: Construction of a 153-foot tall (overall height) self-support telecommunications tower and associated support equipment in an 80-foot by 80-foot fenced compound within a 100-foot by 100-foot lease area. Access to the facility will be gained via a proposed 12-foot wide access road within a 25-foot wide access/utility easement. Utilities will be routed underground within this easement and connected via overhead route along new utility poles to existing infrastructure on Bordoville road.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@44.84151545,-72.81066238168972,14z>



Counties: Franklin County, Vermont



## ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## INSECTS

| NAME                                                                                                                                                                                                                                                                        | STATUS                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Monarch Butterfly <i>Danaus plexippus</i><br>There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a> | Proposed<br>Threatened |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



## **IPAC USER CONTACT INFORMATION**

Agency: Private Entity  
Name: William Gowacki  
Address: 21 B Street  
City: Burlington  
State: MA  
Zip: 01803  
Email: wgowacki@ebiconsulting.com  
Phone: 7272159470



## LEGEND

- Mapped Vernal Pools
- Uncommon Species and other
  - Plant
  - Animal
  - Natural Community
- Rare Threatened and Endange
  - RTE Animal
  - RTE Plant
- Significant Natural Communities
- Deer Wintering Areas
- Indiana Bat Hibernacula

Project Site

1: 6,503

November 24, 2025



330.0 0 165.00 330.0 Meters

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

© Vermont Agency of Natural Resources

1" = 542 Ft. 1cm = 65 Meters

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



Tiffany Skrobiszewski

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**From:** Dodge, Noel <Noel.Dodge@vermont.gov>  
**Sent:** Thursday, January 6, 2022 4:45 PM  
**To:** Tiffany Skrobiszewski  
**Subject:** RE: Enosburg, VT Telecommunication tower- EBI 6121010289

Hello Tiffiany,  
Your below request was forwarded to me by John Gobeille.  
I am the primary contact for all Telecommunication project reviews at the Vermont of Fish and Wildlife Department. I actually review all projects that would go through Section 248 permitting statewide, so please feel free to send these along to me only in the future. Thanks.

I have reviewed the materials you provided and concur that I have no concern regarding any Jurisdictional Trust resources to the VFWD.  
I will however reserve the right to comment following submittal of the full Section 248 petition should the project layout change or additional information come to light.  
Thank you.



Noel Dodge | Wildlife Biologist, Regulatory review (he/him/his)  
[Vermont Agency of Natural Resources](#) | [Fish & Wildlife Department](#)  
Wildlife Division, Lands and Habitat Program  
5 Perry Street, Suite 40 | Barre, VT 05641  
[Noel.Dodge@vermont.gov](mailto:Noel.Dodge@vermont.gov) | 802-689-0000 cell  
*Written communication to and from state officials regarding state business are considered public records and may be subject to public scrutiny.*

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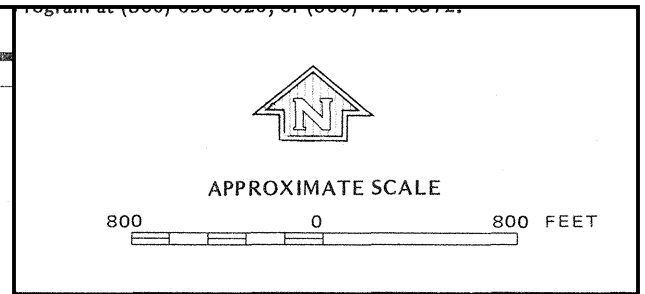
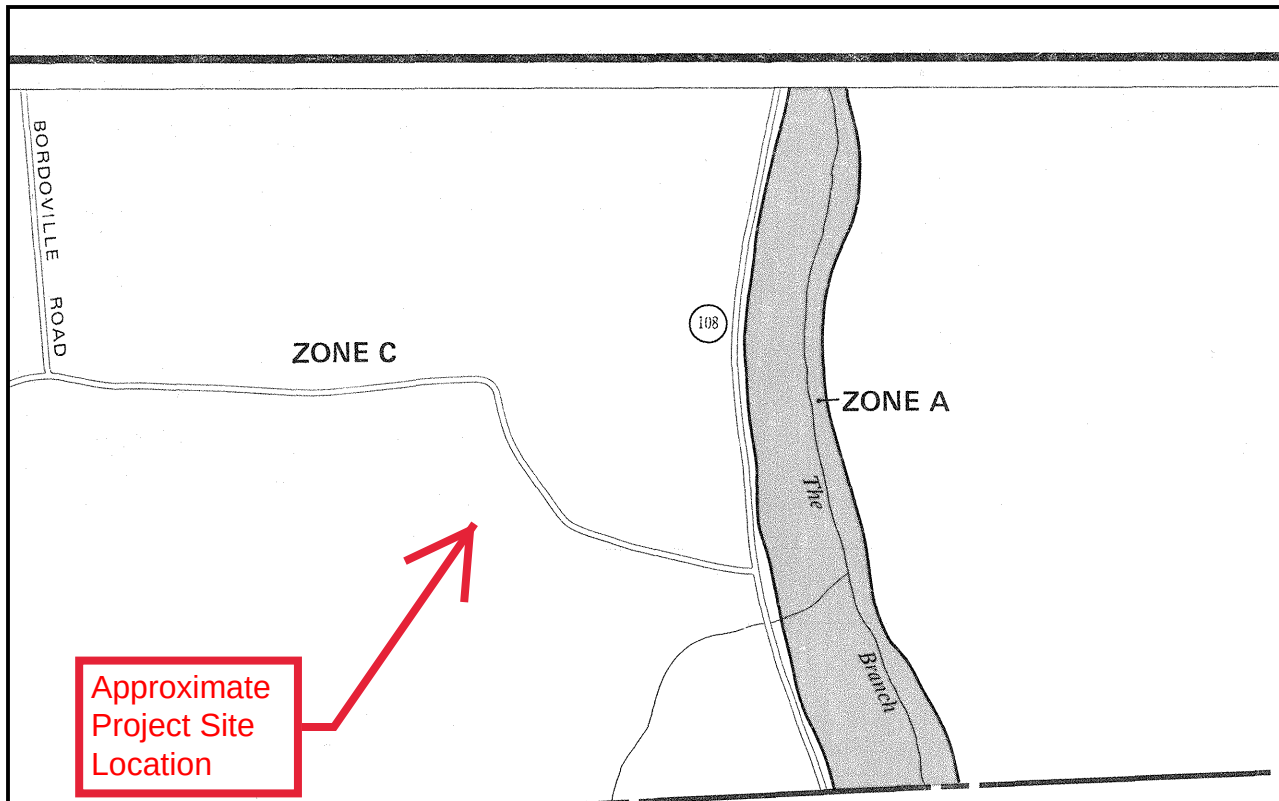
**From:** Tiffany Skrobiszewski <[tskrobiszewski@ebiconsulting.com](mailto:tskrobiszewski@ebiconsulting.com)>  
**Sent:** Thursday, January 6, 2022 8:26:12 AM  
**To:** Gobeille, John <[John.Gobeille@vermont.gov](mailto:John.Gobeille@vermont.gov)>  
**Subject:** Enosburg, VT Telecommunication tower- EBI 6121010289

**EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.**  
On behalf of Industrial Communications, EBI Consulting completed a Natural Resource Review Update for a proposed telecommunications facility in Enosburg, Vermont. We request your review and comment on the potential effects of project activities to the jurisdictional resources of the Vermont Fish and Wildlife Department that may occur within the vicinity of the proposed site. Please see the attached Natural Resources Report with supporting documentation for further information.

Tiffany Skrobiszewski  
Senior Scientist  
757-582-3866  
[tskrobiszewski@ebiconsulting.com](mailto:tskrobiszewski@ebiconsulting.com)  
Visit our website: [www.ebiconsulting.com](http://www.ebiconsulting.com)



[EBI's Notice of Collection and Privacy Policy](#)



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

TOWN OF  
**ENOSBURG,**  
VERMONT  
FRANKLIN COUNTY

PANEL 25 OF 30  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
500051 0025 B

EFFECTIVE DATE:  
JANUARY 2, 1981

 federal emergency management agency  
federal insurance administration

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.





0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

1:7,523

U.S. Fish and Wildlife Service, National Standards and Support Team,  
wetlands\_team@fws.gov

 Estuarine and Marine Deepwater  
 Estuarine and Marine Wetland

 Freshwater Emergent Wetland  
 Freshwater Forested/Shrub Wetland  
 Freshwater Pond

 Lake  
 Other  
 Riverine

National Wetlands Inventory (NWI)  
This page was produced by the NWI mapper

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## **Appendix B**

### **Qualifications**





## **BILL GOWACKI**

### *Biologist I*

**Experience:** Employed at EBI since 2024, in the industry since 2019  
**Education:** M.S., Biology: Ecology & Evolution, University of South Florida  
B.S., Biology: Marine Biology, University of South Florida

Bill Gowacki has over four years of experience in the environmental consulting field. His background includes Environmental Impact Assessments, biological and natural resource assessments, and government agency coordination at local, state, and federal levels. At EBI, Bill serves as a Biologist I within the Telecom Environmental Practice. His primary responsibilities include conducting Biological and Natural Resource Assessments for broadband and FCC National Environmental Policy Act (NEPA) Compliance Reviews

## **RELEVANT PROJECT EXPERIENCE:**

### **Broadband and FCC National Environmental Policy Act (NEPA) Compliance Reviews**

Bill conducts Biological and Natural Assessments for broadband and FCC NEPA Compliance Reviews. These reviews include an analysis of wetlands, endangered species and habitats, floodplain management, and other areas of environmental concern for proposed broadband and telecommunications installations.

### **Environmental Site Reviews**

Bill has conducted field reviews and assessments of infrastructure and development projects throughout the state of Florida. These responsibilities included generalized and specialized field surveys concerning land use identification, wetland delineation and quality assessments, and protected species surveys. These field surveys were performed in accordance with guidelines established by the Florida Department of Transportation (FDOT), the Florida Department of Environmental Protection (FDEP), the Florida Fish and Wildlife Conservation Commission (FFWC), the US Army Corps of Engineers (USACE), and other local and municipal agencies.

### **Environmental Resources Evaluation and Permitting**

Bill has contributed to Environmental Impact Assessments and permitting efforts for projects ranging in scope from culvert replacements to 26-mile highway widening projects. His primary functions in these efforts included assessing potential presence of and impacts to protected species within proposed project areas, wetlands and other surface waters impacts and mitigation, and agency permit applications. Bill was directly responsible in the collection, analysis, and presentation of such data in order to progress critical project pathways from development to permitting to implementation.



## Jesse Redd

### *Senior Biologist*

**Experience:** 20+ years in the industry

**Education:** BS Forestry (Environmental Resources Management), Virginia Tech, Blacksburg VA

Jesse Redd has extensive experience in environmental due diligence specializing in National Environmental Policy Act (NEPA), natural resource reviews, avian nest surveys, Phase 1 Environmental Site Assessments (ESA), and Federal Aviation Administration (FAA) studies for the telecommunication industry.

## Relevant project experience:

### **Environmental Site Assessments, Multiple Locations**

Jesse has conducted Phase I ESAs, Preliminary Environmental Site Screenings and soil and groundwater sampling for various clients and has prepared phase I and phase II compliance reports for properties located in the Mid-Atlantic, Southeast, Northeast and Midwest. These properties have included industrial, manufacturing, commercial, retail and multifamily residential (including HUD) properties as well as telecommunications sites.

### **Avian Nest Surveys**

Mr. Redd has conducted Avian Nest Surveys for telecommunication sites throughout the Mid-Atlantic region. These reports include an analysis of habitat types, breeding pair identification, and breeding behavior for species surveyed.

### **Mobile telecommunications site assessments, Multiple Locations**

In addition to environmental assessments, he has prepared over 300 NEPA screening reports and environmental assessments for telecommunications sites located in the Mid-Atlantic, Southeast, Northeast, and Midwest. These reports ensure compliance with Federal Communications Commission (FCC) requirements under the NEPA and include the analysis of historic properties, wetlands, endangered species habitats, floodplains and other areas of environmental concern and the possible impacts of cellular installations on these sensitive areas. He has also prepared client-specific and State Historic Preservation Office (SHPO)-requested photo simulations for proposed telecommunications structures, including detailed analysis of visual impacts.

### **Environmental sampling, Multiple Locations**

He has also conducted sampling for radon, asbestos and lead at various property types across the Mid-Atlantic, Southeast, Northeast, and Midwest. Additionally, he has performed detailed mold assessments and sampling for residential and commercial properties.



Tiffany Skrobiszewski

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**From:** Dodge, Noel <Noel.Dodge@vermont.gov>  
**Sent:** Thursday, January 6, 2022 4:45 PM  
**To:** Tiffany Skrobiszewski  
**Subject:** RE: Enosburg, VT Telecommunication tower- EBI 6121010289

Hello Tiffiany,  
Your below request was forwarded to me by John Gobeille.  
I am the primary contact for all Telecommunication project reviews at the Vermont of Fish and Wildlife Department. I actually review all projects that would go through Section 248 permitting statewide, so please feel free to send these along to me only in the future. Thanks.

I have reviewed the materials you provided and concur that I have no concern regarding any Jurisdictional Trust resources to the VFWD.  
I will however reserve the right to comment following submittal of the full Section 248 petition should the project layout change or additional information come to light.  
Thank you.



Noel Dodge | Wildlife Biologist, Regulatory review (he/him/his)  
[Vermont Agency of Natural Resources](#) | [Fish & Wildlife Department](#)  
Wildlife Division, Lands and Habitat Program  
5 Perry Street, Suite 40 | Barre, VT 05641  
[Noel.Dodge@vermont.gov](mailto:Noel.Dodge@vermont.gov) | 802-689-0000 cell  
*Written communication to and from state officials regarding state business are considered public records and may be subject to public scrutiny.*

---

**From:** Tiffany Skrobiszewski <[tskrobiszewski@ebiconsulting.com](mailto:tskrobiszewski@ebiconsulting.com)>  
**Sent:** Thursday, January 6, 2022 8:26:12 AM  
**To:** Gobeille, John <[John.Gobeille@vermont.gov](mailto:John.Gobeille@vermont.gov)>  
**Subject:** Enosburg, VT Telecommunication tower- EBI 6121010289

**EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.**  
On behalf of Industrial Communications, EBI Consulting completed a Natural Resource Review Update for a proposed telecommunications facility in Enosburg, Vermont. We request your review and comment on the potential effects of project activities to the jurisdictional resources of the Vermont Fish and Wildlife Department that may occur within the vicinity of the proposed site. Please see the attached Natural Resources Report with supporting documentation for further information.

Tiffany Skrobiszewski  
Senior Scientist  
757-582-3866  
[tskrobiszewski@ebiconsulting.com](mailto:tskrobiszewski@ebiconsulting.com)  
Visit our website: [www.ebiconsulting.com](http://www.ebiconsulting.com)



[EBI's Notice of Collection and Privacy Policy](#)

January 5, 2022

**Vermont Fish and Wildlife Department**

**Mr. John Gobeille**

**5 Perry Street, Suite 40**

**Barre, VT 05641**

[John.Gobeille@vermont.gov](mailto:John.Gobeille@vermont.gov)

**Subject: Trust Resources Review  
Proposed Telecommunications Facility  
Site Identifier: Enosburg VT  
Site Address: 4756 W Enosburg Road, Enosburg, VT 05450  
Latitude / Longitude: 44-50-27.6 N / 72-48-39.42 W  
EBI #6121010289**

Dear Mr. Gobeille:

EBI Consulting (EBI) is conducting an environmental review of the above-referenced proposed telecommunications facility. At the request of Industrial Communications, EBI is submitting the information contained herein for your review and comment with respect to the potential impacts of the proposed facility on jurisdictional trust resources of the Vermont Fish and Wildlife.

For complete details, please refer to the attached Natural Resource Review, which includes a review of protected species and associated habitats identified as being potentially present at or within immediate proximity to the proposed telecommunications installation.

Based on the results of this Review as summarized herein, it is the opinion of EBI that any resulting incidental take of the Northern long-eared bat (*Myotis septentrionalis*) is not prohibited by the final 4(d) rule.

**If feasible, please forward your response directly to me via email at [tskrobiszewski@ebiconsulting.com](mailto:tskrobiszewski@ebiconsulting.com).** Should you have questions or wish to discuss this further, please contact me at the email above or by phone at (757) 582-3866.

Sincerely,



Tiffany Skrobiszewski  
Author / Senior Scientist

Patrick Tilley  
Reviewer / Biologist II

Attachment: Natural Resource Review



## **NATURAL RESOURCE REVIEW**

# Natural Resources Review

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## **Enosburg VT**

4756 W Enosburg Road  
Enosburg, VT 05450

EBI Project No. 6121010289

January 5, 2022

Prepared for:

Industrial Communications  
c/o DuBois & King, Inc.  
PO Box 339  
Randolph, VT 05060

Prepared by:





January 5, 2022

**Subject: Natural Resources Review for a Proposed Wireless Communications Facility  
Enosburg VT  
4756 W Enosburg Road, Enosburg, VT 05450  
44° 50' 27.6" N / 72° 48' 39.42" W  
EBI Project No. 6121010289**

## OVERVIEW

EBI Consulting (EBI) has prepared this Natural Resource Review (NR Review) for the above-referenced proposed wireless communications facility (herein, the Facility). This NR Review supports a National Environmental Policy Act (NEPA) review of the proposed Facility, completed in accordance with Federal Communications Commission (FCC) NEPA implementing procedures set forth in 47 CFR 1.1301-1.1320.

The purpose of this NR Review is to determine whether further environmental review may be required in accordance with 47 CFR 1.1307(a)(1), (2), (3), (6), and (7) of FCC NEPA Rules. Specifically, this NR Review focuses on evaluating whether the proposed Facility will result in potential significant impacts to federal lands, federal-listed species, flood zones, or other significant changes to surface features.

EBI prepared this NR Review using readily available online resources and visual observations made during EBI's field survey. This NR Review is designed to provide a baseline evaluation of the potential for the proposed Facility to significantly affect the above-referenced natural resources (including federal-listed species) and to determine if additional review, specialized on-site surveys, or consultation is required.

## PROJECT SUMMARY

As of the date of this NR Review, the proposed project consists of the construction of a new communications facility. Specifically, the proposed installation will consist of a 140-foot self-supporting tower with an overall height of 153 feet. Ground support equipment will be located within a proposed 100-foot by 100-foot fenced lease area. The site will be accessed via a proposed 25-foot-wide access/utility easement emanating from Bordoville Road. Please see the attached site drawings for complete details.

## PROPERTY AND VICINITY DESCRIPTION

The property on which the Facility is proposed (herein, the Subject Property), is an approximately 505.84-acre parcel, consisting primarily of undeveloped wooded land with patches of cleared pastureland. Agricultural outbuildings are developed along the northeastern and southeastern portion of the property.

The area of the Subject Property on which the installation is proposed (herein, the Project Site) and surrounding area currently consists primarily of undeveloped pastureland with some wooded areas.

## FEDERAL LANDS REVIEW

EBI reviewed available online mapping resources to determine if the proposed Facility location is inside the boundaries of, or within one mile of certain classifications of federal land. Applicable data is depicted on EBI's 'Land Resources Map' (see attached). The following table summarizes EBI's review.

| <b>FEDERALLY-PROTECTED LAND</b><br>Jurisdictional Agency / Resource                                                                                                                                                                                                                                                                                                                                                                  | <i>Within<br/>Boundary</i> | <i>Within<br/>1-mile</i> | <i>Not<br/>Within<br/>1-mile</i>    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|-------------------------------------|
| <b>Wilderness Area [47 CFR §1.1307(a)(1)]</b><br>National Wilderness Preservation System (NWPS)<br>National Park Service (NPS); U.S. Forest Service (USFS); U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM)<br><a href="https://www.arcgis.com/apps/webappviewer/index.html?id=a415bca07f0a4bee9f0e894b0db5c3b6">https://www.arcgis.com/apps/webappviewer/index.html?id=a415bca07f0a4bee9f0e894b0db5c3b6</a> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>Wildlife Preserve [47 CFR §1.1307(a)(2)]</b><br>National Wildlife Refuge System (NWRS)<br>NPS; USFS; USFWS; BLM<br><a href="http://www.fws.gov/refuges">http://www.fws.gov/refuges</a>                                                                                                                                                                                                                                            | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>Wild &amp; Scenic Rivers</b><br>NPS; USFS; USFWS; BLM<br><a href="http://www.rivers.gov">http://www.rivers.gov</a>                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>National Scenic Trails</b><br>NPS and Managing Systems and Trails Organization (MSTO)<br><a href="https://www.nps.gov/subjects/nationaltrailssystem/national-scenic-trails.htm">https://www.nps.gov/subjects/nationaltrailssystem/national-scenic-trails.htm</a>                                                                                                                                                                  | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Based on a review of the above-referenced resources, the proposed facility is not located within the boundaries of, or within one mile of any of the above-referenced federal lands.

## PROTECTED SPECIES REVIEW

### Federally Listed Species and Critical Habitats

EBI utilized the USFWS Information for Planning and Consultation<sup>1</sup> (IPaC) online project review tool to identify species that are federally listed or proposed for listing under the Endangered Species Act (ESA), and that are known to occur within the project vicinity. Based on EBI's research of online files maintained by the USFWS, one such federal-listed (i.e. endangered or threatened) species are known to occur within the project vicinity.

Additionally, EBI utilized the USFWS online Critical Habitat Portal<sup>2</sup> online mapping tool and determined that the proposed Facility location is not within a designated critical habitat.

### State Protected Species

EBI also reviewed online resources maintained by the Vermont Department of Fish and Wildlife (<http://anrmaps.vermont.gov/websites/anra/>) to identify any state-listed species that are known to occur within proximity of the proposed Project Site. Based on EBI's review of these online resources, no state-listed species are known to occur within the immediate proximity of the proposed Project Site.

<sup>1</sup> USFWS Information and Consultation URL: <http://ecos.fws.gov/ipac>

<sup>2</sup> USFWS Critical Habitat Portal URL: <http://criticalhabitat.fws.gov>



A review of the identified species and their associated habitats with respect to the proposed location of the Project Site is provided in the following table.

| SPECIES LISTING<br>Common Name<br>(Scientific Name)                                                                                                                                         | FEDERAL<br>STATUS | HABITAT DESCRIPTION                                                                                                                                                                                                                                                                                               | DETERMINATION OF EFFECT                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Northern long-eared bat<br>( <i>Myotis septentrionalis</i> )                                                                                                                                | FT / ST           | Winter habitat includes large caves or mines; Summer habitat includes roost under or in cavities of both live and dead trees. Foraging habitats include riparian areas, upland forests, ponds, and fields. Forested landscapes supporting suitable habitat (trees > 3-inches dbh) are the most important habitat. | <b>May Affect, 4(d) Rule</b> - Potentially suitable habitat exists at the proposed Site. However, information obtained from the USFWS did not identify any known hibernaculum within 0.25 miles of the proposed Site or maternity roosting trees within 150 feet of the proposed Site. Therefore, any resulting incidental take of the Northern long-eared bat ( <i>Myotis septentrionalis</i> ) is not prohibited by the final 4(d) rule. |
| Monarch butterfly<br>( <i>Danaus plexippus</i> )                                                                                                                                            | FC                | Commonly found across north America wherever suitable habitat exists. Require native milkweed species and nectar plants.                                                                                                                                                                                          | <b>No Determination</b> – Not afforded protection by the Endangered Species Act as a Candidate species.                                                                                                                                                                                                                                                                                                                                    |
| FE = Federal Endangered; FT = Federal Threatened; FP = Federal Proposed; CH = Critical Habitat; FC = Federal Candidate<br>SE = State Endangered; ST = State Threatened; SP = State Proposed |                   |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**As noted in the table above, suitable habitats capable of supporting one or more of the listed species (i.e. Northern long-eared bat (*Myotis septentrionalis*) was noted within the vicinity and at the proposed Site. However, information obtained from the USFWS did not identify any known hibernaculum within 0.25 miles of the proposed Site or known maternity roosting trees within 150 feet of the proposed Site, and as such, EBI is unaware of known hibernaculum within 0.25 miles or known maternity roosting trees within 150 feet of the proposed Site. Therefore, any resulting incidental take of the Northern long-eared bat is not prohibited by the final 4(d) rule unless the Service advises you within 30 days of December 22, 2021.**

#### Migratory Bird Treaty Act

Consideration should also be given to the potential impacts of the construction and ongoing operation of the proposed Facility, on species protected under the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703-712). The USFWS issued “Recommended Best Practices for Communications Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning”<sup>3</sup> to provide avoidance and minimization measures to reduce the risk of avian mortality as a result of communications towers.

The proposed tower will be a 153-foot self-supported (i.e. no guyed wires) with no lighting. As such, it meets most of the USFWS’s tower siting and design recommendations and is therefore not anticipated to adversely affect migratory birds.

#### Bald & Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668-668d) prohibits the “taking” of bald and golden eagles in the absence of a permit issued by the Secretary of the Interior. Based on EBI’s on-site observations, assessment of habitat, and review of publicly available occurrence data, the proposed installation is not anticipated to result in the “take” of any Bald or Golden Eagles. No further review is required.

#### **FEMA FLOOD ZONE**

Based on EBI’s review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map ([www.fema.gov](http://www.fema.gov); Map# 5000510025B), the proposed facility is located within an area identified as Zone C, and therefore is not located within a 100-year floodplain. As such, in accordance with §1.1307(a)(6) of FCC NEPA Rules, an Environmental Assessment is **not** required.

<sup>3</sup> <https://www.fws.gov/migratorybirds/pdf/management/usfwscommmtowerguidance.pdf>

## SIGNIFICANT CHANGES TO SURFACE FEATURES

### Wetlands

EBI did not observe any readily identifiable wetlands or wetland characteristics (e.g. standing water, hydrophytic vegetation, soil saturation and inundation, drainage patterns and sediment deposition, watermarks and drift lines on trees and vegetation, or water stained leaves). A review of the USFWS National Wetlands Inventory (NWI) map (see attached) did not identify any wetlands in the immediate vicinity of the Project Site.

EBI also reviewed the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) for the Project Site and immediate vicinity. According to EBI's review, soils at the Project Site consist primarily of Peru fine sandy loam, 8 to 15 percent slopes. This moderately well drained consists of a restrictive depth between 20 to 39 inches to densic material and a water table depth between 16 to 30 inches. This soil is not listed as hydric by the NRCS (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>).

Based on EBI's review as summarized above, the proposed communications facility installation is not anticipated to impact identified wetlands.

## FINDINGS AND CONCLUSIONS

Based on the results of EBI's review as summarized herein, the proposed communications facility is:

- **Any resulting incidental take of the Northern long-eared bat (*Myotis septentrionalis*) is not prohibited by the final 4(d) rule;**
- Not within the boundaries of, or within one mile of federal lands (i.e. wildlife preserves, wilderness areas, etc.)
- Not within the boundaries of a FEMA-designated 100-year flood zone; and
- Not anticipated to result in a significant change to surface features.

EBI is an independent contractor, not an employee of either the property owner or the project proponent, and its compensation was not based on the findings or recommendations made in this Review or on the closing of any business transaction.

Sincerely,



Ms. Tiffany Skrobiszewski  
Senior Scientist

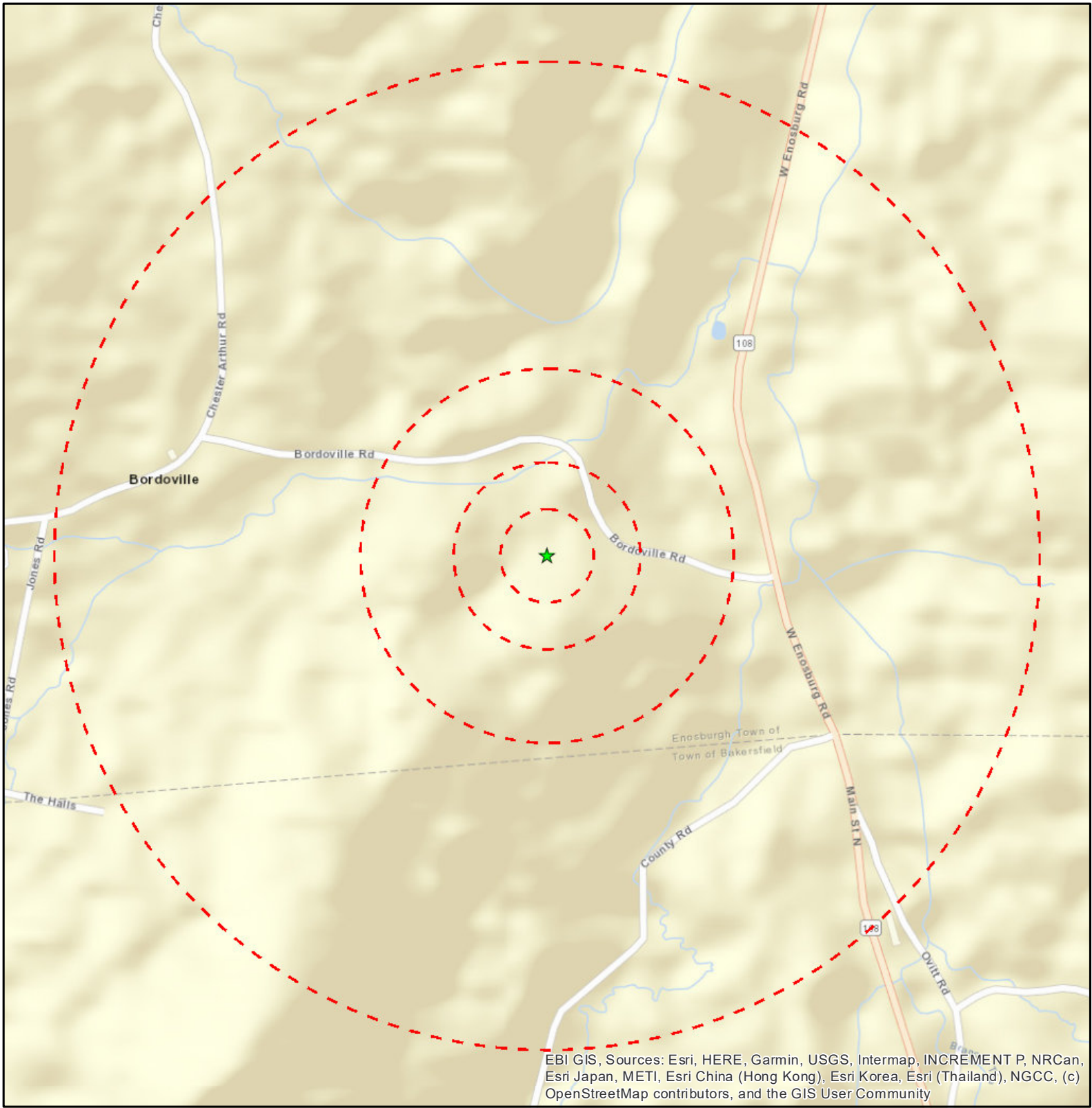


Mr. Patrick Tilley  
Biologist  
Direct# (619) 251-0377

Attachments:    Figures & Drawings  
                      Photographs  
                      Species Review Documentation  
                      Supporting Documentation  
                      Qualifications



## **FIGURES & DRAWINGS**



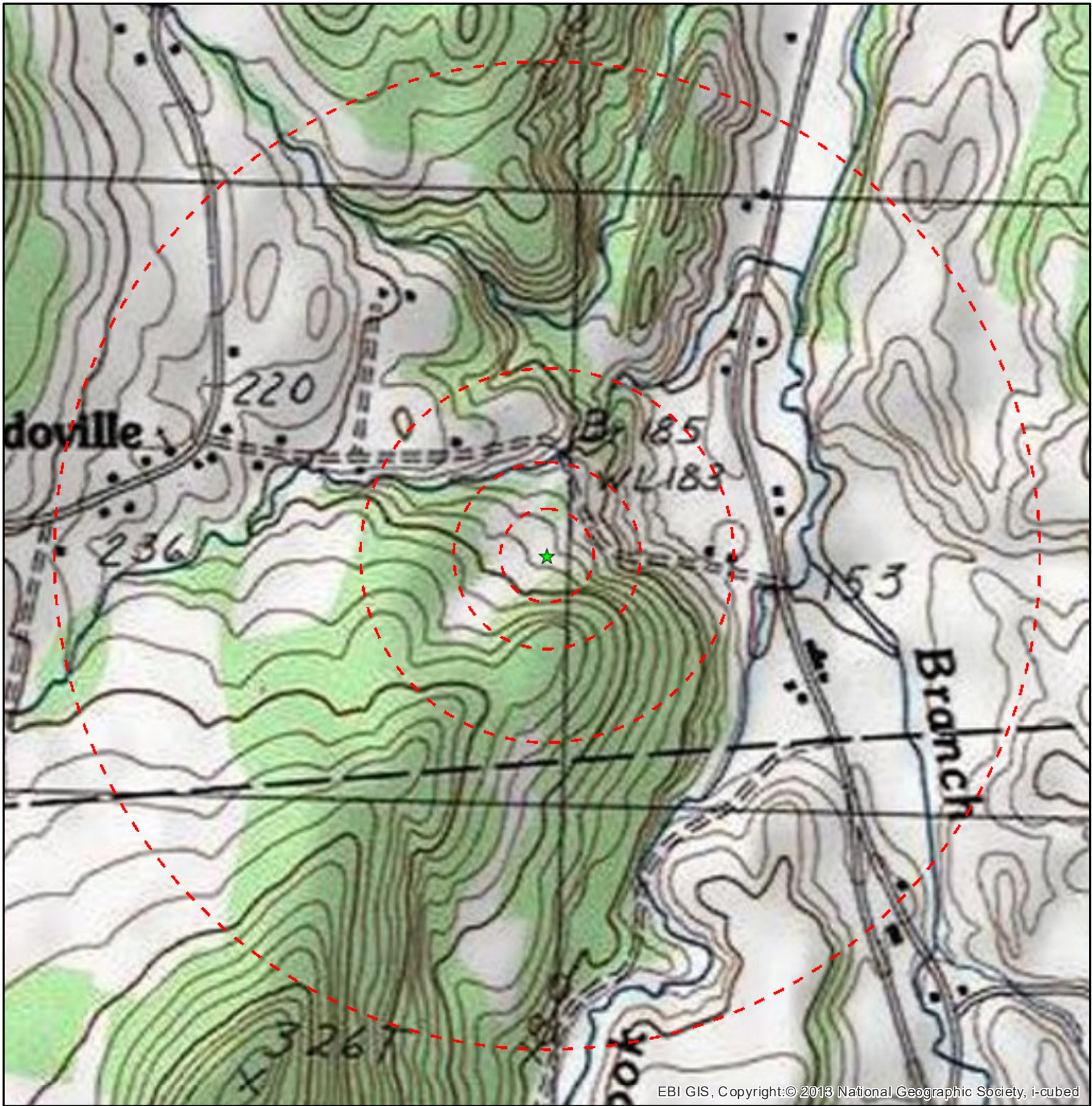
**Legend**

- ★ Project Site
- Site Radius at 250', 500', 1000' and 1/2 mile

**Figure 1: Site Location Map**

**ENOSBURG VT**  
**4756 W ENOSBURG ROAD**  
**ENOSBURG, VT 05450**





### Legend

- ★ Project Site
- Site Radius at 250', 500', 1000' and ½ mile

USGS 24K Quad: Bakersfield, VT 1986

Date: 11/24/2021

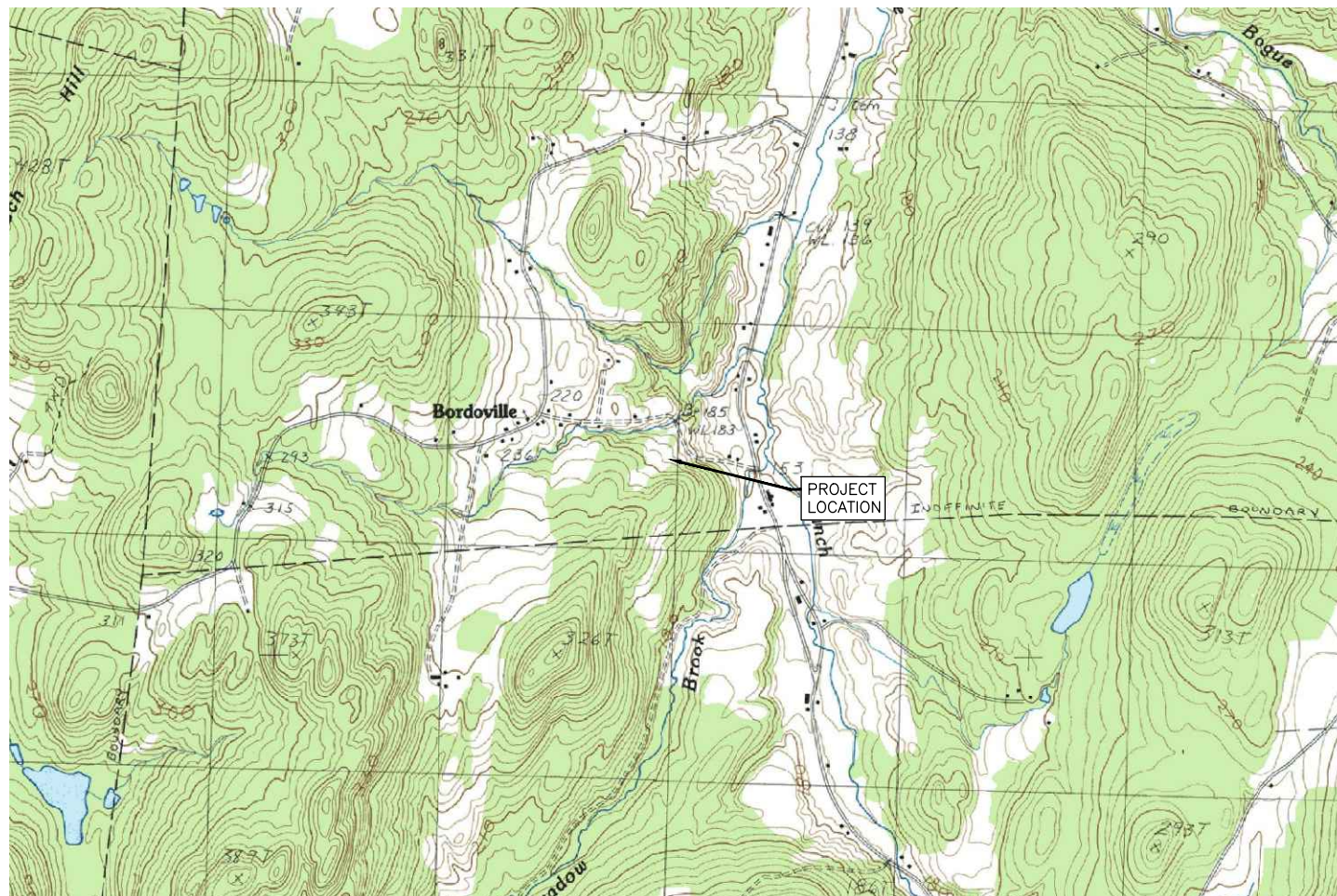
**Figure 2 - Topographic Map**

**ENOSBURG VT**  
**4756 W ENOSBURG ROAD**  
**ENOSBURG, VT 05450**

PN: 6121010289

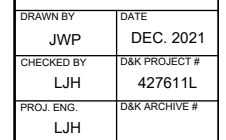






| MEMBER | DATE |
|--------|------|
|--------|------|

|      |                                 |
|------|---------------------------------|
| C-1  | GENERAL NOTES                   |
| C-2  | ORTHOPHOTO PLAN                 |
| C-3  | OVERALL SITE PLAN               |
| C-4  | ABUTTER PLAN                    |
| C-5  | OVERHEAD UTILITY LINE EXTENSION |
| C-6  | PLAN AND PROFILE                |
| C-7  | DETAIL SITE PLAN                |
| C-8  | TOWER ELEVATIONS                |
| C-9  | CIVIL DETAILS                   |
| C-10 | PERVIOUS TELECOMM. SURFACES     |
| C-11 | SIGNAGE AND ANTENNA DETAILS     |
| C-12 | EPSC LOW RISK HANDBOOK          |
| C-13 | EPSC LOW RISK HANDBOOK          |
| C-14 | EPSC LOW RISK HANDBOOK          |

[illegible]

|              |  |
|--------------|--|
|              |  |
| SHEET NUMBER |  |

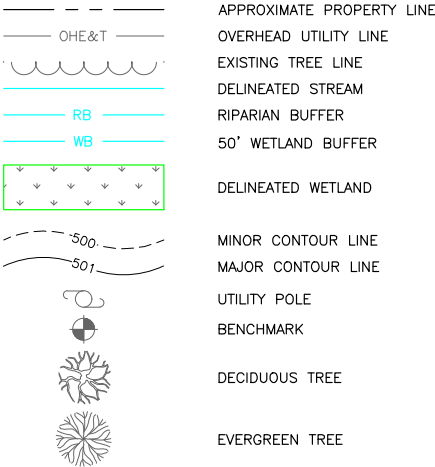
T-1

PROJECT DESCRIPTION:

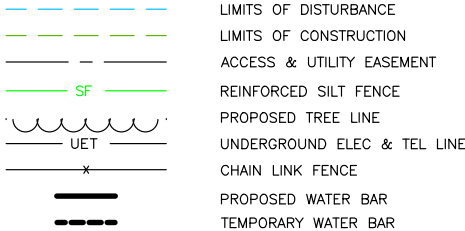
1. TYPE OF PROJECT: TELECOMMUNICATION FACILITY
2. DESCRIPTION OF MAJOR PROJECT COMPONENTS: UNMANNED 80'x80' TELECOMMUNICATIONS COMPOUND TO BE CONSTRUCTED ON A 506 ACRE FORESTED PARCEL. THE PROPERTY MAINTAINS AN ACTIVE FARM, INCLUDING A FARM SHED AND A SUGARHOUSE. THE COMPOUND LOCATION IS SITED IN AN UNDEVELOPED CLEARING WITHIN THE FORESTED AREA. ACCESS TO THE COMPOUND WILL FOLLOW AN EXISTING TRAIL INTO THE CLEARING TO THE SITE. ACCESS IMPROVEMENTS INCLUDE WIDENING THE EXISTING ACCESS ROUTE AND STABILIZING THE ROAD BED. UNDERGROUND UTILITY SERVICES WILL CONNECT TO THE LAST PROPOSED UTILITY POLE ON BORDOVILLE ROAD. PROPOSED OVERHEAD SERVICE LINE ON BORDOVILLE ROAD WILL CONNECT TO THE LAST EXISTING UTILITY POLE. TREE CLEARING WILL BE MINIMIZED TO THE MINIMUM AREA NECESSARY FOR SITE IMPROVEMENTS AND CONSTRUCTION VEHICLE ACCESS. FOLLOWING CONSTRUCTIONS ALL DISTURBED AREAS OUTSIDE THE ACCESS AND COMPOUND WILL BE SEEDED AND MULCHED AND ALLOWED TO NATURALLY REVEGETATE.
3. POSTED SPEED LIMIT: N/A
4. TOTAL ACREAGE OF TEMPORARY EARTH DISTURBANCE: 26,932 S.F. (0.62 ACRE)
  - 4.1. STORMWATER CONSTRUCTION GENERAL PERMIT REQUIRED: NO
5. TOTAL ACREAGE OF TREE CLEARING: 797 S.F. (0.02 ACRE)
6. TOTAL AREA OF PERMANENT EARTH DISTURBANCE: 26,420 S.F. (0.61 ACRE)
7. IMPERVIOUS AREA
  - 7.1. EXISTING = 26,475 S.F. (0.61 ACRE)
  - 7.2. PROPOSED = 6,724 S.F. (0.15 ACRE)
  - 7.3. TOTAL = 33,199 S.F. (0.76 ACRE)
  - 7.4. STORMWATER OPERATIONAL PERMIT REQUIRED: NO
8. SEQUENCE OF MAJOR PROJECT COMPONENTS:
  - 8.1. DEMARCATATE LIMITS OF CONSTRUCTION
  - 8.2. INSTALL CONSTRUCTION ENTRANCE
  - 8.3. TREE CLEARING
  - 8.4. INSTALL EPSC MEASURES
  - 8.5. ESTABLISH ROUGH ACCESS ROAD
  - 8.6. POUR TOWER FOUNDATION
  - 8.7. INSTALL UNDERGROUND ELECTRIC/TELCO & ACCESS ROAD GRADING
  - 8.8. FINISH COMPOUND CONSTRUCTION INCLUDING TOWER ERECTION
  - 8.9. SITE STABILIZATION, SURFACE TREATMENT, RE-SEEDING
9. PREPARED POLLUTION PREVENTION STRATEGIES: CONTRACTOR TO ENSURE THAT THE SITE REMAINS CLEAN AND ALL DEBRIS AND UNUSED MATERIALS ARE REMOVED AT THE END OF EACH DAY.
10. MAXIMUM CONCURRENT EARTH DISTURBANCE: THE PROJECT WILL BE LIMITED TO ONE ACRE OR LESS OF EARTH DISTURBANCE AT ANY ONE TIME.
11. USE OF VEGETATED BUFFERS: THE PROJECT WILL HAVE STORMWATER DISCHARGES FROM THE CONSTRUCTION SITE TO WETLANDS AND DRAINAGE CHANNELS FROM THE ACCESS ROAD THAT DO NOT FIRST FILTER THROUGH A 50 FT. VEGETATED BUFFER. SILT FENCE WILL BE INSTALLED AT THESE LOCATIONS UNTIL FINAL STABILIZATION IS ESTABLISHED. THE ACCESS ROAD AND COMPOUND WILL BE GRADED TO PROVIDE A MILD CROSS-SLOPE TO DIRECT RUNOFF TO THE UNDISTURBED VEGETATED FOREST ADJACENT TO THE ROAD.
12. NAME OF RECEIVING WATERS: UNNAMED TRIBUTARY TO THE BRANCH
13. NUMBER OF PROPOSED STREAM CROSSINGS: 0
  - 13.1. STREAM ALTERATION PERMIT REQUIRED: NO
14. WETLAND IMPACTS:
  - 14.1. AREA OF WETLANDS IMPACTED BY PROPOSED ACTIVITIES: 0 S.F. (0.00 ACRE)
  - 14.2. AREA OF WETLAND BUFFERS IMPACTED BY PROPOSED ACTIVITIES: 4,057 S.F. (0.09 ACRE)
  - 14.3. STATE WETLANDS PERMIT REQUIRED: YES
  - 14.4. ARMY CORPS OF ENGINEERS PERMIT REQUIRED: NO
15. RIVER AND STREAM IMPACTS: NONE
  - 15.1. LOCATED IN A FLOOD HAZARD AREA: NO
  - 15.2. LOCATED IN A RIVER CORRIDOR: NO
  - 15.3. LOCATED IN A RIPARIAN BUFFER: YES
16. RARE, THREATENED, OR ENDANGERED SPECIES IMPACTS: NO IDENTIFIED CONCERNS
17. SIGNIFICANT NATURAL COMMUNITY: NO IDENTIFIED CONCERNS
18. WATER SUPPLY SOURCE PROTECTION AREA IMPACTS: NONE
19. NATURAL RESOURCES HABITAT IMPACTS:
  - 19.1. DEER WINTERING AREA: NO IDENTIFIED CONCERNS
  - 19.2. BEAR HABITAT AREA:
  - 19.3. SONG BIRD HABITAT
  - 19.4. BAT HABITAT AREA: NO IDENTIFIED ROOST TREES
  - 19.5. HABITAT BLOCK: MEDIUM PRIORITY LEVEL 6
  - 19.6. BIOFINDER: ADJACENT TO PRIORITY INTERIOR FOREST BLOCK
20. LOCAL ZONING – TOWN OF ENOSBURG
  - 20.1. ZONING DISTRICT: RURAL RESIDENTIAL (RR)
  - 20.2. OVERLAY DISTRICT:
21. PROPERTY LINE INFORMATION PROVIDED BY THE TOWN OF ENOSBURG TAX MAPS. DUBOIS & KING, INC. DID NOT PERFORM A BOUNDARY SURVEY.
22. TOPOGRAPHIC SURVEY PERFORMED BY DUBOIS & KING, INC. ON NOVEMBER 4, 2021.
23. THE PROJECT WILL COMPLY WITH THE LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL BY THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, 2020 EDITION.
24. ELEVATIONS FROM GPS OBSERVATIONS.

25. WETLANDS DELINEATION AND HABITAT REVIEW PERFORMED BY DUBOIS & KING, INC. ON NOVEMBER 8, 2021.

### EXISTING FEATURES LEGEND



## PROPOSED FEATURES LEGEND

[illegible]





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PRELIMINARY  
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ENOSBURG

BORDOVILLE ROAD  
ENOSBURG FALLS,  
VT 05450

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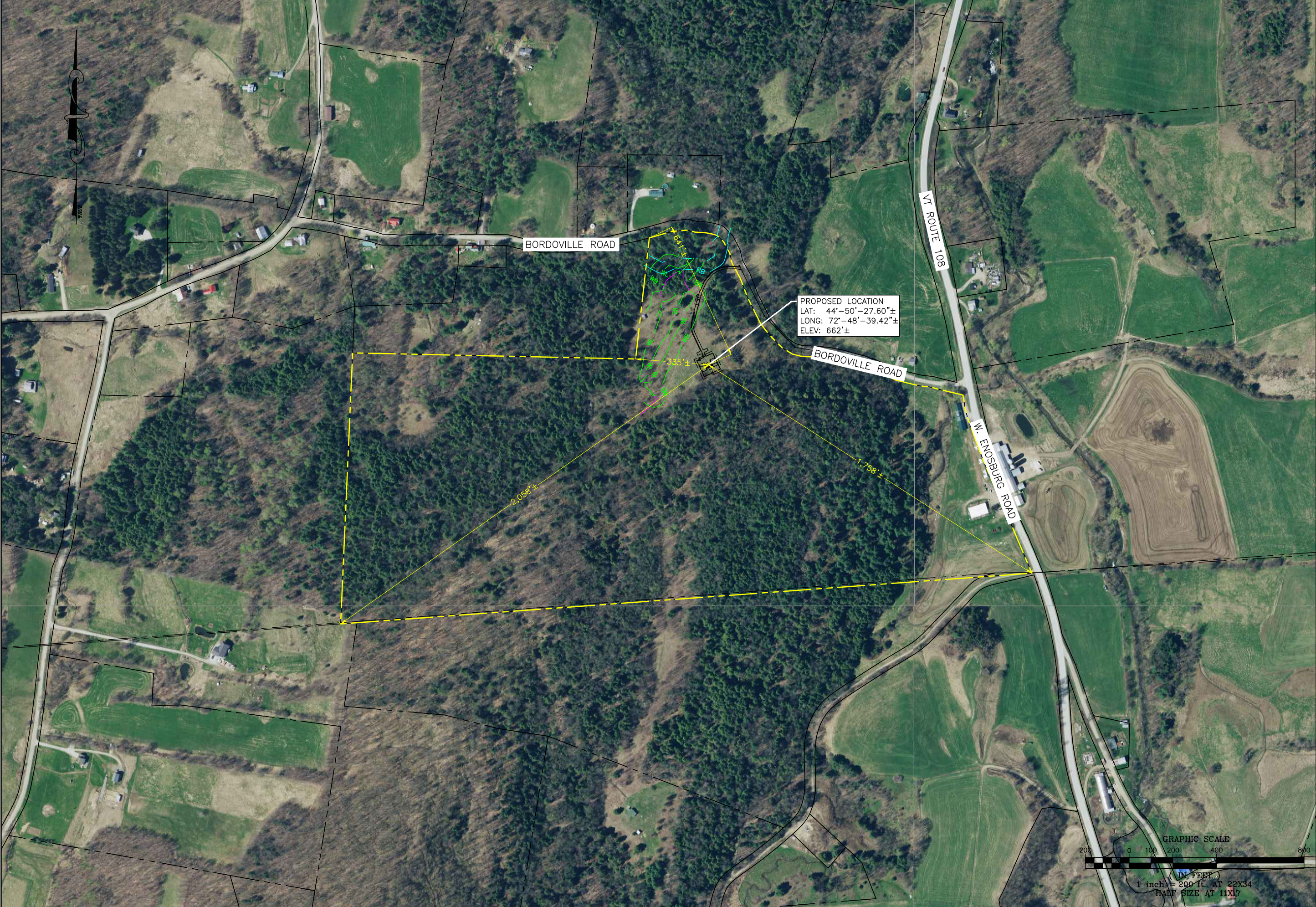
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PERMIT PLANS

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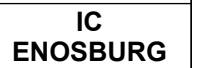
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OVERALL  
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C-3



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ABUTTER LIST:

- A. PARCEL #: CA7961—  
N/F NANCY MURPHIE  
7961 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450

B. PARCEL #: CA8059—  
N/F LYNN McMORROW  
8059 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450

C. PARCEL #: CA8129—  
N/F BRIAN & SABRINA  
8129 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450

D. PARCEL #: CA8264—  
N/F MAURICE & PIERRETTE PARENT  
4001 EAST SHELTON ROAD  
ENOSBURG FALLS, VT 05450

E. PARCEL #: WE3895—  
N/F CAITLIN SHAW  
3895 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

F. PARCEL #:  
N/F

G. PARCEL #: WE4072—  
N/F MARIE HULL  
4072 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

H. PARCEL #: WE4232—  
N/F ERIC & DANIELLE HULL  
4232 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

I. PARCEL #: WE4382—  
N/F NANCY BUZZELL  
4382 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

J. PARCEL #: WE4569—  
N/F SHERWOOD & MONA JEAN SMITH  
4569 W. ENOSBURG ROAD  
ENOSBURG FALLS, VT 05450

K. PARCEL #: WE4543—  
N/F ELROY & LINDA HUNT  
P.O. BOX 328  
ENOSBURG FALLS, VT 05450

L. PARCEL #: 00V001.  
N/F DUANE OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450

M. PARCEL #: 00V001.  
N/F DUANE OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450

N. PARCEL #: 0CY110.  
N/F KRISTEN SLADE  
2326 VT ROUTE 109  
WATERVILLE, VT 05492

O. PARCEL #: 0CY130.  
N/F DUANE & ANDREW OVITT  
249 OVITT ROAD  
ENOSBURG FALLS, VT 05450

P. PARCEL #: 0CY111.  
N/F MICHAEL & HOLLY RIVERS  
27 O'BRIEN DRIVE  
SOUTH BURLINGTON, VT 05403

Q. PARCEL #: JO030A.  
N/F CHESTER & BRENDA HALL  
215 JONES ROAD  
ENOSBURG FALLS, VT 05450

R. PARCEL #: CA6880—  
N/F ARTHUR & JAYE LUNDBORG  
55 JONES ROAD  
ENOSBURG FALLS, VT 05450

S. PARCEL #: BV0537—  
N/F VICTOR & DEBRA TIRrito  
70 GAIL STREET  
WINOOSKI, VT 05404

T. PARCEL #: BV0394—  
N/F PHILIPPA DORFMANN  
394 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450

U. PARCEL #: BV0352—  
N/F WILLIAM & GLORIA HUGHES  
352 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450

V. PARCEL #: BV0494—  
N/F CYRUS HOUSE  
& TARA LOMBARDI  
494 BORDOVILLE ROAD  
ENOSBURG FALLS, VT 05450

W. PARCEL #:  
N/F

X. PARCEL #:  
N/F

Y. PARCEL #: CA7984—  
N/F COURTNEY BENNETT  
7984 CHESTER ARTHUR ROAD  
ENOSBURG FALLS, VT 05450



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ENOSBURG

BORDOVILLE ROAD  
ENOSBURG FALLS,  
VT 05450

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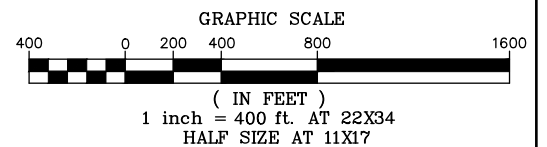
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## OVERHEAD UTILITY LINE EXTENSION

PERMIT PLANS

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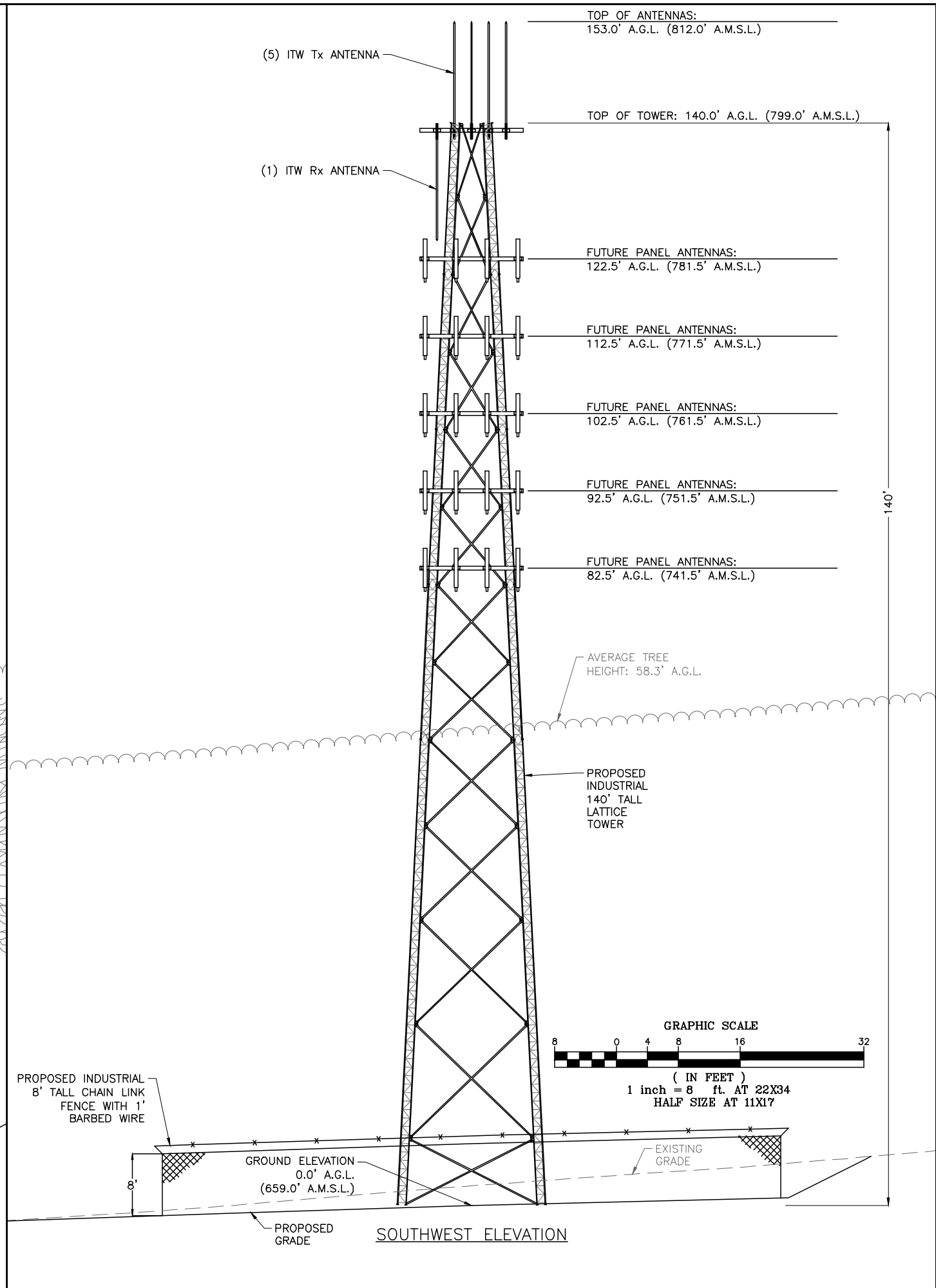
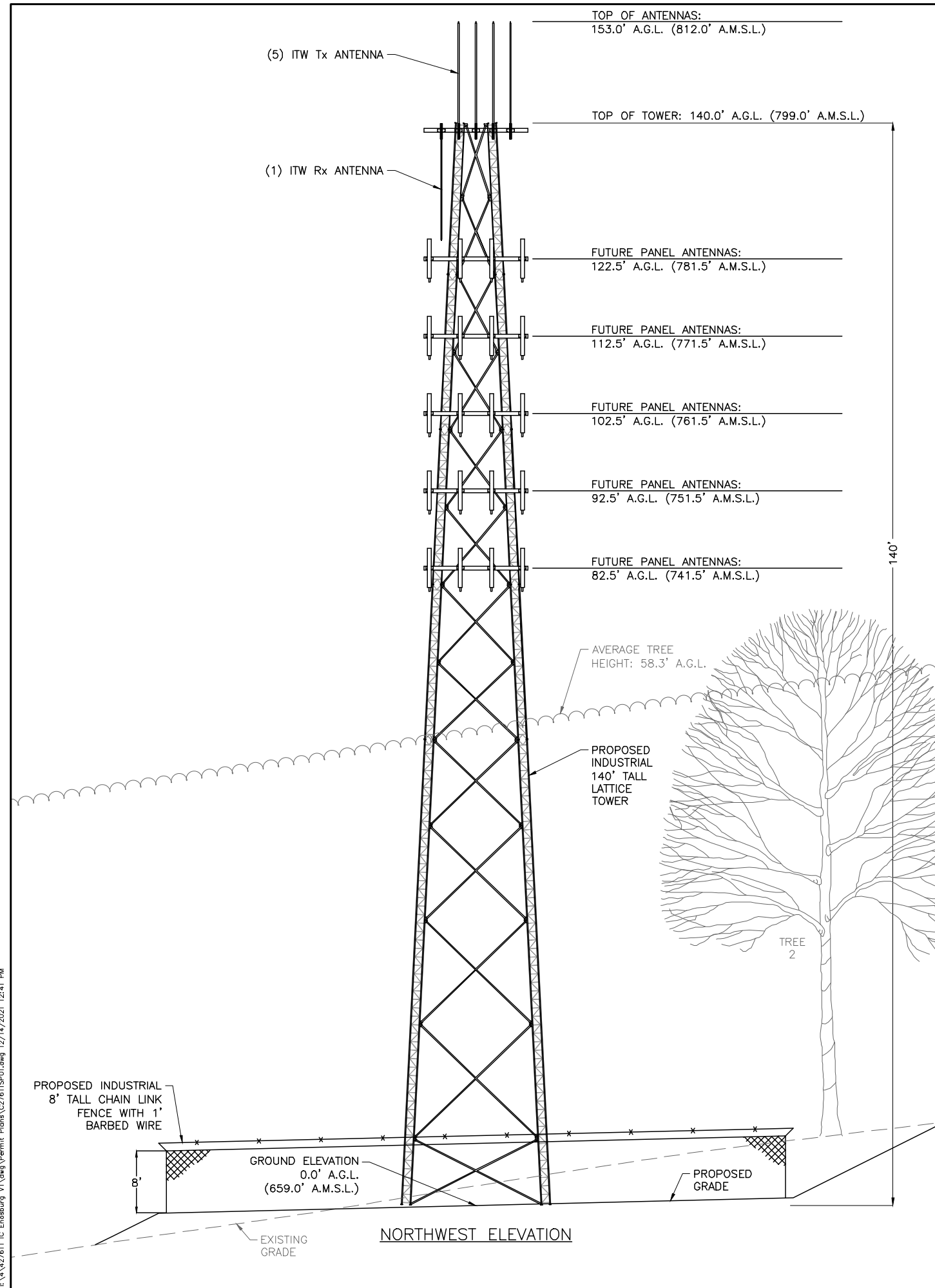
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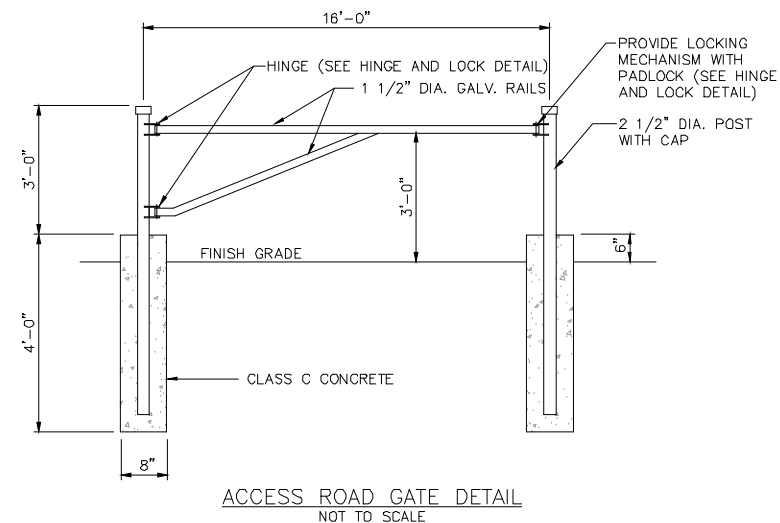
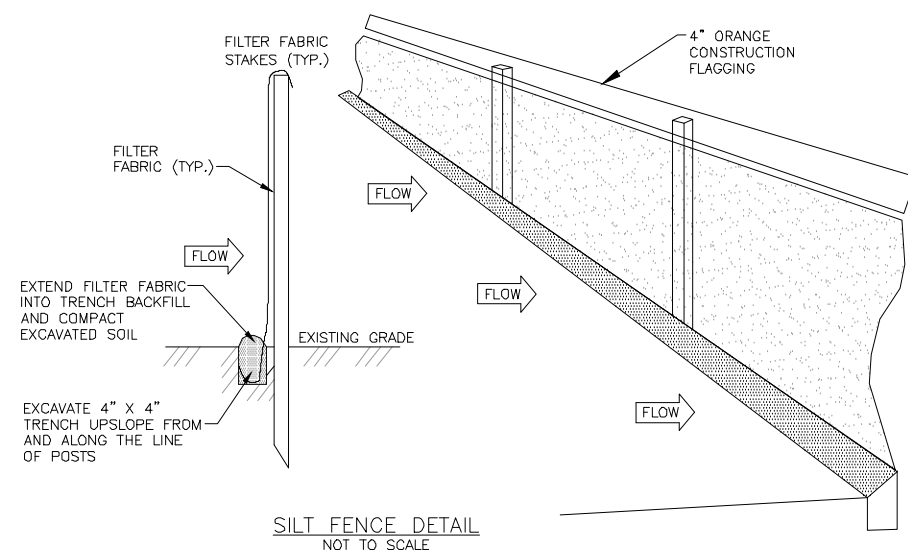






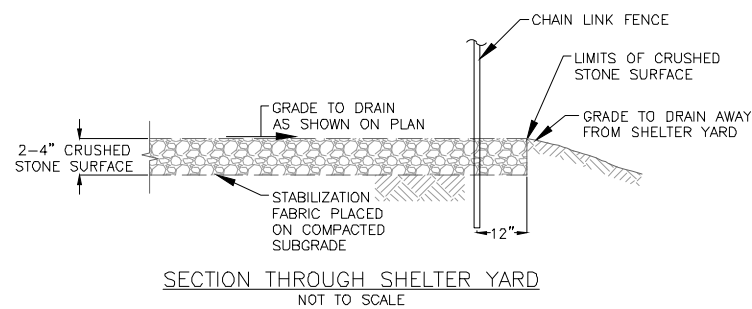
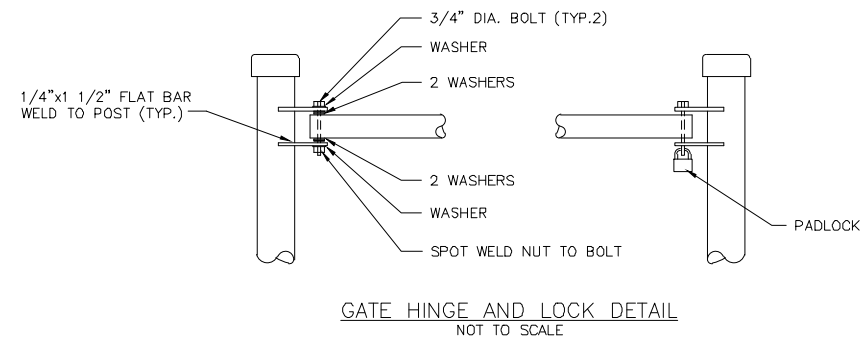






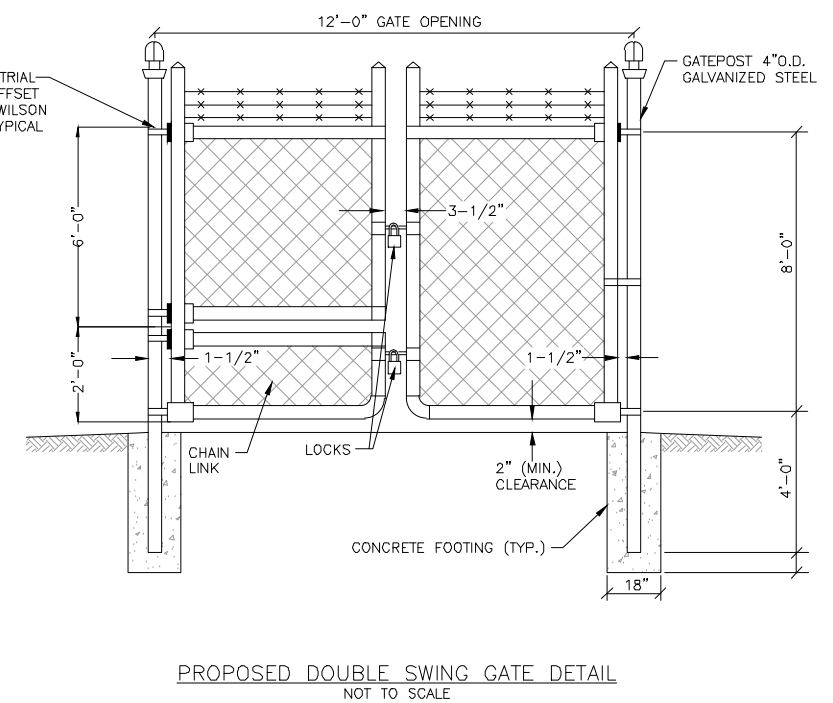
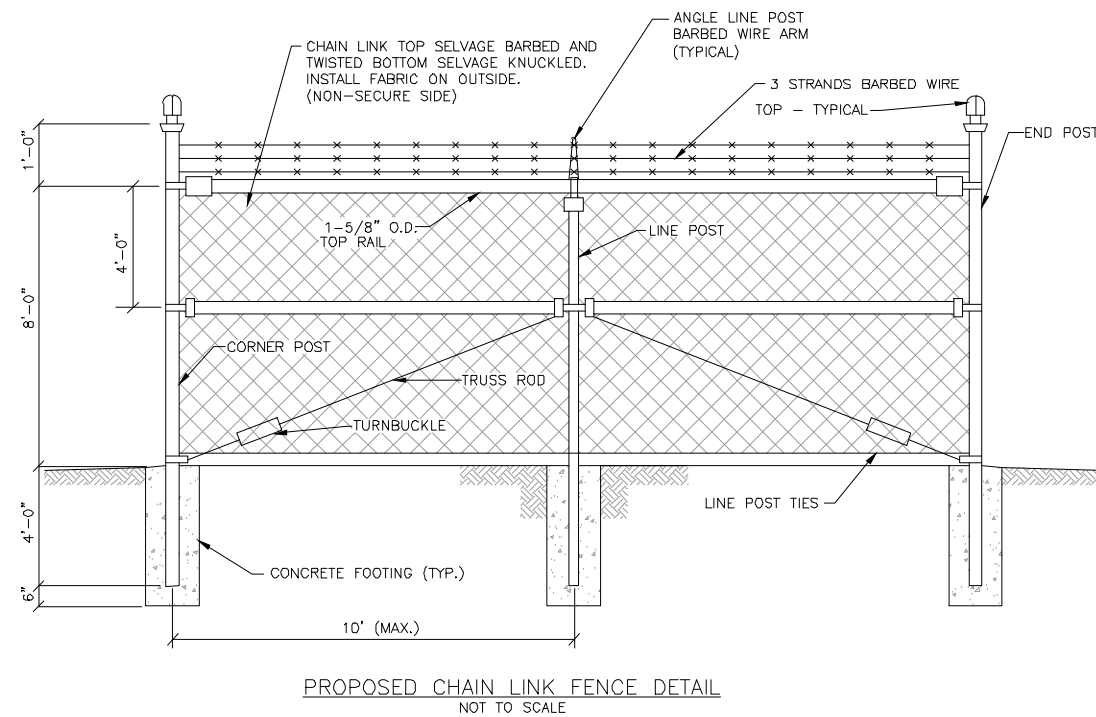
NOTES:

1. SEED AND MULCH ALL EXPOSED SOILS AS SOON AS FEASIBLE.
2. CONTRACTOR TO FOLLOW STATE OF VERMONT LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.



NOTE:

**NOTE:**  
REMOVE TOPSOIL FOR THE PLACEMENT  
OF YARD STONE AND STOCKPILE ON SITE.  
BLEND TOPSOIL INTO NEW GRADE IMMEDIATELY  
SURROUNDING THE FENCED-IN AREA, AND  
INSURE THAT IT REMAINS WITHIN THE TOP  
LAYER OF SOIL STRATA.



ENGINEERING • PLANNING •  
MANAGEMENT • DEVELOPMENT  
6 GREEN TREE DRIVE  
SO. BURLINGTON, VT 05403  
TEL: (802) 878-7661  
FAX: (866) 783-7101  
[www.dubois-king.com](http://www.dubois-king.com)  
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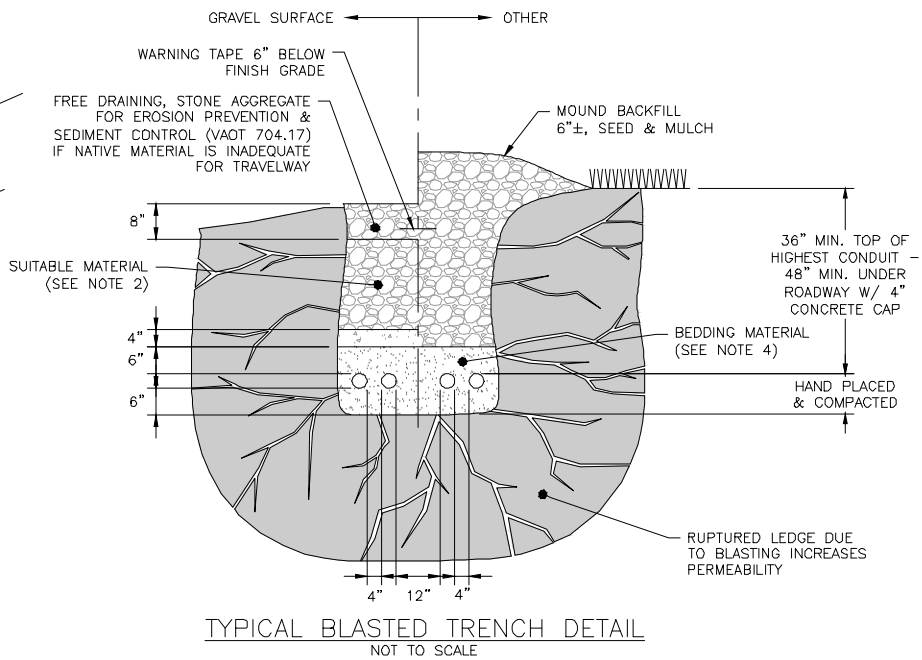
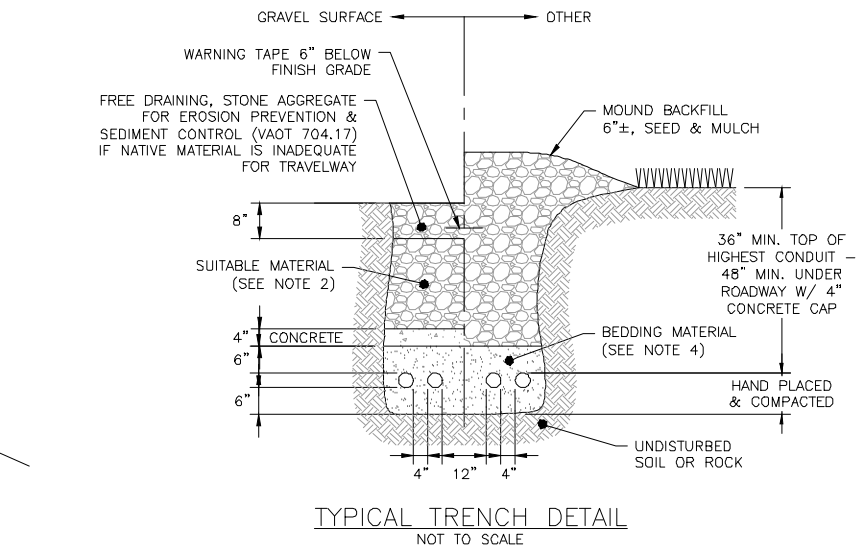
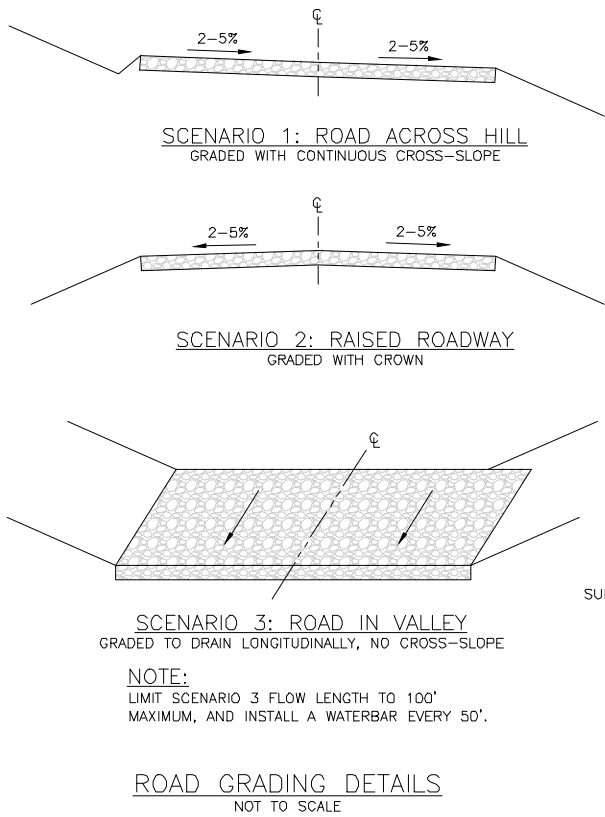
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## ERMIT PLANS

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ACCESS ROAD NOTES:

1. ACCESS TO FOLLOW EXISTING PATHS WHENEVER FEASIBLE.
2. TREE CLEARING SHALL BE LIMITED TO THE MINIMUM REQUIRED TO PERMIT CONSTRUCTION VEHICLE ACCESS. SEE PLAN FOR CLEARING LIMITS. STUMPS OUTSIDE THE ACCESS, UTILITY TRENCH, OR FILL LIMITS SHALL BE LEFT IN PLACE.
3. CONSTRUCTION STANDARDS SHALL MEET OR EXCEED THOSE OUTLINED IN "THE ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT" HANDBOOK.
4. UTILITY TRENCH LOCATION SHOWN AS TYPICAL. REFER TO SITE PLAN FOR UTILITY PLACEMENT.
5. STABILIZE ALL EXPOSED SOILS IN CONFORMANCE WITH THE LOW RISK HANDBOOK OR STORMWATER CONSTRUCTION GENERAL PERMIT. AT A MINIMUM ALL SOILS SHALL BE STABILIZED WITHIN 14 DAYS.
6. CONTRACTOR TO FOLLOW STATE OF VERMONT LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL. SEE EPSC LOW RISK HANDBOOK.
7. REMOVE UNSUITABLE SUBGRADE MATERIAL AND REPLACE WITH CRUSHED STONE AGGREGATE OR NATIVE MATERIAL AND SLOPE TO PROVIDE STABLE WORKING SURFACE.
8. CUT/FILL SLOPES TO BE RE-SEEDDED AND STABILIZED WITH MULCH, EROSION CONTROL MATTING, STONE RIPRAP, AND/OR WOOD CHIPS ONCE FINAL GRADE HAS BEEN ESTABLISHED.
9. ACCESS ROAD TO BE GRADED WITH A MINIMUM OF 2% CROSS-SLOPE.
10. RE-VEGETATED SLOPES EXCEEDING 3H:1V UPON RESTORATION TO BE MATTED WITH JUTE MAT EROSION CONTROL BLANKETS, NORTH AMERICAN GREEN S150BN, OR APPROVED EQUIVALENT.
11. INSTALL EROSION CONTROLS IN ACCORDANCE WITH THE SITE PLANS AND PROJECT PERMITS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED AS DIRECTED BY THE PROJECT ENVIRONMENTAL COMPLIANCE INSPECTOR OR THE ON-SITE PLAN COORDINATOR.
12. INSTALL PERMANENT WATER BARS IN ACCORDANCE WITH TYPICAL DETAIL.
13. MINIMALLY COMPACT EXISTING SUBGRADE MATERIAL AS NECESSARY TO CREATE A STABLE WORKING SURFACE FOR CONSTRUCTION ACCESS, WITHOUT OVER-COMPACTING AND CREATING AN IMPERVIOUS SURFACE. FOLLOWING HEAVY CONSTRUCTION TRAFFIC, TILL OR BACK BLADE THE ACCESS ROAD SUBGRADE PRIOR TO SURFACE COURSE PLACEMENT TO PROMOTE INFILTRATION.

TRENCH NOTES:

1. WHERE BACKFILL IS DESIGNATED "COMPACTED", THIS MEANS 90% TO 95% STANDARD PROCTOR, AASHTO T-99. ALL FILL PLACED BELOW PIPES MUST MEET THIS REQUIREMENT.
2. SUITABLE MATERIAL SHALL CONTAIN NO STONES GREATER THAN 4" IN DIAMETER, NO FROZEN LUMPS, AND ONLY MINOR AMOUNTS OF CLAY OR ORGANIC MATERIAL. ALL MATERIAL TO BE PLACED IN MAXIMUM OF 12" LIFTS AND COMPACTED TO THE SAME LEVEL AS SURROUNDING EXISTING SUBGRADE BEFORE PLACING NEXT LIFT.
3. SEE ELECTRICAL PLANS FOR QUANTITY OF CONDUITS.
4. BEDDING MATERIAL MAY BE CRUSHED STONE, SAND, OR NATIVE MATERIAL FREE FROM ORGANICS AND STONES LARGE ENOUGH TO DAMAGE THE PIPE.

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VT 05450

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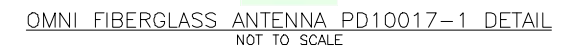
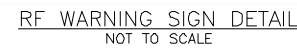
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BOROVILLE ROAD  
ENOSBURG FALLS,  
VT 05450

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## SIGNAGE AND ANTENNA DETAILS

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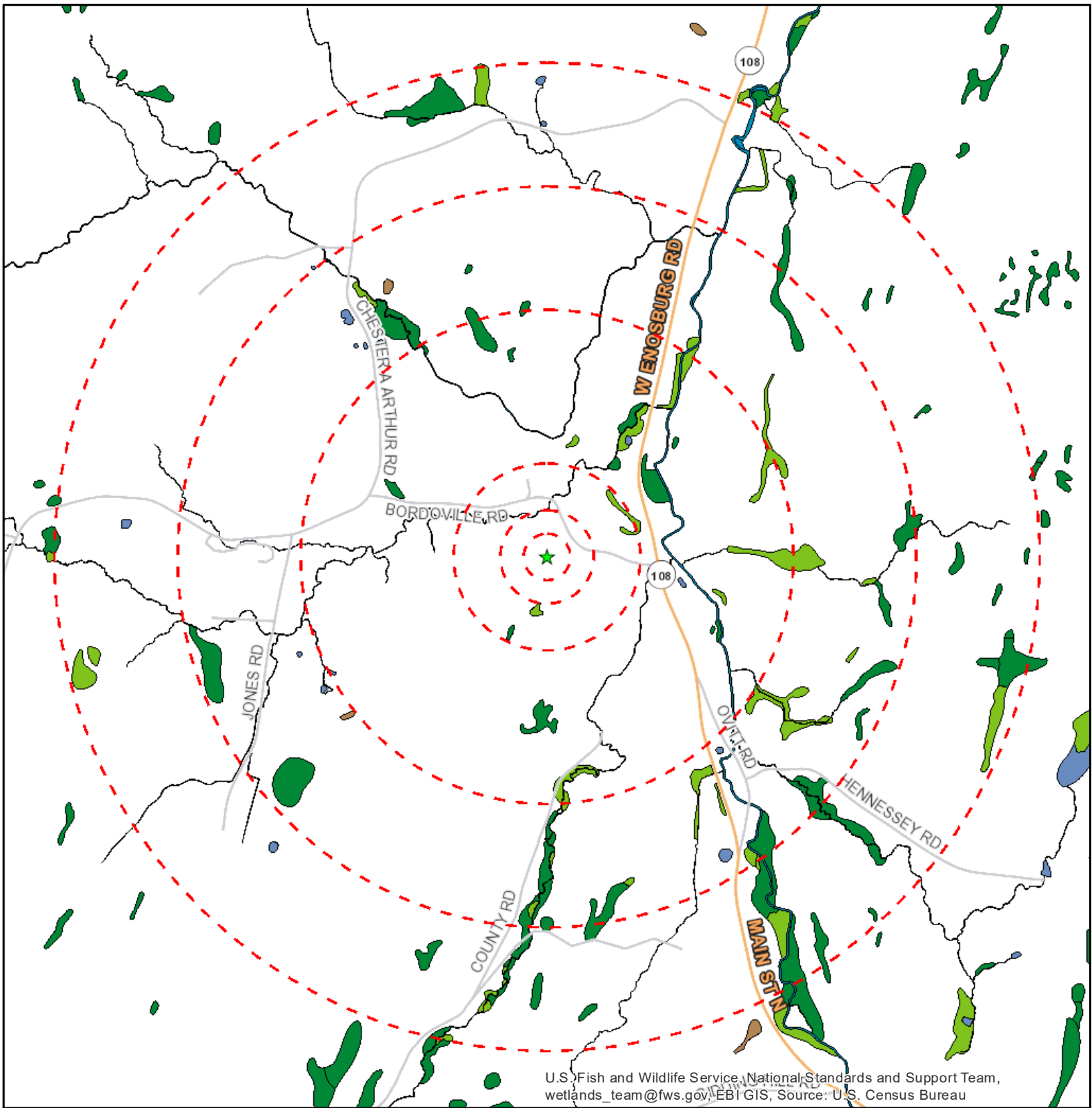












U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov, EBI GIS, Source: U.S. Census Bureau

\* See associated map legend for additional source information.

### Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', 1/2, 3/4 & 1 mile

Date: 12/21/2021

**Land Resources Map**  
**NULL ENOSBURG VT**  
**4756 W ENOSBURG ROAD**  
**ENOSBURG, VERMONT 05450**

PN: 6121010289




**EBI Consulting**  
 environmental | engineering | design

# Land Resources Legend

## Scenic Parkways, Rivers & Trails

-  National Scenic Parkway
-  National Park Service Trail / Appalachian Trail
- AZ - BLM Historic Trail
- CT - DEP Trail
- MT - Lewis & Clark Trail
- NY - Trails

-  NY - Scenic Landmark Area
-  NY - Statewide Area of Scenic Significance
-  National Wild, Scenic River
-  State Wild, Scenic, Protected River
-  PA - Scenic River

Sources: National Park Service [http://www.nps.gov/gis/data\\_info/](http://www.nps.gov/gis/data_info/); Bureau of land management <http://www.blm.gov/wo/st/en.html>; CT DEP [http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav\\_GID=1707%20](http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20); NY GIS Clearinghouse <http://gis.ny.gov/>; National W & S Rivers <http://www.rivers.gov/rivers/mapping-gis.php>; Montana GIS <http://nris.mt.gov/gis>; State rivers data from state government and protection agencies.

## State Conservation, Lands & Wildlife Areas

-  CT - DEP Property
- CO - Public Access Wildlife Area
- FL - Wildlife Management Area
- MT - National Wildlife Refuge
- NH - WMNF Management Area
- ME - Conservation Land
- TN - Wildlife Resource Land
- TX - State Park or Wildlife Mgt Area
-  TX - Audubon Sanctuary
-  CT - DEP Municipal and Open Space
- NH - Conservation Land
- NY - DEC State Lands
-  NY - Agricultural District

Sources: CT DEP [http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav\\_GID=1707%20](http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20); CO Wildlife Space [http://ndis.nrel.colostate.edu/ftp/ftp\\_response.asp](http://ndis.nrel.colostate.edu/ftp/ftp_response.asp); Florida Fish and Wildlife [www.MyFWC.com](http://www.MyFWC.com); Montana GIS <http://nris.mt.gov/gis>; NH GRANIT <http://www.granit.unh.edu/data/downloadfreedata>; ME GIS <http://megis.maine.gov/catalog>; TN GIS <http://www.state.tn.us/environment/parks/gis/data/>; TX GIS <http://www.glo.state.tx.us/nri/data/index.html>; NY GIS Clearinghouse <http://gis.ny.gov/>

## US FWS NWI Wetland Type

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Lake
-  Other
-  Riverine

## State Endangered Threatened & Protected Species

-  AZ - Areas of Environmental Concern
-  CA - Spotted Owl Territory
-  CA - NDDDB T & E Species
- CT - NDDDB Area Feature
-  CT - DEP Critical Habitat
- MA - NHESP Estimated Habitats of Rare Wildlife
- TX - Protected Species

-  MA - NHESP Priority Habitats of Rare Species
-  FL - Conservation Species
- MA - NHESP Certified Vernal Pool
- ME - Vernal Pool
-  NY - Important Bird Area
-  TX - Ecologically Unique Rivers Streams

Sources: AZ BLM Page [http://www.blm.gov/az/st/en/prog/maps/gis\\_files.html](http://www.blm.gov/az/st/en/prog/maps/gis_files.html); CNDDDB <http://www.dfg.ca.gov/biogeodata/cnddb/>; CT DEP [http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav\\_GID=1707%20](http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20); MAGIS <http://www.mass.gov/mgis/laylist.htm>; TX GIS <http://www.glo.state.tx.us/nri/data/index.html>; Florida Fish and Wildlife [www.MyFWC.com](http://www.MyFWC.com); NY GIS Clearinghouse <http://gis.ny.gov/>

## Federal & National Coverage Data Layers

-  USFWS Critical Habitat
-  USFWS Critical Habitat Area
-  National Park Service Land
-  National Wildlife Area or Refuge
-  Federally Owned Land
-  National Wilderness Areas
-  National Park Service Site

Sources: National Park Service [http://www.nps.gov/gis/data\\_info/](http://www.nps.gov/gis/data_info/); USFWS <http://critic.fws.gov/>; National Park Service <http://science.nature.nps.gov/nrdata/index.cfm>; The National Map <http://nationalmap.gov/>; USFW Wildlife Refuge System <http://www.fws.gov/refuges/>; Wilderness.net <http://www.wilderness.net/>



## **PHOTOGRAPHS**



1. Overview of Project Site.



2. Project Site area facing north.





3. View from Project Site facing east.



4. View from Project Site facing south.



5. View from Project Site facing west.



6. Proposed access route.



## **SPECIES REVIEW DOCUMENTATION**



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104  
<http://www.fws.gov/newengland>



In Reply Refer To:  
Consultation Code: 05E1NE00-2022-SLI-0913  
Event Code: 05E1NE00-2022-E-03213  
Project Name: Enosburg VT

December 21, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.



A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

---



## Project Summary

Consultation Code: 05E1NE00-2022-SLI-0913

Event Code: Some(05E1NE00-2022-E-03213)

Project Name: Enosburg VT

Project Type: COMMUNICATIONS TOWER

Project Description: Industrial Communications proposes to construct a 153' self-supporting telecommunication tower within a proposed 100' by 100' lease area.

Project Location:

Approximate location of the project can be viewed in Google Maps: [https://](https://www.google.com/maps/@44.8415928,-72.81116730934892,14z)

[www.google.com/maps/@44.8415928,-72.81116730934892,14z](https://www.google.com/maps/@44.8415928,-72.81116730934892,14z)



Counties: Franklin County, Vermont

---

## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME                                                                                                                                                                                                                             | STATUS     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Northern Long-eared Bat <i>Myotis septentrionalis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a> | Threatened |

## Insects

| NAME                                                                                                                                                                                                                 | STATUS    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Monarch Butterfly <i>Danaus plexippus</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a> | Candidate |

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

---



## Critical Habitat for Threatened & Endangered Species [USFWS]

Final Linear Features



Final Polygon Features



Proposed Linear Features



Proposed Polygon Features





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104  
<http://www.fws.gov/newengland>



In Reply Refer To:

December 22, 2021

Consultation code: 05E1NE00-2022-TA-0913

Event Code: 05E1NE00-2022-E-03326

Project Name: Enosburg VT

Subject: Verification letter for the 'Enosburg VT' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Tiffany Skrobiszewski:

The U.S. Fish and Wildlife Service (Service) received on December 22, 2021 your effects determination for the 'Enosburg VT' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"<sup>[1]</sup> prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.



This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

---

**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

Enosburg VT

**2. Description**

The following description was provided for the project 'Enosburg VT':

Industrial Communications proposes to construct a 153' self-supporting telecommunication tower within a proposed 100' by 100' lease area.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@44.8415928,-72.81116730934892,14z>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

**Determination Key Description: Northern Long-eared Bat 4(d) Rule**

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may



affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

---

## Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?  
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")  
No
3. Will your activity purposefully **Take** northern long-eared bats?  
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?  
**Automatically answered**  
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at [www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html](http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html).

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?  
No
  7. Will the action involve Tree Removal?  
Yes
-



8. Will the action only remove hazardous trees for the protection of human life or property?

*No*

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

*No*

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

*No*

---

## Project Questionnaire

**If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.**

1. Estimated total acres of forest conversion:

0.1

2. If known, estimated acres of forest conversion from April 1 to October 31

0.1

3. If known, estimated acres of forest conversion from June 1 to July 31

0.1

**If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.**

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

**If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.**

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

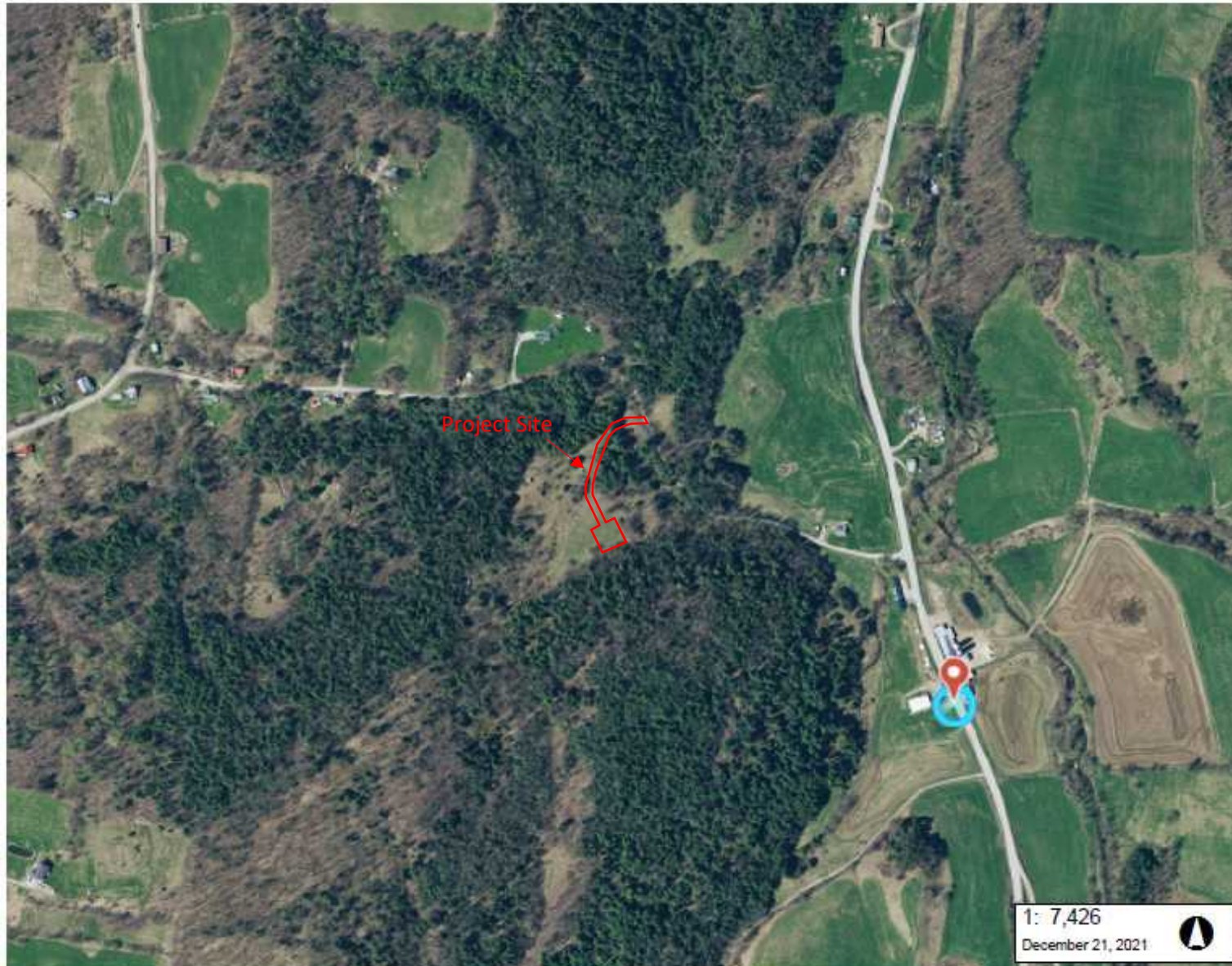
**If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.**

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

---





1: 7,426

December 21, 2021



### LEGEND

- Rare Threatened Endangered
- Threatened or Endangered
- Rare
- Significant Natural Community
- Indiana Bat Hibernacula
- Indiana Bat Summer Range
- Observed
- Potential
- Vernal Pools Confirmed – AE/A

### NOTES

Map created using ANR's Natural Resources Atlas

377.0 0 188.00 377.0 Meters

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

© Vermont Agency of Natural Resources

1" = 610 Ft. 1cm = 74 Meters

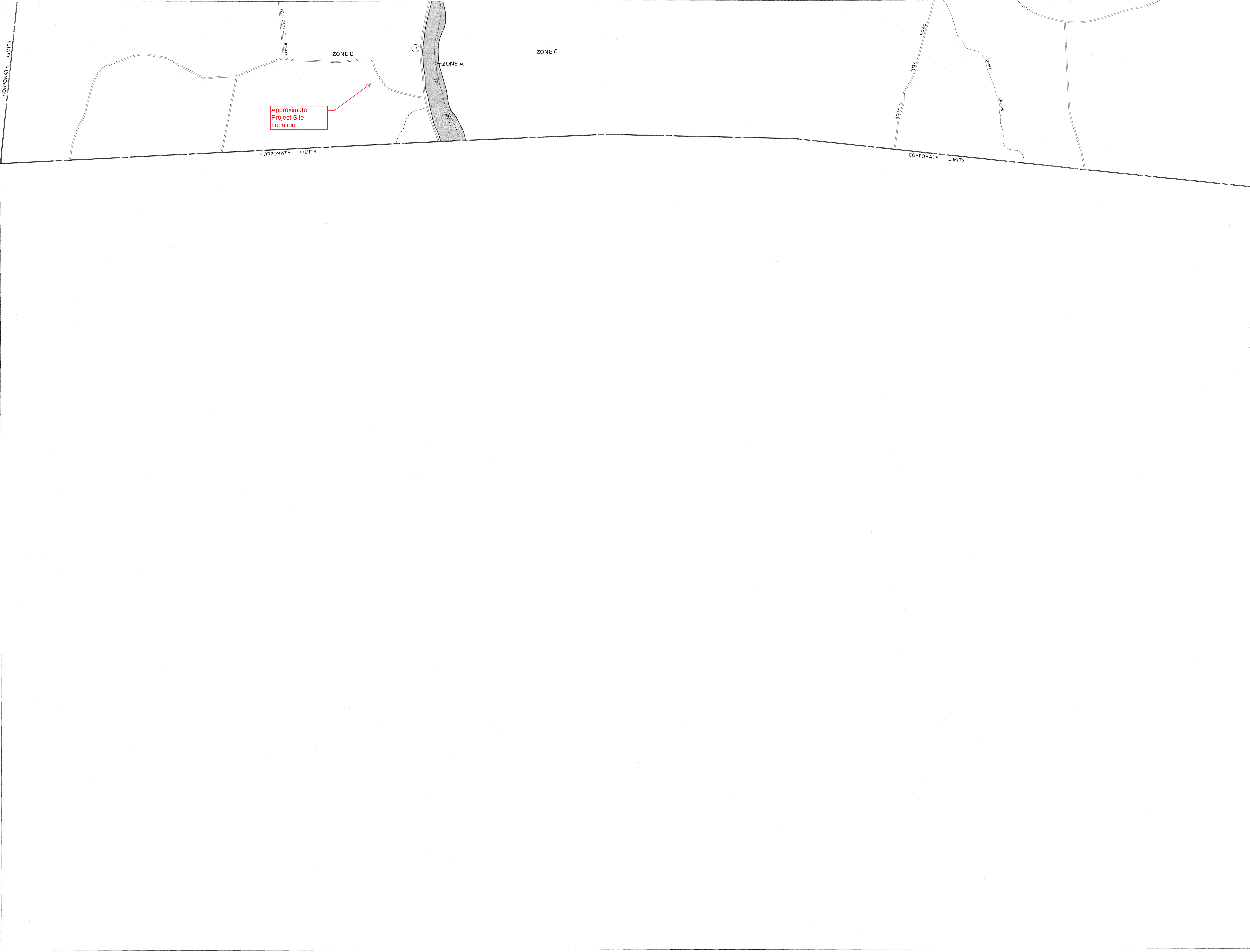
THIS MAP IS NOT TO BE USED FOR NAVIGATION

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.





## **SUPPORTING DOCUMENTATION**



500-Year Flood Boundary

100-Year Flood Boundary

Zone Designations\* With Date of Identification  
e.g., 12/2/74

100-Year Flood Boundary

500-Year Flood Boundary

ZONE B

ZONE A1  
DATE

ZONE A5  
DATE

ZONE B

Base Flood Elevation Line  
With Elevation in Feet\*\*

513

Base Flood Elevation in Feet  
Where Uniform Within Zone\*\*

(EL 987)

Elevation Reference Mark

RM7 X

River Mile

M1.5

\*\*Referenced to the National Geodetic Vertical Datum of 1929

\*EXPLANATION OF ZONE DESIGNATIONS

| ZONE   | EXPLANATION                                                                                                                                                                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A      | Areas of 100-year flood; base flood elevations and flood hazard factors not determined.                                                                                                                                                                                                          |
| A0     | Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.                                                                                                                      |
| AH     | Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.                                                                                                                             |
| A1-A30 | Areas of 100-year flood; base flood elevations and flood hazard factors determined.                                                                                                                                                                                                              |
| A99    | Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.                                                                                                                                            |
| B      | Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading) |
| C      | Areas of minimal flooding. (No shading)                                                                                                                                                                                                                                                          |
| D      | Areas of undetermined, but possible, flood hazards.                                                                                                                                                                                                                                              |
| V      | Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.                                                                                                                                                                      |
| V1-V30 | Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.                                                                                                                                                                          |

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:

AUGUST 9, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:

NOVEMBER 26, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:

JANUARY 2, 1981

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620, or (800) 424-8872.

APPROXIMATE SCALE

NATIONAL FLOOD INSURANCE PROGRAM

FIRM  
FLOOD INSURANCE RATE MAP

TOWN OF  
ENOSBURG,  
VERMONT  
FRANKLIN COUNTY

PANEL 25 OF 30  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
500051 0025 B

EFFECTIVE DATE:  
JANUARY 2, 1981

federal emergency management agency  
federal insurance administration





U.S. Fish and Wildlife Service  
National Wetlands Inventory

Enosburg VT



December 21, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.







United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Franklin County, Vermont**



# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.



# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report  
Soil Map

72° 48' 42" W

72° 48' 35" W

44° 50' 33" N

44° 50' 33" N



Soil Map may not be valid at this scale.

44° 50' 26" N

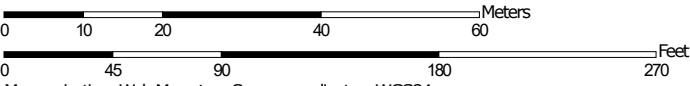
44° 50' 26" N

72° 48' 42" W

72° 48' 35" W



Map Scale: 1:954 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84

# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Franklin County, Vermont  
Survey Area Data: Version 25, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 28, 2012—Mar 7, 2017

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.



## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                           | Acres in AOI | Percent of AOI |
|------------------------------------|---------------------------------------------------------|--------------|----------------|
| PeC                                | Peru fine sandy loam, 8 to 15 percent slopes            | 0.5          | 75.5%          |
| WrC                                | Westbury stony fine sandy loam, 8 to 15 percent slopes  | 0.0          | 0.0%           |
| WxD                                | Woodstock-Rock outcrop complex, 15 to 25 percent slopes | 0.2          | 23.9%          |
| WxE                                | Woodstock-Rock outcrop complex, 25 to 60 percent slopes | 0.0          | 0.6%           |
| <b>Totals for Area of Interest</b> |                                                         | <b>0.6</b>   | <b>100.0%</b>  |

## 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 contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Franklin County, Vermont

### PeC—Peru fine sandy loam, 8 to 15 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2ty60

*Elevation:* 330 to 1,870 feet

*Mean annual precipitation:* 31 to 95 inches

*Mean annual air temperature:* 27 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Peru and similar soils:* 83 percent

*Minor components:* 17 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Peru

##### Setting

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loamy lodgment till derived from granite and/or loamy lodgment till derived from mica schist and/or loamy lodgment till derived from phyllite

##### Typical profile

*Ap - 0 to 6 inches:* fine sandy loam

*Bhs - 6 to 8 inches:* fine sandy loam

*Bs1 - 8 to 12 inches:* fine sandy loam

*Bs2 - 12 to 18 inches:* fine sandy loam

*Bs3 - 18 to 21 inches:* fine sandy loam

*BC - 21 to 24 inches:* fine sandy loam

*Cd - 24 to 65 inches:* sandy loam

##### Properties and qualities

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 20 to 39 inches to densic material

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.01 to 1.42 in/hr)

*Depth to water table:* About 16 to 30 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 3.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C/D

*Hydric soil rating:* No



## Minor Components

### Colonel

*Percent of map unit:* 7 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Closed depressions, closed depressions, open depressions, open depressions

*Down-slope shape:* Linear, concave

*Across-slope shape:* Concave

*Hydric soil rating:* No

### Cabot

*Percent of map unit:* 4 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Footslope, toeslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Closed depressions, closed depressions, open depressions, open depressions

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Hydric soil rating:* Yes

### Marlow

*Percent of map unit:* 4 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Rises, rises

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* No

### Tunbridge

*Percent of map unit:* 2 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Rises, rises

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* No

## **WrC—Westbury stony fine sandy loam, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 9g9g

*Elevation:* 300 to 2,000 feet

*Mean annual precipitation:* 36 to 50 inches

*Mean annual air temperature:* 37 to 46 degrees F

*Frost-free period:* 90 to 135 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Westbury and similar soils:* 75 percent

*Minor components:* 25 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Westbury**

#### **Setting**

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, backslope, footslope

*Landform position (three-dimensional):* Mountainbase, interfluvium, side slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Coarse-loamy basal till

#### **Typical profile**

*H1 - 0 to 6 inches:* fine sandy loam

*H2 - 6 to 20 inches:* fine sandy loam

*H3 - 20 to 60 inches:* fine sandy loam

#### **Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 17 to 37 inches to densic material

*Drainage class:* Somewhat poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)

*Depth to water table:* About 6 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* D

*Hydric soil rating:* No

### Minor Components

#### Stowe

*Percent of map unit:* 8 percent  
*Hydric soil rating:* No

#### Peru

*Percent of map unit:* 7 percent  
*Hydric soil rating:* No

#### Cabot

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

#### Tunbridge

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

## WxD—Woodstock-Rock outcrop complex, 15 to 25 percent slopes

### Map Unit Setting

*National map unit symbol:* 9g9q  
*Elevation:* 300 to 2,000 feet  
*Mean annual precipitation:* 36 to 50 inches  
*Mean annual air temperature:* 37 to 46 degrees F  
*Frost-free period:* 90 to 135 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Woodstock and similar soils:* 50 percent  
*Rock outcrop:* 40 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Woodstock

#### Setting

*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Mountaintop, mountainflank, interfluve, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Coarse-loamy till

#### Typical profile

*H1 - 0 to 12 inches:* fine sandy loam  
*R - 12 to 22 inches:* unweathered bedrock



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### Properties and qualities

*Slope:* 15 to 25 percent  
*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock  
*Drainage class:* Somewhat excessively drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to high (0.01 to 6.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Hydric soil rating:* No

### Description of Rock Outcrop

#### Setting

*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Mountaintop, mountainflank, interfluvial, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex

#### Typical profile

*R - 0 to 60 inches:* unweathered bedrock

### Properties and qualities

*Depth to restrictive feature:* 0 inches to lithic bedrock  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to very high (0.01 to 20.00 in/hr)  
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8s  
*Hydric soil rating:* Unranked

### Minor Components

#### Tunbridge

*Percent of map unit:* 8 percent  
*Hydric soil rating:* No

#### Stowe

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

## **WxE—Woodstock-Rock outcrop complex, 25 to 60 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 9g9r  
*Elevation:* 300 to 2,000 feet  
*Mean annual precipitation:* 36 to 50 inches  
*Mean annual air temperature:* 37 to 46 degrees F  
*Frost-free period:* 90 to 135 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Rock outcrop:* 50 percent  
*Woodstock and similar soils:* 40 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Rock Outcrop**

#### **Setting**

*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Mountaintop, mountainflank, interfluve, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex

#### **Typical profile**

*R - 0 to 60 inches:* unweathered bedrock

#### **Properties and qualities**

*Depth to restrictive feature:* 0 inches to lithic bedrock  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to very high (0.01 to 20.00 in/hr)  
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8s  
*Hydric soil rating:* Unranked

### **Description of Woodstock**

#### **Setting**

*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Mountaintop, mountainflank, interfluve, side slope  
*Down-slope shape:* Convex

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*Across-slope shape:* Convex

*Parent material:* Coarse-loamy till

### Typical profile

*H1 - 0 to 12 inches:* fine sandy loam

*R - 12 to 22 inches:* unweathered bedrock

### Properties and qualities

*Slope:* 25 to 60 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Low to high (0.01 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* D

*Hydric soil rating:* No

### Minor Components

#### Tunbridge

*Percent of map unit:* 8 percent

*Hydric soil rating:* No

#### Stowe

*Percent of map unit:* 2 percent

*Hydric soil rating:* No



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