



Northern Pass Transmission LLC
P.O. Box 330
780 North Commercial Street
Manchester, NH 03105-0330

May 27, 2016

Stephen R. Barry, Chairman
Deerfield Board of Selectmen
8 Raymond Road
Deerfield, N.H. 03037

Dear Selectman Barry:

Thank you for the opportunity to attend your Board of Selectmen's meeting on May 16, 2016 to discuss Northern Pass.

By way of follow-up, I am enclosing answers to questions raised during the meeting, as well as clarifying points on some key topics. In addition, I've included the PowerPoint presentation from the meeting for your reference.

Please let me know if the Board has questions about these materials or the project in general.

Sincerely,

A handwritten signature in blue ink that reads 'Jim Jiottis' with the initials '3AD' written below it.

Jim Jiottis
Project Manager
Eversource/Northern Pass

Enclosures

Follow-up answers to questions posed at Deerfield Board of Selectmen Meeting – May 16, 2016

1. *Could you specify which part of the application and what part of the study deals with the project planned for Deerfield?*

The discussion on traffic can be found in Lynn Farrington's pre-filed testimony in Volume II of the Northern Pass Site Evaluation Committee application. Related items to construction access at Deerfield can be found in the New Hampshire Department of Environmental Services Wetland Application in Volume V Appendix 2, and the Alteration of Terrain Permit for Deerfield Substation in Volume VIII Appendix 6d, which would outline access at the Deerfield site. We should add that a significant component of the traffic plan includes working with the local towns on specific issues and needs.

2. *When do you anticipate having approval from ISO New England to finalize and release the details and plans for the control buildings that would be part of the substation expansion?*

The layout inside the new substation expansion is waiting final approval by ISO-NE. The ISO is reviewing study results which will ultimately drive the final design. Approval is expected by mid-summer 2016.

3. *Could you provide a cost estimate for the 7.3 miles of overhead line? What would the cost estimate be for that segment in town if it were to be buried?*

The estimated cost of construction for the 7.3-mile segment of the overhead line in Deerfield is approximately \$34.53 million. The cost of burying the Northern Pass transmission lines within Deerfield would cost nearly \$200 million.

If an underground line were to be installed in Deerfield, the new 345 kV line would need to be installed under public roadways. Northern Pass and the Eversource easements do not allow for underground installations in the existing right-of-way (ROW).

Assuming the project remains overhead until it reaches the Deerfield town line, the transition to underground would occur at the ROW intersection with Mt. Delight Road on the Deerfield/Allenstown line. At this location, approximately 2 acres of land adjacent to the ROW would be required to construct a transition station to accommodate the equipment needed to transfer the overhead line to underground. Once the line left the transition station, it would travel under Mt. Delight Road until it reached North Road (Routes 43/107). It would cross North Road and follow James City Road to Nottingham Road; following Nottingham Road to Cate Road and terminate on the Deerfield substation property. The total distance underground would be approximately 8.29 miles, compared to the 7.3 miles overhead currently proposed.

Other clarification points from the Deerfield Board of Selectmen meeting – May 16, 2016

1. Several references were made to the Eversource property on North Road. There are no plans to construct a substation on this property. The property was purchased in 2013 based on projected load increases within Deerfield and the surrounding towns, which identified the need for a new distribution source. The studies which identified the need are updated annually with actual loads and the projections adjusted. Current Eversource studies and forecasts through 2025 do not identify a need for a new distribution source in Deerfield.
2. There are also no plans for a transmission expansion at Deerfield substation within ISO-NE's current 10-year plan, except the work required for Northern Pass. This includes additional substation expansion or the construction of new transmission lines into Deerfield substation.
3. Eversource is not utilizing the existing property (Lot 53) for any construction related activities. The lot adjacent to the Eversource property, Lot 54, is being utilized by its current owner for activities unrelated to Eversource.
4. There were a number of questions regarding the changes in sound due to the substation expansion. The studies specifically covering the area around Deerfield substation are found in Appendix 39, Sound Study 3. Many of the comments focused on a sound wall, however, the wall is only one part of the design. Northern Pass has required the equipment supplier to meet the sound criteria set forth in Sound Study 3, which include measurements after the equipment is placed in service. The manufacturer is required to take additional measures beyond a wall should further sound mitigation be required, if it becomes necessary to further address concerns about noise, we are committed to working with the Town to discuss potential solutions.
5. Several concerns were raised regarding the lighting at the existing substation and for the expansion. It is Eversource's policy to not continually light the station at night. Area lights are used only during work activities or to address specific security threats. If lights are on at the station at night, Eversource should be contacted.
6. There were references made to the configuration of the transmission lines in an approximate 3 mile section of the ROW within Deerfield. The location of the lines within the ROW, which will include Northern Pass and the two existing lines, are not placed in that way to allow for future transmission lines. The placement is the result of land rights associated with the easements which make up this ROW section. Eversource only has rights to construct a single transmission line on one side of the ROW. This requires the Northern Pass line to be placed closer to one side, which affects structure height. If Eversource had the rights to utilize the full ROW width for the Northern Pass line, it would result in reductions of structure heights.



Providing energy stability and economic opportunities



Deerfield Substation Expansion

Board of Selectmen Meeting
May 16, 2016



IMPROVED
ROUTE



LOWER
ENERGY COSTS



FORWARD
NH FUND



NH TAX
BENEFITS



NH JOBS &
ECONOMIC BENEFITS



CLEAN ENERGY &
NATURAL RESOURCES

Meeting Purpose



Requests for additional information regarding the substation in Deerfield

- Questions during Public Information Sessions
- Direct contacts from town residents and members of town government

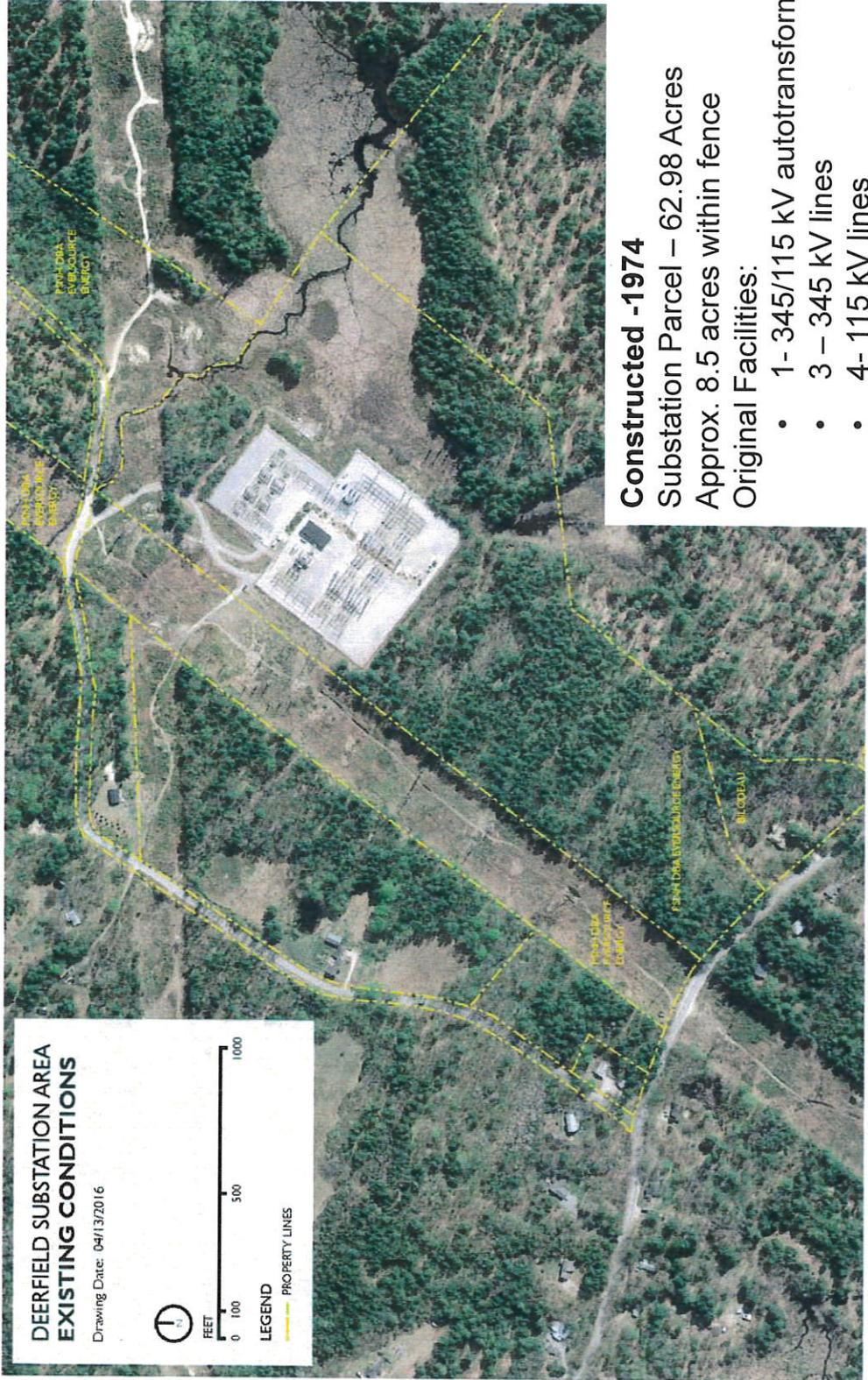


Meeting Agenda



1. Review existing substation
 - History of station
 - Recent projects involving Deerfield substation
2. Proposed expansion of existing substation for Northern Pass
3. Questions regarding Deerfield Substation

Existing Deerfield Substation



**DEERFIELD SUBSTATION AREA
EXISTING CONDITIONS**
Drawing Date: 04/13/2016

0 100 500 1000
FEET

LEGEND
— PROPERTY LINES

Constructed -1974

Substation Parcel – 62.98 Acres
Approx. 8.5 acres within fence

Original Facilities:

- 1- 345/115 kV autotransformer
- 3 – 345 kV lines
- 4- 115 kV lines

Height of steel in substation – 100'

No additions made to substation until 2007

Work Within the Existing Footprint



While considerable work has taken place at the substation, it has all been within the existing footprint

Rebuild G146 line -2003

Rebuild L175 line - 2010



Work Within the Existing Footprint **forward**nhplan

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Rebuild L175 line - 2010

Increase rating of C129 line - 2012

Rebuild D118 line - 2014



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Rebuild G146 line -2003

Rebuild L175 line - 2010

Increase rating of C129 line - 2012

Rebuild D118 line - 2014

Replace original circuit breakers -

Addition of 345 kV circuit breaker -

Control House Expansion -

Replace all protection & controls systems -

Install 2nd 345/115 kV autotransformer -

Security system upgrades -

Repair of original 345/115 kV autotransformer -

2005/10

2007

2011

2011

2012

2012

2015

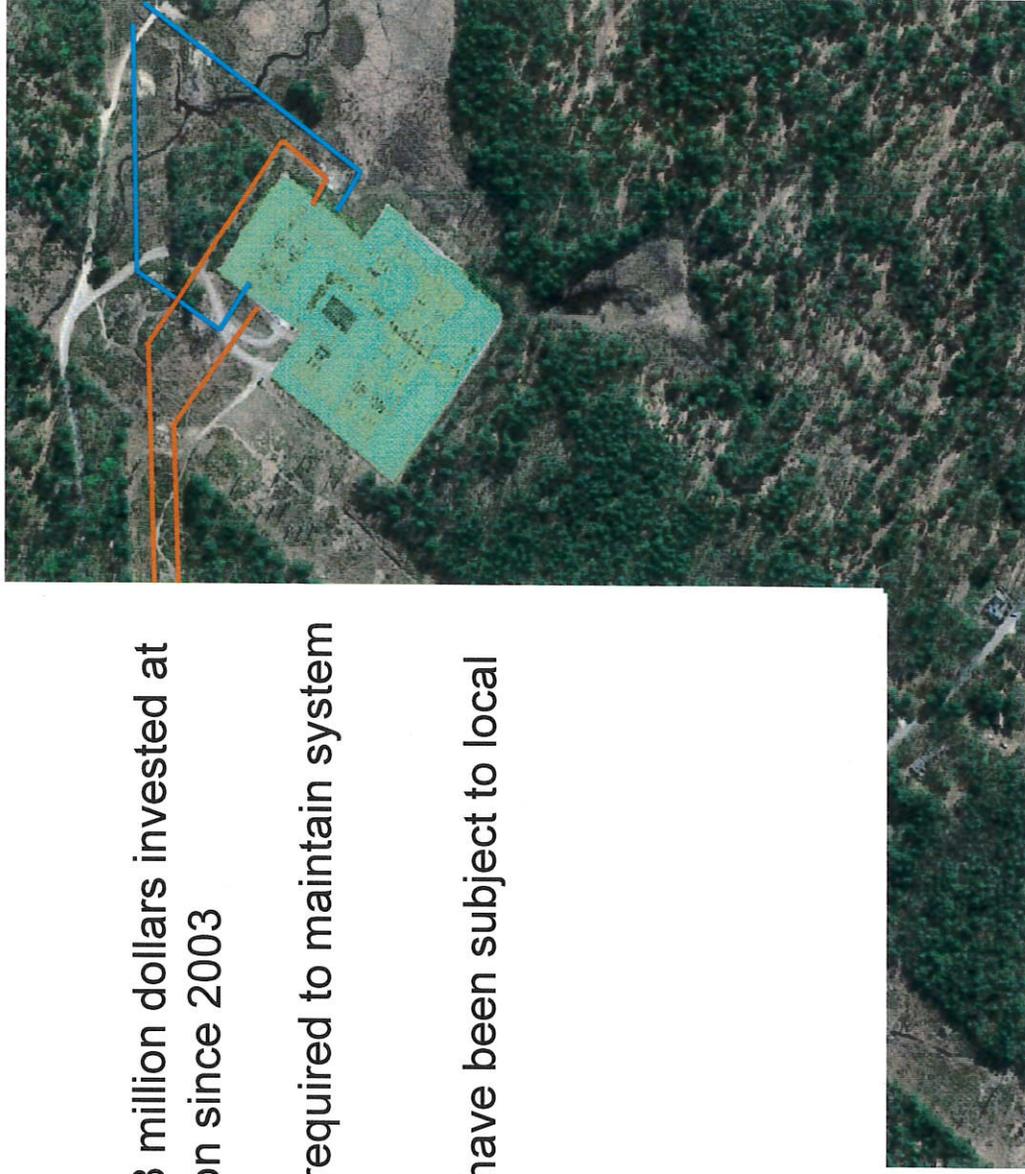


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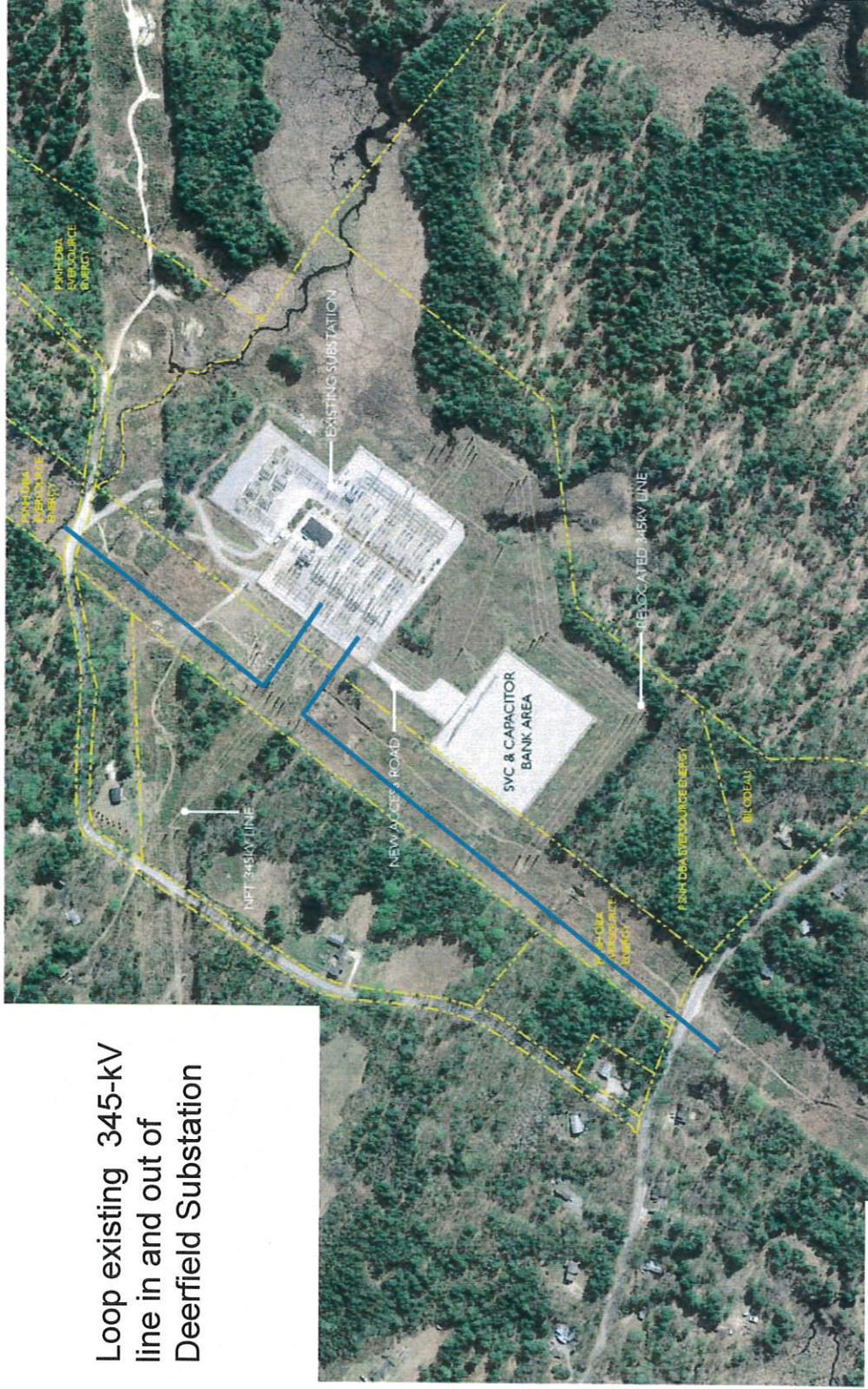
- Approximately \$58 million dollars invested at Deerfield substation since 2003
- All improvements required to maintain system reliability
- All improvements have been subject to local permitting



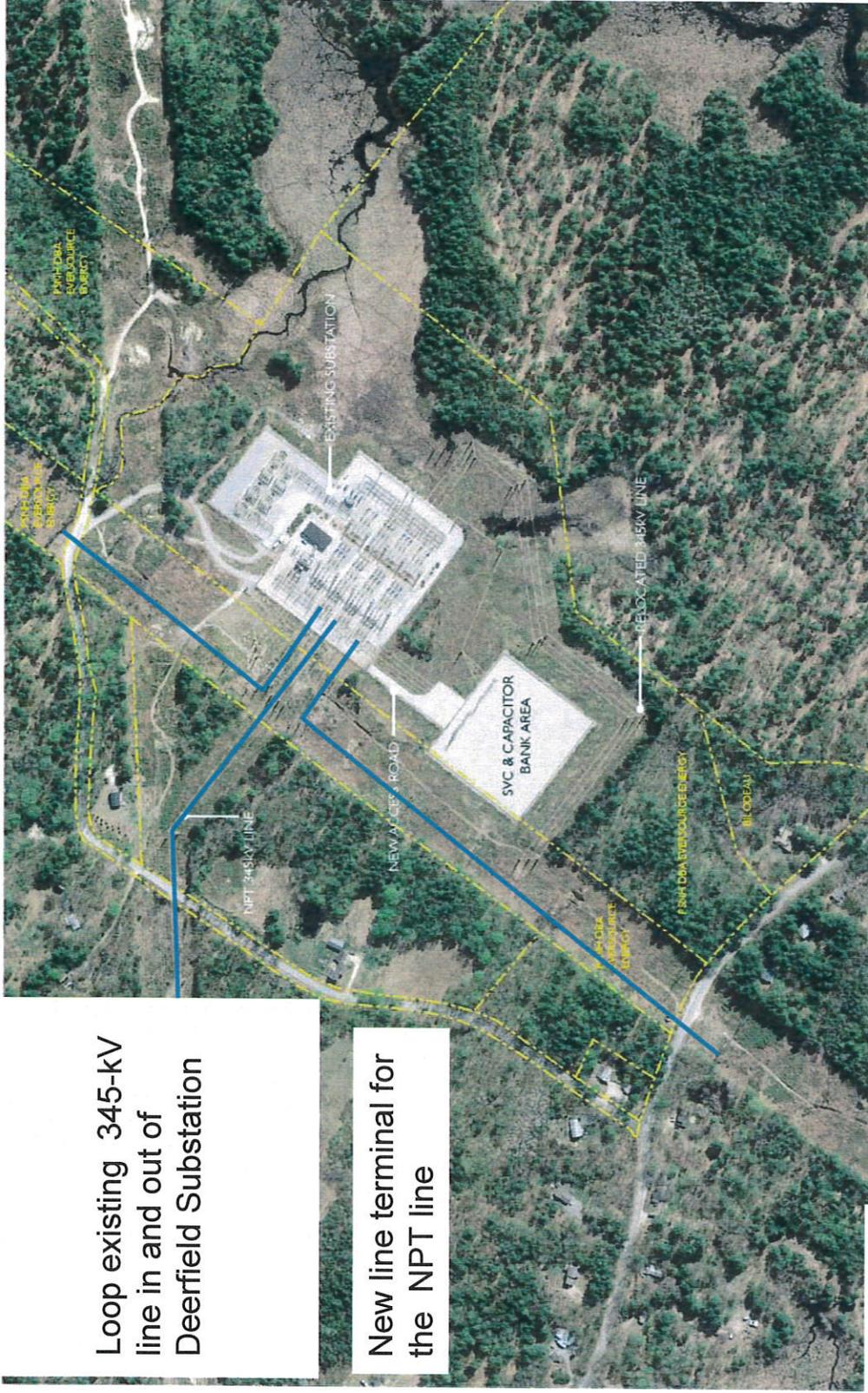
Deerfield Substation Additions



Loop existing 345-kV line in and out of Deerfield Substation



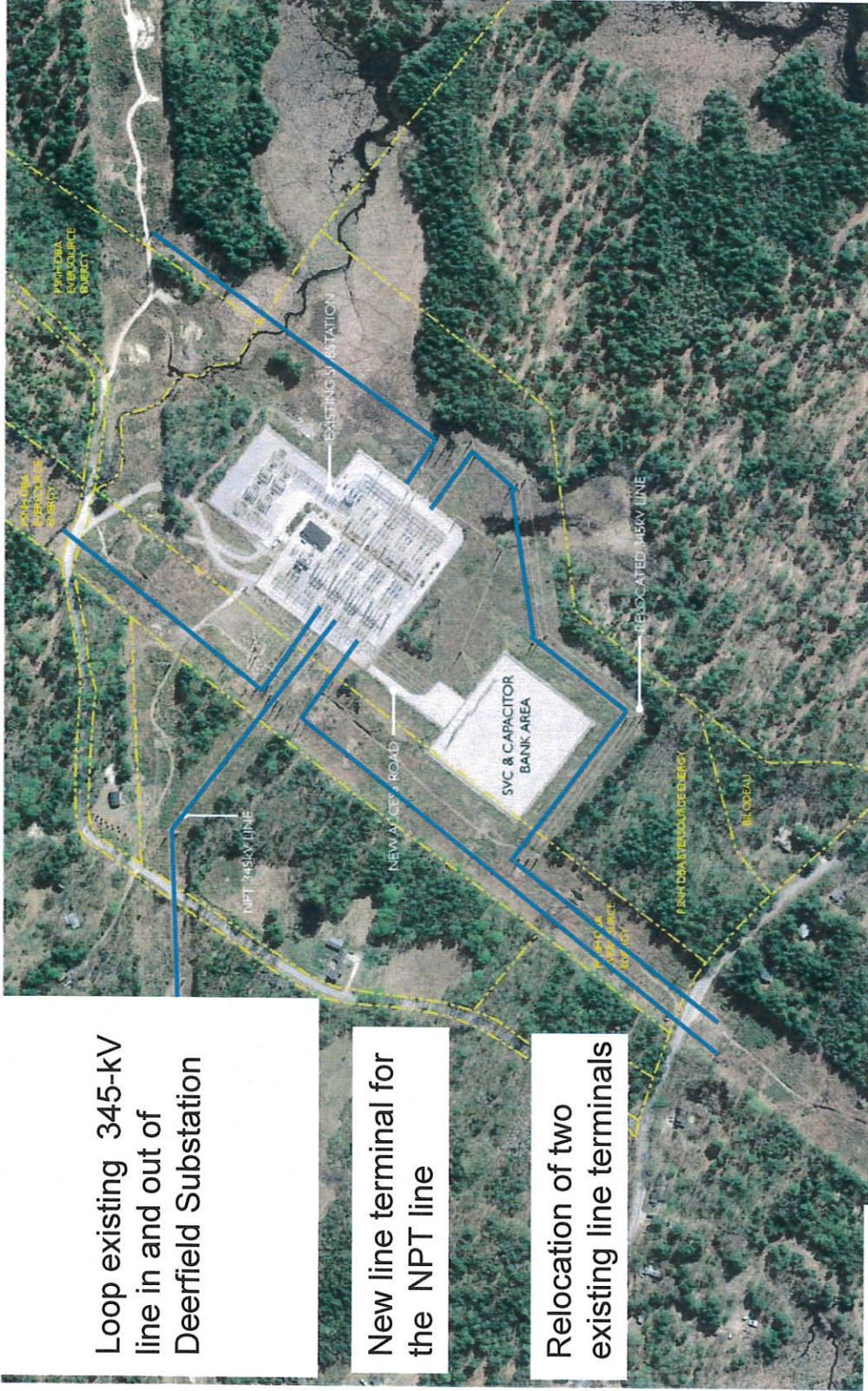
Deerfield Substation Additions



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New line terminal for the NPT line

Deerfield Substation Additions

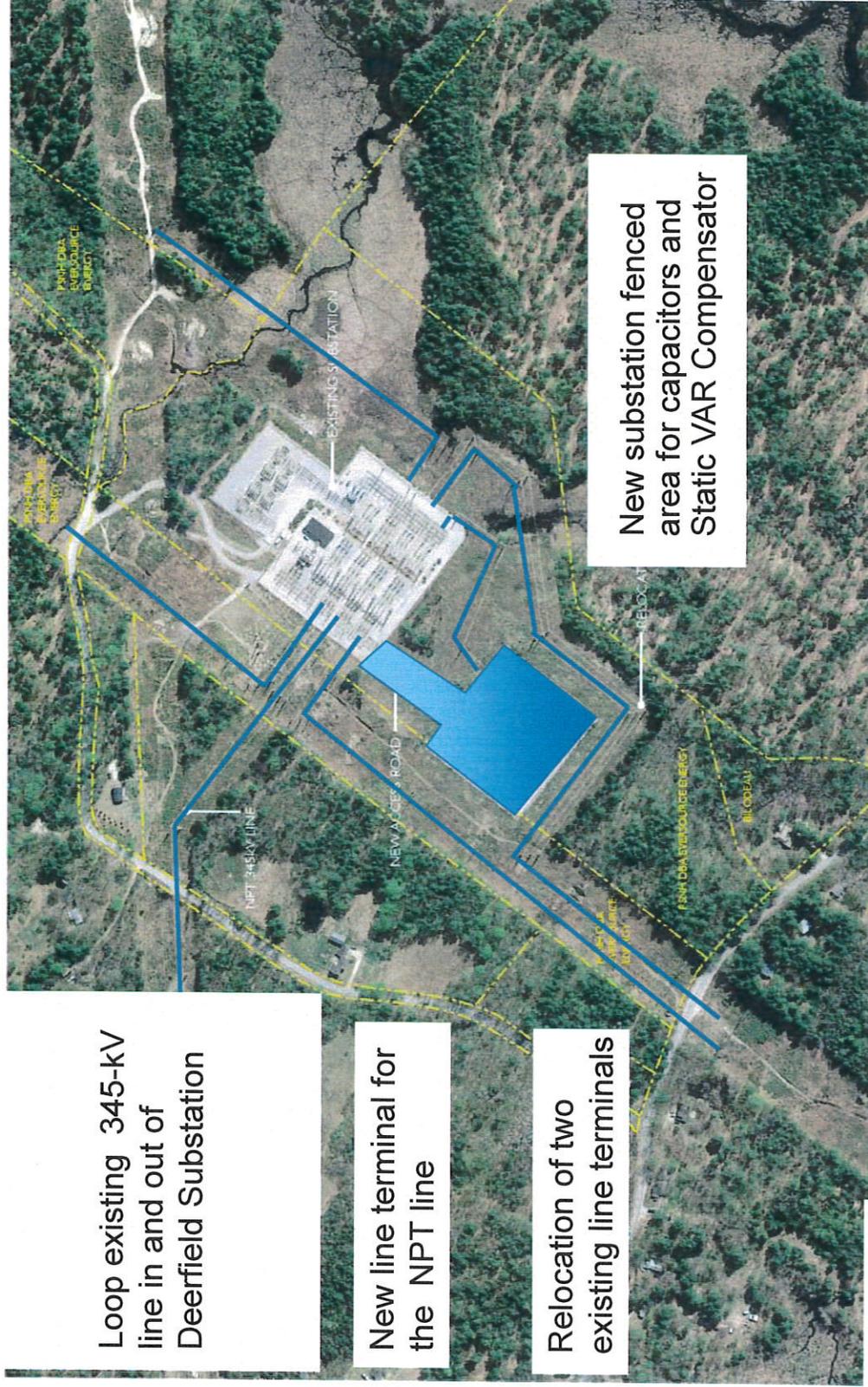


Loop existing 345-kV line in and out of Deerfield Substation

New line terminal for the NPT line

Relocation of two existing line terminals

Deerfield Substation Additions



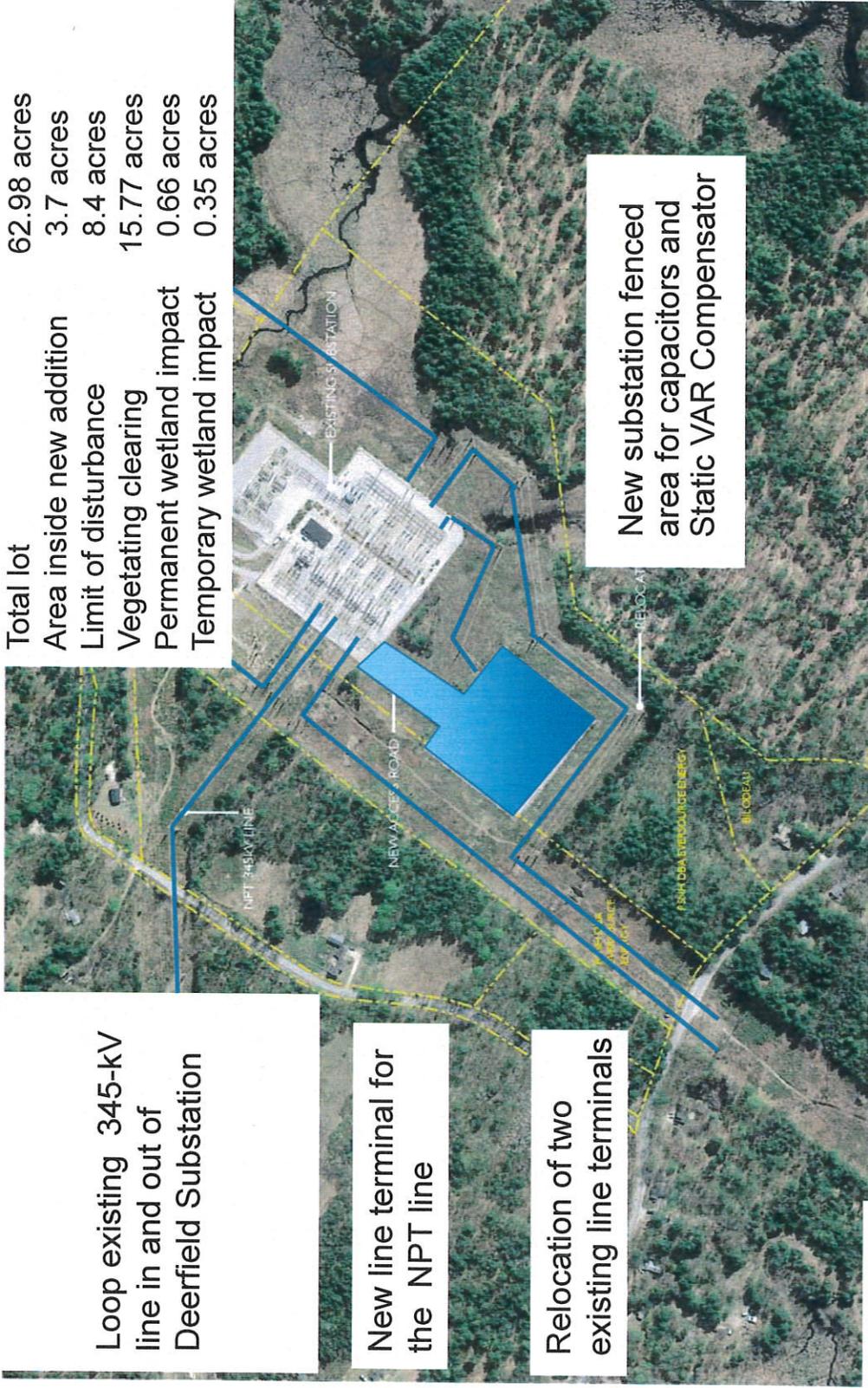
Loop existing 345-kV line in and out of Deerfield Substation

New line terminal for the NPT line

Relocation of two existing line terminals

New substation fenced area for capacitors and Static VAR Compensator

Deerfield Substation Additions



Total lot	62.98 acres
Area inside new addition	3.7 acres
Limit of disturbance	8.4 acres
Vegetating clearing	15.77 acres
Permanent wetland impact	0.66 acres
Temporary wetland impact	0.35 acres

Loop existing 345-kV line in and out of Deerfield Substation

New line terminal for the NPT line

Relocation of two existing line terminals

New substation fenced area for capacitors and Static VAR Compensator

Required Upgrades



- The additional upgrades are required to reliably interconnect to the New England electrical system
- Line Upgrades
 - Modify 10 structures on existing 345 kV lines between Deerfield and Scobie Pond Substation in Londonderry, NH. (5 structures in Deerfield)
- Other Station Upgrades
 - Installation of a capacitor bank at Scobie Pond Substation in Londonderry, NH
- These upgrades and those at Deerfield Substation are paid for by the Project and are required to reliably interconnect to the New England electrical system

Construction Schedule



Expected construction duration at Deerfield substation is 13 months

Proposed Northern Pass Transmission Project Schedule for Deerfield													
Description	2018												
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Substation Construction													
- Site Development (Clearing & Grading)													
- Civil Work (Inside Existing and Expansion)													
- SVC & Cap Bank Installation													
- Structure Cut-Ins													

All start dates and activity durations are dependent on permit approval, site and seasonal restrictions.



Questions?



- Contact us
 - Email: info@northernpass.com
 - Phone: (800) 286-7305
 - Website: northernpass.us

