

**STATE OF NEW HAMPSHIRE  
SITE EVALUATION COMMITTEE**

**DOCKET NO. 2015-06**

**JOINT APPLICATION OF NORTHERN PASS TRANSMISSION, LLC AND  
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY  
FOR A CERTIFICATE OF SITE AND FACILITY**

**PREFILED SUPPLEMENTAL TESTIMONY OF**

**PATRICIA M. O'DONNELL, FASLA AICP, ICOMOS, IFLA  
HERITAGE LANDSCAPES LLC**

**ON BEHALF OF  
COUNSEL FOR THE PUBLIC**

**April 17, 2017**

1   **Q.    Please state your name, position and your employer.**

2    A.    My name is Patricia O'Donnell, Principal, Heritage Landscapes LLC, certified planner,  
3        landscape architect and an expert in historic places and cultural landscapes.

4   **Q.    Have you previously testified in this docket?**

5    A.    Yes. I submitted prefiled direct testimony on November 15, 2017.

6   **Q.    Are there further considerations that you wish to include in your testimony?**

7    A.    Yes, I submit the following supplement to my prefiled direct testimony on the Northern Pass  
8        Transmission project ("Project") potential impacts to above-ground historic sites (including  
9        cultural landscapes) as submitted to the Site Evaluation Committee ("SEC") on November 15,  
10       2016.

11

12       This supplement provides clarification of four aspects that relate to my expert opinion on the  
13       potential for the Project to adversely affect New Hampshire historic sites to include cultural  
14       landscapes. These are the aspects of: corrected historic sites and cultural landscape counts;  
15       integrity; visibility; and Project planning to avoid and minimize potential unreasonable adverse  
16       effects.

17   **Q.    Have you corrected the calculation error in Heritage Landscapes report Table 2,**  
18       **"Summary Town Historic Sites and Cultural Landscapes Counts"?**

19    A.    Yes, the spreadsheet contained a calculation error that excluded the last 4 rows from the counts.  
20        These counts have been revised in the attached Revised Table 2, corrected 15 March 2017. The  
21        chart now shows accurate totals for each resource type, with the counts of 9 categories  
22        summing to 3,024 counts and the mileage of linear sites summing to 1,291 miles of counts. The  
23        current use lands for the 35 host and 1-mile adjacent towns total 632,118 acres, covering  
24        59.63% of total town land area, including a count of 10,146 individual parcels. Historic sites,  
25        miles of corridor and current use totals are all shown separately. (See corrected Table 2  
26        attached as Exhibit E.)

27   **Q.    What are your comments regarding the integrity of the historic sites included in your**  
28       **report?**

29    A.    New Hampshire Site 102.23 definitions do indicate that consideration of "Historic sites" should  
30        extend beyond those eligible for the National Register to acknowledge a host of sites that are  
31        "significant in the history, architecture, archeology or culture" of local communities and the

1 State of New Hampshire (Site 102.23). The SEC rules do not define integrity or guide  
2 assessment of integrity for places or features deemed significant to New Hampshire history,  
3 architecture, archeology or culture. Further, the SEC rules do not specify how to assess the  
4 significance or judge the integrity of historic sites. The concepts of significance and integrity  
5 are relevant as they are used throughout the Applicants' submitted Appendix 18: Northern Pass  
6 Transmission Project Assessment of Historic Properties, Preservation Company, October 2015.  
7

8 In accord with federal guidance for historic preservation, historic sites are assessed for  
9 integrity. Integrity means the degree to which the resource remains identifiable. As defined in  
10 federal guidance, integrity is "the authenticity of a property's historic identity, evidenced by the  
11 survival of physical characteristics that existed during the property's historic or prehistoric  
12 period."<sup>1</sup> The National Register uses seven aspects to assess integrity: location, setting, feeling,  
13 association, workmanship, design, and materials. In my prefiled testimony and the Heritage  
14 Landscapes assessment report, the integrity aspects of setting, feeling, and association are  
15 highlighted when discussing the historic sites and cultural landscapes potentially impacted by  
16 the proposed Project.<sup>2</sup> Direct visibility of the proposed Project is one impact to integrity of  
17 feeling, association and setting while pervasive visibility of the proposed Project is another  
18 impact to integrity in the same aspects.  
19

20 Reference to New Hampshire Site 102.23 definitions and language led Heritage Landscapes to  
21 an inclusive approach to identification of historic sites and cultural landscapes. For historic  
22 sites and cultural landscapes, seven categories were presented in our report as were the  
23 community identified historic sites. Assessing the integrity and historic importance of these  
24 groups of sites and landscapes must consider the nature and qualities of each group. There are  
25 varied means by which communities and state governments place value on and control the  
26 future trajectory of historic sites and cultural landscapes. The means and methods include:  
27 enacting laws; placing deed restrictions in property titles; regulating taxation; developing rules  
28 for appropriate uses; and providing guidance for management. All of these serve as tools to

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<sup>1</sup> *Secretary of the Interior's Standards and Guidelines*, Preservation Terminology, accessed 14 March 2017, [https://www.nps.gov/history/local-law/arch\\_stnds\\_10.htm](https://www.nps.gov/history/local-law/arch_stnds_10.htm)

<sup>2</sup> Heritage Landscapes LLC, "Assessment Report on Potential Effects to Above Ground Historic Sites and Cultural Landscapes for the Northern Pass Transmission Project," 15 November 2016.

1 protect culturally valued sites. These places and properties subject to protections include the  
2 diverse types included in the Heritage Landscapes report and my testimony. In relation to  
3 integrity of these historic sites and cultural landscapes we offer the following additional  
4 comments.

5  
6 **Historic Graveyards** are final resting places and function as memorial landscapes. The  
7 purpose remains and that purpose is an indicator of integrity. Map HL2 included in the Heritage  
8 Landscapes report shows only a partial capture of historic graveyards as nearly half the  
9 counties in New Hampshire have not yet inventoried these historic cultural landscapes. The few  
10 towns with graveyards mapped on HL2 serves as a predictor of many more graveyards likely to  
11 exist throughout the 10-mile APE of the proposed Project.

12  
13 **Conserved Lands, Public Waters and Recreation Lands** are all set aside within regulatory  
14 designations and legal frameworks addressing conservation, public access and ongoing  
15 management. The integrity for these properties and acreages is intact when the character of the  
16 lands is retained as designated and the access, use and management continues. Outdoor  
17 recreation and landscape conservation are recognized by the NH Division of Historic Resources  
18 (“DHR”) as important themes within New Hampshire history.<sup>3</sup> The list of Historic Contexts  
19 identified through DHR historic site survey by 2006 is attached (Exhibit D), with themes  
20 relating to conservation, recreation and public waters highlighted by Heritage Landscapes in  
21 yellow. Each act of conserving land through easements or current use affirms the importance of  
22 these resource types to the people of New Hampshire, and speaks to the history and traditions  
23 of outdoor recreation and landscape appreciation.

24  
25 **Current Use Parcels** are accepted into the taxation reduction program as continuing land uses  
26 managed by the owners. The integrity of current use properties is expressed through persistent  
27 management as forests and fields in productive uses.  
28

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<sup>3</sup> NH Division of Historical Resources, “Historic Context List,” updated June 2006, accessed 14 March 2017, [https://www.nh.gov/nhdhr/documents/context\\_list.doc](https://www.nh.gov/nhdhr/documents/context_list.doc)

1 As protected waterbodies for nature conservation and for non-degrading human uses, **Public**  
2 **Waters** (depicted on Heritage Landscapes report map HL7) retain integrity as great ponds,  
3 lakes, rivers and streams within the New Hampshire landscape.

4  
5 The integrity of **Public Trails** is linked to the integrity of the conserved lands, public waters,  
6 recreation lands and accessible current use lands they pass through. Continuity of character and  
7 ongoing management of these lands serves to reinforce the integrity of public trails.

8  
9 For **Scenic Roads**, integrity is held by the character of the road and the adjacent landscape.  
10 Integrity derives from the continuity of adjacent land uses over decades, despite some evolution  
11 through minor changes. The integrity of scenic roads remains intact unless major changes  
12 impact the scenic qualities of that corridor.

13  
14 The assessment of integrity occurs at the local, state and national level for valued historic sites.  
15 Community members identified historic sites at the workshops conducted by Counsel for the  
16 Public. This process signifies local values as the act of identifying these historic sites indicates  
17 that they continue to be recognized as historically and culturally important because they  
18 express and retain integrity today.

19  
20 In addition, the SEC rules and the definitions in Sites 102.23 do not specify age requirement for  
21 historic sites. Due to the rapid rate of change in contemporary society, the trend within historic  
22 preservation is toward recognizing historic sites less than 50 years old. The so-called “fifty year  
23 rule” for listing to the National Register is an assessment guideline and not a base requirement.<sup>4</sup>  
24 The National Park Service has published guidance for listing historic sites less than 50 years  
25 old that are of “exceptional importance.”<sup>5</sup> Discourse within the preservation community  
26 acknowledges the increasing pace of landscape change and the need to reconsider basic

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<sup>4</sup> West, Carroll, “The fifty-year stumbling block,” 22 September 2015, National Council on Public History, accessed 12 April 2017, <http://ncph.org/history-at-work/the-fifty-year-stumbling-block/>

<sup>5</sup> Sherfy, Marcella and W. Ray Luce, “Guidelines for Evaluation and Nominating Properties that Have Achieved Significance Within the Past Fifty Years,” Revised 1998, U.S. Department of the Interior National Park Service, National Register of Historic Places, accessed 12 April 2017, <https://www.nps.gov/nr/publications/bulletins/pdfs/nrb22.pdf>

guidelines for assessing historic significance to reduce the loss of historic sites that have not yet reached the 50-year benchmark.<sup>6</sup>

**Q. What are your supplemental comments regarding the visibility of the historic sites and cultural landscapes included in your report?**

A. In reference to visibility, Heritage Landscapes report included maps of identified historic sites and cultural landscapes (HL1 – HL8) as well as a map displaying an area of potential visibility based on a bare-ground visibility model (HL9). To graphically illustrate and enumerate the sites mapped on HL1 through HL8 that have potential Project visibility according to a bare-ground visibility model, the area of potential visibility has been overlaid on the previously identified cultural landscapes and historic sites data to create the following three new maps, submitted with this supplemental testimony as Exhibits A through C:

- Northern Pass Potential Visual Impact Sheet 1- North Above Ground 15 March 2017
- Northern Pass Potential Visual Impact Sheet 2- Central Underground 15 March 2017
- Northern Pass Potential Visual Impact Sheet 3- South Above Ground 15 March 2017

These new maps utilize data that is already mapped, although it should be noted that not all New Hampshire historic sites and landscapes enumerated in our report have previously been mapped. The three maps illustrate the distribution and density of identified and mapped historic sites potentially impacted by views of the proposed Project within a 10-mile radius area of potential visual impact, in accord with SEC Rule 301.05(b)(4)(d)(2). Using a bare-ground viewshed model, as required by Site 301.05 (b)(1), we provide this set of supplemental maps to visually depict the historic sites (including cultural landscapes) previously mapped in our report that have potential visual impact within a 20-mile wide corridor. Those sites and linear features that coincide with the red visibility bare-ground overlay are potentially visible to the proposed Project. The following counts are drawn from this GIS visibility overlay to summarize historic sites counts depicted on the three supplemental maps.

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<sup>6</sup> Articles describing the philosophical shift include: “50-year rule for structures in Redlands needs revisiting” Redlands Daily Facts, 15 October 2013, accessed 12 April 2017. <http://www.redlandsdailyfacts.com/social-affairs/20131015/50-year-rule-for-structures-in-redlands-needs-revisiting>; also, Madeleine Baran, “Preservationists holding public panel on debated ‘50-year rule’,” 27 October 2009, MPRnews, accessed 12 April 2017, <http://www.mprnews.org/story/2009/10/26/preservation-meeting>.

<b>Historic Site or Cultural Landscape Type</b>	<b>Number identified 20-mile corridor</b>	<b>Potential views 20-mile corridor</b>	<b>Percent (%) Potentially Visible</b>
National Register Listed Sites (or Determined Eligible for listing)	161	92	57
Historic Graveyard	555	180	32
Unlisted Historic Resource identified in State Data or by Applicant Survey	1484	1384	93
Conserved/Public Land	2192 parcels	1237 parcels	56
Recreation Lands Areas	756 sq. miles	250 sq. miles	33
Recreation Lands Sites (includes Overlooks)	419	264	63
Designated Rivers	326 miles	106	33
Public Water Access Points	288	92	32
Public Waters (Lakes or Ponds)	638	433	68
Scenic/Designated Roads	573 miles	210 miles	37
Community Identified Historic Site	518	306	59

Heritage Landscapes utilized a 10-mile radius area of potential visual impact for the analytical mapping and enumeration of potentially visible historic sites and cultural landscapes through reference to Site 301.05(b)(4). Intending to protect scenic resources, this rule specifies a 10-mile radius area of visibility analysis for electrical transmission lines meeting specific criteria possessed by the Northern Pass project. To ensure a comprehensive assessment of the potential for visual impact, Site 301.05(b)(1) requires visibility be assessed using a bare ground model that removes consideration of vegetation and other less permanent landscape features as screening elements. Based on the definition of “scenic resources” established in Site 102.45 that includes “historic sites,” Heritage Landscapes determined the 10-mile radius (20-mile corridor) visual impact assessment requirement established in Site 301.05(b)(4) should extend to historic sites and cultural landscapes.

Further, for the purposes of SEC review of the Northern Pass Transmission application, Site 301.06 sets a minimum area of potential effect (“APE”) to be determined using the method utilized in federal rules for the Section 106 process. Federal guidance provided in Code (36 C.F.R. §800.16(d)) states that the “Area of potential effects means the geographic area or areas

1 within which an undertaking may directly or indirectly cause alterations in the character or use  
2 of historic properties, if any such properties exist. The area of potential effects is influenced by  
3 the scale and nature of an undertaking and may be different for different kinds of effects caused  
4 by the undertaking.” Using this definition, as guided by SEC Rules, and informed by Site  
5 301.05(4), Heritage concludes that due to the size, scope, and duration of the Project and its  
6 structures, a 10-mile radius area is a reasonable range within which to identify potentially  
7 affected historic sites.

8  
9 In relation to visibility, we also wish to supplement our report, Chapter 5, Page 115, which is  
10 edited with additional italic text:

11  
12 SEC historic sites consideration (3) The extent, nature, and duration of the potential adverse  
13 effects on historic sites and archeological resources;

14  
15 The proposed Project will have adverse effects into the distant future in all towns where the  
16 Project intends to be sited above ground *and beyond those towns to the adjacent towns where*  
17 *the bare-ground model demonstrates visibility*. The extent of the proposed Project is massive  
18 with proposed monopoles and trellis frames rising above any future tree line, dwarfing all  
19 nearby historic sites and visually impacting all *historic sites and* cultural landscapes *with*  
20 *visibility to the proposed Project*. These Project elements, including substations and points  
21 where the line is proposed to transition from underground to above ground, will permanently  
22 mar *the historic sites and cultural* landscapes of the host towns *and the adjacent towns with*  
23 *Project visibility as depicted on the supplemental mapping and counts*.

24 **Q. What are your supplemental comments regarding the avoidance and minimization of the**  
25 **potential Project impacts?**

26 A. Standard conceptual guidance for project advises a three-step planning effort that seeks first to  
27 avoid unreasonable impacts. Those impacts that cannot be avoided are to be minimized. Failing  
28 both avoidance and minimization, the final resolution is mitigation. For the Northern Pass  
29 Project, the application of this process, beginning with avoidance of impact, is not readily  
30 apparent. It is my opinion that if the Applicants had begun the Project with the intent of



1 avoiding historic sites and cultural landscapes valued by the people of New Hampshire, there  
2 would have been a different Project design currently under review by the SEC.

3 **Q. Do you have any additional recommendations regarding this proposed Project?**

4 A. It is my expert opinion that the application did not sufficiently address the broad spatial extent  
5 of potential indirect (visual) impacts from the proposed Project, nor did it sufficiently  
6 acknowledge or assess the potential for direct impacts to historic buildings, structures and  
7 cultural landscapes along both the above-ground and underground segments of the Project  
8 corridor. The Applicants' lack of a thorough accounting of potentially impacted historic sites  
9 and cultural landscapes, coupled with an insufficient assessment of potential direct impacts,  
10 suggests that within the enormous scope of this Project there exist many more impacts to New  
11 Hampshire historic sites of all types than provided in the application. This is compounded by a  
12 lack of clarity within the Applicants' design plans as to the location of historic sites and their  
13 physical relationship to existing and proposed access roads, and proposed clearing and staging  
14 areas.

15  
16 Should the Project be approved, I recommend the Applicants' be required to hire and respond  
17 to independent observers to monitor Project implementation for impacts to previously  
18 identified and unidentified historic sites (inclusive of cultural landscapes) to supplement the  
19 limited resources of State agencies. I suggest that independent monitors, reportable to the SEC,  
20 and in consultation with other pertinent State agencies, may assist in identifying Project  
21 impacts that can be avoided or minimized through modified implementation strategies, using  
22 state and federal guidance.<sup>7</sup> Field monitoring of implementation may also identify important,  
23 and previously unrecorded, historic sites. Unrecorded historic sites may include, but not be  
24 limited to the following: ruins; stone walls and historic fencing; cemeteries; historic buildings,

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<sup>7</sup> Resources for protecting historic sites from adjacent construction include: Chad Randl, "Protecting a Historic Structure during Adjacent Construction," Preservation Tech Notes, Temporary Protection Number 3, U.S. Department of the Interior, National Park Service Cultural Resources, Heritage Preservation Services, July 2001, accessed 12 April 2017, <https://www.nps.gov/tps/how-to-preserve/tech-notes/Tech-Notes-Protection03.pdf>; Historic Documentation Company, Inc., Historic Stone Highway Culverts in New Hampshire Asset Management Manual, September 2009, accessed 12 April 2017, <https://www.nh.gov/dot/org/projectdevelopment/environment/documents/CulvertManagementManual.pdf>; Charles Birnbaum, "Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes," <https://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm>; "Current Practices to Address Construction Vibration and Potential Effects to Historic Buildings Adjacent to Transportation Projects" prepared by Wilson Ihrig & Associates, Inc., ICF International, and Simpson, Gumpertz & Heger, Inc., September 2012

1 bridges and other structures; ponds; stone culverts and drainage systems; terraces and other  
2 human-shaped topographic features; agricultural areas and former productive lands; and  
3 historic trees or groves often associated with historic homesteads and fields. These features and  
4 others, taken together, communicate the integrity of New Hampshire's historic sites and  
5 cultural landscapes, as the commonwealth shared by the people of New Hampshire and visitors.

**EXHIBITS**

- A. Northern Pass Potential Visual Impact, Sheet 1 – North Above Ground
- B. Northern Pass Potential Visual Impact, Sheet 2 - Central Underground
- C. Northern Pass Potential Visual Impact, Sheet 3 – South Above Ground
- D. NH Division of Historical Resources Historic Context List, Updated June 2006
- E. Heritage Landscapes Assessment Report Table 2, “Summary Town Historic Sites and Cultural Landscapes Counts, Miles and Acres” - revised