

13 Legends Drive Hooksett, NH 03106

July 9, 2019

New Hampshire Division of Historical Resources c/o Nadine Miller 19 Pillsbury Street Concord, NH 03301

Re: Seacoast Reliability Project (RPR #6528) Cable House Relocation Methodology

Dear Ms. Miller-

The following memorandum, requested by the New Hampshire Division of Historical Resources on June 7, 2019, outlines specific methods by which the Durham Cable Terminal House of the Little Bay Underwater Cable Terminal Houses Historic District will be relocated during and after project construction activities. Eversource has retained the services of the Arnold M. Graton Associates, Inc., (AMG) of Holderness, New Hampshire, a firm with extensive experience shoring, rigging and moving historical structures.

Methods

AMG will begin by setting small steel beams along the shore to create a level platform, fit to the terrain, at the base of the cable house. From this platform, AMG can build as needed, to shore up the cable house. Work in this area will be done in accordance with tides and special care will be taken to not disturb shoreline vegetation.

AMG worked closely with Fire Tower Engineered Timber to develop the plans as illustrated in Appendix A. The method involves core drilling two-inch holes through the lower course of the brick foundation, just above the stone, so that horizontal steel rods can pass through the structure. Some minimal repointing of brick may be required at this time before drilling can be done. Corner boards and three metal bands will be installed as an inner collar to help support the joint between the older and the more recent sections. A few bricks will be carefully removed on the inside center wall to allow for the inner collar.

Eight two-inch holes will then be drilled through the roof, to be re-filled later, for the rods from the inner collar to the frame above. Sleeves and rods inserted at 8" on center with rods up to the inner and outer collars (these collars will not make contact with brick walls). The vertical rods run up through the H beams into the steel plates that cross the top. A three-inch fire hose filled 90% with water, but not pressurized, will be installed around the in a continuous loop around both the interior framing and the exterior perimeter of the building. This hose will help maintain equal tension on all horizontal rods.

Once the structure is cradled, the structure will be raised six to eight feet and then moved sideways approximately fifty feet, turning fifteen to twenty degrees. At this point the structure will be placed on a temporary foundation on which it will be supported over the winter. The



structure will be mothballed at this point (vendor to be named). Once weather has improved, a permanent concrete foundation below grade with stone and mortar above grade (facsimile to original foundation) will be constructed on the stable bluff approximately twelve feet west and fifteen feet north of its original location. The cable house will be moved and placed on the new foundation. Once the building is stable in its final location all sleeves, rods, collars, shoring materials used to support structure etc. will be removed.

Rehabilitation work including brick wall repointing, roof repair, etc. will be assessed after the cable house is placed in its permanent location (Summer 2020) and a comprehensive restoration plan will be submitted to the New Hampshire Division of Historical Resources and the United States Army Corps of Engineers for comment. If weather permits, the rehabilitation work will take place in Fall 2020.

A tentative schedule for the cable house relocation is included in Appendix B.

AMG Qualifications

Arnold M. Graton Associates, Inc., has a 60-year history of shoring, rigging and moving historic structures. All moves have been successful. AMG has moved many homes, churches and museums to new locations and has moved several covered bridges off waterways for restoration; all involved extensive shoring and rigging expertise to insure no harm occurred in the structures. AMG has a full inventory of unique tools and shoring materials distinct to the occupation and is well known in this unique field for quality work.

If you have any questions or comments, please feel free to contact me at <u>brooke.kenline-nyman@eversource.com</u> or 603-634-2147.

Sincerely,

Blulie

Brooke Kenline-Nyman Cultural Resources Specialist

Enclosures: Appendix A – Cable House Move Plans Appendix B – AMG Tentative Schedule

Cc: Lindsey Lefebvre, USACE Pamela Monroe, Administrator, SEC David Trubey, DHR Appendix A: Cable House Move Plans









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Cupyright 2017 VIIIE TOWER ENGINEERED TIMBER INC.













Appendix B: AMG Tentative Schedule

RESTORATION CONSERVATIONIST



US Rte. 3 PO Box 174 Holderness, NH 03245

cell 603-448-8592 603-968-9574 • 603-968-3621 ARNOLD M. GRATON Master Bridge Wright amgraton@gmail.com

June 12, 2019

Dena M Champy Lead Project Manager, PMP Eversource Energy

> Timeline/Sequence of Work Cable House, Durham, NH

The following timeline is estimated and subject to changes. This timeline follows the attached methodology.

June 29, 2019 Start mobilization- deliver steel frame to site and store as described off driveway area

July 11, 2019 (dependent upon receipt of Army Corp permit) Install silt fence, excavate area behind CH-prepare to start core drilling

July 15 to August 2, 2019 Core drill lower course of brick at foundation and roof, insert sleeves and rods

August 5-16, 2019 Install steel frame – build road to move CH to new site

August 19-30, 2019 Rig for move and move CH

August 2020 New foundation at location designated by Owner Move CH to new foundation