

The State of New Hampshire

Before the

Public Utilities Commission

Docket No. \_\_\_\_\_

PETITION OF GRANITE STATE TELEPHONE, INC.  
FOR LICENSE  
TO CONSTRUCT AND MAINTAIN A FIBER OPTIC CABLE  
OVER A PORTION OF HIGHLAND LAKE

TO THE PUBLIC UTILITIES COMMISSION:

Granite State Telephone, Inc. ("GST") hereby petitions the Public Utilities Commission ("Commission"), pursuant to the RSA 371:17 for a license to construct and maintain a fiber optic cable over and across the public waters of a portion of the aforementioned lake in the Town of Washington, New Hampshire.

Construction and maintenance of the cable at this crossing will promote the public good as it is an extension of our existing network telecommunications network in the Town of Washington. This petition to the Commission to construct these facilities is in response to a request for telecommunications service from a resident of Point Island in the aforementioned lake.

Accordingly, GST hereby makes the following statements in support of its petition:

1. GST is a New Hampshire corporation engaged in business as a telephone utility subject to the jurisdiction of the Commission.
2. GST owns, maintains and operates a telecommunications network comprised of both copper and fiber optic cables for the purpose of fulfilling the telecommunications requirements of residents and businesses in, among other areas, the Town of Washington.
3. GST requests a license to construct and maintain a fiber optic cable over and across public waters at the following location in the Town of Washington, New Hampshire:
  - a. Highland Lake at Birch Point Way, between utility poles Public Service of New Hampshire ("PSNH") #158/1Y; GSC #111A/2 and PSNH #158/1; GSC #111A/3.
4. This portion of the lake, for which a crossing license is requested, is listed as a public waterway in the "Official List of Public Waters", issued March 1, 2011, published by the

5. A separate engineering package is provided for this planned crossing, complete with a location map detailing where the proposed cable will cross the lake.
6. The engineering package also includes design and profile drawings. Public documents have identified Highland Lake as being a 712 acre body of water. Nevertheless, field inspections conducted by GST, have determined that the portion of the public waters associated with the proposed crossing is not suitable for sail boating. Accordingly, the proposed crossing has been designed according to the specifications set forth in Table 232-1, Category #6 of the National Electric Safety Code (NESC).
7. The proposed GST crossing will be installed between the two aforementioned utility poles and along the same path PSNH already takes to cross this portion of the lake. The attached engineering drawings provide the exact distances between the poles, as well as the height of each pole and the associated attachments. Vertical distances have been determined by information obtained from GST field inspections.
8. The proposed GST crossing will consist of three components; support strand, fiber optic cable and lashing wire (collectively "overhead line crossing"). The support strand will be of nominal diameter (5/16") and will serve as the messenger for the communication cable. The fiber optic cable will contain six fiber strands, and will be approximately ¼" in diameter. The fiber cable will be lashed to the support strand using standard lashing wire.
9. Sag and tension calculations were prepared per the NESC Articles 232.A1 and 251, using heavy load conditions (0 degrees Fahrenheit temperature, 4.0 pounds per square foot (psf) wind loading, and ½" radial ice). In all cases, the calculations for Article 251, using heavy load conditions, were found to be the governing condition for both sag and tension. The maximum tension under heavy conditions was calculated and found not to exceed 60% of usable strand load of 11,200 pounds. These calculations confirm that the fiber cable should not fail under these heavy load conditions.
10. All vertical clearances were calculated using the height (above water level) of the lake as surveyed on August 16, 2012. Efforts were made by GST engineering personnel to obtain 10 year flood profile information from the Federal Emergency Management Agency ("FEMA"). However, conversations with FEMA Mapping Specialists and the Flood Plain Administrator for the Town of Washington have revealed that there is no such study of Highland Lake on file.

<sup>1</sup> See <http://des.nh.gov/organization/commission/pip/publications/wd/documents/olpw.pdf>.

This type of information does exist for a few of the lake's tributaries, but no reference is made in those studies of the 10 year profile of the lake itself. However, conversations with the aforementioned parties did reveal that the level of the portion of the lake in the Town of Washington is controlled by a dam located in the Town of Stoddard. The Town of Washington Flood Plain Administrator in particular stressed with GST that, in the event of the height of the lake rising more than 24", water would be released at the dam, resulting in a lowering of the lake level in the Town of Washington. Regardless, the proposed GST crossing would surpass the clearance specifications established in NESC Article 251, even if the level of the lake was to rise 17' above the level measured by GSC on August 16, 2012.

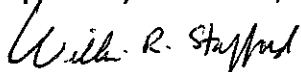
11. All private property easements associated with this proposed crossing are in place. No additional Town of Washington or State of New Hampshire permits are required for this construction.
12. The proposed crossing has been designed and will be constructed, operated and maintained by GST personnel.
13. GST submits this license petition in the spirit that it be exercised without affecting the rights of the public in the public waterways. Minimum safe line clearances above the water surface and affected shorelines will be maintained at all times. The use and enjoyment of the public of the waterway will not be diminished in any material respect as a result of the proposed overhead line crossing.

WHEREFORE, GST respectfully requests that the Commission:

- A. Find that the license petition for herein may be exercised without affecting the public rights in the public waters which are part of this petition.
- B. Grant GST a license to construct, operate and maintain fiber optic cables over and across the public waters of Highland Lake as specified in this petition; and
- C. Issue an Order Nisi and orders for its publication.

Dated at Weare, New Hampshire the 21<sup>st</sup> day of August, 2012.

Respectfully Submitted,



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William R. Stafford, Chief Operating Officer  
Granite State Telephone, Inc.  
600 South Stark Highway  
Weare, New Hampshire 03281