

# STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: July 17, 2013  
AT (OFFICE): NHPUC

NHPUC 25JUL'13AM11:06

FROM: Leszek Stachow, Analyst 

SUBJECT: DT 13-144 Northern New England Telephone Operations LLC  
d/b/a/FairPoint Communications  
Petition to Construct and Maintain Telecommunications Cable across  
New Hampshire Public Waters located at NH Route 1A over  
Sagamore Creek, Portsmouth, NH,

TO: Commission  
Debra Howland, Executive Director

On May 13, 2013, Northern New England Telephone Operations LLC d/b/a/FairPoint Communications (FairPoint) filed a petition pursuant to RSA 371:17 seeking approval for a license to construct and maintain aerial plant over and across a state owned public waterway in Portsmouth, NH across Sagamore Creek. Following Staff investigation, FairPoint submitted a supplemental filing on May 31, 2013.

The location of the crossing in this petition is as follows:

- NH Route 1A over Sagamore Creek( bridge No 198/034) in Portsmouth, NH between pole 59/45 and pole 59/56; poles located in front of Shaw Road( north side of crossing) and Sagamore Ave ( south side of crossing)

The river crossing by cables in this petition is listed as a public water in the Department of Environmental Services' official list of public waters and therefore requires a license pursuant to RSA 371:17.

1. Review of public need and public impact.

In its cover letter FairPoint states that it has been contacted by the State of New Hampshire in regards to a bridge reconstruction project on-going in Portsmouth, NH and that as part of this project FairPoint is required to permanently re-locate its telecommunications facilities over New Hampshire public waters in order to allow the State to advance the project.

The New Hampshire Department of Transportation in conjunction with the City of Portsmouth will rebuild the bridge over Sagamore Creek. The reconstruction of the

bridge requires FairPoint to relocate its existing facilities and petition the Commission for a license. During the bridge reconstruction period, FairPoint will relocate its facilities which are currently in a conduit system parallel with the bridge to an existing pole line to cross the creek and continue service delivery to its customers.

2. **Review of NESC code requirements.**

FairPoint states that the water crossing will be constructed and maintained with due regard for established safety standards as set forth in the National Electrical safety Code (NESC). Staff reviewed documents and data provided by FairPoint, including detailed diagrams, descriptions, and maps of the crossings. Staff confirmed the information provided in the filing complies with the requirements of the NESC. The attached worksheets provide a summary of Staff's review.

3. **Recommendations and Conclusions.**

Based upon Staff's analysis, the proposed crossing will not substantially affect the public rights in the waters and lands and Staff concludes that FairPoint has demonstrated a public need for the proposed crossings. Accordingly, Staff recommends that the Commission grant the license for the Sagamore Creek crossing in this petition, with the following conditions;

1. FairPoint will maintain proper clearances between its cables and those adjacent to it at all times across the entire span pursuant to NESC 235C2b and 235H.
2. FairPoint will construct, operate and maintain the attachments at all times in accordance with both the 2002 and 2007 editions of the NESC as required by NH Admin. Code Puc 433.01 and 1303.07.

*Info provided is intended to be used in conjunction with the NESC and does not in any way supersede or replace the NESC. The NESC should always be considered as the primary basis for making clearance determinations.*

## Telecommunications Fiber Optic Cable<sup>1</sup> Water Crossing Checklist

Docket #: DT 13-144

Applicant: FairPoint Communications-NNE

Date: July 17, 2013

Analyst: Stachow

Location: NH Route 1A over Sagamore Creek ( Bridge No 198/034), in  
Portsmouth, NH

1	Yes, estuary	Is water body on DES list: <a href="http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/olpw.pdf">http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/olpw.pdf</a>
2	N/A	If Merrimack River from the MA-NH State line to Concord, NH; Lake Umbagog within NH; or the Connecticut River to Pittsburg, NH., has Army Corps of Engineers approved?
3	No	Does petition indicate DOT or DES approvals needed?
4	N/A	If DOT or DES approvals needed, ask applicant for contact at applicable state agency and call to determine status of approvals. Are DOT or DES approvals expected?
5	Yes	Compare facts stated in petition to "as built" drawings. Are facts consistent? Check things like pole numbers, span length, location, water body.
6	Yes	Compare make ready requirements from pole owner to "as built" drawing. Confirm necessary appurtenances (e.g. guys) are included in drawing and all existing attachments are depicted.
7	Yes	Does petition attest the proposed crossing is designed and will be built and maintained in accordance with the NESC?
8	Not Known	Are existing attachments licensed? If not, notify existing attachers in writing and request license application.

<sup>1</sup>As defined by NESC 230 F 1e and NESC 230 F 2

*Info provided is intended to be used in conjunction with the NESC and does not in any way supersede or replace the NESC. The NESC should always be considered as the primary basis for making clearance determinations.*

9	Yes	If lowest attachment is not licensed, verify minimum water clearances plus one foot per attachment beneath proposed attachment are met under Heavy Load conditions and recommend conditional approval. (e.g if water is not suitable for sailing and there are 2 existing attachments below proposed, add 2 feet to 14 foot clearance requirement and determine if proposed attachment with maximum sag is greater than 16 feet from water surface). If water suitable for sailing, use 10 year flood elevation.
10	N/A	If lowest attachment is licensed, does make ready indicate lowest attachment will be moved closer to water? (If no, skip to step 15. If yes, what is max sag of lowest attachment at 0 deg F, 0.5 inch ice, 4 psf wind?)
11	Yes	Is water suitable for sailing?
12	N/A	If not suitable for sailing is there <b>14 feet</b> clearance from lowest point in sag of lowest attachment to water surface under Heavy Load conditions? (preferably measured from water surface at 10 year flood elevation, but not required)  NESC Table 232-1, 6
13	Yes	If suitable for sailing is there appropriate clearance from lowest point in sag of lowest attachment to water surface under Heavy Load conditions at 10 year flood elevation. Size of rivers and streams based upon largest surface area of any 1 mile segment that includes the crossing (circle applicable standard) <ul style="list-style-type: none"> <li>a. Less than 20 acres: <b>17.5 feet</b></li> <li>b. Over 20 to 200 acres: <b>25.5 feet</b></li> <li>c. Over 200 to 2000 acres: <b>31.5 feet</b></li> <li>d. Over 2000 acres: <b>37.5 feet</b></li> </ul> NESC Table 232-1, 7 and notes 18 and 19.
14	N/A	Is there a minimum of <b>40 inches</b> between electric neutral and proposed attachment on each pole?  NESC Table 235-5 1a
15	Not Known	Is there a minimum 75% of distance required at supports at every point in the span ( <b>30 inches</b> between electric neutral and proposed attachment) under all conditions?  NESC 235C2b
16	84"*	What is maximum sag of proposed attachment under Heavy Load Conditions?  NESC Table 250-1

*Info provided is intended to be used in conjunction with the NESC and does not in any way supersede or replace the NESC. The NESC should always be considered as the primary basis for making clearance determinations.*

17	OK	Run tension numbers to verify maximum sag calculation.
18	Yes	Is there a minimum <b>12 inch</b> clearance between proposed attachment and adjacent communications attachments at each pole?  NESC 235H1
19	Not known	Is there a minimum <b>4 inch</b> clearance between proposed attachment and any conductor, cable or equipment of adjacent communications attachments at every point in the span under Heavy Load conditions?  NESC 235H2

NOTE: If the crossing is within 10 feet horizontally of an existing bridge structure that may already limit use of the waterway, a simplified drawing may be submitted with vertical distances measured to the bridge deck. If bridge deck is 15 feet above water surface, water is not suitable for sailing, and height of lowest crossing is above the bridge deck, clearance to water does not need to be measured. In this instance, flood elevation information is not required.

**NOTES:**

14. Attachment is not adjacent to neutral

16. \*Sag calculation performed by utility using standard engineering tables and erring on the side of caution with higher cable weight assumed at 11b/ft and a larger span length of 475ft.