

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: October 22, 2012

AT (OFFICE): NHPUC

FROM: Kate Bailey *KMB*

SUBJECT: DT 11-136 segTEL Petition to Cross Contoocook River in Penacook

TO: Commission
Debra Howland, Executive Director

On June 13, 2011, segTEL filed a petition seeking approval for license to construct and maintain fiber optic cable over the Contoocook River in Penacook, adjacent to the Village Street Bridge on Route 3 between Canal Street and Elm Street from utility pole UES 736/1, T-85N to UES 554/1, T-6. On February 14, 2012, segTEL submitted a letter withdrawing the filing based on its interpretation of a prior decision not to require a license for a fiber attached to a bridge. As this crossing is not physically attached to the bridge, Staff informed segTEL a license is needed in this location. Staff performed its initial review of the petition in April 2012 and requested that segTEL revise its petition. segTEL filed its revised petition on October 17, 2012.

Review of public need and public impact

In its petition segTEL states that the crossing is necessary to meet the reasonable requirements of the public. The crossing will be attached to existing utility poles jointly owned by Unitil and FairPoint. According to the petition, no DOT or DES permits are required of the crossing. segTEL states that the license petitioned for "may be exercised without substantially affecting the rights of the public in the crossing of the Contoocook River. Minimum safe line clearances above the water surface will be maintained at all times. The use and enjoyment by the public of the river will not be diminished in any material respect as a result of the overhead line crossing."

Review of NESC code requirements

According to the petition, the crossings will be designed, constructed, maintained and operated by segTEL. Staff reviewed documents and data provided by segTEL, including detailed diagrams, descriptions, and maps of the crossings. Staff confirmed the proposed crossings have been designed to meet the requirements of the National Electrical Safety Code (NESC), consistent with NH Admin Rule Puc 433.01(a). The attached worksheet provides a summary of Staff's review. As noted on the worksheet, the information provided by segTEL did not verify a minimum clearance of 75% of the

distance required at the supports at every point in the span required by NESC 235C2b, or a minimum 4 inch clearance between the proposed attachment and any conductor, cable or equipment of adjacent communications attachments at every point in the span required by NESC 235H.

Staff was unable to determine whether the existing FairPoint facility at this location is licensed. The Comcast license for this location is pending in Docket No. DT 12-054. Staff performed a site visit and observed possible NESC violations on the FairPoint and Comcast attachments. FairPoint and Comcast should be required to review their attachments, make them compliant with the NESC if necessary and report back to the Commission. The segTEL attachment has already been installed and should not impact adjustments to existing attachments, but in the event it does, segTEL should be required to make necessary adjustments and file a revised diagram if the location of its attachment is altered.

Recommendations and Conclusions

Based upon Staff's analysis, the proposed crossings will not substantially affect the public rights in the waters and lands and Staff concludes that segTEL has demonstrated a public need for the proposed crossings. Accordingly, Staff recommends that the Commission approve the license for segTEL, with the following conditions:

1. segTEL will cooperate fully with the pole owners to ensure all pole attachments on these poles comply with the NESC and state law and will file a revised diagram if its location is required to be rearranged.
2. segTEL maintain proper clearances between its cables and those adjacent to it at all times across the entire span pursuant to NESC 235C2b and 235H.
3. segTEL construct, operate and maintain the attachments at all times in accordance with both the 2002 and 2007 editions of the NESC.

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 Cable¹ Water Crossing Checklist

Docket #: DT 11-136

Applicant: segTEL

Date: April 12, 2012, October 2012

Analyst: Kate

Location: Contoocook River adjacent to Village Street Bridge in Penacook
NH between utility poles UES 736/1, T-85N and UES 554/1, T-6

| | | |
|---|---------------------------------------|---|
| 1 | yes | Is water body on DES list: http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/olpw.pdf |
| 2 | NA | 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 | Not needed | Does petition indicate DOT or DES approvals needed? |
| 4 | NA | 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 | Not provided | 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 | Not provided | Does petition attest the proposed crossing is designed and will be built and maintained in accordance with the NESC? |
| 8 | FRP – unknown Comcast-DT 12-054 | Are existing attachments licensed? If not, notify existing attachers in writing and request license application. |

¹As defined by NESC 230 F 1e and NESC 230 F 2

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| | | |
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| 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 | no | 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 | no | Is water suitable for sailing? |
| 12 | unk | If not suitable for sailing is there 14 feet 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 | NA | 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"> a. Less than 20 acres: 17.5 feet b. Over 20 to 200 acres: 25.5 feet c. Over 200 to 2000 acres: 31.5 feet d. Over 2000 acres: 37.5 feet NESC Table 232-1, 7 and notes 18 and 19. |
| 14 | yes | Is there a minimum of 40 inches between electric neutral and proposed attachment on each pole? NESC Table 235-5 1a |
| 15 | Not specified | Is there a minimum 75% of distance required at supports at every point in the span (30 inches between electric neutral and proposed attachment) under all conditions? NESC 235C2b |
| 16 | 3.98 ft | 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 12 inch clearance between proposed attachment and adjacent communications attachments at each pole? NESC 235H1 |
| 19 | Not specified | Is there a minimum 4 inch 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. Fiber adjacent to three phase electric over bridge. Clearance complies with NESC 235C2a