

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: July 19, 2010

AT (OFFICE): NHPUC

FROM: Kate Bailey, Director, Telecom *KMB*

SUBJECT: Staff Recommendation in DT 10-009

TO: Commission
Executive Director



On January 12, 2010, Freedom Ring, d/b/a BayRing Communications (BayRing) filed a petition with the Commission Under RSA 371:17 for a license to construct and maintain fiber optic cable over and across the Concord and Montreal Railroad in Concord, New Hampshire between Unitil Poles CECO 12 and CECO 13. According to the petition, construction of the fiber optic cable is necessary to meet reasonable requirements of service to the public, to accommodate growth in demand and to obtain a greater level of service reliability in the Concord area.

The petition was reviewed and analyzed by the Commission's Safety Division. The Safety Division's review, dated July 16, 2010, is attached. The Safety Division determined that BayRing's proposed attachment was consistent with the 2002 and 2007 editions of the National Electrical Safety Code and recommended the license be granted with conditions. See Attached memo.

The Telecom Division recommends a license be issued for the proposed Railroad crossing.

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: July 16, 2010

AT (OFFICE): NHPUC

FROM: Randy Knepper ^{cos} RSK
Director of Safety

SUBJECT: Review of BayRing Communication's Petition
to Cross the former Concord and Montreal Railroad , Concord, NH
Docket No. DT 10-009

TO: Kate Bailey, Director of Telecommunications
Lynn Fabrizio, Staff Attorney

The Safety Division review of the above petition consisted of the following ten elements:

- Summary of Petition and Petition History
- Applicable Statute for Petition
- Review of existing crossing(s) already licensed by the PUC
- Review of other applicable state agency license requirements
- Does the petition contain sufficient and accurate information to determine if administrative rules are being met, *i.e.* Puc 300, Puc 400, Puc 1300 rules?
- Review of pole owner permissions and conditions
- Review of petition elements
- Are all pole attachments shown to allow for a proper determination of NESC codes?
- Statement of public need for the right to cross state owned rail.
- Conclusions and Recommendations

1. Summary of petition and history.

- On January 12, 2010, BayRing Communications filed a petition to cross over the former Concord and Montreal Railroad in Concord, New Hampshire with a fiber optic cable type 216 (5/16 inch diameter, 7 strand EHS) and support cable (3/4 inch diameter steel) on existing poles owned by Unitol Energy Services.
- On May 5, 2010, in correspondence with Safety Division Staff, BayRing stated that it intended to keep the original petition as filed rather than amending to show that approval from the NHDOT was pending.

2. Applicable New Hampshire statute referenced in petition.

TITLE XXXIV
PUBLIC UTILITIES

CHAPTER 371
PROCEEDINGS TO ACQUIRE PROPERTY OR RIGHTS

Rights in Public Waters and Lands

371:17 Petition. – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or **across any of the land owned by this state**, it shall petition the commission for a license to construct and maintain the same. For the purposes of this section, ""public waters" are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the commission may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall petition the commission for a license in the same manner prescribed for a public utility.

Source. 1921, 82:1. PL 244:8. RL 294:16. 1951, 203:48 par. 17. 1953, 52:1, eff. March 30, 1953.

3. Review of existing license(s) and permissions previously granted by PUC to cross former Concord and Montreal rail crossing in Concord, NH, and ownership of lands.

a. Historical Review of Existing License of the Concord and Montreal Rail Crossing in Concord, NH:

The Concord and Montreal Rail Crossing as referred to in the BayRing petition was merged into the Boston and Maine Rail system in 1895. The segment subject to the current petition subsequently became part of the State of New Hampshire Rail System, now known as the Concord-Lincoln branch of the New Hampshire Rail System. The poles in question are owned by Unitil; FairPoint and City of Concord attachments are currently on the poles. A private license to cross the rail was granted to Unitil Energy Systems by the former Boston and Maine Rail System June 4, 1968. The clearance above the rails was shown in that license as 30 feet at mid span using poles CE12 and CE13. To date, the Safety Division has not found any written documentation confirming that licenses were ever granted by the Boston & Maine Rail System or the PUC to FairPoint or its predecessors, or to the City of Concord pursuant to RSA 371:17 to cross this particular rail line.

4. Review of land ownership of existing pole structures.

According to the City of Concord's GIS database of parcels owned within the town, the western pole (CE Pole 13) and eastern pole (CE Pole 12) are outside the right of way of the State of New Hampshire. (See Appendix A for photo documentation of existing conditions.) CE Pole 13 is located just north of the property line of a parcel owned by Unitil and within the municipal right of way of West Portsmouth St and CE Pole 12 is within the municipal right of way of Foundry St near the property owned by Fox Brook Holdings LLC. Consistent with the City of Concord's database, Bay Ring's petition also shows both CE Pole 13 and CE Pole 12 outside of the State of New Hampshire right of way. CE Pole 13 is depicted as 31.2 feet west and perpendicular to the rail centerline and CE Pole 12 is shown as 28.8 feet east and perpendicular to the rail centerline

5. Review of NESC code requirements as described in Puc 300, Puc 400 and Puc 1300 rules.

N.H. Code of Administrative Rules PART Puc 433 requires a CLEC to *construct, install and maintain its plant, structures, equipment, and lines to prevent interference with service furnished by other carriers and by other public service facilities, such as cable, fire alarm, electric, water, sewer, gas, or steam facilities.* Puc 433.01(b). This requires compliance with the 2002 edition of the NESC. Puc 433.01(a).

N.H. Code of Administrative Rules PART Puc 1303 requires a CLEC or any other pole attaching entity to *install in accordance with the 2007 edition of the NESC.* Puc 1303.07(a). Thus, the Safety Division reviewed compliance with both the 2002 and the 2007 editions of the NESC.

BayRing's petition shows the orientation and location relationship of the proposed fiber optic lines in relationship to existing pole owners and attaching entities at both the pole locations including midspan above the rail crossing. The existing pole attaching entities are identified as Fairpoint Communications, City of Concord Fire Alarm, and Concord Electric, and the pole owner as Unitil Energy Systems (UES); Unitil facilities are attached to both poles. The petition also shows the relationship of proposed fiber optic cables to vertical clearances from the raised rail bed as well as ground level survey taken on November 18, 2009.

NESC Section 230.F.1.e and Section 230.F.2 are considered by the Safety Division to be applicable to fiber optic cables.

The BayRing petition did not show the actual weightings, sag conditions, or tensioning conditions of the existing overhead electric facilities (Unitil Energy

Systems), fire alarm facilities (City of Concord) or telephone facilities (Fairpoint Communications) facilities.

The Safety Division confirmed through field investigation that the poles in question are 45 feet in length, wooden Class 3 poles made of Southern Pine with creosote treatment applied in 1967, according to markings on the pole

A review of the vertical clearance between UES facilities and proposed Bay Ring facilities reveals that the proposed 42-inch clearance is in conformance with the minimum required vertical clearance of 40 inch per NESC Table 235-5 (1a). A scale of the drawing provided within the petition shows that this minimum separation is maintained under all loading conditions throughout the span although it is not specified in a drawing detail.

A review of the vertical clearance between proposed BayRing facilities and existing Fairpoint Communications and fire alarm facilities reveals that the minimum vertical clearance requirement of 12 inches is maintained per Section 235.C.2.b(1)(a) of the NESC at the pole,

The petition shows that existing Fairpoint facilities will be lowered and BayRing will take the position of the existing Fairpoint location. A clearance equal to or greater than 23.5 feet will be maintained from the lowest cable which is required by the NESC code per Table 232-1 and Fig 234-5. RSA 373:39 requires 22 feet of vertical clearance above rails thus BayRing's petition is satisfactory in this regard.

Line Item 5 in the petition lists conditions of sag that are inconsistent with NESC loading conditions as defined in Section 232 A. However, Line Item 6 references elevations and loadings that are in conformance with NESC loading conditions. These conditions were the Heavy Loading Conditions applicable to New Hampshire [Table 250-1 (0 deg F, 4 psf wind, 0.5 inch radial equivalent ice)]. For purposes of this review, the Safety Division used those drawings, profile details and notes referenced by Line Item 6.

A review of the calculated sags was checked with SpanCheck at tensions provided in the petition and loading conditions at 0 deg F with no ice and wind and 32 deg F with 0.5 inch ice and 0 deg F with 0.5 inch ice and 4 psf wind load and sag results were consistent with those shown in the petition.

Line Item 7 of the petition incorrectly states there are no NHDES or NHDOT permits necessary for the construction of the crossing. The Safety Division believes RSA 373:1-a,II requires a permit to be issued by NHDOT if an acceptable application is approved. BayRing did not enclose any documentation that showed that a NHDOT permit has been obtained and declined to revise its petition to reflect the pending NHDOT approval.

6. Statement of public need and public impact.

BayRing states the crossing is needed to accommodate increased growth and to maintain service reliability for the Concord Area, and that no environmental permits are required of the crossing. BayRing further states in its petition that the proposed communication lines will not substantially affect the rights of the public in the right of way of New Hampshire Rail System, that minimum safe vertical and horizontal line clearances above the rail beds will be maintained by BayRing, and that the use and enjoyment by the public of the New Hampshire Rail System will not be diminished in any material respect as a result of the overhead line crossing.

7. Recommendations and Conclusions

The Safety Division recommends approval of BayRing's petition to the Commission with the following conditions:

- a. Bay Ring should submit a copy of the approved rail permit issued by the NHDOT within 60 days of any final order being issued.
- b. The Commission should require that all future alterations to the crossings conform to the requirements of both the 2002 and 2007 editions of the NESC.
- c. BayRing should be required to maintain and operate the crossings in conformance with the NESC.
- d. BayRing should be required to file within 120 days of installation copies of the final configurations with sufficient detail of its crossing with clearances from all other attaching entities under applicable NESC loading conditions.

Appendix A



Figure 1. OverView of State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13/12 and Unitil Substation (Circuit 15H3 is between the Unitil Substation and the westerly side of the State of New Hampshire Rail Road branch Concord to Lincoln.

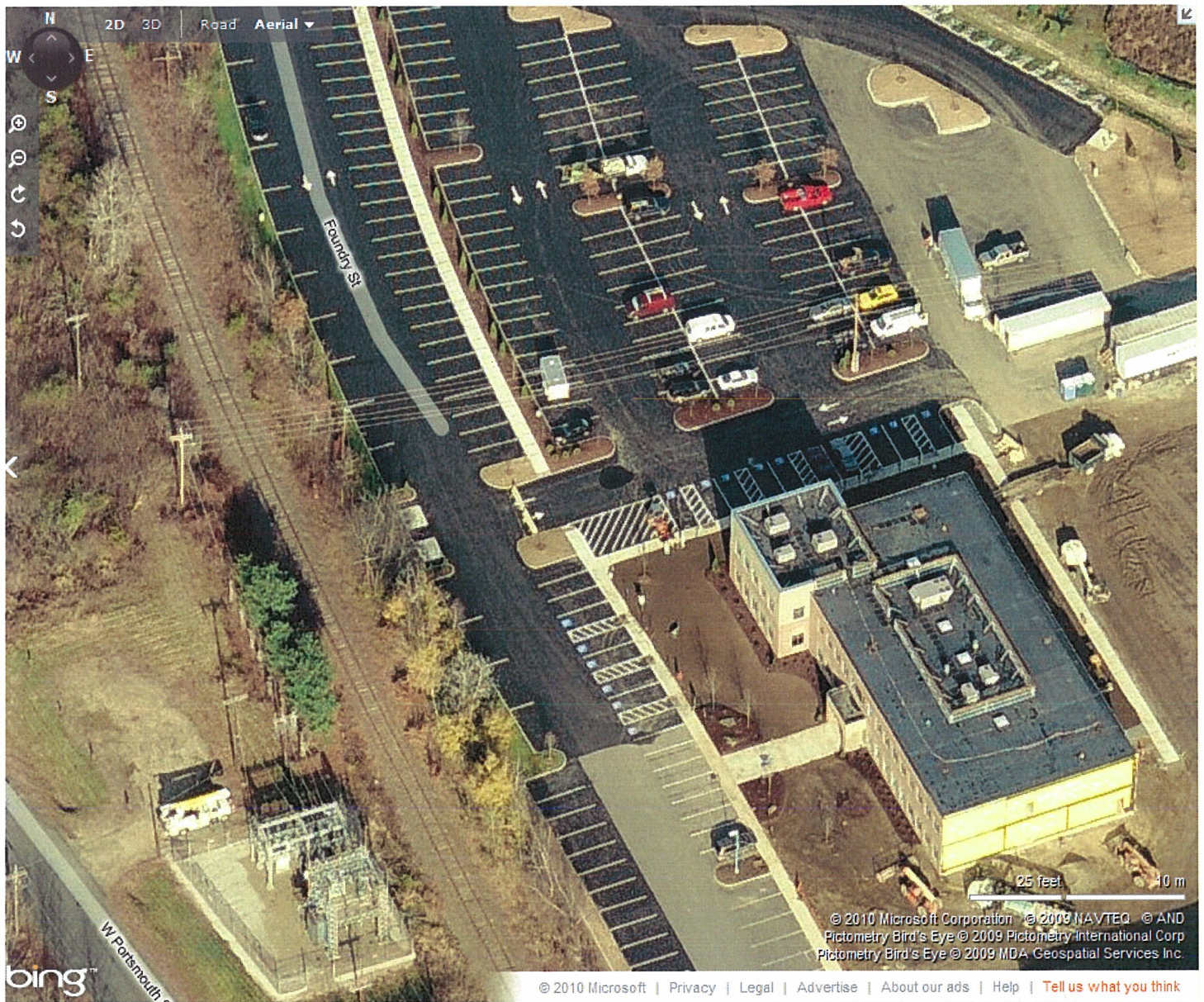


Figure 2. Closer View of State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13/12 and Unitil Substation (Circuit 15H3 is between the Unitil Substation and the westerly side of the State of New Hampshire Rail Road branch Concord to Lincoln.

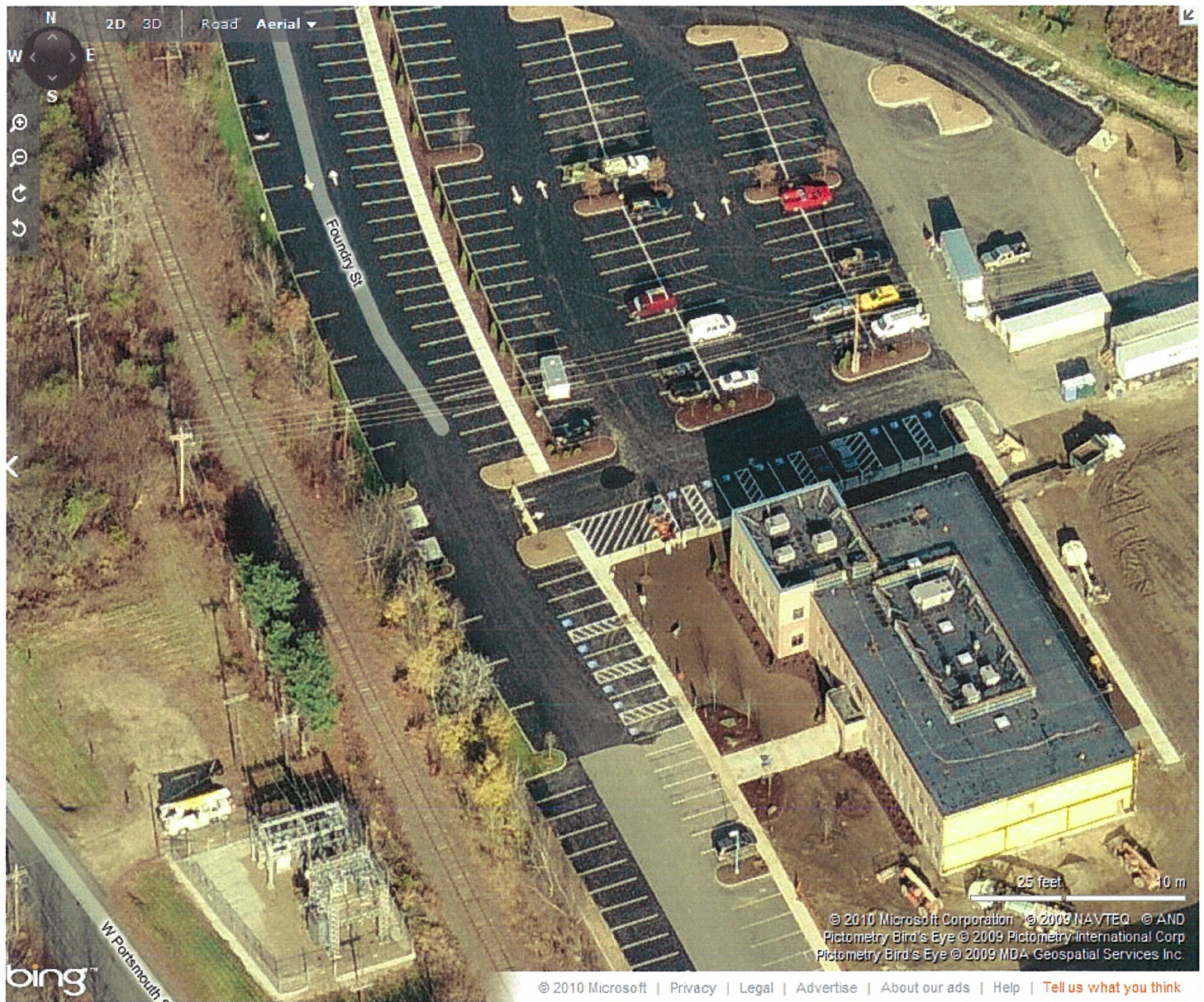


Figure 3. Looking northward State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13/12 and Unitil Substation (Circuit 15H3 is between the Unitil Substation and the westerly side of the State of New Hampshire Rail Road branch Concord to Lincoln. The crossing is north of the Unitil Substation and north of parcel



Figure 4. Looking south eastward State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13/12 and Unitil Substation (Circuit 15H3 is between the Unitil Substation and the westerly side of the State of New Hampshire Rail Road branch Concord to Lincoln. The crossing is north of the Unitil Substation and east of the railroad ROW and within the Foundry St ROW.



Figure 5. Looking north State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13 is on the west side of the tracks and CE Pole 12 is on the eastern side of the rail corridor.

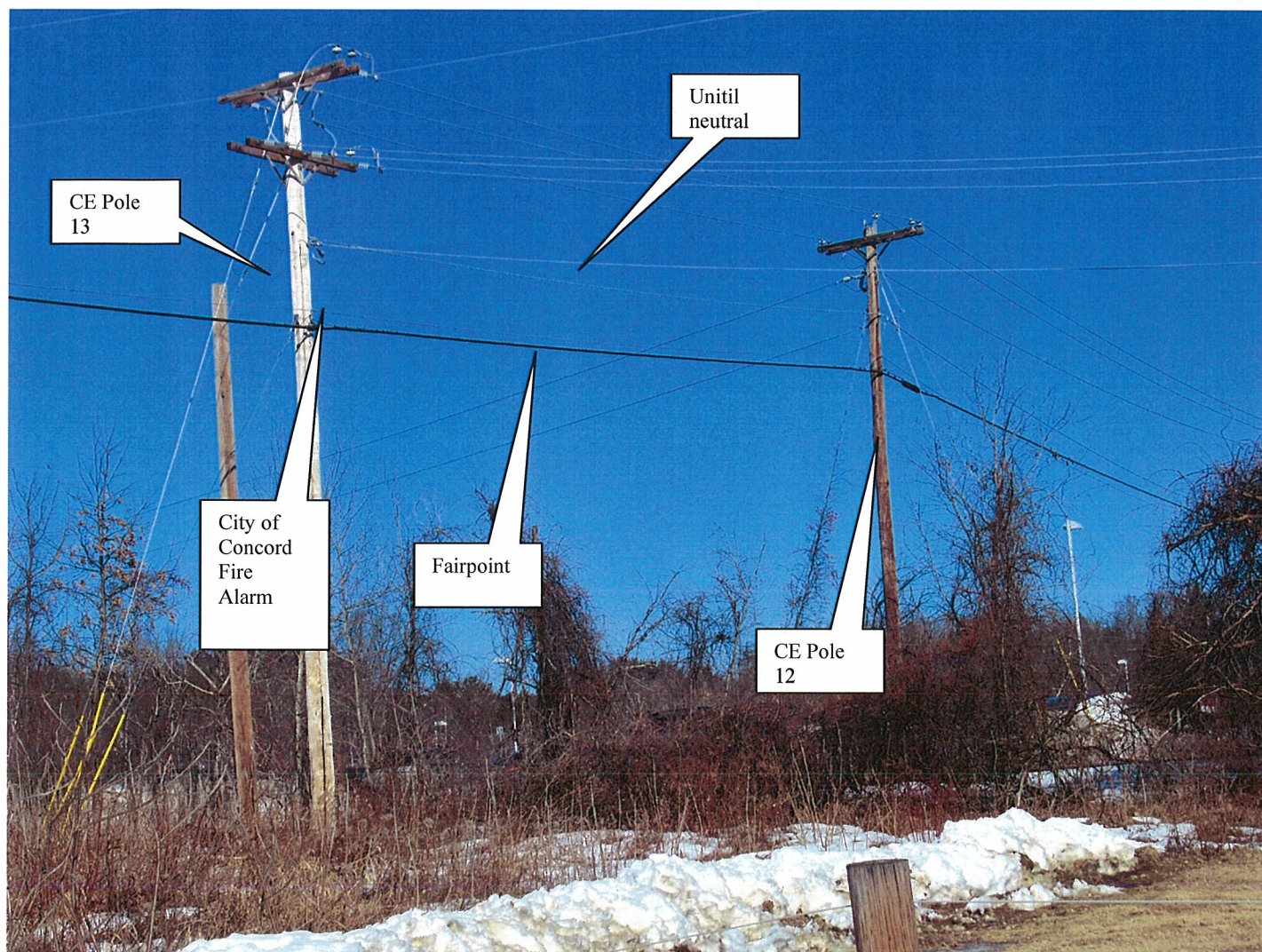


Figure 6. Looking easterly State of New Hampshire Rail Crossing, Concord, NH. Note CE Pole Line 13 is on the west side of the tracks and CE Pole 12 is on the eastern side of the rail corridor.



Figure 7. Close up view of CE Pole 13 is on the west side of the tracks. Note the light colored pole is the newest pole that was set in 2001 and the darker pole is the original CE Pole 13 that was set in 1967.



Figure 8. Close up view of CE Pole 13 is on the west side of the tracks showing all the attaching entities Fairpoint and City of Concord Fire Alarm. Note the light colored pole is the newest pole that was set in 2001 and the darker pole is the original CE Pole 13 that was set in 1967 and is now used for guying

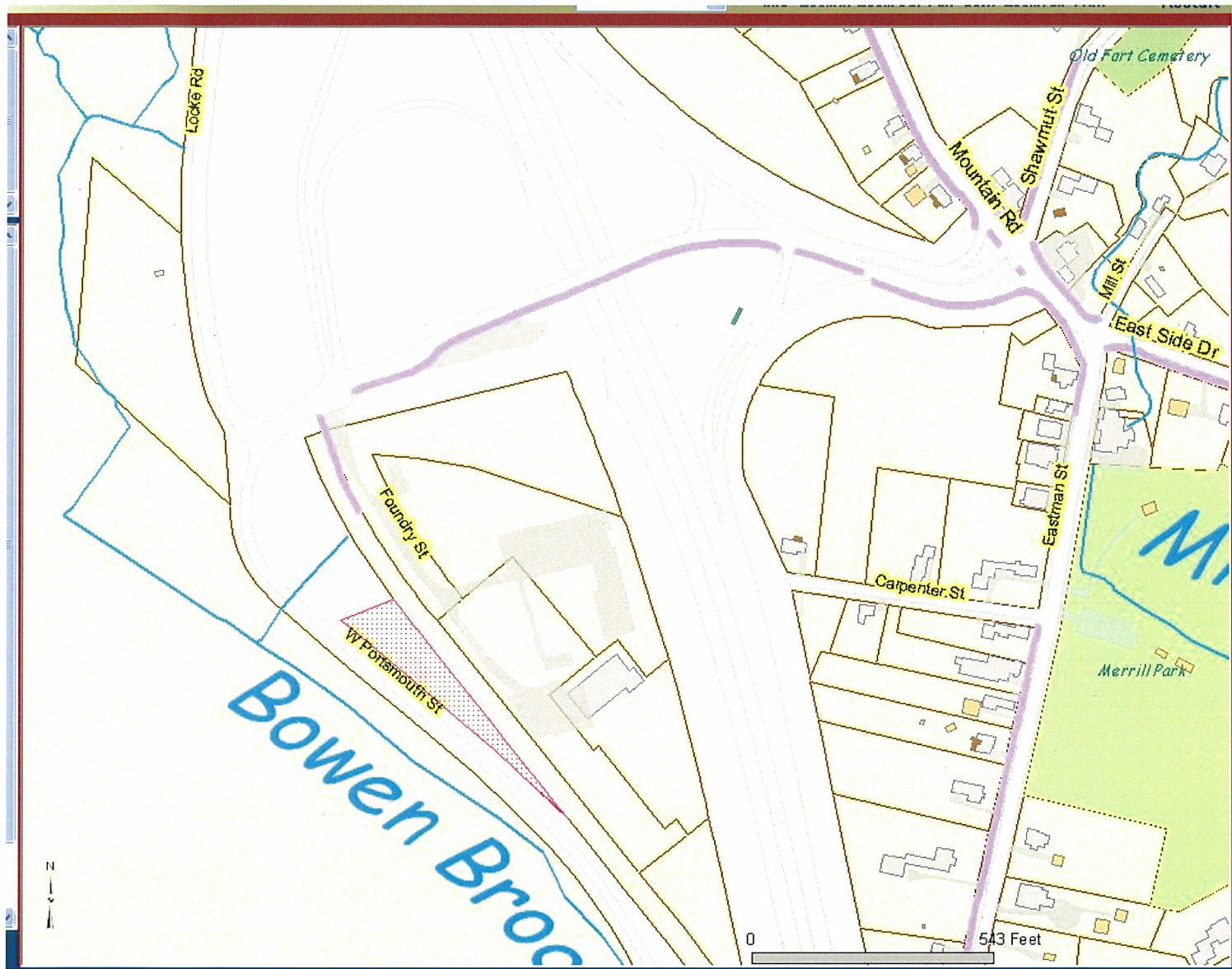


Figure 9. Shaded area is owned by Unitil and is between the West Portsmouth St ROW and the ROW of the State of New Hampshire. Note the crossing is just to the north of this parcel.

LAYERS

CUSTOM MAP

DATA

[View as Table](#)

ParcelID	5701
MBL	79-4-8
Owner	Unitil Energy Systems Inc
Location	7 W Portsmouth St
Own Addr	8 Liberty Ln W
Own City	Hampton
Own State	NH
Own Zip	03842
Co Owner	
Land Area	0.41
Land Value	62500
Bldg Value	0
Total Value	62500
Year Built	0
Stories	
Style	Vacant Land
Rooms	
Beds	
Baths	
Heat	
Fuel	
AC	
Neighborhood	0412
Site Index	J
Sale Price	0
Sale Date	12/11/2008
Land Use Code	4230
Land Use Description	ELEC ROW

Figure 10 shows Unitil Energy Systems is the owner of Parcel ID 5701

Record is taken from GIS of City of Concord and parcel database.

[Show Legend](#)

LAYERS

CUSTOM MAP

DATA

[View as Table](#)

ParcelID	5791
MBL	81-8-1
Owner	State/nh
Location	W Portsmouth St
Own Addr	107 N Main St
Own City	Concord
Own State	NH
Own Zip	03301
Co Owner	C/o Secretary Of State
Land Area	3.4
Land Value	124200
Bldg Value	0
Total Value	124200
Year Built	0
Stories	
Style	Vacant Land
Rooms	
Beds	
Baths	
Heat	
Fuel	
AC	
Neighborhood	0112
Site Index	H
Sale Price	0
Sale Date	
Land Use Code	901V
Land Use Description	STATE-NH MDL-00

Figure 11 shows State of New Hampshire is the owner of the Rail Road ROW and the owner of Parcel ID 5791
Record is taken from GIS of City of Concord and parcel database.

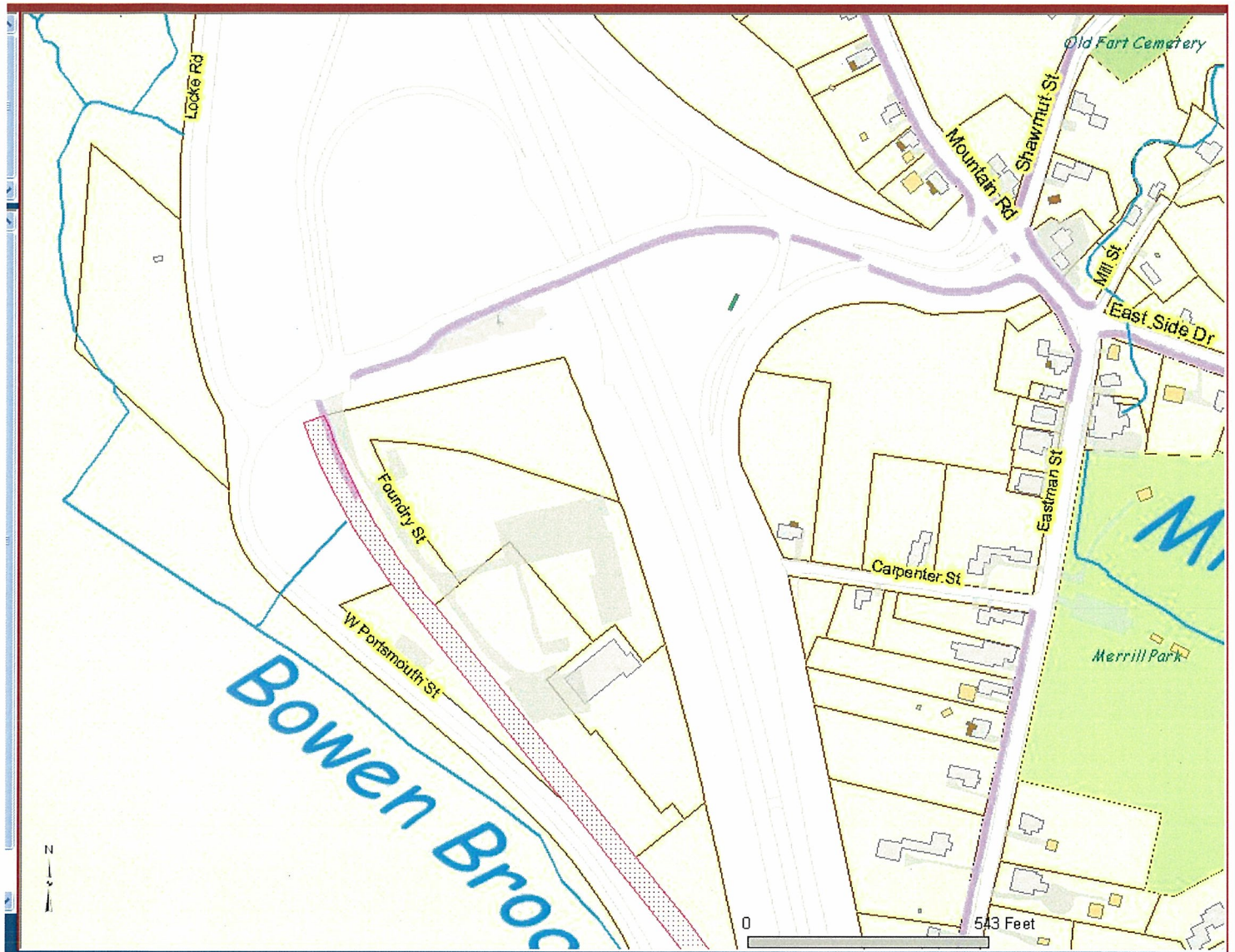


Figure 12. Shaded area is owned by State of New Hampshire and contains the Rail Road that is being crossed. Note where the crossing is West Portsmouth St and Foundry St. ROW's adjacent to this parcel.

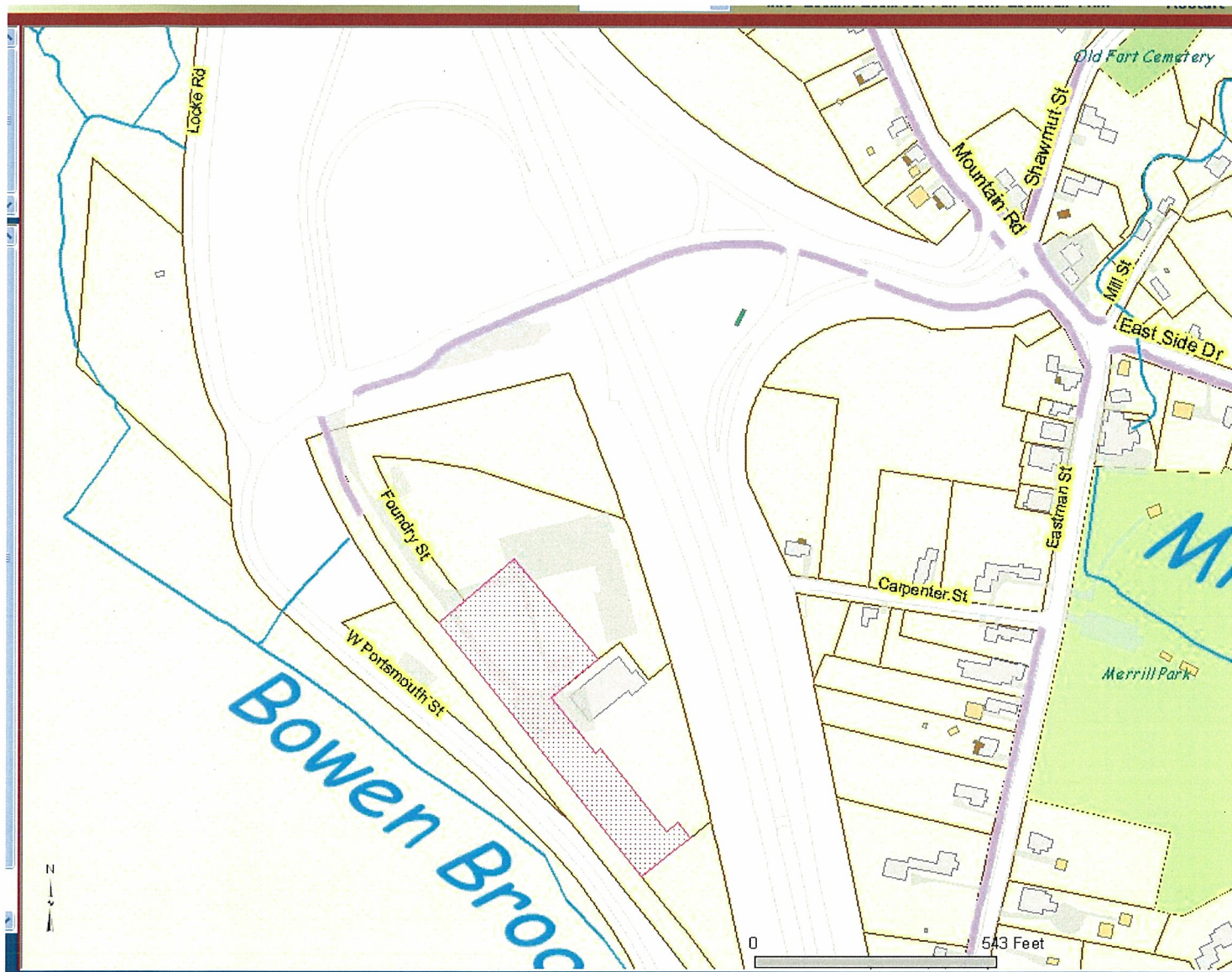


Figure 13. Shaded area is owned by Fox Brook Holdings LLC which owns the parking areas that are near the existing buildings.

LAYERS

CUSTOM MAP

DATA

View as Table

ParcelID	5697
MBL	79-4-1
Owner	Fox Brook Holdings Llc
Location	18 Foundry St
Own Addr	Po Box 290
Own City	New Ipswich
Own State	NH
Own Zip	03071
Co Owner	
Land Area	2.57
Land Value	593300
Bldg Value	4570100
Total Value	5163400
Year Built	2008
Stories	2
Style	Profess. Bldg
Rooms	
Beds	
Baths	
Heat	Forced Air-Duc
Fuel	Gas
AC	Central
Neighborhood	0412
Site Index	H
Sale Price	0
Sale Date	7/17/2008
Land Use Code	3420
Land Use Description	PROF BLDG MDL-94

Figure 14 shows Fox Brook Holdings LLC is the owner of Parcel ID 5697. Record is taken from GIS of City of Concord and parcel database.