

**STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

CONFERENCE REPORT

PROJECT: Northern Pass

DATE OF CONFERENCE: October 25, 2016

LOCATION OF CONFERENCE: 7 Hazen B34 211 Kancamagus Conf Rm

ATTENDED BY: DEPARTMENT OF TRANSPORTATION

Mike Servetas – Assistant Director of Operations

Melodie Esterberg – Chief of Design Services

Lennart Suther – Utilities Engineer, Design Services

Matthew Powers – Utility Coordinator, Design Services

Alan Hanscom – NH DOT District 3 Maintenance Engineer

Christopher Turgeon – NH DOT District 2 Assistant Maintenance Engineer

EVERSOURCE ENERGY

Jerry Fortier – NPT Project Manager, Eversource Energy

Lance Clute – PAR Electric

Stephanie Labbe – PAR Electric

Lyn Farrington – Louis Berger Group

Mark Hodgdon – Hodgdon Law

Sam Johnson – Burns & McDonnell Engineering

Tom Heneghan – SGC Engineering (Director of Engineering)

Tom Doyle – SGC Engineering

Nick Strater – Brierley Associates

SUBJECT: Site Evaluation Committee (SEC) Application Process and Design Update

NOTES ON CONFERENCE:

See attached Agenda.

Self-introductions were performed as there were new people, so everyone would understand the individual responsibilities for the project.

The technical sessions at the SEC with Eversource's technical expert's testimony is wrapping up in October. The next session will be the Interveners' technical expert's testimony. The PUC has granted the petition for Northern Pass Transmission to operate as a "public utility" in the State of New Hampshire contingent on SEC approval of the project.

There were no changes to the previous meeting minutes.

Ms. Labbe noted that the field geotechnical work on the NHDOT roadways is complete and anticipate receipt of all the data next week. The geotechnical reports for the roadways are being prepared. The field survey work is complete except obtaining sewer inverts in Plymouth. The preliminary soil data shows that the existing soil thermal qualities range from “not great” to “terrible” were the thermal resistivity is showing to be generally twice the maximum value necessary to dissipate the heat generated. The amount of voids and organic material in the soil is the cause of the results.

PAR Electric indicated a solution for soils with a somewhat high thermal resistivity would be a wider trench to provide the necessary heat dissipation, but soil with very high thermal resistivity would require the use of fluidized thermal backfill (FTB) and thermal concrete. For these reasons, a formal request was submitted on October 13, 2016 to use FTB. The Department has begun reviewing the request using the geotechnical boring information submitted on October 5, 2016. The Department’s main concern is with any differential heaving between FTB and the adjacent existing soil. Mr. Hanscom asked Eversource what is the thought on the depth of the FTB. Ms. Labbe replied that intent is the full trench depth to obtain the desired thermal dissipation.

The Department asked about the thermal dissipation for the horizontal directional boring locations. Eversource noted that rock has a lower thermal resistivity which dissipates heat better and the horizontal directionally drilled conduits are spaced further apart.

The Department asked about the amount of thermal dissipation and what is the anticipated temperature at the pavement or ground surface in the winter? Will the heat melt snow and create ice during the winter? Also what is the depth of FTB required for heat dissipation and the depth for convenience? Eversource replied that the thermal dissipation is needed to limit the operating temperature of the cable to no more than 70° so the cable doesn’t degrade, lose efficiency and capability. Eversource will check with their subconsultant on the depth required for heat dissipation versus convenience.

The Department will need internal discussion regarding whether and where to perform the test locations as proposed by PAR. The initial thought would be at 2 or 3 locations 100’ long. The Department would like a length recommendation from PAR. PAR indicated they would contact their subcontractor for a recommended length to obtain a suitable test. The Department normally doesn’t issue excavation permits after November 15th, therefore locations will need to determine in the next week. PAR will need 1 week to schedule the construction of the test locations and as such will notify their subcontractor to prepare for this work.

Eversource requested return of comments to the Sample Permit Package submitted on October 21, 2016 for incorporation into the first submittal of the formal Permit Package on November 30, 2016 in 10 days. The review will be worked into the Department’s work load recognizing the time frame of the next submittal. The formal submittal schedule presented by

PAR is anticipated to be 2 sections in District 1 on November 30th, all the sections in District 3 on December 7th, and the remainder of District 1 on December 13th. Ms. Labbe asked whether electronic copies would be sufficient or full size paper plan sets? Mr. Hanscom requested an electronic submittal along with 3 full size sets; 2 for each District and 1 set for Design Services. The Department will mark comments on both sets, return one set and keep the second to check that comments were addressed. Ms. Labbe noted that the electronic sets would be on the Northern Pass Transmission FTP site due to the size of the file. Mr. Clute noted that if the Department has any questions or wants clarification to please call. Ms. Esterberg reiterated that the Town, in which the road segment is located, is to be shown on the individual plan sheet.

Ms. Labbe has drafted an Exception request letter for those areas where the proposed design alignment does not meet the Department's policies, especially to be outside the pavement. Ms. Labbe asked how detailed the documentation of the exceptions will need to be such as whether to include every reason at each individual location along the 60 miles needed. Mr. Suther replied that for lengthy segments the reasons within a specified segment (beginning and ending stations) not individual locations would make sense. Ms. Labbe provided a draft Exception request letter for the segments in the Sample Permit package. The Department will provide comments to the letter with the Sample Permit package comments.

Eversource noted that with the Directional Drilling at water crossings under the roadway they would like copies of the bridge plans, specifically the foundations. The Department will need a list of the bridges with the water crossing to obtain the specific bridge plans. The Department recommends looking at the Department's website for NH Bridges to obtain the bridge number. This is available under Divisions/Bureaus/Districts – Division of Project Development – Bridge Design – Document Library.

Mr. Johnson presented revised plans for the aerial crossing of I-393 in Concord for comments from the Department. This proposal is to co-locate the P145 line on the 318 line along the southwest side of existing easement and construct the proposed direct current (DC) 345 kV facility (3132 line) at the previous location of the P145 line. There is no proposed relocation of the existing C189 line over the bridge. This proposal will place the proposed direct current (DC) 345 kV facility (3132 line) west of the west abutment of the westbound bridge over Portsmouth Street. The Department asked about whether Eversource could combine the C189 line with the proposed direct current (DC) 345 kV facility (3132 line). Eversource replied that ISO – New England would not allow due to system reliability concerns. Mr. Johnson also noted that there is a potential to share in Unitol's right-of-way. The Department requested a cross section of the crossing showing the existing facilities and the proposed facilities.

Mr. Johnson provided the next 6 week field work schedule which shows geotechnical work at Eversource transition and substation sites, clearing at substation sites, and field historic/archeological research necessary along NH 116 in Easton and Franconia, NH 112 in Woodstock and West Road in Canterbury (see copy attached).

Ms. Esterberg noted that the Department has put together a section on the NHDOT website for the public awareness of the Department's role in the process as reviewing documents

for the permitting of facilities within the DOT right-of-way. The Department is not evaluating the merits of the project but is ensuring Eversource is following the policies and procedures for facilities within the right-of-way. All conference reports, complaints and responses, and related documents have been posted. Draft or client/lawyer privileged documents will not be posted. Mr. Fortier noted that he had looked at the website and thought it was informative.

The next meeting was rescheduled for 1:00 pm on November 29, 2016 as 4th Tuesday of November would have the meeting during Thanksgiving week.

Submitted by:

Lennart Suther
Utilities Engineer

LDS/lds

NOTED BY: MAE, MCP

cc: Attendees, Christopher Waszczuk, David Rodrigue, Douglas King, Richard Radwanski, Brian Schutt, Philip Beaulieu, Louis Barker, Charles Schmidt, Shelley Winters