SME
SEVEE & MAHER
ENGINEERS
4 Blanchard Road, PO Box 85A, Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692 • sme-engineers.com

Daniel R. Murray, P.E.

EDUCATION

B.S. – Mechanical Engineering Technology, University of Maine

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

Professional Engineer – Maine

EMPLOYMENT HISTORY

2024 to present – Sevee & Maher Engineers, Inc., Cumberland, Maine, Senior Engineer
2023 to 2024 – SGC Engineering, LLC, Augusta, Maine, Senior Transmission Line Engineer
2018 to 2023 – RLC Engineering, PLLC, Hallowell, Maine, Transmission Line Engineer

PROFESSIONAL EXPERIENCE

Daniel Murray has over seven years of experience in transmission and subtransmission line infrastructure engineering. His areas of expertise include line analysis, maintenance replacements, and new line design. Mr. Murray is well versed in the National Electric Safety Code (NESC) for Overhead Line Design and has advanced skills in Powerline PLS CADD software for overhead line modeling and analysis.

Representative projects demonstrating Mr. Murray's areas of expertise include:

- **Versant Power, Staff Augmentation Program, Multiple Projects, Maine –** Supported Versant Power's Transmission and Distribution Engineering team for 1.5 years. Distribution support included development of 12 kV 3-phase Hendrix spacer cable framing details and analysis of non-standard site-specific structure arrangements and or guying and bracing limitations. DG (Distributed Generation) support included analyzing clearance requirements between distribution and transmission lines at crossings, as well as the development of permit level railway crossing drawings. Transmission support included engineering design support for various TRPIs (Transmission Replacement by Inspection), full line rebuilds, and ongoing improvements to transmission standards.
- **Versant Power, Line 86 Study and Rebuild, Maine –** Lead engineer for evaluation of 12 miles of 46 kV transmission line at existing surveyed conditions within PLS CADD to determine NESC code clearance concerns. Line ampacity, lidar and meteorological data were used to determine conductor sag at the time of survey and results overlayed with utility field inspection data to prioritize a multistage rebuild sequence. Designed line rebuild using light duty steel direct embed poles adequate for existing conductor and future re-conductor.
- **Green Mountain Power, Temporary Line Relocations, St. Johnsbury and Middlebury, Vermont** – Lead engineer for the temporary rerouting of several 34.5 kV transmission lines to accommodate multiple substation expansion projects.
- **Versant Power, Line 68 Relocation, Ellsworth, Maine** – Lead engineer for the relocation of a 115 kV transmission line to another terminal bay structure. The project included the design of a custom structure to mount a gang-operated 3-phase switch on a 3-pole structure.
- **Versant Power, Line 2 Study, Maine –** Lead engineer for the evaluation of a 4-mile existing 46kV transmission line for identification of NESC code clearance concerns, and analysis of multiple

loading scenarios to identify current capacity limitations. Line ampacity, lidar and meteorological data were used to determine conductor sag at the time of survey.

- **Versant Power, Line 74 Rebuild, Maine –** Lead engineer for the design of eight miles of existing 46 kV transmission line for rebuild using a combination of light duty steel and wood direct embedded steel poles.
- **Versant Power, Route 9 Crossing Design, Maine –** Engineer for the redesign of existing 115 kV and 345 kV transmission lines to traverse a new section of roadway planned for construction by the Maine Department of Transportation.
- **Silver Maple Wind Farm, Pisgah Mountain, Winthrop, Maine** – Engineer for the design of a 34.5 kV underground and overhead collector line for five (5) 3.6 MW wind turbines and two (2) 115 kV tie lines to connect a new and an existing substation and switchyard. The interconnection required splitting an existing 115kV transmission line for the new switchyard.
- **Versant Power, Line 1 Rebuild, Maine** – Engineer for the design of an 8-mile 46 kV transmission line for rebuild using primarily light duty direct embed steel poles for the existing line relocation. The design compared the use of wood poles and steel poles to determine a preferred solution. Two miles of line were along the heavily traveled Route 1A in Ellsworth, Maine. Coordination with Maine Department of Transportation and other agencies was required for traffic control.
- **Versant Power, Milo Solar Farm, Milo, Maine –** Engineer for the design of 1.25 miles of new, roadside 46 kV transmission line that incorporated an existing 12.2 kV distribution underbuild in preparation for the installation of a 26MW solar farm. Custom metering, recloser, and motor-operated switch structures were required.
- **Maine Electric Power Company (MEPCO), 345 kV Structure Maintenance Replacements**, **Maine –** Engineer for the design of over 80 replacement structures that included wood and light duty steel poles of H-frame tangent and running angle construction.
- **Eversource Energy, Optical Groundwire (OPGW) Additions, Western Massachusetts** – Engineer for the addition of overhead fiber optic cable on two miles of 115 kV transmission line, including the analysis of existing conditions and modification and/or replacement of structures to support new fiber installation.
- **Green Mountain Power, Line Re-rate, Vermont** – Engineer for the re-rate of over 15 miles of 46 kV transmission line to handle the additional load capacity for a solar farm. Additional loading required thermal calculations to determine a new maximum operating temperature (MOT) of the lines. Both lines were modeled in PLS-CADD to determine if clearance concerns existed at the new line maximum operating temperature, Structure replacements were specified as required.
- **Eversource, Estimating Services, Multiple Locations** – Provided cost estimates for several new high voltage transmission lines as part of substation upgrades and greenfield sites. Estimates were generated using SAGE estimating software.
- **Eversource, Conductor Position Tables, New Hampshire**– Development of Conductor Positioning Tables for over 50 transmission lines in New Hampshire to aid in the development and updates of relay settings. Voltages ranged from 115 kV and 345 kV transmission lines.
- **MEPCO, 345 kV Line Rebuild, Maine** – Designer for over 120 miles of 345 kV transmission line in the State of Maine consisting of H-frame wood tangent structures, direct embed steel, and steel on foundation structure types.