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October 23, 2008

VIA HAND DELIVERY

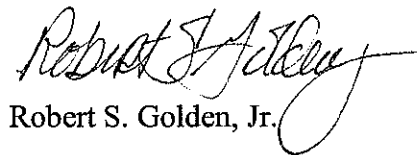
Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **DOCKET NO. 364** The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 325 Waterford Parkway North, Waterford, Connecticut

Dear Chairman Caruso:

In connection with Docket No. 364, enclosed please find the original and twenty (20) copies of Proposed Findings of Fact.

Very truly yours,



Robert S. Golden, Jr.

Enclosures

cc: Service List

DOCKET NO. 364 – The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 325 Waterford Parkway North, Waterford, Connecticut	}	Connecticut
	}	Siting
	}	Council
	}	October 23, 2008

Proposed Findings of Fact

Introduction

1. The Connecticut Light and Power Company (CL&P), in accordance with the provisions of Connecticut General Statutes (CGS) Sections 16-50g et seq., and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies, applied to the Connecticut Siting Council (Council) on June 6, 2008 for the construction, operation, and maintenance of a new substation to be located on CL&P's property located at 325 Waterford Parkway North, Waterford, Connecticut. (CL&P 1, Vol. 1, pp. A-1 and Q-1)
2. The purpose of the proposed substation is to increase electric distribution system capacity and to improve reliability in Waterford by establishing a new bulk power substation in the Town. (CL&P 1, Vol. 1, p. G-1)
3. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 23, 2008, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Town Hall Auditorium, 15 Rope Ferry Road, Waterford, Connecticut. (Council's Hearing Notice dated August 11, 2008)
4. The party in this proceeding is the applicant, CL&P. (Transcript 1 - 3:05 p.m. [Tr. 1], p. 4)
5. The intervenors in this proceeding are Ahlam Shalhout and Constance Casey. (Tr. 1, p. 5)
6. The Council and its staff inspected the proposed substation site on September 23, 2008, beginning at 2:00 p.m. (Council's Hearing Notice dated August 11, 2008)
7. Pursuant to CGS § 16-50l (b), public notice of the application was published in the New London Day on May 22, and May 29, 2008. (CL&P 1, Vol. 1, p. Q-4; CL&P 1, Vol. 2, Exh. 9)
8. On September 9, 2008, CL&P erected two signs at the proposed substation property. The signs were located on the road frontage of Oil Mill Road and also Waterford Parkway North. The signs included the applicant's name, the type of facility proposed, the public

hearing date and location, the availability of the applicable documents for Docket 364, and contact information for the Council. (Tr. 1, pp. 18-19)

9. Pursuant to CGS § 16-50l (b), notice of the application was provided to all abutting property owners. In addition, notice was provided to nearby property owners. Such notices were sent by certified mail, return receipt requested. (CL&P 1, Vol. 1, p. Q-4; CL&P 1, Vol. 2, Exh. 10; CL&P 8, p. 28)
10. On March 25, 2008, CL&P representatives conducted a door-to-door public outreach program by visiting 15 neighboring homes located at properties along Oil Mill Road (number 71 through 109). The purpose of the program was to inform residents of the upcoming project, its associated permitting process and a preliminary schedule of events. Information was left for those neighbors not at home that day. (CL&P 1, Vol. 1, p. R-1)
11. Pursuant to CGS § 16-50l (b), CL&P provided notice to all federal, state and local officials and agencies listed therein. (CL&P 1, Vol. 1, pp. Q-3 through Q-4; CL&P 1, Vol. 2, Exh. 8)

State Agency Comment

12. Pursuant to CGS § 16-50j(h), on August 11, 2008, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Environmental Protection (“DEP”), Department of Agriculture (“DOA”), Department of Public Health (“DPH”), Council on Environmental Quality (“CEQ”), Department of Public Utility Control (“DPUC”), Office of Policy and Management (“OPM”), Department of Economic and Community Development (“DECD”), and the Department of Transportation (“DOT”). (Record)
13. The Council received a response from the DPH dated August 26, 2008. The DPH had no comment on the proposal. (DPH Comments dated August 26, 2008)
14. The Council received a response from the DOT dated September 18, 2008. The DOT had no comment on the proposal. (DOT Comments dated September 18, 2008)
15. The following agencies did not respond with comment on the application: DEP, DOA, CEQ, DPUC, OPM, and DECD. (Record)

Municipal Consultation

16. CL&P commenced the municipal consultation process on April 4, 2008, by sending a Municipal Consultation Filing ("MCF") to the Town of Waterford Chief Elected Official, First Selectman Daniel M. Steward. Copies of the MCF were also sent to the Town of East Lyme Chief Elected Official, First Selectman Paul Formica. (CL&P 1, Vol. 1, p. O-1)
17. CL&P representatives met with the Waterford Board of Selectmen on June 3, 2008. First Selectman Daniel M. Steward provided CL&P a letter on June 4, 2008, acknowledging that the information in the MCF supports the need for the project to meet Waterford's and surrounding towns' growth, indicating that the site selected appears to be a logical choice. (CL&P 1, Vol. 1, p. Q-3; CL&P 8, p. 27)
18. First Selectman Paul Formica provided CL&P a letter stating that he had found no indication of any adverse impact on residents of the Town of East Lyme resulting from the project. (CL&P 1, Vol. 1, p. O-1; CL&P 1, Vol. 2, Exh. 7)
19. CL&P filed a "Location Review" submission with the Waterford Conservation Commission ("WCC") on February 11, 2008 and the Planning and Zoning Commission ("P&Z") on February 21, 2008. (CL&P 1, Vol. 1, p. O-1; CL&P 8, p. 26)
20. CL&P gave a presentation to the WCC at its regular meeting on February 14, 2008 and to the P&Z on February 25, 2008. Both the WCC and the P&Z issued comments, which CL&P has addressed. (CL&P 1, Vol. 1, p. O-1; CL&P 8, p. 26)
21. On April 16, 2008 CL&P met with the Waterford Economic Development Commission ("WEDC") to present the project and its benefits to the community. The WEDC voted to support the project. (CL&P 1, Vol. 1, pp. O-1 through O-2; CL&P 1, Vol. 2, Exh 7; CL&P 8, p. 27)

Need

22. Currently, Waterford's electric load is primarily served by two bulk power substations: Flanders Substation located in East Lyme and Williams Street Substation located in New London. (CL&P 1, Vol. 1, p. G-1; CL&P 8, p. 9)
23. The current configuration is not a viable long-term option for reliably meeting Waterford's growing electric demands. (CL&P 1, Vol. 1, p. G-1; CL&P 8, p. 9)
24. Electric power supplied by the Flanders and Williams Street Substations from 2004 to 2006 increased from 129.6 MVA to 143.7 MVA (a 5% increase per year). (CL&P 8, p. 10)

25. Flanders Substation exceeded its permissible load rating of 75 MVA in 2006. To alleviate the immediate overload, CL&P instituted a Forced Load Transfer ("FLT") scheme. This FLT scheme provides the necessary time window to construct the proposed substation for operation beginning in 2010. (CL&P 1, Vol. 1, p. G-4; CL&P 8, p. 10)
26. The Williams Street Substation was expected to exceed its permissible load rating of 69 MVA in 2008. (CL&P 1, Vol. 1, p. G-5)
27. In addition to Waterford's recent growth, there is significant potential for additional industrial/commercial development and expansion in the near and long term. (CL&P 8, p. 10; Transcript 2 – 7:00 p.m. [Tr. 2], pp. 49-50)
28. The proposed substation would provide approximately 87 MVA of new capacity to the distribution system, relieving the Flanders Substation of 30 MVA. (CL&P 8, p. 11)
29. Once the proposed substation is operative, a new 23-kV feeder would be created from the proposed substation and relieve 10 MVA of load from the Williams Street Substation. (CL&P 8, p. 11)
30. The capacity relief on the Flanders and Williams Street Substation will then be available to meet future load growth in other areas served by these two substations. (CL&P 8, p. 11)
31. A substation for the Waterford area has been listed in the Connecticut Siting Council Review of the Connecticut Electrical Utilities Ten-Year Forecast of Loads and Resources, published in 2005, 2006, 2007 and again in the draft report for 2008. (CL&P 1, Vol. 1, p. A-4; CL&P 8, p. 11)
32. By letter dated January 11, 2008, CL&P received ISO-New England approval per Section I.3.9 of the ISO New England Inc. Transmission, Markets and Service Tariff for the proposed substation. (CL&P 1, Vol. 1, p. A-4; CL&P 8, p. 11)
33. CL&P considered increases to the energy efficiency and Demand Side Management ("DSM") programs that it manages through the Connecticut Energy Efficiency Fund ("CEEF"). In addition, CL&P evaluated the potential impacts of the development of distributed generation ("DG") and emergency generation ("EG") projects. CL&P determined, however, that these customer-side programs will not preclude the need for the proposed substation. The breakdown for 2007 was: CEEF 2,608 kW, Demand Response 2,350 kW and DG 575 kW for a total of 5,533 kW. (CL&P 8, p. 13; Tr. 1, pp. 27-28)
34. Six projects (totaling 5,200 kW) have been approved by the DPUC for the Waterford area. These projects consist of three EG (2,125 kW) and three DG (3,075 kW) projects. To date, four of the six projects have been completed (two EG (875 kW) and two DG (575 kW)). (CL&P 8, p. 14; Tr. 1, pp. 27-28)

35. CL&P does not expect a significant level of future DG or EG projects in the Waterford area. (CL&P 8, p. 14; Tr. 1, p. 32)
36. If all of these approved projects were completed and operational, they would not provide enough relief for the Waterford area. (CL&P 8, p. 15)

Alternatives

37. CL&P considered alternative system options to meet the challenges in Waterford. None of the available options would produce a distribution system in Waterford that would be as reliable and flexible as the proposed substation and, ultimately, the options would not eliminate the need for the proposed facility to meet system capacity projections. (CL&P 1, Vol. 1, p. G-5; CL&P 8, p. 12)
38. The Flanders Substation cannot be expanded to meet the load requirements for the Town of Waterford. (CL&P 1, Vol. 1, p. G-6; CL&P 8, p. 12; Tr. 2, pp. 49-50)
39. A third transformer connection is not possible at the Flanders Substation due to insurmountable space constraints. (CL&P 1, Vol. 1, p. G-6; CL&P 8, p. 12; Tr. 2, p. 49)
40. The net capacity increase from the replacement of the two existing power transformers with larger transformers at the Flanders Substation is much less than that provided by the proposed substation. (CL&P 1, Vol. 1, p. G-6; CL&P 8, p. 12)
41. The Waterford load is located on the opposite side of the Niantic River from the Flanders Substation. The additional feeders needed to supply Waterford would have to cross the Niantic River. Due to the obstacles of crossing the Niantic River, the option of adding additional feeders from the Flanders Substation is impractical. (CL&P 1, Vol. 1, p. G-6; CL&P 8, p. 12)
42. Replacement of the existing power transformers with larger transformers or the installation of a third transformer at the Williams Street Substation is not viable. The Williams Street Substation is located outside of the Waterford load pocket, its feeders are at their capacity limits under peak load and there is no opportunity to install new feeders in the same duck bank system. The addition of another transformer and new feeders would require extensive and costly underground distribution work. (CL&P 1, Vol. 1, p. G-7; CL&P 8, pp. 12-13)

43. The option of using the Uncasville Substation to relieve load in Waterford is not as reliable as the proposed substation. The Uncasville Substation is projected to overload in the year 2013, it produces incompatible voltage and new feeders would have to travel six miles to the Waterford load area. (CL&P 1, Vol. 1, p. G-7; CL&P 8, p. 13)
44. CL&P reviewed and evaluated six potentially viable site locations in Waterford and concluded that the selected location was the most viable option for the proposed substation. (CL&P 1, Vol. 1, p. I-2)
45. In its site evaluations, CL&P used the following criteria to evaluate a particular location's viability: proximity to distribution load area and existing feeders; proximity to existing transmission circuits; ease of access; earthwork requirements; sufficient size and shape; zoning and adjacent land-use constraints; environmental considerations; and proximity to public water-supply watershed and/or aquifer areas. (CL&P 1, Vol. 1, p. I-2)
46. The six sites evaluated were: Waterford Parkway North ("Location 1"); 994 Route 85 Hartford Turnpike ("Location 2"); Southeast of No. 969 Petroleum Station – 85 Hartford Turnpike ("Location 3"); North of 813 Vauxhall Street – Cohanzie Junction ("Location 4"); Northwest of 130 Old Colchester Road ("Location 5"); and North Bloomingdale Road ("Location 6"). (CL&P 1, Vol. 1, pp. I-2 through I-9)
47. CL&P determined that the proposed site, Location 1, best satisfies the site evaluation criteria. (CL&P 1, Vol. 1, p. I-2)
48. The proposed site is proximate to distribution load area and existing feeders. (CL&P 1, Vol. 1, p. I-2)
49. The proposed site allows for easy connection to an adjacent 115-kV transmission circuit. (CL&P 1, Vol. 1, p. I-2)
50. The proposed site has direct access from Waterford Parkway North. (CL&P 1, Vol. 1, p. I-2)
51. Development of the proposed site would require minimal earthwork because the site is lightly wooded and generally level. (CL&P 1, Vol. 1, p. I-2)
52. The proposed site is located in a RU-120 Rural Residential Zone, where substations are permitted with a special permit. (CL&P 1, Vol. 1, p. I-4; Tr. 2, pp. 44-45)
53. Development of the proposed site would have minimal environmental effects. (CL&P 1, Vol. 1, pp. I-2 through I-4)

54. Location 2 is unsuitable because the interconnection of the 115-kV transmission circuit is 800 feet away and there are limited connection possibilities to existing 23-kV distribution circuits. Location 2 would require at least six new pole structures at 85 feet high. This location would also require a right-of-way acquisition and additional development that CL&P estimates would increase the cost between \$9.5 and \$9.9 Million Dollars. (CL&P 1, Vol. 1, p. I-5; Tr. 1, pp. 41-42; Tr. 2, p. 48)
55. Development of Location 2 would impact wetland resources and a portion is within the FEMA 500 year flood zone. Wetland impacts would most likely be associated with the connection to the transmission line. (CL&P 1, Vol. 1, p. I-5)
56. Location 3 was rejected since it offers limited connection possibilities to 23-kV distribution feeders, would require extensive distribution line work and substantial earthwork due to its topography. (CL&P 1, Vol. 1, p. I-6)
57. Location 4 was rejected since it is located farther away from the existing load center, offers poor connection possibilities to existing 23-kV distribution feeders, would require extensive distribution line work and offers minimal buffer to surrounding residences. (CL&P 1, Vol. 1, pp. I-6 through I-7)
58. Location 5 was rejected since it offers poor connection possibilities to existing 23-kV, would require extensive distribution line work and significant vegetative clearing. (CL&P 1, Vol. 1, pp. I-7 through I-8)
59. Location 6 was rejected since it is located farther away from the existing load area, offers poor connection possibilities to existing 23-kV distribution feeders, and would require extensive distribution line work and major vegetative clearing. In addition, the facility would be visible from several nearby homes. (CL&P 1, Vol. 1, pp. I-8 through I-9)

Description of Proposed Project

60. The proposed substation would be located in the western portion of CL&P's 5-acre parcel, which currently consists of undeveloped land located immediately northeast of the intersection of Oil Mill Road and Waterford Parkway North. The parcel will accommodate the construction and operation of the substation without the need to purchase any additional real estate. (CL&P 1, Vol. 1, pp. A-1 and F-1)
61. The proposed substation would be located in a 200-foot by 245-foot area enclosed by a seven-foot high chain link fence with one additional foot of barbed wire (three strands). CL&P would establish a trap-rock surface within the substation compound. (CL&P 1, Vol. 1, p. F-1)
62. Access to the proposed substation would be via a gravel driveway, directly from Waterford Parkway North. (CL&P 1, Vol. 1, p. F-1)

63. The proposed substation would be supplied from one of the existing 115-kV-overhead transmission line circuits (1605 line). Two additional single-circuit steel poles will be installed in order to provide a means for the 1605 transmission circuit to be connected to the proposed substation. (CL&P 1, Vol. 1, pp. F-1 through F-3)
64. Development of the proposed substation would include the installation of two new line-terminal structures within the substation compound, each of which would also support a line-disconnect switch. The substation would also be outfitted with one circuit breaker with associated disconnect switches, two transmission line circuit switchers, two 60-MVA power transformers to step down the voltage from 115-kV to 23-kV, four transformer disconnect switches and three transformer circuit switchers. (CL&P 1, Vol. 1, p. F-3)
65. A transformer disconnect switch and circuit switcher will be in the supply path to each of the two 60-MVA power transformers. The third transformer disconnect would provide for a future 60-MVA power transformer, if needed. (CL&P 1, Vol. 1, p. F-3)
66. The additional transformer disconnect switch and circuit switcher could be used for a mobile transformer connection, when necessary to perform maintenance or to replace a failed transformer. (CL&P 1, Vol. 1, p. F-3)
67. Two metal-clad switchgear enclosures, each approximately 27-feet long, 14-feet wide and 14-feet high will be installed to provide the switching equipment for seven 23-kV distribution feeders, of which four will be activated initially. (CL&P 1, Vol. 1, pp. F-3 and F-4)
68. Cables for each distribution feeder will exit the substation via underground conduits, and rise above ground on wood poles. There will be a total of four overhead distribution feeders exiting the substation. (CL&P 1, Vol. 1, p. F-4)
69. A protective relay and control equipment enclosure and battery enclosure will be installed within substation compound. (CL&P 1, Vol. 1, p. F-4)
70. No emergency generator will be needed for backup power. (CL&P 2, Q. 6)
71. Surrounding land use in the vicinity of the proposed substation consists of a highway, residential and undeveloped properties. (CL&P 1, Vol. 1, p. H-3)
72. Development of the proposed substation requires protective relay system changes within the control enclosures at three other existing bulk substations (Montville, Williams Street, and Flanders). (CL&P 1, Vol. 1, p. F-1; CL&P 2, Q. 1)
73. The tallest structures inside the fenced area will be the two line-terminal structures for the incoming 115-kV lines. The structures are approximately 53-feet 9-inches with a 10-foot

lighting mast on top of each structure. (CL&P 1, Vol. 2, Exh. 1, Reference Drawing 25216-92001; CL&P 2, Q. 5)

74. The substation equipment and supporting infrastructure would have a service life of approximately 40 years and would be capable of capacity increases during this time. (CL&P 1, Vol. 1, p. F-6)
75. The construction phase of the project is expected to occur over a period of 12 to 15 months. (CL&P 1, Vol. 1, p. L-3)
76. The tentative in-service date is June 2010. (CL&P 1, Vol. 1, p. L-3)
77. The estimated cost for the siting, design, and construction of the proposed substation and supporting infrastructure is \$13,200,000. (CL&P 1, Vol. 1, p. F-4)
78. Outdoor lighting would be provided in the proposed substation for general illumination during periods of occupancy at night or during inclement weather. Lighting would be manually controlled and generally directed downward. Lighting would be off except for nighttime inspections and response to emergencies; temporary lighting could be used where necessary to illuminate specific task areas. (CL&P 1, Vol. 1, p. J-2; Tr. 2, pp. 52-53)

Environmental Considerations

79. The proposed project would not have any significant, long-term adverse effects on the existing environment and ecology, nor would it adversely affect the scenic, historic, and recreational values of the vicinity. (CL&P 1, Vol. 1, p. K-1)
80. Construction of the proposed substation would not result in any effects on wetlands or watercourses. (CL&P 1, Vol. 1, p. K-4)
81. Limited site work is anticipated within the 100-foot upland review area of a perennial watercourse and its bordering wetlands located on the property. Proposed activities within the upland review area include grading and construction of a small 1,241 ± square foot portion of the fenced-in substation area. (CL&P 1, Vol. 1, p. K-4)
82. Construction of the proposed substation would not have significant adverse effects on vegetation, wildlife or habitat values. (CL&P 1, Vol. 1, pp. K-4 and K-5)

83. The project would not have an adverse effect on wildlife due to the proposed substation footprint's immediate proximity to similar habitat (in excess of 50 acres) that would allow for natural relocation of potential wildlife from the construction zone. In addition, the transmission corridor provides valuable and diverse wildlife habitat. (CL&P 1, Vol. 1, p. K-5)
84. Approximately 225 trees six inches or greater in diameter will be removed to enable construction of the substation footprint and driveway. (CL&P 2, Q. 11)
85. Upon completion of construction activities, all disturbed/exposed areas would be stabilized and revegetated. These areas would be dressed with topsoil and seeded with a New England conservation/wildlife mix, to establish a cover of native grasses, forbs, wildflowers and legumes that would provide both soil stability and wildlife habitat value. Erosion controls would remain in place until site stabilization is achieved. (CL&P 1, Vol. 1, p. L-2)
86. No state or federally listed endangered, threatened, or special concern species have been identified on the property. (CL&P 1, Vol. 1, p. K-5; CL&P 1, Vol. 2, Exh. 5)
87. Based on current CTDEP NDDB review criteria, the proposed substation does not present a potential conflict with a listed species or significant natural community. (CL&P 1, Vol. 1, p. K-5)
88. The closest water supply wells are part of the Groton Pond Wellfield (a State-designated Preliminary Aquifer Protection Area), located approximately 2.1 miles southwest of the proposed substation. Based on substation design considerations and the physical distance of the water supply wells to the substation, there would be no adverse environmental effect on the aquifer. (CL&P 1, Vol. 1, p. K-5)
89. The proposed substation will have no direct effects on the Niantic River Watershed. No surface water connections exist at the proposed pad site and thus, any stormwater being shed from the substation footprint would ultimately exit the property via infiltration. (CL&P 10, Q. 1)
90. The site is located outside the Coastal Boundary but the Town of Waterford is located within the Coastal Area, as defined by CGS § 22a-94(a). No coastal resources are located on the property or within the site vicinity; the Coastal Boundary is located approximately 660 feet south of the property. (CL&P 1, Vol. 1, p. K-9)
91. The unnamed stream located east of the proposed development area is not associated with a Special Flood Hazard Area or Floodway. The stream is classified by Other Flood Areas as Zone X. Zone X includes areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. (CL&P 1, Vol. 1, p. H-9)

92. On January 15, 2008, CL&P submitted a request for determination from the Connecticut State Historic Preservation Office ("SHPO") regarding the potential effect or no effect of the project on cultural resources. (CL&P 1, Vol. 1, p. H-8)
93. A Phase I cultural resources survey was conducted at the proposed substation site. (CL&P 1, Vol. 1, p. K-6)
94. During the Phase IB cultural resources reconnaissance survey, 62 shovel test pits were completed on the property in a grid pattern of points spaced approximately 50 feet apart. In several instances, mottled soil stratigraphy was encountered indicating the presence of prior disturbances throughout the property. These disturbances included tree throws, mechanical earth movement, and the excavation of percolation tests. (CL&P 1, Vol. 1, p. K-6)
95. A pedestrian survey of the southwestern corner of the property revealed the effects of previous gravel operations, which consisted of substantial erosion and the removal of the topsoil in this area. (CL&P 1, Vol. 1, p. K-6)
96. There is no documentary evidence that the proposed site has ever been the location of a cemetery, house, barn or other structure. (CL&P 1, Vol. 2, Exh. 6, p. 31)
97. Items identified during the fieldwork conducted by Heritage Consultants, LLC did not constitute evidence of cultural significance and no additional testing of the property was recommended. (CL&P 1, Vol. 1, p. K-6; CL&P 1, Vol. 2, Exh. 6)
98. Based on the results of the Phase IB cultural resources reconnaissance survey, the construction of the proposed substation would not affect any significant cultural resources. The SHPO concurred with this finding and provided a "No Adverse Effect" letter to CL&P on May 9, 2008. (CL&P 1, Vol. 1, p. K-6; CL&P 1, Vol. 2, Exh. 6)
99. Heritage Consultants, LLC investigated a claim from a local resident that a portion of the proposed site was the location of a small cemetery. This investigation included research of historical records, additional fieldwork and subsurface testing. From this investigation Heritage Consultants, LLC concluded that the local resident incorrectly remembered the location of the former cemetery or that it has already been removed by graveling operations and/or construction of the nearby road intersection. (CL&P 1, Vol. 2, Exh. 6; Tr. 2, pp. 39-40)
100. Heritage Consultants, LLC has developed an Unanticipated Discoveries Plan in the unlikely event that material related to a human burial(s), that either were not recorded historically or could not be identified in the field (e.g., buried under layers of fill), are uncovered during construction. (CL&P 1, Vol. 2, Exh. 6, pp. 40, 47-48)
101. Prior to commencement of construction, CL&P intends to install erosion controls at the limits of work in accordance with the approved D&M Plan and the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control. (CL&P 1, Vol. 1, p. L-1)

102. The power transformers within the proposed substation would contain insulating fluid. Surrounding each transformer will be secondary containment, consisting of an Imiber Beads Drain Protection System® for the sump, designed to hold 110% of a transformer's fluid capacity. (CL&P 1, Vol. 1, p. L-3; CL&P 1, Vol. 2, Exh 1, Drawing C-6)
103. Due to existing elevated background levels, the projected noise levels generated by the proposed substation at the property boundaries would be below applicable noise regulations. (CL&P 1, Vol. 1, p. K-7)
104. The main source of noise in the area of the proposed substation is traffic noise from I-95 and I-395. (CL&P 1, Vol. 1, p. H-10)

Visibility

105. CL&P does not anticipate that the proposed substation would be visible from surrounding residences during "leaf on" conditions because of distances and intervening obstructions (i.e. vegetation and/or structures). (CL&P 2, Q. 10)
106. There is potential for limited, seasonal views (during "leaf off" conditions) from at least portions of the northern abutting residence (71 Oil Mill Road), located approximately 619 feet from the proposed substation. (CL&P 2, Q. 10)
107. After construction, additional areas surrounding the proposed substation will be landscaped with evergreen trees to assist in screening the facility along the roads from passing vehicles. No residences are located to the east or west of the proposed substation site. Residences to the south are over 1,000 feet away, beyond Interstate 95, and substantial tree cover exists between the highway and these homes. (CL&P 2, Q. 10)

Magnetic Field Levels

108. The proposed substation will incorporate field management practices that are consistent with the Council's Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut, dated December 14, 2007. (CL&P 1, Vol. 1, p. M-5; CL&P 8, pp. 22-23)
109. Magnetic field ("MF") levels off the proposed substation property due to currents in substation equipment will be in the same range as typically found in residences (up to 4 milligauss) ("mG"). (CL&P 8, p.18)

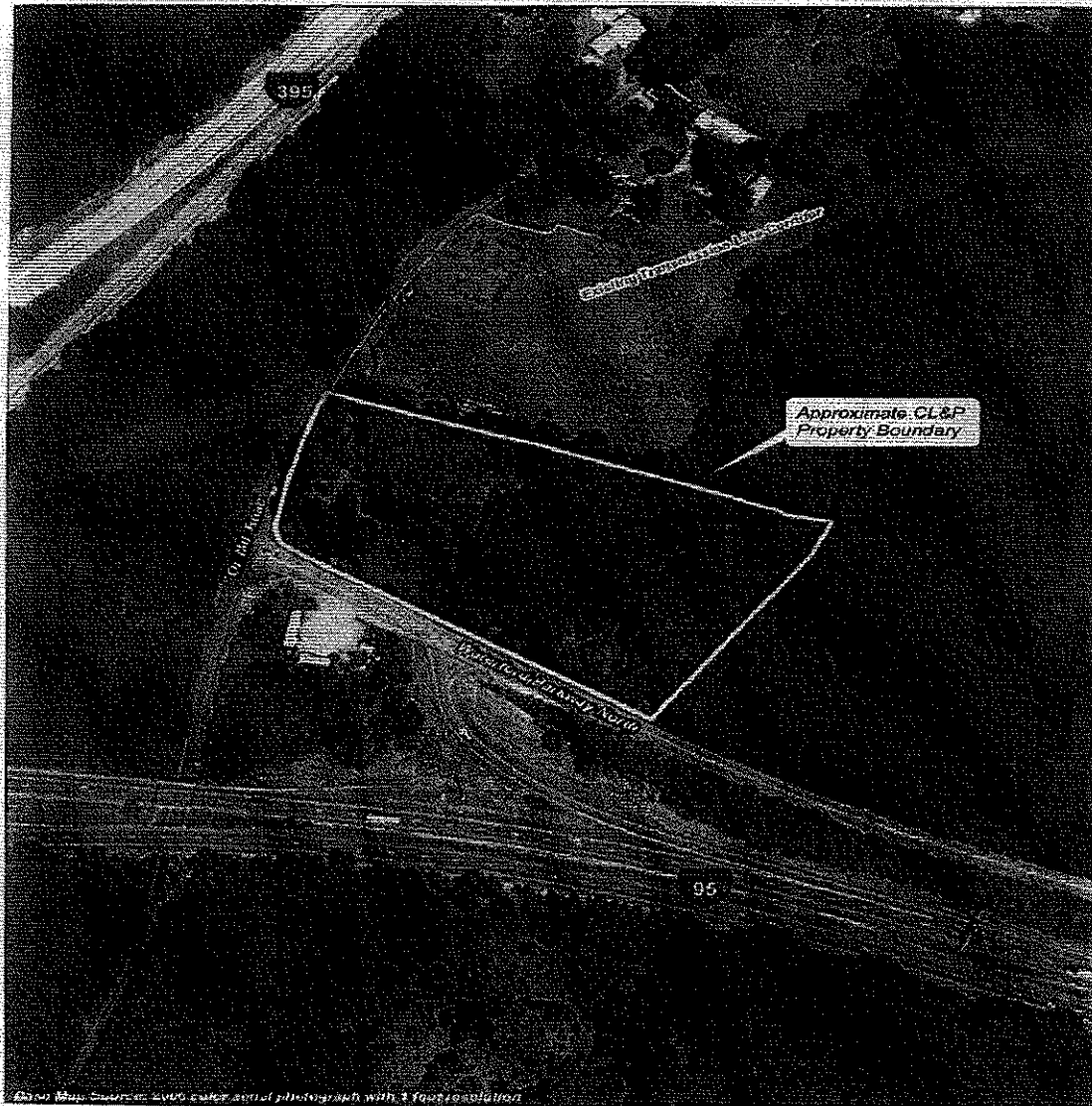
110. The interconnection of the substation would affect current flows on the 115-kV circuits. To determine how the magnetic field from these lines would be altered by the proposed substation, CL&P performed pre and post-construction MF calculations based on ISO New England's 2015 projected peak-day line currents. (CL&P 1, Vol. 1, p. M-3 through M-13)
111. MF levels drop off rapidly with the distance from a source, so the MF levels at all points along a property boundary to either side of the transmission circuits will be much lower than the levels found beneath the circuits. (CL&P 1, Vol. 1, p. M-2)
112. The predominant sources of existing power-frequency electric and magnetic fields ("EMF") at and beyond the boundaries of the substation property are from the existing double-circuit transmission line (115-kV circuits 1500 and 1605) that crosses the northwest corner of the property. (CL&P 8, p. 19)
113. The highest post-project levels of MF anticipated along the property boundaries will be found near the transmission circuits and on the property lines directly beneath where the transmission circuit conductors cross or come closest to the property line. (CL&P 8, p. 20)
114. The MF along the west property line will be lower than they are now under the same load conditions. The highest MF levels along the west property line will be 3.77 mG under modeled peak-load conditions and 1.59 mG under modeled peak-day average load conditions. Without the substation, the comparable highest levels would be 6.9 mG and 4.49 mG respectively. (CL&P 8, p. 20)
115. The north property line will experience an increase in MF levels because of the proposed substation entry span on the 1605 circuit where it crosses the north property line. The highest off-right-of way point along the north property line will be 15.77 mG under modeled peak-load condition and 10.27 mG under the modeled peak-day average load condition. The comparable highest MF levels without the proposed substation would be 6.75 mG and 4.40 mG respectively. (CL&P 8, p. 21)
116. There are no state or federal limits for EMF levels at the property line of the proposed substation; however, the Institute of Electrical and Electronic Engineers ("IEEE"), International Committee for Electromagnetic Safety ("ICES") and the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") have issued guidelines for long-term public exposure to MF. The ICES referenced level is 9,040 mG; the ICNIRP referenced level is 833 mG. The existing and projected MF at and beyond the property lines of the proposed substation are well below these limits. (CL&P 8, p. 23)
117. The proposed substation will have no effect on existing MF at the nearest residence, which is located 619 feet northeast of the center of the proposed substation footprint. (CL&P 2, Q. 13)

118. The nearest residence is located approximately 150 feet from the existing double-circuit 115-kV line from Cohanzie Junction to Flanders Substation. Project-related changes to this line, including the reverse phasing of its two circuits, will reduce the MF produced by this line on and off the right-of-way, including at this residence. (CL&P 2, Q. 13)

Safety and Reliability

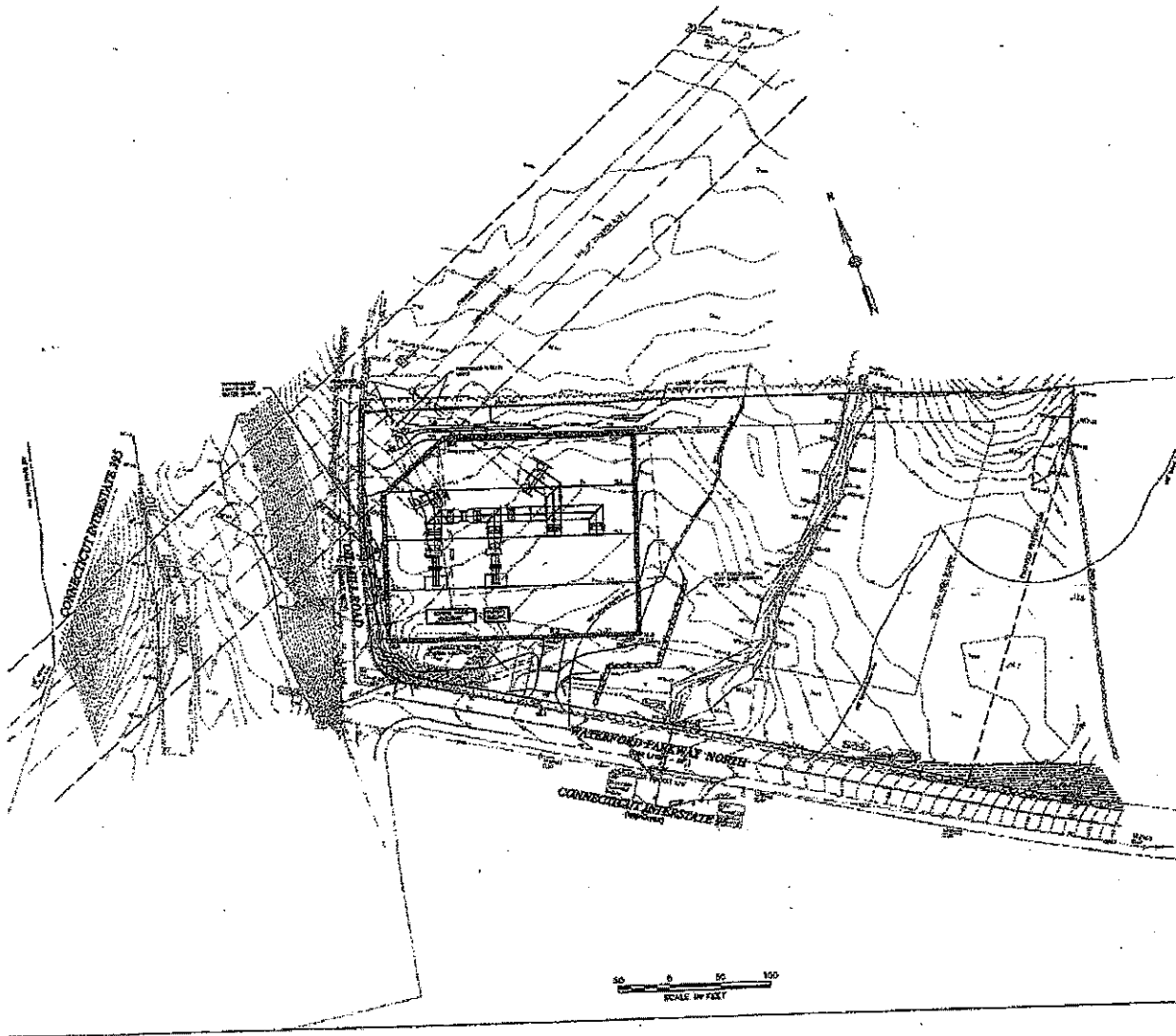
119. Construction of the proposed substation would be performed in full compliance with the standards of the National Electrical Safety Code, the DPUC and good utility practice. (CL&P 1, Vol. 1, p. J-1)
120. In the event that an energized line or substation equipment fails, protective relaying equipment would remove the equipment from service, thereby protecting the public and the remaining equipment within the substation. (CL&P 1, Vol. 1, p. J-1)
121. The proposed substation would be equipped with measures to ensure continued service in the event of outages or faults on transmission or substation equipment. Continued reliability would be achieved by incorporating a "loop through" design configuration for the existing 115-kV overhead transmission line, transformer protection, and redundant automatic protective relaying equipment. (CL&P 1, Vol. 1, p. J-1)
122. The substation would be remotely controlled and monitored by means of a Supervisory Control and Data Acquisition system. (CL&P 1, Vol. 1, p. J-1)
124. The control enclosure would be equipped with fire extinguishers and smoke detectors. Detection of smoke would automatically activate an alarm at Connecticut Valley Electric Exchange and the system operators would then take the appropriate action. (CL&P 1, Vol. 1, p. J-2)

Figure A-2: Site Location Map, Aerial



(CL&P 1, Vol. 1, p. A-3)

Figure 1 Site Layout



(CL&P 1, Vol. 2, Exh. 1, Drawing C-3)