



**MAINE POWER
RELIABILITY PROGRAM**
A CENTRAL MAINE POWER COMPANY PROGRAM

**TOWN OF FARMINGDALE, MAINE
SHORELAND ZONING AND
FLOODPLAIN MANAGEMENT APPLICATION**

Sections 60/212 and 3025 Transmission Line Construction

Prepared for:

Central Maine Power Company
83 Edison Drive
Augusta, Maine 04336

Prepared by:



TRC Engineers, LLC
14 Gabriel Drive
Augusta, Maine 04330

November 2009



Central Maine Power

August 15, 2008

Bureau of Land & Water Quality
Division of Land Resource Regulation
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Municipalities (various)

Federal Agencies (various)

RE: Central Maine Power Company - Maine Power Reliability Program (MPRP)
Agent Authorization

To Whom It May Concern:

Central Maine Power Company hereby authorizes TRC Engineers, Inc. and TRC staff to act as its agent for all activities associated with the acquisition of Federal, state and local permits related to the above referenced project.

Please call me at 626-9557 or email me at gerry.mirabile@comco.com with any questions. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Gerry J. Mirabile".

Gerry J. Mirabile
Lead Analyst - Compliance

An equal opportunity employer

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An Energy East Company

The Maine Power Reliability Program (MPRP)

The Maine Power Reliability Program (MPRP) is a Central Maine Power Company (“CMP”) program to upgrade Maine’s bulk power system. The vast majority of Maine’s bulk power transmission system was placed into service in the early 1970s and is now reaching the limits of its ability to meet the growing electrical demand of Maine customers. Since the last major transmission infrastructure was completed more than 30 years ago, the patterns of both available generation and customer load have shifted significantly. For example, population has become more concentrated in the southern part of the state, while the generation needed to serve that load is now more distant and dispersed. When these changes are combined with increasing peak demand, the current transmission infrastructure in Maine will, in very few years, become inadequate and unsafe. In addition, the reliability and security standards mandated by law and administered by the North American Electric Reliability Corporation (NERC), the Northeast Power Coordinating Council, Inc. (NPCC), and ISO New England (ISO-NE) have changed significantly in recent years. CMP must upgrade its bulk power system with this proposed project to meet the mandatory standards and to provide reliable electric service to Maine customers into the future. In all, MPRP will encompass nearly 80 Maine towns, and will require approvals from the Maine Public Utilities Commission, the Maine Department of Environmental Protection, the Army Corps of Engineers, and numerous municipalities.

Project Description in the Town of Farmingdale

The part of the program located in the Town of Farmingdale involves work in an existing 150-215 foot wide transmission line corridor (Section 60/212) that traverses the south-central portion of the town. In this corridor, which extends for approximately 4.2 miles from Browns Island on the Kennebec River to the West Gardiner town line, the project involves:

- The installation of a new 345 kV transmission line (Section 3025 attached as Exhibit 2). Several structure types will be used in constructing the new line including 15 steel single poles (typically 125 feet above ground), 28 two-pole wooden H-Frames (typically 75 feet above ground), and one lattice tower on Browns Island (approximately 196 feet above ground).
- Rebuilding of the existing 115 kV line (Section 60/212). This will involve the removal and replacement of the existing line, and will be constructed using several structure types including 39 wooden single poles that are typically 75 feet above ground, 18 steel single poles that are typically 90 feet above ground, and one lattice tower on Browns Island that will be approximately 172 feet above ground.
- Rebuilding the existing 34.5 kV line (Section 19) and distribution circuit (263D1) where the two lines cross the Kennebec River. This will involve the removal and replacement of the existing structures along Maine Avenue. The replacement structures will be located on the west side of Maine Avenue using two steel single pole structures that are approximately 97 feet above ground.

- Discontinuing the existing 34.5 kV line (Section 41) that runs south from the Bowman Street substation to the West Gardiner town line. The structures within the corridor will be removed once the project is complete.

The project also involves the acquisition of an additional 15-65 feet of property from abutting land owners along portions of the corridor. Some clearing of vegetation in these areas will be required to ensure that the project meets federal reliability and safety standards (see maps in Exhibit 1). The amount of clearing will be limited to that which is necessary for development of the project, and is generally limited to removal of species that are capable of growing tall enough to interfere with the transmission lines (so-called “capable species”).

Please note that structure heights vary due to varying terrain and the need to achieve spans which will avoid or minimize impacts to natural resources. Typical above ground structure heights are described above, although some structures may exceed those heights in specific instances (see the attached table in Exhibit 3 for a description of the number of structures within specific height ranges for the new and rebuilt transmission line sections).

The proposed upgrades in the Town of Farmingdale, as outlined above, are a part of the program to improve the reliability, safety, and security of the bulk power transmission system in Maine, while at the same time meeting the increasing demands for electrical power.

Summary of Applicable Ordinances and Zoning Districts

The proposed project will be located within two shoreland zoning districts: the Limited Commercial District along the Kennebec River, and a Stream Protection District along Cold Stream.

The proposed project traverses four 100-year floodplain areas; including Browns Island, the west shoreline of the Kennebec River, Cold Stream, and a tributary of Cold Stream.

As a result, CMP seeks approval of the project under the Town’s Shoreland Zoning Ordinance and Floodplain Management Ordinance.

Town of Farmingdale Shoreland Zoning Ordinance

Based on the Official Shoreland Zoning Map for the Town of Farmingdale the proposed transmission line project traverses two shoreland zoning districts – a Limited Commercial District and a Stream Protection District. Within the shoreland zone transmission lines are considered “essential services” as defined on page 35, Section 17 of the Town’s Shoreland Zoning Ordinance. Essential services are an allowed use within both the Limited Commercial and Stream Protection Districts with Planning Board approval, as identified in Table 1. In addition, Section 15(L)(2) provides that essential services are only allowed in the Stream Protection District to provide services to a permitted use within that district or where no reasonable alternative to locating the project in that district exists.

As is described beginning on page 13 the portions of the proposed transmission line project located in the shoreland zone satisfy both the Land Use Standards contained in Section 15 and the permitting requirements contained in Section 16(D) of the Shoreland Zoning Ordinance. Included in this discussion is an explanation as to why there is no reasonable alternative to the upgrades proposed in the Stream Protection District.

Town of Farmingdale Floodplain Management Ordinance

Based on the “Flood Insurance Study - Town of Farmingdale, Maine, Kennebec County” and accompanying “Flood Insurance Rate Map,” revised May 2, 1994, the proposed transmission line project traverses four 100-year floodplain areas located on Browns Island, the west shoreline of the Kennebec River, Cold Stream, and a tributary of Cold Stream. Before construction can begin in these areas, a Flood Hazard Development Permit must be obtained from the Planning Board. As is described beginning on page 20, the portions of the proposed transmission line project located in the 100-year floodplain satisfy the Floodplain Management Ordinance contained in Article XII, Section 4 of the Town of Farmingdale Code of Ordinances.

**TOWN OF FARMINGDALE
SHORELAND ZONING PERMIT APPLICATION
GENERAL INFORMATION**

1. Applicant Central Maine Power Company	2. Applicant's Address 83 Edison Drive Augusta, Maine 04336	3. Applicant's Tel. # (207) 623-3521
4. Property Owner Central Maine Power Company	5. Owner's Address 83 Edison Drive Augusta, Maine 04336	6. Owner's Tel. # (207) 623-3521
7. Contractor To be determined	8. Contractor's Address	9. Contractor's Tel. #
10. Location/Address of Property Existing transmission line corridor from Browns Crossing to the West Gardiner town line (Section 60/212)	11. Tax Map/Page & Lot # See Deed Reference Table attached as Exhibit 4	12. Zoning District The proposed project traverses a Limited Commercial District and a Stream Protection District
13. DESCRIPTION OF PROPERTY INCLUDING A DESCRIPTION OF ALL PROPOSED CONSTRUCTION, E.G. LAND CLEARING, ROAD BUILDING, SEPTIC SYSTEMS, AND WELLS (PLEASE NOTE THAT A SITE PLAN SKETCH IS REQUIRED). See Project Description on pages 3 and 4		
14. Proposed Use of Project See Project Description on pages 3 and 4	15. Estimated Cost Of Construction Approximately \$10 million for the MPRP project in the Town of Farmingdale	

**TOWN OF FARMINGDALE
SHORELAND AND PROPERTY INFORMATION**

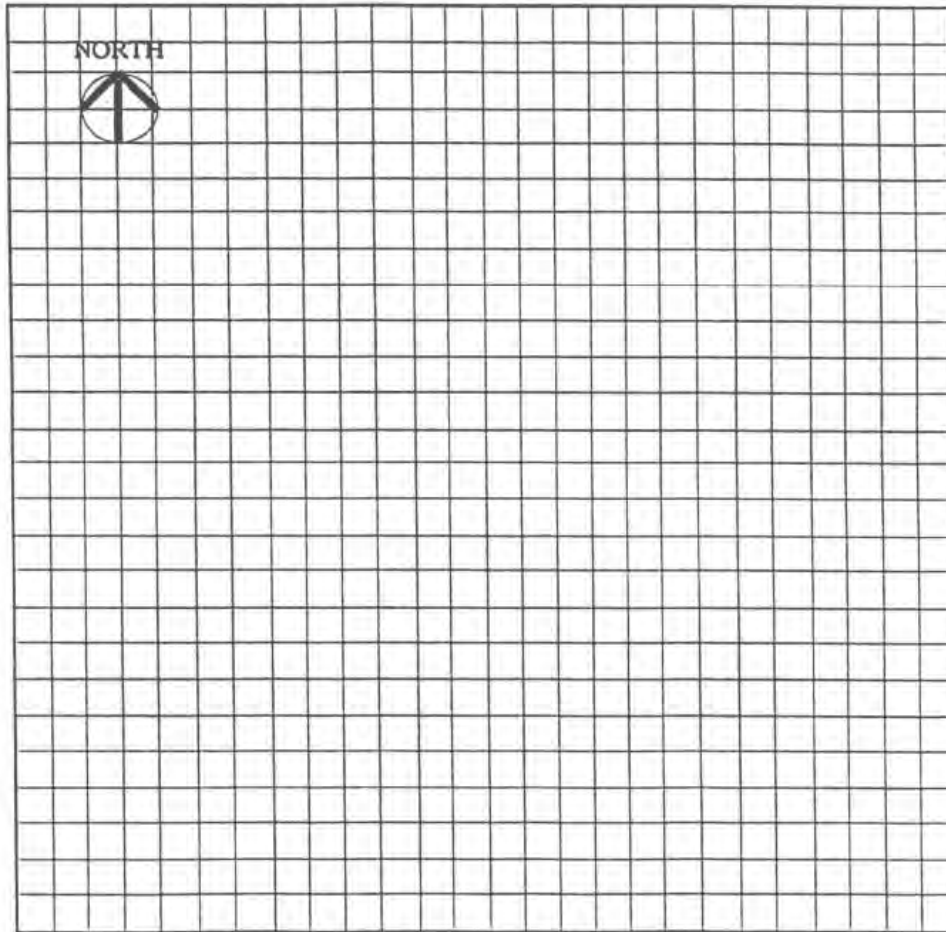
<p>16. LOT AREA The CMP corridor, once expanded as part of the MPRP, will cover approximately 98 acres within the Town of Farmingdale of which 2.5 acres will be within the shoreland zone. See maps 1 and 5 attached as Exhibit 1.</p>	<p>17. FRONTAGE ON ROAD (FT.) The CMP corridor crosses 5 public roads with a corridor width of 215' at each crossing. Of these roads, only Maine Avenue is within the shoreland zone. See maps 1 and 5 attached as Exhibit 1.</p>
<p>18. SQ. FT. OF LOT TO BE COVERED BY NON-VEGETATED SURFACES. The transmission line poles will cover less than 0.01% of the entire corridor and project area; the remainder will remain vegetated.</p>	<p>19. ELEVATION ABOVE 100 YR. FLOOD Portions of the project area will be located within the 100-year floodplain at Browns Island, the west shoreline of the Kennebec River, Cold Stream, and a tributary of Cold Stream as discussed in greater detail beginning on page 20.</p>
<p>20. FRONTAGE ON WATERBODY (FT.) The transmission line corridor crosses two waterbodies with a corridor width of 215' on the Kennebec River and 215' on Cold Stream. See maps 1 and 5 attached as Exhibit 1.</p>	<p>21. HEIGHT OF PROPOSED STRUCTURE(S) Above ground structure heights throughout the project area will range from 47 to 196 feet. Only one structure will be located within the shoreland zone (Cold Stream) and will be approximately 75 feet above ground.</p>
<p>22. EXISTING USE OF PROPERTY The property has been used as a transmission line corridor since 1961.</p>	<p>23. PROPOSED USE OF PROPERTY See Project Description on pages 3 and 4.</p>
<p><i>Note: Questions 24 & 25 apply only to expansions of portions of existing structures which are less than the required setback</i></p>	
<p>A) SQ. FT. OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK AS OF 1/1/89: N/A</p>	<p>A) CU. FT. OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK AS OF 1/1/89: N/A</p>
<p>B) SQ. FT. OF EXPANSIONS OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK FROM 1/1/89 TO PRESENT: N/A</p>	<p>B) CU. FT. OF EXPANSIONS OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK FROM 1/1/89 TO PRESENT: N/A</p>
<p>C) SQ. FT. OF PROPOSED EXPANSION OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK: N/A</p>	<p>C) CU. FT. OF PROPOSED EXPANSION OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK: N/A</p>
<p>D) % INCREASE OF SQ. FT. OF ACTUAL AND PROPOSED EXPANSIONS OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK SINCE 1/1/89: (% INCREASE = $(B + C) / A \times 100$) N/A</p>	<p>D) % INCREASE OF CU. FT. OF ACTUAL AND PROPOSED EXPANSIONS OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK SINCE 1/1/89: (% INCREASE = $(B + C) / A \times 100$) N/A</p>

(See Exhibits 1 and 2)

SITE PLAN

PLEASE INCLUDE: LOT LINES; AREA TO BE CLEARED OF TREES AND OTHER VEGETATION; THE EXACT POSITION OF PROPOSED STRUCTURES, INCLUDING DECKS, PORCHES, AND OUT BUILDINGS WITH ACCURATE SETBACK DISTANCES FROM THE SHORELINE, SIDE AND REAR PROPERTY LINES; THE LOCATION OF PROPOSED WELLS, SEPTIC SYSTEMS, AND DRIVEWAYS; AND AREAS AND AMOUNTS TO BE FILLED OR GRADED. IF THE PROPOSAL IS FOR THE EXPANSION OF AN EXISTING STRUCTURE, PLEASE DISTINGUISH BETWEEN THE EXISTING STRUCTURE AND THE PROPOSED EXPANSION.

NOTE: FOR ALL PROJECTS INVOLVING FILLING, GRADING, OR OTHER SOIL DISTURBANCE YOU MUST PROVIDE A SOIL EROSION CONTROL PLAN DESCRIBING THE MEASURES TO BE TAKEN TO STABILIZE DISTURBED AREAS BEFORE, DURING AND AFTER CONSTRUCTION (See attached guidelines)



SCALE: _____ = _____ FT.

ADDITIONAL PERMITS, APPROVALS, AND/OR REVIEWS REQUIRED

CHECK IF REQUIRED:

- PLANNING BOARD REVIEW APPROVAL
(e.g. Subdivision, Site Plan Review)
- BOARD OF APPEALS REVIEW APPROVAL
- FLOOD HAZARD DEVELOPMENT PERMIT
- EXTERIOR PLUMBING PERMIT
(Approved HHE 200 Application Form)
- INTERIOR PLUMBING PERMIT
- DEP PERMIT (Site Location,
Natural Resources Protection Act)
- ARMY CORPS OF ENGINEERS PERMIT
(e.g. Sec. 404 of Clean Waters Act)

X Maine Public Utilities Commission - Certificate of Public Convenience and Need

X Building Permit

NOTE: APPLICANT IS ADVISED TO CONSULT WITH THE CODE ENFORCEMENT OFFICER AND APPROPRIATE STATE AND FEDERAL AGENCIES TO DETERMINE WHETHER ADDITIONAL PERMITS, APPROVALS, AND REVIEWS ARE REQUIRED

I CERTIFY THAT ALL INFORMATION GIVEN IN THIS APPLICATION IS ACCURATE. ALL PROPOSED USES SHALL BE IN CONFORMANCE WITH THIS APPLICATION AND THE _____ SHORELAND ZONING ORDINANCE. I AGREE TO FUTURE INSPECTIONS BY THE CODE ENFORCEMENT OFFICER AT REASONABLE HOURS.	
_____ APPLICANT'S SIGNATURE	_____ DATE
_____ AGENT'S SIGNATURE (if applicable)	_____ DATE

FRONT OR REAR ELEVATION

SIDE ELEVATION

DRAW A SIMPLE SKETCH SHOWING BOTH THE EXISTING
AND PROPOSED STRUCTURES WITH DIMENSIONS

APPROVAL OR DENIAL OF APPLICATION (For Office Use Only)	MAP _____ LOT # _____
THIS APPLICATION IS: _____ APPROVED _____ DENIED	
IF DENIED, REASON FOR DENIAL: _____ _____ _____	
IF APPROVED, THE FOLLOWING CONDITIONS ARE PRESCRIBED: _____ _____ _____ _____	
NOTE: IN APPROVING A SHORELAND ZONING PERMIT, THE PROPOSED USE SHALL COMPLY WITH THE PURPOSES AND REQUIREMENTS OF THE SHORELAND ZONING ORDINANCE FOR THE TOWN OF _____ .	
_____ CODE ENFORCEMENT OFFICER	_____ DATE

INSPECTION CHECK LIST	PERMIT #
<input type="checkbox"/> Prior to Clearing and Excavation	_____
<input type="checkbox"/> Prior to Foundation Pour	_____
<input type="checkbox"/> Prior to Final Landscaping	FEE AMOUNT
<input type="checkbox"/> Prior to Occupancy	_____

NOTE: THIS CHECKLIST IS INTENDED TO ASSIST THE CEO IN TRACKING A SHORELAND ZONING PERMIT THROUGH THE REVIEW PROCESS

Appendix 1

SHORELAND ZONING PERMIT CHECKLIST

CHECKOFF FOR ALL STRUCTURES:

- COMPLETE SHORELAND ZONING PERMIT APPLICATION
- PAY APPROPRIATE FEE
- LOT AREA
- % OF LOT COVERED BY NON-VEGETATED SURFACES
- HEIGHT OF STRUCTURE
- SETBACK FROM HIGH WATER LINE
- ELEVATION SETBACK FROM SIDE AND REAR LOT LINES
- % INCREASE OF EXPANSIONS OF PORTION OF STRUCTURE WHICH IS LESS THAN REQUIRED SETBACK
- COPY OF INTERIOR AND EXTERIOR PLUMBING PERMITS
- COPY OF DEED
- ELEVATION OF LOWEST FLOOR TO 100 YEAR FLOOD ELEVATION
- COPY OF ADDITIONAL PERMIT(S) AS REQUIRED
(See Page 5 of Application Form)
- SOIL EROSION CONTROL PLAN PROVIDED

CHECKOFF FOR FURTHER REVIEW:

- COPY OF FILE TO BOARD OF APPEALS IF VARIANCE OR SPECIAL EXCEPTION IS REQUIRED
- COPY OF FILE TO PLANNING BOARD IF PLANNING BOARD REVIEW IS REQUIRED

CHECK OFF FOR SITE VISITS BY CEO:

- PRIOR TO CLEARING AND EXCAVATION
- PRIOR TO FOUNDATION POUR
- PRIOR TO FINAL LANDSCAPING
- PRIOR TO OCCUPANCY

SHORELAND ZONING ORDINANCE

Zoning Districts Impacted

The proposed project will traverse two Shoreland Zoning districts as follows:

1. A Limited Commercial District along the Kennebec River (Exhibit 1, Map 1).

The project area traverses a Limited Commercial District along the west shoreline of the Kennebec River. There are no new structures proposed within the District. Approximately 0.15 acres of vegetation clearing to remove “capable species,” or trees capable of growing into the safety zone around the conductors, will be required within the District. The existing structures within the District will be removed, with new structures located west of Maine Avenue just outside the District.

2. A Stream Protection District along Cold Stream near the West Gardiner Town Line (Exhibit 1, Map 5).

The project area traverses a Stream Protection District along Cold Stream near the West Gardiner town line. One single pole angle structure will be installed on the east side of Cold Stream within the District. Approximately 0.75 acres of vegetation clearing to remove capable species will be required within the District.

Permitted Land Uses

The MPRP project area is an “essential service,” which, pursuant to Section 14 and Table 1 (page 12 of the Town of Farmingdale Shoreland Zoning Ordinance), is a permitted use within the Limited Commercial District with the approval of the Planning Board. Essential services are a permitted use within the Stream Protection District with Planning Board approval, subject to the specific requirements of Section 15(L)(2) of the Ordinance, addressed below.

Land Use Standards: Shoreland Zoning Ordinance Section 15

A. Minimum Lot Standards

Not applicable.

B. Principal and Accessory Structures

Not applicable.

C. Piers, Docks, Wharfs, Bridges, etc.

Not applicable.

D. Campgrounds

Not applicable.

E. Individual Private Campsites

Not applicable.

F. Commercial and Industrial Uses

Not applicable.

G. Parking Areas

There will be no parking areas associated with the project.

H. Roads and Driveways

There will be no new permanent roads or driveways associated with the project, other than CMP-maintained access points and ways suitable for routine and urgent maintenance by its own vehicles. Temporary access ways, which do not add any impervious surface area, will be established for use during the construction phase, and may be located in the shoreland zone (see maps 1 and 5 in Exhibit 1). This will be an ongoing process as access will be established to areas undergoing immediate construction. Determinations surrounding the exact nature of the construction of these temporary access ways will be made by the contractor in consultation with an environmental representative. All access paths are temporary and will be removed once construction is complete.

Temporary access ways will be established for general access to the corridor for construction purposes. These temporary access ways will be in place for more than one growing season, but will be removed once all aspects of construction in that area are complete. Access to pole sites, either for removal or construction, will be achieved by temporary access ways which will be in place for no more than one growing season. Areas where soils have been disturbed will then be mulched with hay. Vegetation will be allowed to reestablish itself once the temporary access ways have been removed.

Measures will be taken to avoid and minimize impacts to streams and wetlands through the use of crane mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Appropriate erosion controls will be installed wherever necessary. If necessary, mats will be placed parallel to the upland edge as abutments to further protect bank stability and establish stability. No extensive grubbing (grading to remove root systems) within wetland crossing areas will be done prior to mat placement. However, some minor grading may be required to ensure mat stability and construction access safety. All such grading will be performed on a limited basis and only with prior approval by CMP's environmental representatives. Streams that are too wide to cross with crane mats or temporary bridges will be avoided.

I. Signs

There will be no signage associated with the project.

J. Storm Water Runoff

With the exception of the immediate area occupied by the support structures, there is no additional increase in impervious surface area associated with the transmission line, and therefore, there will be no significant storm water run-off generated from the project.

K. Septic Waste Disposal

Not applicable.

L. Essential Services

A guiding principle in the design of the MPRP transmission line upgrades has been to utilize the existing transmission line corridors to the maximum extent possible. Co-location of the transmission line upgrades, as opposed to the creation of new corridors, has multiple benefits, including the minimization of impacts to communities, individual property owners, and the environment.

- 1) Within the Town of Farmingdale, the construction of the new 345 kV transmission line and rebuilding of the existing 115 kV will occur mostly within the existing transmission line corridor, with the exception of the acquisition of an additional 15 feet along the north side of the corridor at the Kennebec River, and 65 feet along the north side of the corridor at Cold Stream.
- 2) The corridor along which the new and rebuilt transmission line will run crosses a Stream Protection District on Cold Stream. Within the corridor, CMP has, to the greatest extent practicable, sited each individual structure so as to avoid, and where unavoidable to minimize, adverse impacts to surrounding uses and resources. As part of this avoidance and minimization effort, CMP has attempted to site the structures so that none are located within the District. However, one single pole angle structure as part of the rebuilt 115 kV line will be located on the east side of the stream within the District. Some clearing of “capable species” within the District will also be necessary to prevent trees from growing into the safety zone around the conductors.

There is no reasonable alternative to locating this structure within the Stream Protection District. The amount of ground disturbance associated with the planned structures will be small, i.e., limited to the immediate vicinity of the pole placements (approximately 40 square feet), and because the project is within the existing transmission line corridor (which contains structures of a similar bulk and style), locating the structure within this District causes the least overall impact when compared to the alternatives. Avoiding this District would require expanding or moving the existing transmission line corridor or erecting much taller and much more substantial structures to achieve the required span over this District. The overall environmental and visual impacts of either of these alternatives would be much greater than the impacts associated with the project as proposed.

M. Mineral Exploration and Extraction

Not applicable.

N. Agriculture

Not applicable.

O. Timber harvesting.

Not applicable.

P. Clearing of Vegetation for Development

Some clearing of vegetation will be required within the service corridor to accommodate the project and ensure that the project meets federal reliability and safety standards. The amount

of clearing will be limited to that which is necessary for development of the project, and is generally limited to removal of species that are capable of growing tall enough to interfere with the transmission lines (so-called “capable species”), and, in some instances, the occasional removal of mature “danger trees.” Danger trees are trees that are large enough and positioned in such a manner that they could fall into the conductor, thereby posing a severe reliability risk. The removal of danger trees is a relatively infrequent activity.

The vegetation management work is performed using equipment typical of logging operations including cable and hook skidders, forwarders, tree movers, chain saws, and logging trucks. In general all trees, saplings of capable species, and sometimes tall shrubs are cut at ground level. All root systems are left intact as the ground is not grubbed or graded. All slash (i.e., limbs, tree trunks, wood chips, etc.) from the cutting operation is disposed of in accordance with the Maine Slash Law (12 M.R.S.A. § 9333). The remaining vegetation is typically composed of scattered growth of small shrubs of non-capable species and herbaceous plants.

After construction is completed, non-capable species are allowed to grow to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. Over a relatively short period of time (generally within one calendar year), the newly cleared portions of the corridors will exhibit the early-successional habitat type that is typical of existing transmission line corridors in Maine.

See attached maps 1 and 5 in Exhibit 1 and the sections related to specific Shoreland Zone Districts on page 13 for more detailed information.

Q. Erosion and Sedimentation Control

With the exception of the immediate area around the base of the support structures there is no increase in impervious surface area associated with the transmission line. The amount of ground disturbance associated with this project will be limited to the immediate vicinity of the pole placements and the impacts associated with temporary access roads. CMP has developed a standard manual, “Environmental Guidelines for Construction and Maintenance Activities on Transmission line and Substation Projects” (2007), which it uses as a routine part of all transmission and substation projects (a copy of which is attached as Exhibit 5). This manual contains erosion and sedimentation control requirements, standards, and methods that will be used to protect soil and water resources during construction of the various MPRP components. The manual was developed in consultation with the Maine Department of Environmental Protection (DEP), is largely based on DEP’s *Maine Erosion and Sediment Control BMPs*, dated March 2003, and DEP’s Chapter 500, and contains specific Best Management Practices appropriate for electric transmission line and substation construction. These guidelines will be followed in the construction of transmission lines.

R. Soils

Based on the applicants’ analysis of the Soil Survey Geographic Database compiled by the United States Department of Agriculture – Natural Resources Conservation Service, soils within the transmission line corridor will accommodate the proposed MPRP construction activities. Soil constraints within the transmission line corridor will be managed and mitigated through implementation of erosion and sediment control measures, proper site and project design, and special construction procedures. If concrete foundations for specific

poles should need to be constructed, soil borings will be conducted and the foundations will be designed in accordance with soil characteristics.

S. Water Quality

To minimize spill potential during construction, no fueling or maintenance of vehicles and equipment will be performed within 100 feet of wetlands, streams or other sensitive natural resources. After construction, the electrical transmission line corridor is maintained to encourage the growth of scrub-shrub vegetation. Trees within the corridor that are capable of growing up into the conductors (“capable species”) must be removed for safety and reliability reasons. CMP uses a selective herbicide program to treat an area once every four years to maintain an early successional stage of growth. Herbicide is selectively applied (using a low-pressure backpack applicator) to capable species to prevent growth (or re-growth of a cut plant) of individual plants. CMP does not use herbicides within 25 feet of any waterbody or wetland with standing water. Crew forepersons are certified by the Maine Pesticide Control Board, and all herbicides are EPA registered. The selective use of herbicides within the transmission line corridor does not pose a threat to groundwater quality.

T. Archaeological and Historic Resources

Following consultation with the Maine Historic Preservation Commission (MHPC) CMP has conducted extensive investigations of potential pre-historic archaeological, historic archaeological and historic architectural surveys along the project corridor. Survey reports have been submitted to the MHPC and can be provided to the Town if requested. TRC confirmed, on behalf of CMP, that these surveys documented no archaeological or historic resources within the project area in the Town.

Approval Standards: Shoreland Zoning Ordinance Section 16D

The proposed use will:

1. Maintain safe and healthful conditions

The project will maintain the same safe and healthful conditions which are already present in the transmission line corridor. The transmission line corridor and the structures within it are maintained to established industry standards so as to ensure the safety of utility workers and the general public. Maintaining sufficient clearances around the conductors is paramount to the safe operation of the line. These clearances are achieved through appropriate siting of the structures themselves and through vegetation maintenance practices as described above. All construction will be in accordance with CMP's transmission standards, general industry standards, and "Good Utility Practice," including all necessary liveline working clearances, strength factors, and reliability factors as governed by the National Electrical Safety Code (NESC). In all instances, the line will be designed to meet or exceed the NESC and other standards, as applicable. The transmission line and all facilities will be operated in full compliance with CMP safety standards, which fully comply with Federal Occupational Safety & Health Administration requirements.

A health concern that is sometimes expressed revolves around the electric and magnetic fields produced by transmission lines. These fields are produced by any electric equipment or anything that carries electric current. The World Health Organization and numerous other scientific agencies around the world have studied the issue extensively. These studies have been unable to establish that electric and magnetic fields produced by transmission lines such as those being proposed as part of the MPRP cause any adverse health effects. There is no scientific basis to project any adverse health effects as a result of the electric and magnetic fields produced by transmission lines associated with this project. Accordingly, this standard has been met.

2. Not result in water pollution erosion or sedimentation to surface waters.

As described above with respect to Shoreland Zoning Ordinance Sections 15(J), (Q), and (S) on pages 14, 16, and 17, the MPRP project will not result in water pollution, erosion, or sedimentation to surface waters.

3. Adequately provide for the disposal of all wastewater.

There will be no wastewater disposal required for this project, and therefore this standard has been met.

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird, or other wildlife habitat.

Impacts to wildlife and areas of wildlife habitat are largely avoided through the use of the existing service corridor, which has been in place for several decades. In general, given the existing landscape characteristics of the site, construction and maintenance of the project is not expected to create conditions that are not already common to the project area. It is fully anticipated that local wildlife populations will adapt and respond to any additional alterations much as they already do to ongoing land uses within the vicinity of the proposed project. Therefore, impacts to wildlife are expected to be minimal to non-existent. Identified significant wildlife habitats and natural areas, such as vernal pools and rare plant locations, will be avoided and minimized to the extent practicable through careful siting and placement of poles. Once installed the transmission line structures, due to the minimal amount of ground surface area they occupy, will have no significant impact on these critical natural areas. Significant wildlife habitats and natural areas will be avoided to the greatest extent practicable during construction, including measures that are taken to ensure any impacts will be minimal and temporary. Thus, this standard has been met. See attached maps (Exhibit 1, maps 1 and 5) and the discussion of impacts to specific Shoreland Zone Districts on page 13 for more detailed information.

5. Conserve shore cover and visual, as well as actual, points of access to inland waters.

The proposed project will take place entirely within or directly adjacent to the existing corridor, and since the corridor already contains structures of a similar nature, the proposed project will not significantly affect visual points of access to inland waters, and will have no impact on actual points of access to inland waters. The corridor will continue to be maintained in a vegetated state, thereby preserving a similar degree of shore cover which currently exists.

6. Protect archaeological and historic resources as designated in the comprehensive plan.

As discussed above on page 17 with respect to Shoreland Zoning Ordinance Section 15(T), the project will not impact any archaeological and historic resources designated in the comprehensive plan.

7. Will avoid problems associated with floodplain development and use.

As depicted on the attached maps (Exhibit 1, maps 1 and 5), a portion of the project area is within a 100-year floodplain associated with the Kennebec River and Cold Stream (See page 20). Because of the nature of a transmission line and the minimal additional impervious surface associated with the project, construction and maintenance of the proposed transmission line will not cause or increase flooding or cause a flood hazard to any neighboring structures. Furthermore, the program will not affect runoff or infiltration relationships. Thus, the project will avoid problems associated with floodplain development and use.

8. Be in conformance with the provisions of Section 15, Land Use Standards.

As discussed above with respect to Shoreland Zoning Ordinance Sections 15(A) through (T), above, this project complies with all of the provisions of Section 15 of the Shoreland Zoning Ordinance.

FLOODPLAIN MANAGEMENT ORDINANCE (Article XII, Town of Farmingdale Code of Ordinances)

Areas of Impact

The transmission line project traverses four floodplain areas as depicted on the Flood Insurance Rate Map as developed by the Federal Emergency Management Agency (FEMA) for the Town of Farmingdale as follows (see Exhibit 1, maps 1 and 5):

- Kennebec River – Browns Island. The project traverses approximately 140 feet of floodplain across Browns Island on the Kennebec River (Zone AE). This area is also within the designated floodway. The existing lattice and wooden H-frame structures will be replaced with two new lattice structures as part of the construction of the new 345 kV line (Section 3025) and the rebuilding of the existing 115 kV line (Section 60). Approximately 0.5 acres of vegetation clearing will be required to remove “capable species.”
- Kennebec River – west shoreline. The project traverses approximately 250-300 feet of floodplain along the west shoreline of the Kennebec River (Zone AE). Three of the proposed four new or replacement structures will be located within the floodplain, but not within the floodway. The existing lattice and wooden H-frame structures currently located along shoreline of the river will be removed. Approximately 0.2 acres of vegetation will be cleared on the north side of the corridor to remove “capable species.”
- Cold Stream. The project traverses approximately 550 feet of floodplain associated with Cold Stream (Zone A) near the West Gardiner town line. Two new structures will be located within the floodplain east of the stream, but not within the floodway. Approximately 0.9 acres of vegetation clearing will be required to remove “capable species.”
- Tributary east of Cold Stream. The project traverses approximately 130 feet of floodplain associated with a tributary of Cold Stream (Zone A). No structures will be located within the floodplain.

Under the provisions of Section 4-1202 of the Town’s Code of Ordinances, before any development begins within any area of special flood hazard established in the Ordinance, a flood hazard development permit must be obtained from the Planning Board.

Under the provisions of Section 4-1205, the Planning Board must review all applications to assure that the proposed development is reasonably safe from flooding and to determine that all pertinent requirements of the development standards are met.

In general, because of the nature of a transmission line and the minimal additional impervious surface associated with the project, construction and maintenance of the proposed transmission lines will not cause or increase flooding or cause a flood hazard to any neighboring structures or property. Furthermore, the program will not affect runoff or infiltration relationships. Thus, the project will avoid problems associated with floodplain development and use.

Section 4-1206 Development Standards

1. New construction or substantial improvement of any structure shall:

A. be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the development resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

The transmission line poles will be adequately anchored to prevent flotation, collapse or lateral movement during a flood (see Engineers Statement attached as Exhibit 6). All construction will be in accordance with CMP’s transmission standards, general industry standards, and “Good Utility Practice,” including all necessary liveline working clearances and strength and reliability factors as governed by NESC.

B. use construction materials that are resistant to flood damage;

See above

C. use construction methods and practices that will minimize flood damage; and,

See above

D. use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.

Not applicable as the project will not involve the installation of service facilities.

2. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

Not applicable, as the project does not involve construction or replacement of any water supply systems.

3. All new and replacement sanitary sewage systems shall be designed and located to minimize or eliminate infiltration of flood waters into the system and discharge from the system into the flood waters.

Not applicable, as the project does not involve construction or replacement of any sanitary sewage systems.

4. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during floods.

Not applicable, as the project does not involve construction or replacement of any on-site waste disposal systems.

5. All development shall be constructed and maintained in such a manner that no reduction occurs in the flood carrying capacity of any watercourse.

The project improvements will be in compliance in that the proposed structures will be replacing structures that are currently in place, and therefore will not reasonably present a risk of increased flood levels within the community.

6. New construction or substantial improvement of any residential structure...

Not applicable, as the project does not involve construction or improvements to any residential structures.

7. New construction of substantial improvement of any non-residential structure located within...

Not applicable, as the project does not meet the definition of "structure" as described on page 168 of the ordinance.

8. New or substantially improved manufactured homes located within...

Not applicable, as the project does not involve construction or improvements to any manufactured homes.

9. Floodways (See attached Floodway Impact study attached as Exhibit 6)

A. In Zones A1-30 and AE encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in riverine areas for which a regulatory floodway is designated on the community's "Flood Boundary and Floodway Map," unless a technical evaluation certified by a registered professional engineer is provided demonstrating that such encroachments will not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

The project is within a Zone AE riverine area (Browns Island) designated as a regulatory floodway in the Kennebec River. The project in this area involves the replacement of the two existing structures with two new lattice structures in the same approximate

location. The improvements are part of the construction of the new 345 kV line (Section 3025) and rebuild of the existing 115 kV line (Section 60).

The regulatory floodway also includes a narrow portion of the west shoreline of the Kennebec River; however, there will be no new construction within this area.

A Floodway Impact Study was conducted by TRC Engineers, LLC for the Browns Island structures (see Exhibit 6). In summary, the project improvements will be in compliance in that the proposed structures will not present a risk of increased flood levels within the community.

- B. In Zones A1-30 and AE riverine areas, for which no regulatory floodway is designated, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted unless a technical evaluation certified by a registered professional engineer is provided demonstrating that the accumulative effect of the proposed development, when combined with other existing development and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.

The project is not within an area for which “no regulatory floodway” is designated. Thus, this standard is not applicable.

- C. In Zone A riverine areas, in which the regulatory floodway is determined to be the channel of the river or water course and the adjacent land areas to a distance of one-half the width of the floodplain as measured from the normal high water mark to the upland limit of the floodplain, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted unless a technical evaluation certified by a registered professional engineer is provided meeting the requirements of Section 4-1206 (I)(2).

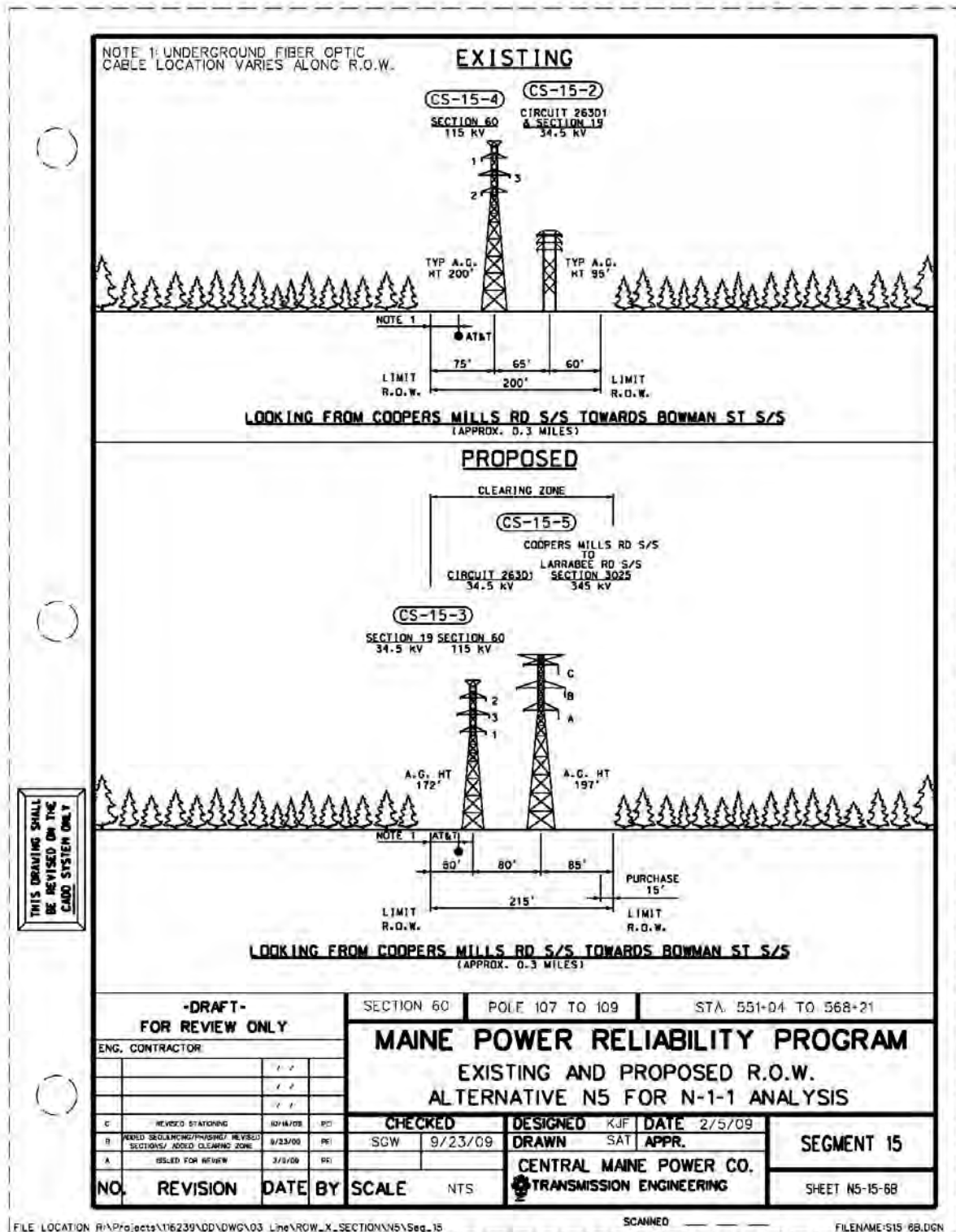
Not applicable as no portion of the project is within a Zone A riverine area.

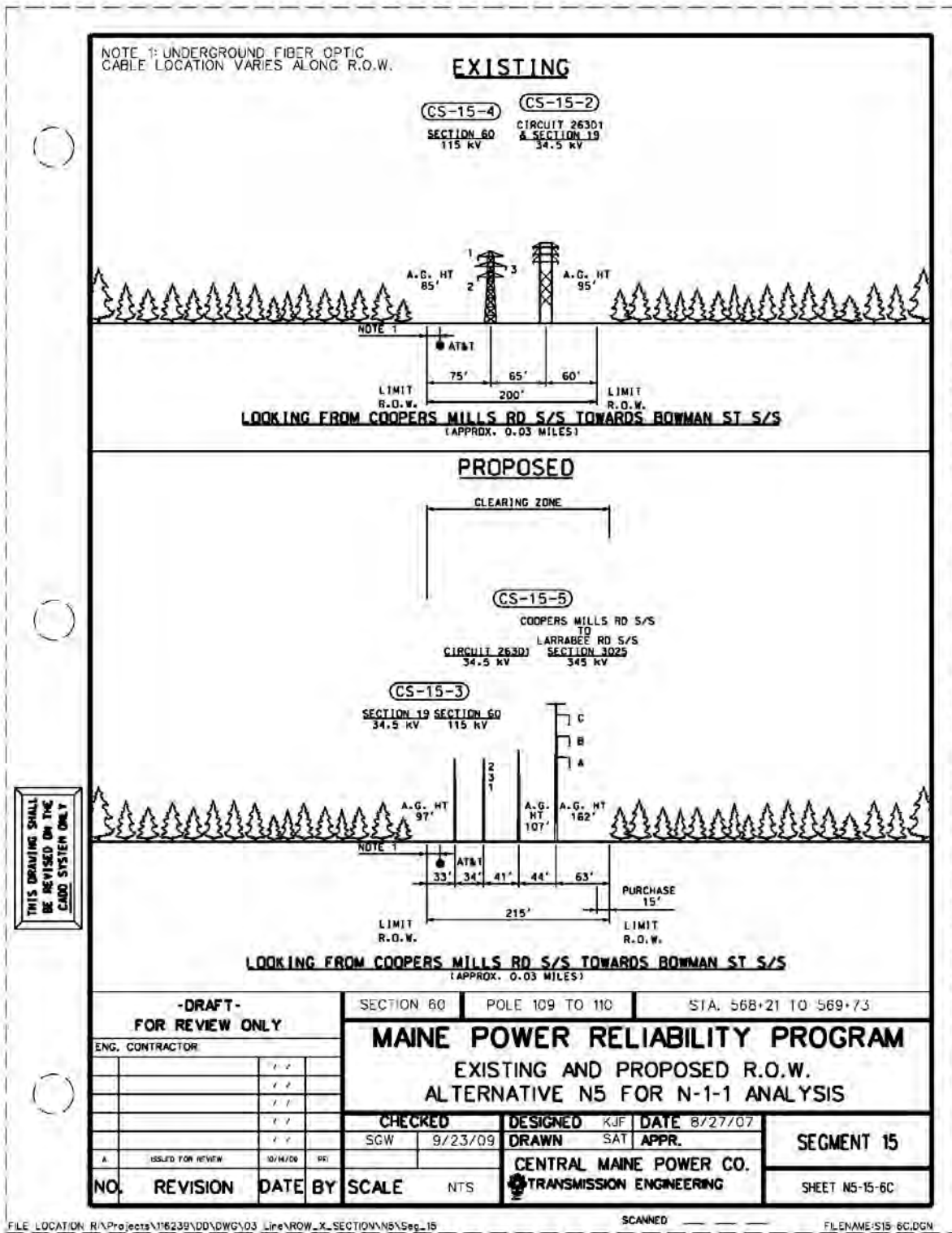
10. New Construction or substantial improvements of any structure in Zones A1-30, AE, AO, AH, and A that meets the development standards of Section 4-1206, including the elevation requirements of Section 4-1206 (F), (G), or (H) and is elevated on posts, columns, piers, piles, “stilts,” or crawlspace less than three feet in height may be enclosed below the elevation requirements provided all of the following criteria are met or exceeded...

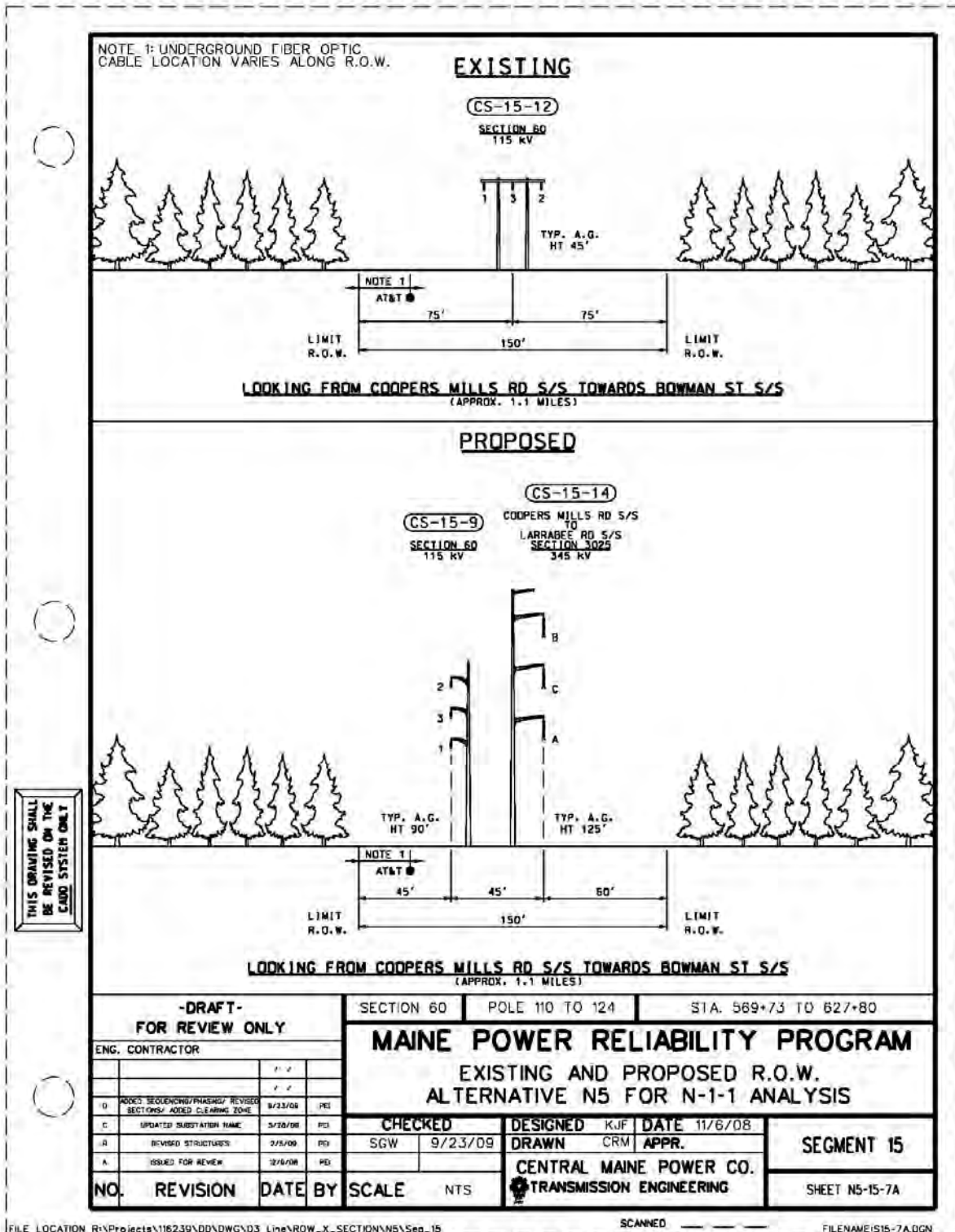
Not applicable as no portion of the transmission line structures will be enclosed.

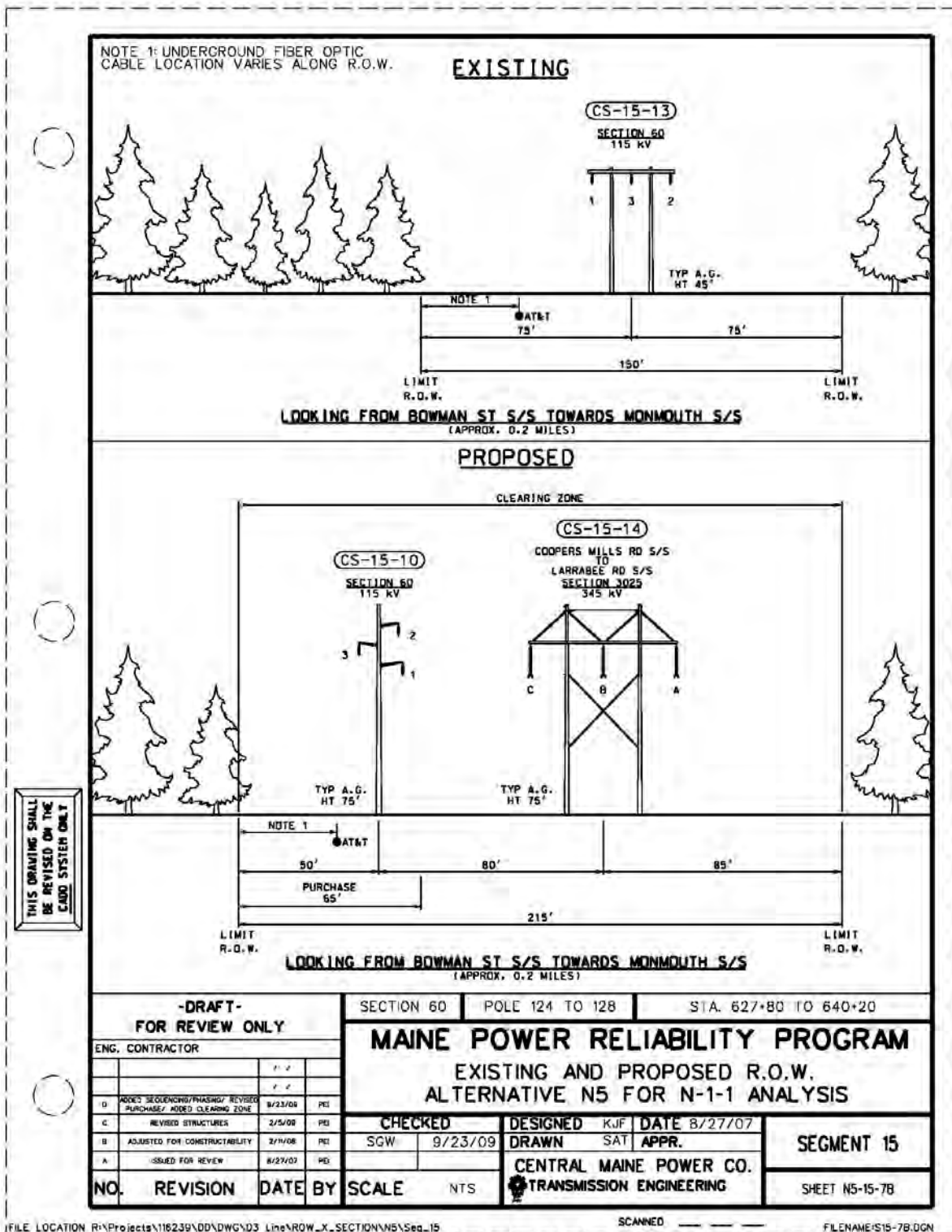
EXHIBIT 1
Transmission Line Corridor on Topo Maps, Sensitive Habitat, and
Hydrographic Features

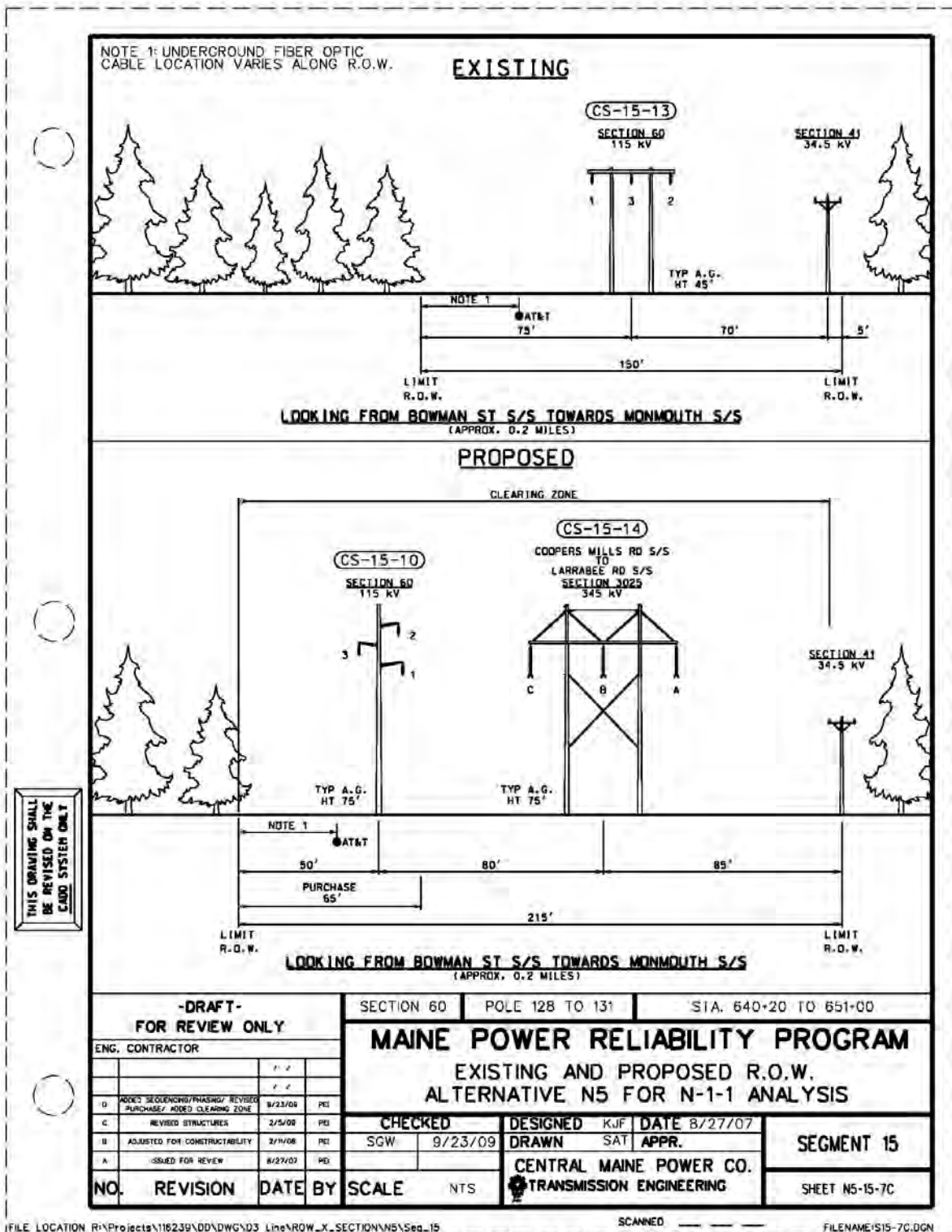
EXHIBIT 2
Transmission Line Configuration Cross Sections

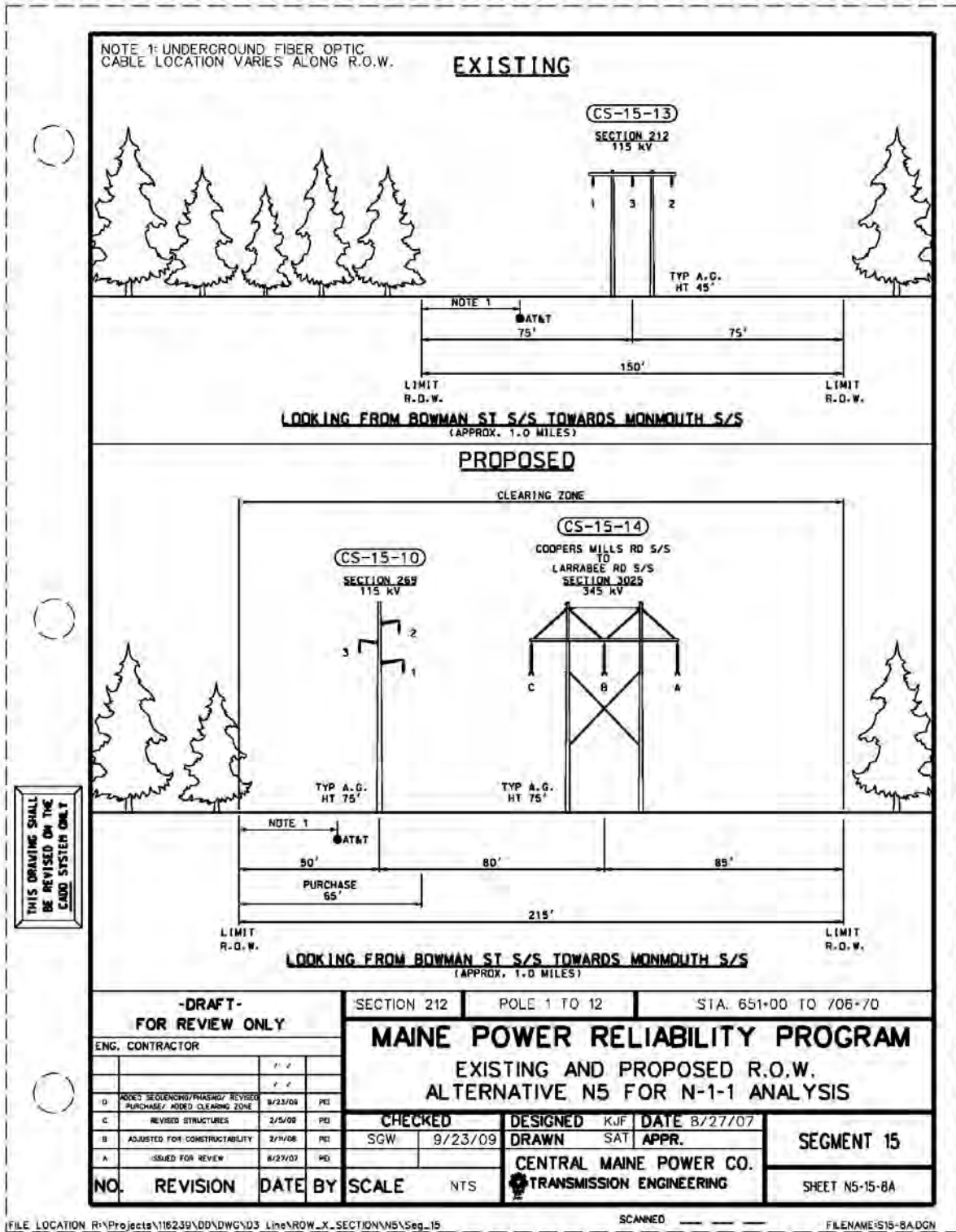












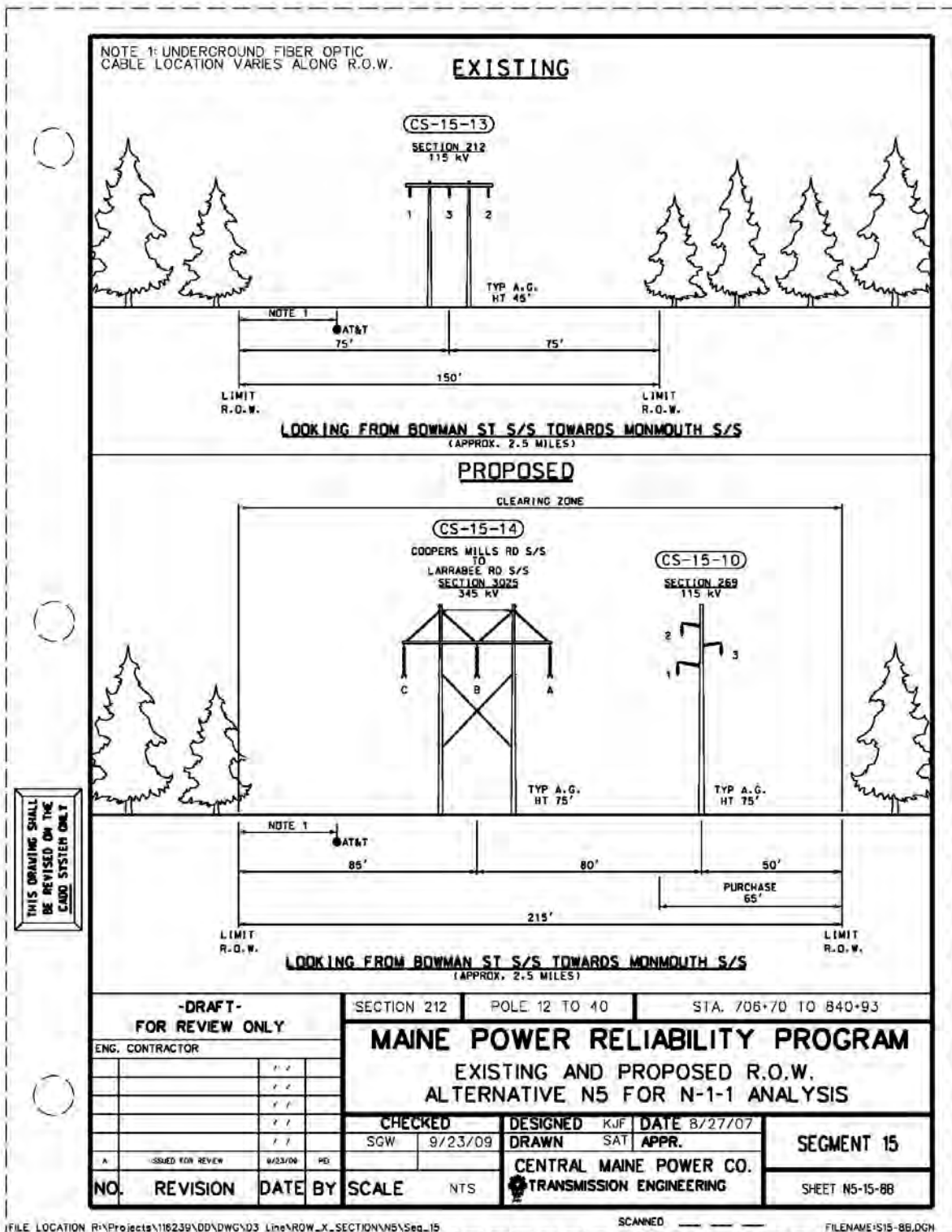


EXHIBIT 3
New Transmission Structure Height Ranges

Above Ground Height Range for New Transmission Structures

Structure (in feet)	Number of Structures	Section 3025 (new 345 kV)	Section 60 (rebuilt 115 kV)	Section 212/269 (rebuilt 115 kV)	Section 19 (rebuilt 34.5 kV)	Dist. Circuit 263D1 (rebuilt)
51 - 60	6		4	2		
61 - 70	10	1	2	7		
71 - 80	32	10	4	18		
81 - 90	14	6	5	3		
91 - 100	14	4	7	2	1	
101 - 110	9	7	1			1
110 - 120	2		2			
121 - 130	2	2				
131 - 140	7	7				
141 - 150	3	3				
151 - 160	2	2				
161 - 170	1	1				
171 - 180	1		1			
181 - 190						
191 - 200	1	1				
Total	104	44	26	32	1	1

EXHIBIT 4
Abutting Landowners and CMP Deed Reference Table

Farmingdale, Maine

Segment	Town	Map / Lot	Owner Name 1	Owner Name 2	Mailing Address 1	Mailing Address 2	Mailing Town	State	Zip Code	Additional Lots Owned
15	Farmingdale			Farmingdale Town Office	289 Main Avenue		Farmingdale	ME	04344	
15	Farmingdale	10-8	Ronald	Stoddard	653 Civic Center Drive		Augusta	ME	04330	
15	Farmingdale	14-14		Forest Products - Leroy Goucher	99 Kents Hill Road		Wayne	ME	04284	
15	Farmingdale	14-7	Yvonne M.	Wheelock	196 Blaine Road		Farmingdale	ME	04344	
15	Farmingdale	15-2		Kennebec Heights	Limited Partnership	RFD 2 Box 6910	Winthrop	ME	04364	
15	Farmingdale	2-1	James E.	Norton	125 Ryder Road		Farmingdale	ME	04344	
15	Farmingdale	28-19-2-A	Real a	Mathieu	132 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-2-B		L.&L. Real Estate Development, LLC	258 Eastern Avenue		Farmingdale	ME	04344	28-19-3, 28-19-5, 28-19-6, 28-19-7, 28-19-8, 28-19-4 are easements
15	Farmingdale	28-19-2-C	Michael	Stauff	136 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-3-A	Dan	Towle	124 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-3B	Dennis	Ladd	126 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-3C	Kathleen	Kimball	128 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-A	Patricia A.	Hart	142 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-19-B	Pamela L.	Stanton	PO Box 696		Gardner	ME	04345	
15	Farmingdale	28-19-C	Marjorie	Gallagher	148 Kennebec Drive		Farmingdale	ME	04344	
15	Farmingdale	28-20	Brenda J.	Vachon	34 Park Street		Farmingdale	ME	04344	
15	Farmingdale	28-21		Brouillet, Sharon - K. V. Health Club	11 K.V. Lane		Farmingdale	ME	04344	
15	Farmingdale	29-4		Farmingdale Town Office	289 Maine Avenue		Farmingdale	ME	04344	
15	Farmingdale	29-5	Robert B.	Webb	PO Box 446		Monmouth	ME	04259	
15	Farmingdale	3-10	Mark A.	Pelkey	54 Ryder Road		Farmingdale	ME	04344	

<i>Segment</i>	<i>Town</i>	<i>Map / Lot</i>	<i>Owner Name 1</i>	<i>Owner Name 2</i>	<i>Mailing Address 1</i>	<i>Mailing Address 2</i>	<i>Mailing Town</i>	<i>State</i>	<i>Zip Code</i>	<i>Additional Lots Owned</i>
15	Farmingdale	3-11	Maureen	Donovan	74 Ryder Road		Farmingdale	ME	04344	
15	Farmingdale	31-14B	Robert B.	Webb	PO Box 457		Winthrop	ME	04364-0457	
15	Farmingdale	7-28	Lowell M.	Giles	832 Northern Avenue		Farmingdale	ME	04344	
15	Farmingdale	8-1	Richard K.	McArthur	71 Ryder Road		Farmingdale	ME	04344	
15	Farmingdale	8-11	Bruce E.	Ellis	655 Northern Avenue		Farmingdale	ME	04344	8-B2
15	Farmingdale	8-14	Forrest R.	McDonald	84 Littlefield Lane		Farmingdale	ME	04344	
15	Farmingdale	8-14-1	Stephen	Benner	82 Littlefield Lane		Farmingdale	ME	04344	
15	Farmingdale	8-14-3	Carl B.	Ericson	PO Box 627		Waldoboro	ME	04572	
15	Farmingdale	8-14-4	Carol A.	Rogers	114 Littlefield Lane		Farmingdale	ME	04344	
15	Farmingdale	8-14-6	William W.	Rogers	531 Northern Avenue		Farmingdale	ME	04344	
15	Farmingdale	8-14-8	Keith	Kalloch	543 Northern Avenue		Farmingdale	ME	04344	8-14-7
15	Farmingdale	8-2	James	Deroche	59 Ryder Road		Farmingdale	ME	04344	
15	Farmingdale	8-3	Alden	Young	43 Ryder Road		Farmingdale	ME	04344	
15	Farmingdale	8-4	Debra A.	Clark	724 Northern Avenue		Farmingdale	ME	04344	
15	Farmingdale	8-8	Ellen L.	Ellis	727 Northern Avenue		Farmingdale	ME	04344	
15	Farmingdale	8-21	Christine M.	Valentine	353 Bowman Street		Farmingdale	ME	04344	9-22-2
15	Farmingdale	9-23	Daniel L.	Durgin	311 Bowman Street		Farmingdale	ME	04344	

CMP / MPRP Project Abutters

<i>Segment</i>	<i>Town</i>	<i>Map / Lot</i>	<i>Owner Name 1</i>	<i>Owner Name 2</i>	<i>Mailing Address 1</i>	<i>Mailing Address 2</i>	<i>Mailing Town</i>	<i>State</i>	<i>Zip Code</i>	<i>Additional Lots Owned</i>
41	Farmingdale	10-1	Albert (Sonny)	Barry	315 Northern Avenue		Farmingdale	ME	04344	Also 5-6
41	Farmingdale	10-4	Kenneth	Sonagere	West Auburn Road		Auburn	ME	04210	
41	Farmingdale	10-4A	David	Tripp	16 Peacock Road		Farmingdale	ME	04344	
41	Farmingdale	10-4B	Sheryl	McArthur	24 Peacock Road		Farmingdale	ME	04344	
41	Farmingdale	10-4C	Charles	Decoursey	269 Northern Avenue		Farmingdale	ME	04344	
41	Farmingdale	10-5	Andrea	McCaslin	38 Peacock Road		Farmingdale	ME	04344	
41	Farmingdale	10-6	Doug	Swift	15 Shirley Lane		Farmingdale	ME	04344	
41	Farmingdale	5-9-1	Dave	Dineen	Highland Avenue		Gardiner	ME	04345	
41	Farmingdale	9-11	Clarence	Thompson	334 Bowman Street		Farmingdale	ME	04344	
41	Farmingdale	9-21	David	Valentine	353 Bowman Street		Farmingdale	ME	04344	
41	Farmingdale	9-22-1	Steven	MacPhee	PO Box 16		Nobleboro	ME	04555	
41	Farmingdale	9-22-2		Unknown				ME		

CMP DEED REFERENCE LIST

Segment 15									
Section 60									
CMP	Parcel #	Municipality	County	Grantor	Grantee	Date	Book/Page	Type	Dimensions
	42	Farmingdale	Kennebec	American Ice Company	CMP	12-May-2010	506/70	Fee	All
	43	Farmingdale	Kennebec	Corkum, Earl R.	CMP	11-May-1961	1224/177	Fee	195'
	43.1	Farmingdale	Kennebec	Albee, Chester H. and Phyllis B.	CMP	20-Dec-1961	1249/355	Easement	150'
	43.2	Farmingdale	Kennebec	Auber, Frank L. and Grace C.	CMP	20-Dec-1961	1249/359	Fee	150'
	44	Farmingdale	Kennebec	Peaslee, Evelyn L.	CMP	14-Mar-1967	1438/79	Easement	150'
	45	Farmingdale	Kennebec	Brann, Preston and Lewis	CMP	16-May-1961	1225/102	Fee	Triangle
	46	Farmingdale	Kennebec	Bailey, Robert W. and Georgia A.	CMP	25-May-1961	1227/263	Fee	150'
	47	Farmingdale	Kennebec	Norwood, Everett W.	CMP	16-Oct-1961	1244/94	Fee	Triangle
	48	Farmingdale	Kennebec	Farrington, Harry C. and Alice G.	CMP	3-Jul-1961	1232/251	Fee	150'
	49	Farmingdale	Kennebec	Durgin, Harold	CMP	14-Jul-1961	1240/99	Fee	150'
	50	Farmingdale	Kennebec	Shaw, William A.	CMP	28-Aug-1961	1237/430	Easement	150'
	51	Farmingdale	Kennebec	Gilson, Patrick H.	CMP	16-Jun-1961	1230/289	Fee	150'
	52	Farmingdale	Kennebec	Littlefield, Addie F.	CMP	3-Nov-1961	1240/93	Fee	150'
	53	Farmingdale	Kennebec	King, Frederick W. and Ruth H.	CMP	18-Jun-1961	1230/283	Easement	150'
	54	Farmingdale	Kennebec	Trott, Wilhelmina D. et al	CMP	20-Oct-1961	1240/97	Fee	150'
Section 212									
	55	Farmingdale	Kennebec	Ellis, Samuel G.	CMP	25-Jul-1961	1234/35	Fee	150'
	56	Farmingdale	Kennebec	Campbellton, Fred W.	CMP	25-Jul-1961	1234/33	Fee	150'
	57	Farmingdale	Kennebec	Maine Turnpike Authority	CMP	27-Apr-1972	1600/640	Easement	150'
	58.1	Farmingdale	Kennebec	Auber, Frank L. and Grace C.	CMP	13-Aug-1961	1237/432	Fee	150'
	58	Farmingdale	Kennebec	Auber, Frank L. and Grace C.	CMP	13-Aug-1961	1237/432	Fee	triangle
	60	Farmingdale	Kennebec	Rogers, Arnold L.	CMP	13-Oct-1961	1244/99	Fee	150'
	61	Farmingdale	Kennebec	Warren, Kenneth L. and Benner, Gladys	CMP	8-Nov-1961	1245/473	Fee	150'
	62	Farmingdale	Kennebec	Inhabitants of Town of Farmingdale	CMP	9-May-1962	1264/273	QC	150'
	63	Farmingdale	Kennebec	Ellis, Bruce Edward	CMP	14-Sep-1961	1240/90	Easement	150'
	64	Farmingdale	Kennebec	Lavoie, Edmond and Louise	CMP	29-Sep-1961	1243/60	Fee	150'
	65	Farmingdale	Kennebec	Jewett, Ray P. and Josephine M.	CMP	30-Aug-1961	1237/434	Fee	150'
	66	Farmingdale	Kennebec	Norton, James E. Jr. and Nancy L.	CMP	29-Sep-1961	1243/69	Fee	150'
	67	Farmingdale	Kennebec	Carter, Arthur M.	CMP	9-Oct-1961	1243/65	Easement	triangle
	68	Farmingdale	Kennebec	Pratt, James L. and Margaret G.	CMP	20-Dec-1961	1249/357	Easement	150'
	69	Farmingdale	Kennebec	Norton, James E. Sr.	CMP	10-Oct-1961	1243/67	Easement	150'

Segment 41 (Section 41)								
CMP	Parcel #	Municipality	County	Grantor	Grantee	Date	Book/Page	Type
	1.1	Farmingdale	Kennebec	Fish, Herbert P.	CMP	26927	1678/184	Fee
	1.2	Farmingdale	Kennebec	Barry, Stella M.	CMP	26927	1678/186	Fee
	1.3	Farmingdale	Kennebec	Swift, Carroll T.	CMP	26949	1683/109	Fee
	1.4	Farmingdale	Kennebec	McCaslin, Donald and Betty J.	CMP	26927	1678/188	Fee
	1.5	Farmingdale	Kennebec	Phair, Eldred O. and Teresa	CMP	26927	1678/190	Easement
	8	Farmingdale	Kennebec	Lowell, J. Wilbur	CMP	18188	885/292	Easement
	8	Farmingdale	Kennebec	Nickerson, Mary L.	CMP	43996	580/477	Easement
	9	Farmingdale	Kennebec	McCausland, Alfred B.	CMP	43999	580/476	Easement
	9	Farmingdale	Kennebec	Wood, William	CMP	43997	580/479	Easement
	10	Farmingdale	Kennebec	Elm Brook Farm et al	CMP	43999	580/475	Easement

**CMP Deed Reference Table
(Supplemental)**

Section	Last Name	First Name	Map Lot	Source Document	Book/Page
212	Rogers	William	8/ 14-6	Option	
212	Rogers	William	8/ 14-5	Deed	9952/228-229
212	Rogers	Carol	8/ 14-4	Option	
212	McDonald	Forrest	8/ 14	Deed	9897/323-324
212	Benner	Stephen	8/ 14-1	Deed	10030/116-117
212	Carl Erickson	Roland Ralph	8/ 14-3	Option	
212	Boothby	Gene	8/ 7	Deed	9865/211-212
212	Kalloch	Keith	8/ 14-8	Option	
212	Ellis	Bruce	8/ 11	Option	
212	Ellis	Bruce & Judith	8/8-2	Option	
212	Barnstormers SC	c/o Nancy Frost, President	"	Option	
212	Ellis	Ellen & Robert	8/ 8	Option	
212	Deroche, James	Weber, Laura	8/ 2	Deed	9808/349-350
212	Clark	Debra & Timothy	8/ 4	Option	
212	Young	Alden	8/ 3	Deed	9974/267-268
212	Giles	Lowell & Sandra	7/ 28	Option	
212	McArthur	Richard	8/ 1	Deed	9949/93-94
212	Donovan	Maureen & Timothy	3/ 11	Option	
212	Norton	James & Nancy	2/ 1	Deed	9949/90-92
60	Moran	Winfield	9/ 28	Deed	10104/79-80
60	Beers	Gerald & Tammy	9/ 24A	Option	
60	Durgin	Daniel & Sonja	9/ 23	Option	
60	Valentine	Christine & David	9/ 21 & 22-2	Option	
212	c/o Ted Goucher	Lee Goucher Forest Products	14/ 14	Option	
60	Olah	Tracy Rene	25/15	Option	
60	Vachon	David & Brenda	28/ 20	Deed	9897/80-81
60	Vachon	David & Brenda	28/ 20	Option	
60	Brouillet	Sharon	28/ 21	Option	
60	Webb	Robert	29/ 5	Option	
60	Corkum	Elwood	31/ 148	Option	

EXHIBIT 5
Central Maine Power Company
Environmental Guidelines for Construction and Maintenance
Activities on Transmission Line
and Substation Projects

**EXHIBIT 6
FLOODPLAIN MANAGEMENT**

**Engineers Statement on Applicable Development Standards
Power Engineers, Inc.**

AND

**Floodway Impact Study
TRC Engineers, LLC**



July 13, 2009
Page 2

The Ordinance also requires:

C. use construction methods and practices that will minimize flood damage;

Statement of Compliance:

All contracts for work performed on Central Maine Power Company (CMP) transmission line rights-of-way will include the *Central Maine Power Company Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects (Guidelines)* to ensure the project is constructed in an environmentally conscious manner. CMP personnel or their designated representatives will ensure that the *Guidelines* are followed by inspecting all work and prescribing corrective steps to be taken where necessary. The *Guidelines* contain standards and methods used to protect soil and water resources during construction, reconstruction and maintenance of transmission lines and substations. They are based on practical methods developed for construction in utility corridors (Best Management Practices) and their use is enforced by both State of Maine and Federal regulatory agencies.

As part of the Best Management Practices identified, the *Guidelines* require project superintendents, foremen, and inspectors to monitor weather conditions and reports on an on-going basis and to modify schedules and practices when periods of rain or high water flows are expected. Such modifications may include rescheduling work and removing equipment and materials from an "area of special flood hazard" identified on the Farmingdale Flood Insurance Rate Map in anticipation of a flood event. These practices, along with the other Best Management Practices will serve to minimize any flood damage that may occur during construction of the project.

The Ordinance also requires:

D. use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.

Not applicable. Project within the limits of the Town of Farmingdale does not use electrical, heating, ventilation, plumbing, or air conditioning equipment or other service facilities

Should you have questions related to any of this information, please don't hesitate to contact me at (207) 869-1209.

Sincerely,

Steve Walker, P.E.



c: DMS 116239.40.05.07
PER-03



Project: MPRP
Location: Farmingdale, Me
Project Number: 166247
Client: CMP

Prepared by: DTB
Date: 6/25/09

Floodway Impact Study

Proposed Sections 3025 and 60, Farmingdale, Maine

Purpose of the Study:

Central Maine Power Company (CMP) has initiated the Maine Power Reliability Program (MPRP) to upgrade Maine's aging bulk power transmission systems throughout the state. Approximately 80 communities are located within the MPRP project area including Farmingdale. Sections 60 (115kV) and 3025 (345kV) transmission lines are proposed within an existing 150 to 215 foot corridor in Farmingdale. Portions of Sections 60 and 3025 will be constructed in the Kennebec River 100-year floodplain, Zone AE, as mapped by the Federal Emergency Management Agency (FEMA).

In accordance with the Town of Farmingdale Floodplain Management Ordinance, *"no development shall be permitted within a Zone AE riverine floodway unless a technical evaluation certified by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing development and anticipated development...will not increase the water surface elevation of the base flood more than one foot at any point within the community."*

This study will show that the proposed 115kV and 345kV transmission lines will not increase the base flood elevation by more than one foot; and, it will show the impact to be de minimis.

Study Assumptions:

A determination from the Maine State Planning Office ruled that a transmission line project within a floodplain is to be considered a "development". As such, this development will consist of two lattice tower structures erected within the existing corridor on Brown Island in the middle of the Kennebec River. These towers replace existing structures (one 115kV lattice tower and one 34kV wood H-frame structure) removed to facilitate the line upgrade work. No future development of the corridor is anticipated. For the purposes of this study, each new lattice structure will have four legs and each leg will consist of about 4.86 square feet of steel per foot of flow depth.

Sections 60 and 3025 will cross the Kennebec River 100-year floodplain in between Sections G and H as shown on panel 230164 0008 C of the Town of Farmingdale Flood Insurance Study (panel attached). For this evaluation, the sectional and flooding characteristics of the transmission line crossing will be the calculated averages of the sectional and flooding characteristics of Sections G and H as tabulated in Table 2 (Table attached).

The floodplain width will remain constant at 1438 feet.

Kennebec River Characteristics at Floodplain Crossing (Pre-development):

$$\text{Floodplain_width} := 1438\text{-ft} \quad \text{Flow_Section_Area} := 43900\text{-ft}^2$$

$$\text{Mean_Depth} := \frac{\text{Flow_Section_Area}}{\text{Floodplain_width}} \quad \text{Mean_Depth} = 30.529\text{-ft} \quad \text{Base_Flood_El} := 26.35\text{-ft}$$

$$\text{Existing_Grade_at_Tower_Base} := 20\text{-ft}$$

Kennebec River Characteristics at Floodplain Crossing (Post-development):

$$\text{Depth_of_Flow} := \text{Base_Flood_El} - \text{Existing_Grade_at_Tower_Base} = 6.4\text{-ft}$$

$$\text{Total_Leg_Count} := 8 \quad \text{Based on 2 Structures in Floodway}$$

$$\text{Total_Area_Steel_per_ft} := \text{Total_Leg_Count} \cdot 4.86\text{ft}^2 \quad \text{See worksheet}$$

$$\text{Total_Area_Steel_per_ft} = 38.9\text{-ft}^2 \quad \text{Total Steel Area Perpendicular to Flow per Foot Depth of Flow}$$

$$\text{Total_Steel_Area} := \text{Total_Area_Steel_per_ft} \cdot \frac{\text{Depth_of_Flow}}{\text{ft}} = 246.9\text{ft}^2 \quad \text{Total Steel Area Perpendicular to Flow}$$

$$\text{Est_Width_of_Steel_Obstruction} := \frac{\text{Total_Steel_Area}}{\text{Mean_Depth}} = 8.1\text{ft}$$

$$\text{Effective_Floodplain_width} := \text{Floodplain_width} - \text{Est_Width_of_Steel_Obstruction} = 1429.91\text{ft}$$

$$\text{Revised_Mean_Depth} := \frac{\text{Flow_Section_Area}}{\text{Effective_Floodplain_width}} = 30.701\text{ft}$$

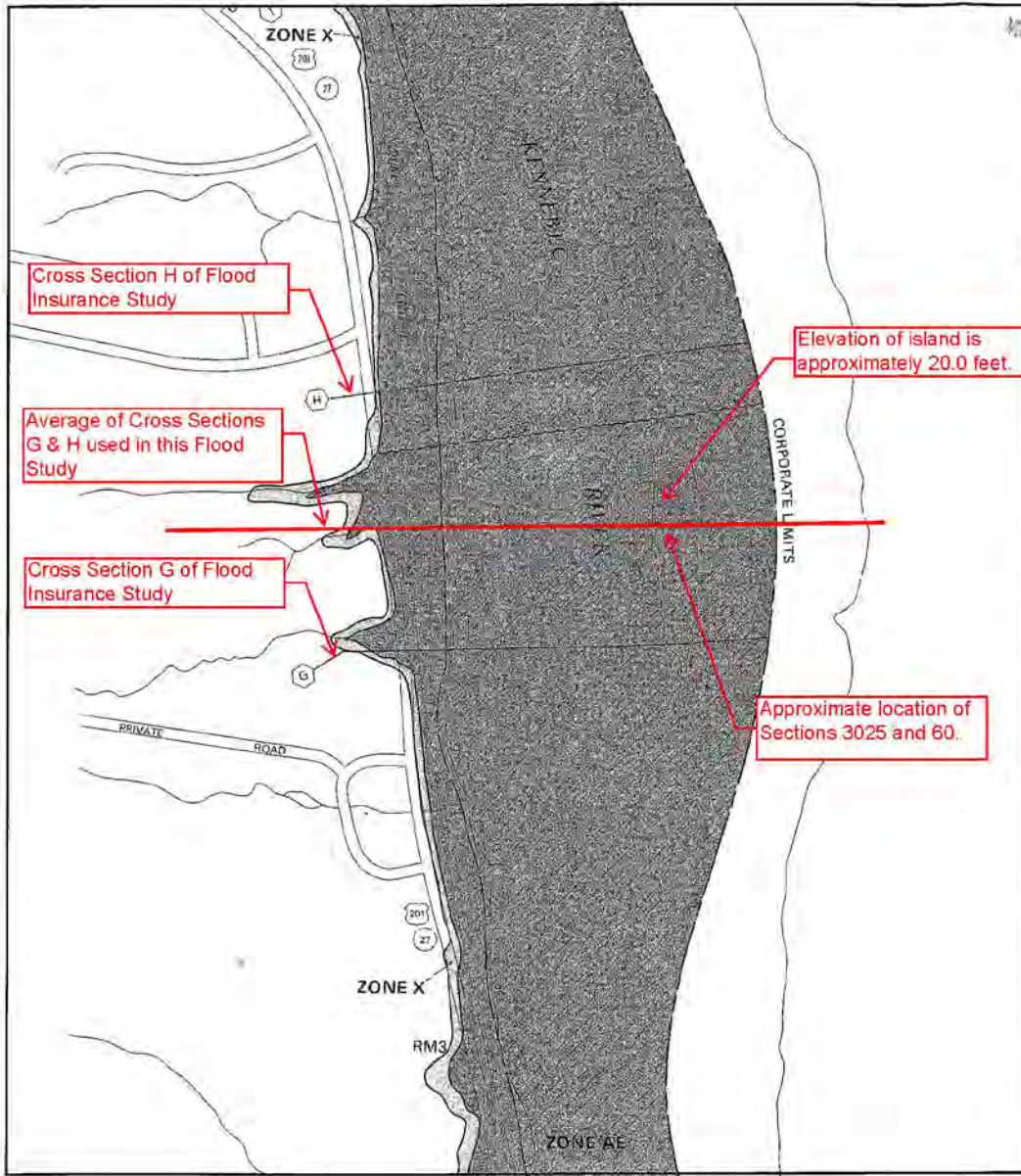
$$\text{Total_Impact} := \text{Revised_Mean_Depth} - \text{Mean_Depth} = 2.07\text{-in}$$

$$\text{Revised_Base_Flood_El} := \text{Base_Flood_El} + \text{Total_Impact} = 26.52\text{-ft}$$

Summary:

The proposed project is estimated to raise the 100-year flood elevation by just over 2 inches. This is less than the 1 foot threshold required in the Farmingdale Floodplain Management Ordinance. However, as stated above, the two new structures replaced two existing structures. As such, the calculated total area of steel perpendicular to flow should only have been the net difference. Reducing the amount of perpendicular steel to the net difference will reduce the estimated rise in the 100-year flood elevation. Furthermore, the calculated increase is based on the assumption the floodplain width will remain constant. In reality, any increase in depth will be less due to the mitigating effect of an increasing floodplain width. Taking the above factors into account, the actual rise in the 100-year flood elevation as a result of this project should probably be between 1 and 2 inches--far less than the 12-inch allowable.

Daniel T. Butler, PE
Manager, Civil & Transmission Engineering Dept.



ZONE A99 To be protected from 300-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X 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.

OTHER AREAS

ZONE X Areas determined to be outside 500-year floodplain.

ZONE D Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS†

Identified 1987 Identified 1990 Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

— Floodplain Boundary

--- Floodway Boundary

- - - Zone D Boundary

Boundaries Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 Base Flood Elevation Line; Elevation in Feet*

(D) — (D) Cross Section Line

(EL 987) Base Flood Elevation in Feet Where Uniform Within Zone*

RM 7x Elevation Reference Mark

•M1.5 River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside special Flood Hazard Areas. The community map revisitors should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only seaward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.


Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.


 APPROXIMATE SCALE
 400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM


FIRM
FLOOD INSURANCE RATE MAP

TOWN OF FARMINGDALE, MAINE
KENNEBEC COUNTY

PANEL 8 OF 10
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230164 0008 C

MAP REVISED:
MAY 2, 1994


Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on this title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.mec.fema.gov

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH ² (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY ³	WATER SURFACE ELEVATION		INCREASE
						WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY	
Kennebec River								
A	370	650/320	24,500	9.0	25.3	23.6	24.2	0.6
B	920	600/270	22,800	9.7	25.3	23.6	24.2	0.6
C	1,840	800/360	27,800	8.0	25.6	24.2	24.8	0.6
D	2,630	893/520	24,500	9.0	25.6	24.2	24.8	0.6
E	3,600	1090/620	33,100	6.7	26.4	25.1	25.7	0.6
F	4,260	1000/525	32,700	6.8	26.4	25.2	25.8	0.6
G	6,530	1400/1110	42,700	5.2	26.7	25.6	26.2	0.6
H	7,510	1475/1075	45,100	4.9	27.1	26.0	26.5	0.5
I	9,050	1012/712	33,400	6.6	27.1	26.0	26.5	0.5
J	10,390	990/400	35,100	6.3	27.4	26.2	26.8	0.6
K	12,490	1350/450	42,300	5.2	27.7	26.6	27.1	0.5

¹Feet above corporate limits

²Width/width within corporate limits

³Elevation computed considering ice-jam effects

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY
TOWN OF FARMINGDALE, ME
 (KENNEBEC CO.)

FLOODWAY DATA

KENNEBEC RIVER



BOOK NO.

PAGE NO.

FILE NO.

SUBJECT FARMINGDALE FLOOD STUDY WORKSHEET

SHEET 1 OF 1

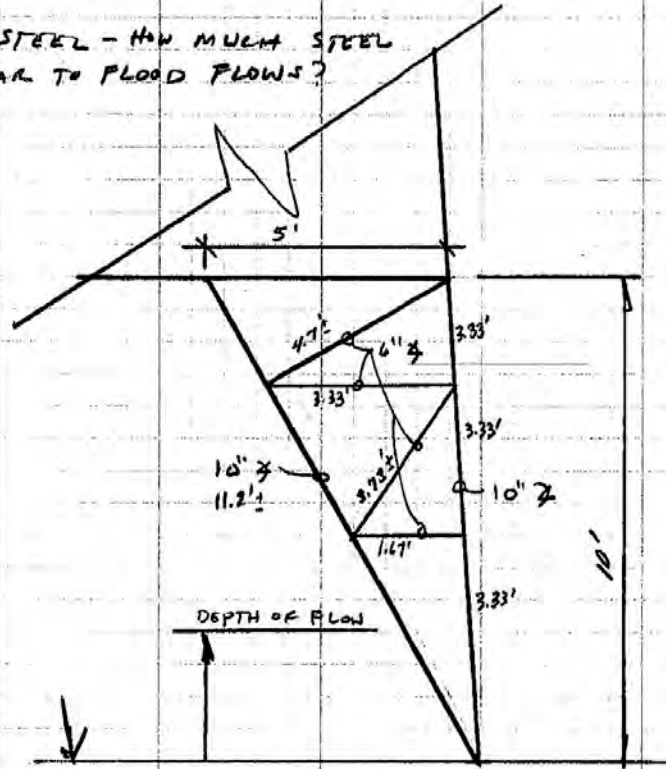
SHEETS

COMPUTED BY DTB

DATE 6/25/09

CHECKED BY

LATTICE TOWER STEEL - HOW MUCH STEEL IS PERPENDICULAR TO FLOOD FLOWS?



TOTAL AREA PER LEG (PERPENDICULAR TO FLOW)

$$6" \times 6" = 13.43' \times 2 \text{ PER LEG} = 26.86' \times 0.5' = 13.43 \text{ ft}^2$$

$$10" \times 10" = 21.2' \times 2 \text{ PER LEG} = 42.4' \times 0.83' = 35.2$$

$$48.6 \text{ FT}^2$$

$$\text{TOTAL AREA OF STEEL PERPENDICULAR TO FLOW} = 48.6 \text{ FT}^2 \text{ PER LEG}$$

$$\text{TOTAL PER FOOT OF HEIGHT} = 48.6 / 10' = 4.86 \text{ FT}^2 / \text{FT}$$

(PER FT OF FLOW HEIGHT)

State of Maine



Department of the Secretary of State

I, the Secretary of State of Maine, certify that according to the provisions of the Constitution and Laws of the State of Maine, the Department of the Secretary of State is the legal custodian of the Great Seal of the State of Maine which is hereunto affixed and of the reports of organization, amendment and dissolution of corporations and annual reports filed by the same.

I further certify that CENTRAL MAINE POWER COMPANY, formerly THE MESSALONSKEE ELECTRIC COMPANY is a duly organized business corporation under the laws of the State of Maine and that the date of incorporation is July 20, 1905.

I further certify that said business corporation has filed annual reports due to this Department, and that no action is now pending by or on behalf of the State of Maine to forfeit the charter and that according to the records in the Department of the Secretary of State, said corporation is a legally existing business corporation in good standing under the laws of the State of Maine at the present time.

In testimony whereof, I have caused the Great Seal of the State of Maine to be hereunto affixed. Given under my hand at Augusta, Maine, this sixth day of January 2009.



A handwritten signature in black ink, appearing to read "Matthew Dunlap".

MATTHEW DUNLAP
Secretary of State