

Section 19 Flooding

9.0 Explanation of Flooding Impact

The project includes approximately 59 miles of 115-kilovolt transmission line and an upgrade of an existing substation at Keene Road in Chester. The substation upgrade will occur within the existing fence line. Other than poles, there are no permanent structures to be constructed within the 100-year floodplain. The pole structures have very small footprints and will not consume any flood storage capacity. Therefore, the proposed project will not cause or increase flooding, or cause a flood hazard to any existing structure. Furthermore, these structures will not have an unreasonable effect on runoff infiltration relationships in accordance with the “No Adverse Effect Standard” of the Site Location of Development Law.

Large sections of the proposed transmission line have been deliberately located adjacent to an existing right-of-way, fields, and cleared areas to minimize unnecessary clearing of forest cover. However, forest cover will be cleared along several sections of the route; resulting in their conversion to scrub-shrub or early successional cover. Generally, this conversion will improve the ability of the land to absorb runoff due to the increased density of the root mass associated with the resultant vegetative cover.

As discussed in Section 12, Stormwater, the construction of the transmission line does not change the hydrology of the project area. The surface area to be occupied by the new structures is inconsequential and thus, there will not be an unreasonable effect on runoff infiltration relationships. The project will be designed, constructed, and maintained such that the flooding extent and frequency of flooding of downstream waterbodies will not be increased and the 100-year flood elevations will not be adversely affected.

9.1 Federal Emergency Management Agency Mapping

Q3 Flood Data are developed by the Federal Emergency Management Agency (FEMA) by scanning the existing hardcopy Flood Insurance Rate Maps (FIRMs), published by FEMA at a scale of 1:24000, and vectorizing a thematic overlay of flood risks. Q3 Flood Data files contain certain key features (e.g., areas inundated by 100-year flooding for which base flood elevations have been determined) from the existing hard copy FIRMs.

Appendix 19-1 provides overlays of the proposed transmission line ROW and available Q3 Flood Data that illustrate where the ROW crosses mapped flood zone areas in the Towns of Chester and Mattawamkeag. FIRMs are not available for Woodville or the portions of Aroostook County where the Maine GenLead project crosses waterways.

As shown in Appendix 19-1, mapped floodplains intersected by the project are associated with pole construction within the 100-year flood zone. The 115-kilovolt transmission line crosses three areas with mapped 100-year flood plains. Only two of the mapped floodplains will be impacted, Medunkeunk and Ebhorse Streams, both in Chester. Two transmission line structures would be located in these flood plain areas. Table 19-1 provides a listing of the areas with mapped 100-year flood zones crossed by the proposed transmission line, their approximate crossing widths, and structures that would be located in the mapped flood plains.

Table 19-1. Mapped 100-Year Flood Plains Crossed by the Maine GenLead 115kv Transmission Line

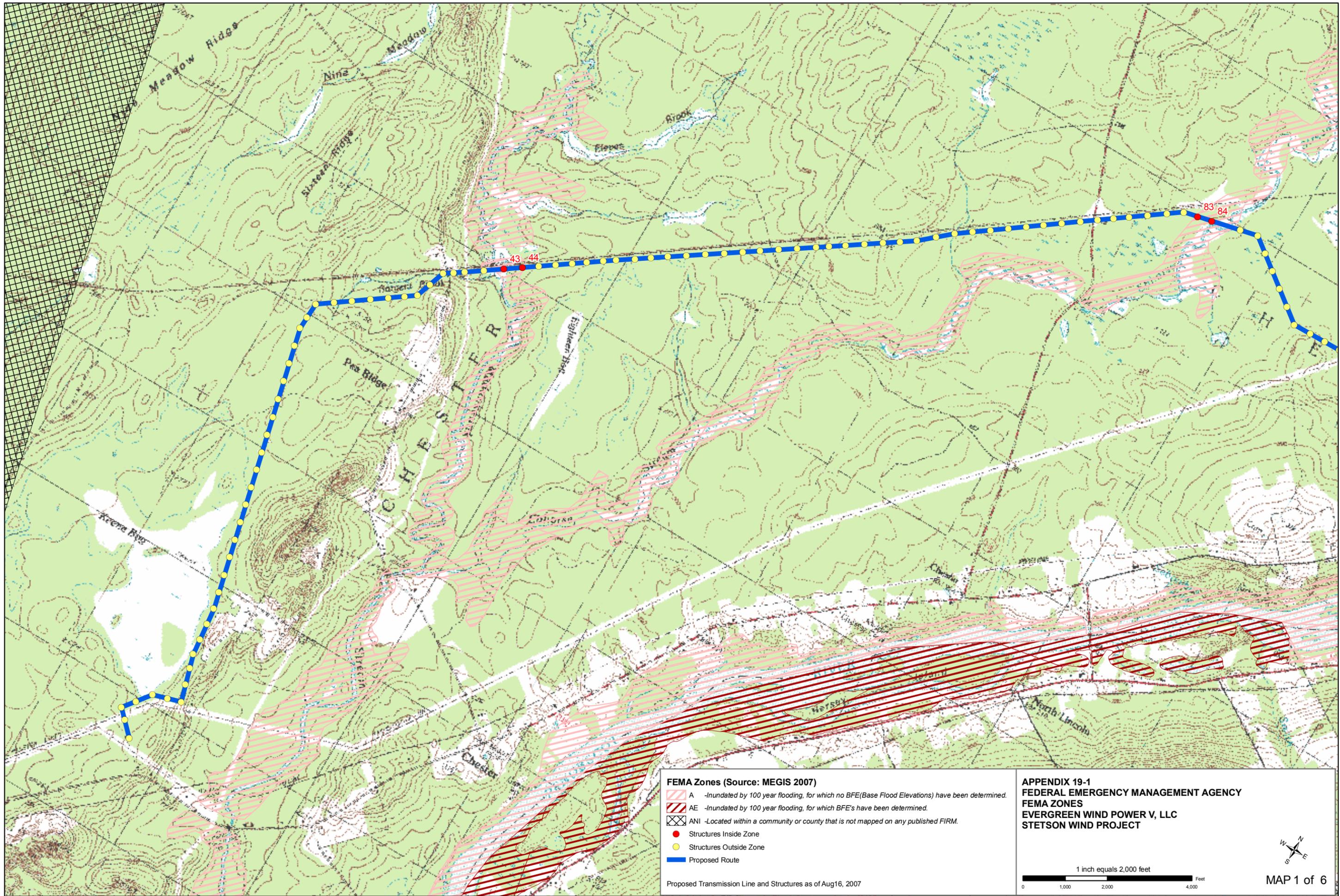
Stream/Wetland	Town	Approximate Crossing Width (Feet)	Structures within Mapped Floodplain (Structure No.)
Medunkeunk Stream	Chester	633	39
Ebhorse Stream	Chester	882	77
Penobscot River	Mattawamkeag	425	None *

- The south shore of the Penobscot River crossing in Woodville is not FEMA mapped.

Clearing within the flood zones for the transmission line ROW will result in the conversion of approximately 2.65 acres of floodplain forest cover to scrub-shrub and early-successional types. This should not have any adverse effect on flooding, and may have a small net positive hydrologic effect, as discussed above.

Because there are only two structures in the floodplain and minimal permanent footprint associated with them, there will be no increase in the incidence of flooding from this project. Neither the construction activities nor operation of the transmission line will cause the loss of flood water storage. Alteration of the existing topography and natural drainage-ways is not planned. The applicant will manage ground cover types in the ROW to promote growth of shrubs and grasses. Therefore, the project will not increase the potential for flooding.

Appendix 19-1



- FEMA Zones (Source: MEGIS 2007)**
-  A -Inundated by 100 year flooding, for which no BFE(Base Flood Elevations) have been determined.
 -  AE -Inundated by 100 year flooding, for which BFE's have been determined.
 -  ANI -Located within a community or county that is not mapped on any published FIRM.
 -  Structures Inside Zone
 -  Structures Outside Zone
 -  Proposed Route

Proposed Transmission Line and Structures as of Aug16, 2007

**APPENDIX 19-1
FEDERAL EMERGENCY MANAGEMENT AGENCY
FEMA ZONES
EVERGREEN WIND POWER V, LLC
STETSON WIND PROJECT**

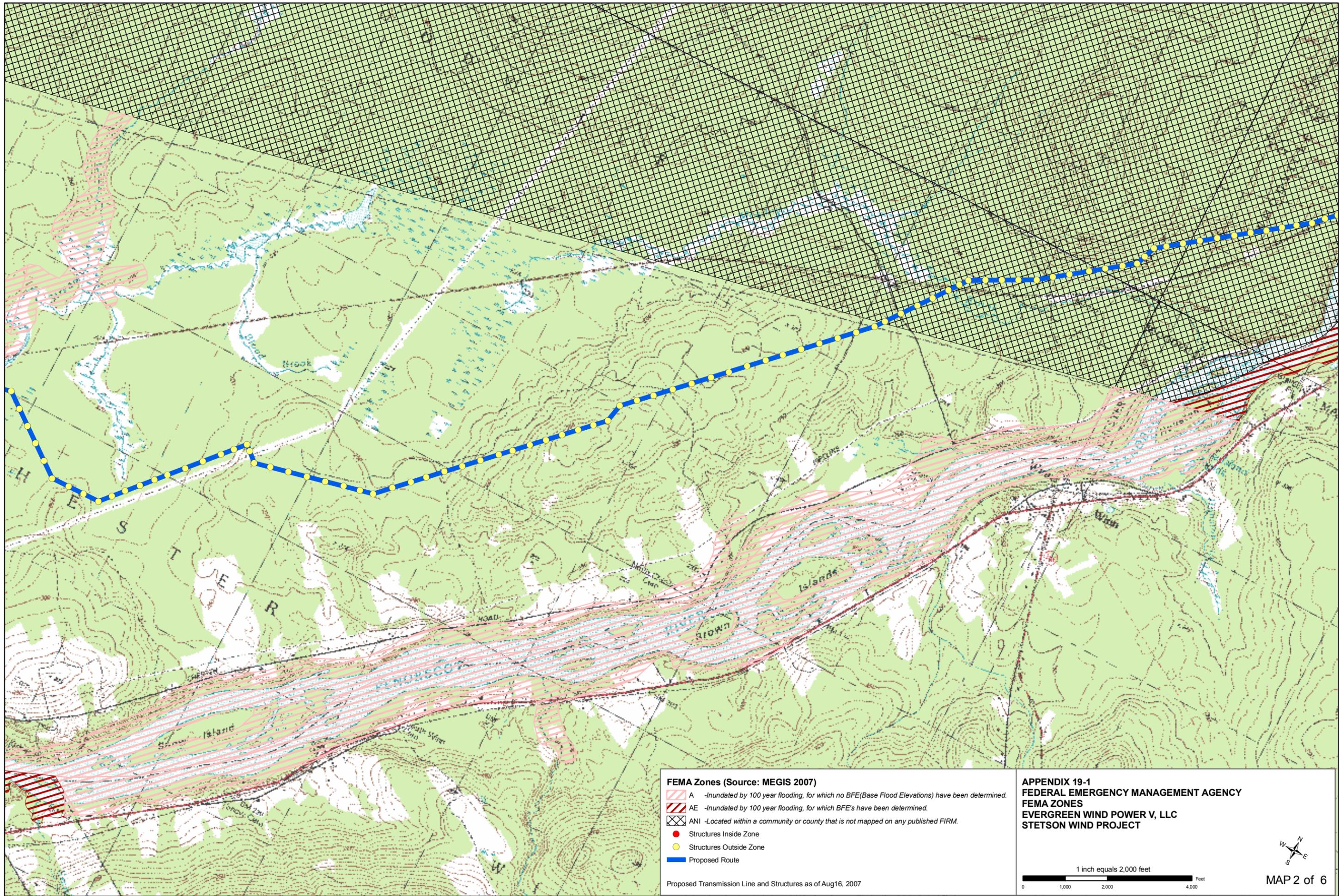
1 inch equals 2,000 feet



0 1,000 2,000 4,000 Feet



MAP 1 of 6



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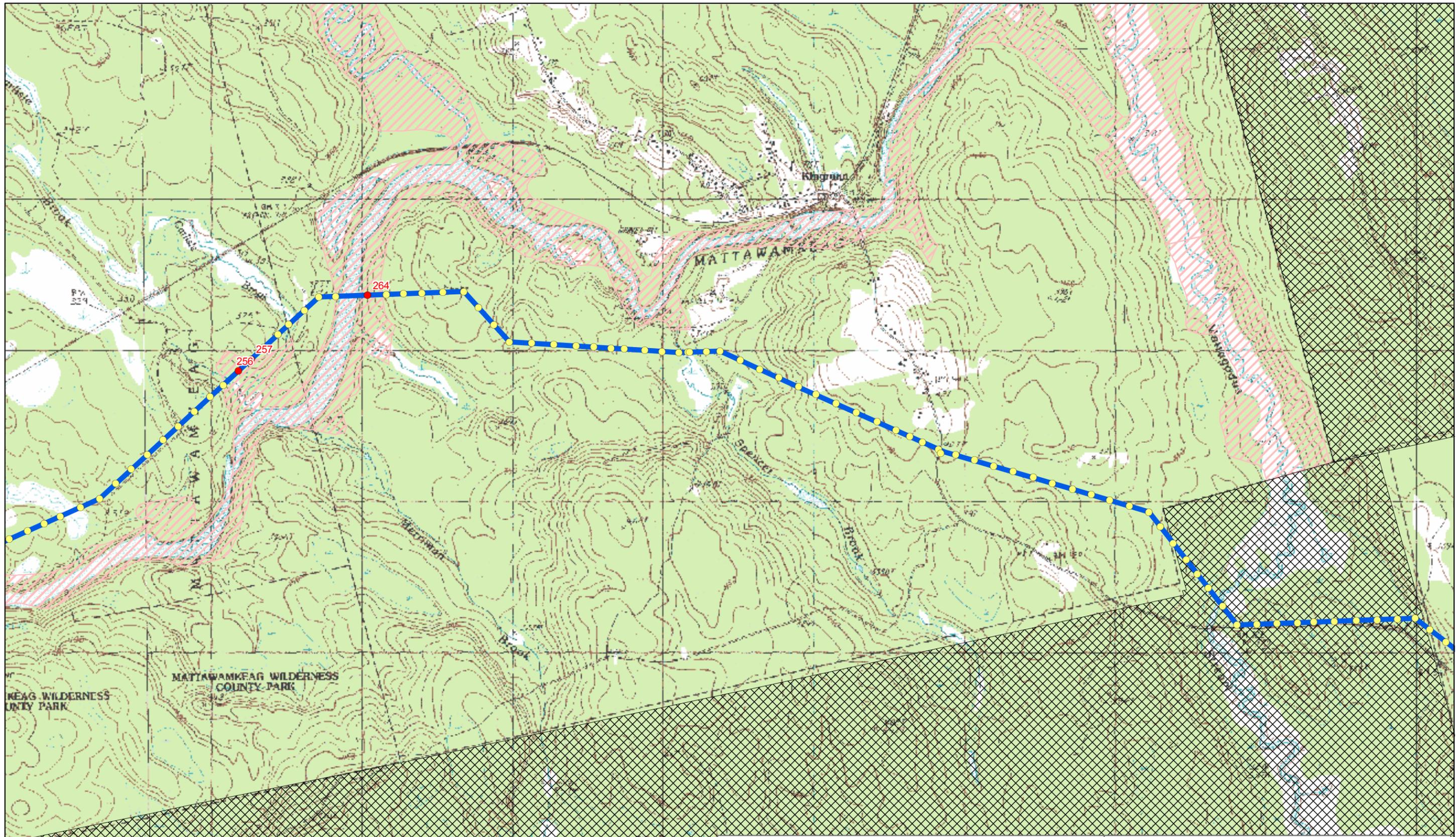
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MAP 3 of 6



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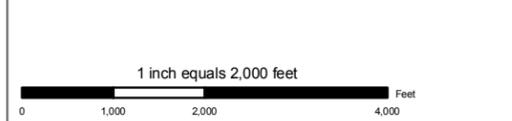
MAP 4 of 6

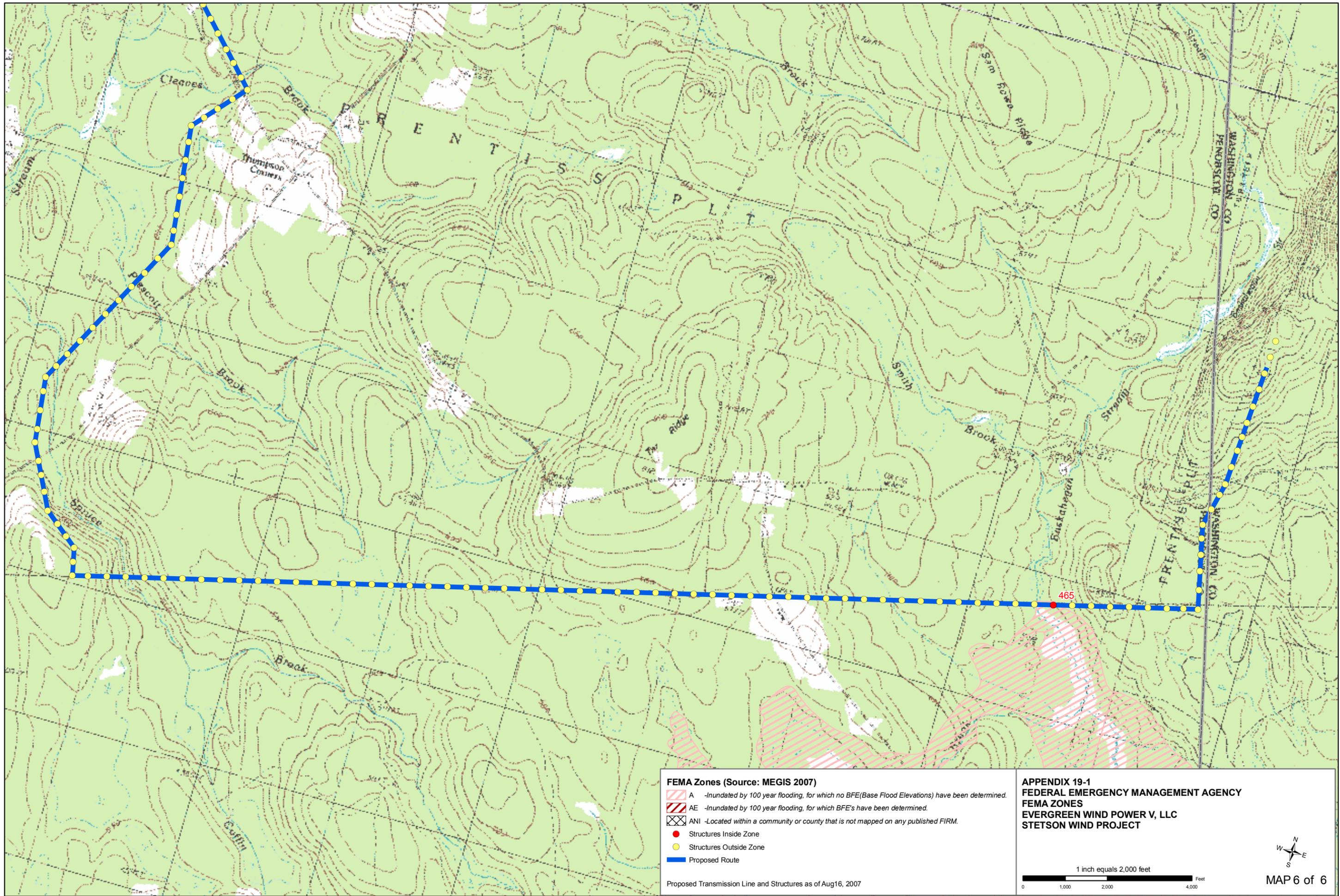


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