

NextEra Energy Transmission New York, Inc.

(NEETNY)

Empire State Line

Case 18-T-0499

Appendix V

Comprehensive Gas and Pipeline Facilities Safety Plan

September 2020



EMPIRE STATE LINE PROJECT
GAS AND PIPELINE FACILITIES SAFETY PLAN
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1.0 Project Description

The Project includes an approximately 20-mile 345-kilovolt (kV) transmission line and associated facilities in the town of Royalton in Niagara County, New York, and the towns of Alden, Newstead, Lancaster, and Elma in Erie County, New York, respectively. The Project includes a new 345 kV switchyard (Dysinger Switchyard) in Niagara County, which will become the new 345 kV hub in Western New York where seven 345 kV lines will connect. It also includes a second new switchyard (East Stolle Switchyard) in Erie County to be connected to the existing New York State Electric & Gas Corporation (NYSEG) Stolle Road Substation. The approximately 20-mile 345 kV transmission line (Project Line) will connect the Dysinger and East Stolle Switchyards. In turn, the Dysinger Switchyard will be connected to the Power Authority of the State of New York (NYPA) 345 kV Niagara lines via two double-circuit structures approximately 0.30 miles in length and the NYSEG 345 kV Kintigh lines via two single-circuit transmission lines approximately 0.15 miles in length (Dysinger Tie-Ins). The East Stolle Switchyard will be connected to the NYSEG Stolle Road Substation via single circuit structures approximately 0.2 miles in length and NYSEG 345 kV Stolle Road to Homer City transmission line via single-circuit structures approximately 0.2 miles in length (East Stolle Tie-Ins). Transmission line structures will consist primarily of steel monopoles. The Project Line will primarily be built within the existing NYSEG Utility Corridor.

2.0 Purpose

This Appendix V is NextEra Energy Transmission New York Inc.'s (NEETNY) Comprehensive Gas Line Safety Plan for the Empire State Line Project (Project). Project design and construction will comply with the electric and magnetic field standards established by the Commission in Opinion No. 78-13, issued June 19, 1978, and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, issued September 11, 1990. Construction will also avoid adverse effects on the cathodic protection system and physical conditions of existing structures and any fuel gas pipelines within the Project right of way (ROW) and within 25 feet of the edge of the Project ROW.

Construction practices will be implemented by the Construction Contractor to avoid impacts on underground utilities and will comply with the requirements for the protection of underground facilities set forth in 16 New York Codes, Rules and Regulations Part 753 "Protection of Underground Facilities." Initial coordination has been conducted with the owners of underground utilities that could be impacted during construction. Encroachments over underground utility

ROWs will not be avoidable. However, NEETNY will work directly with the affected utilities to minimize or avoid impacts and promote safety during construction.

3.0 Crossing Locations

Underground pipeline crossing locations are shown on the Plan and Profile drawings in Appendix A of the EM&CP.

4.0 Crossing Methods

The following methods will be used when underground utilities are crossed:

1. Crossing of underground utilities will include installing temporary timber air bridges to avoid impacts or rutting over pipelines as shown on drawing EST-D-T010-2 in Attachment A (refer to the “Temporary Construction Ramp Over Pipeline” drawing);
2. Crossing will be conducted at 90-degree angles, to the maximum extent possible, but not at less than 45 degrees;
3. Encroachment into the Project ROW will not commence without prior notice to the granting pipeline utility and presence of the granting utilities pipeline representative on site to confirm crossing locations and safety procedures during the initial road or power line installation; and
4. Longitudinal occupancy of the pipeline ROW will be minimized.

5.0 On-site Emergency Access Procedures

The Construction Contractor will implement the following measures in the field to ensure inspection, maintenance, and emergency access to underground utilities:

1. Equipment or materials will not be stored within pipeline ROWs;
2. Soil or topsoil stockpiles will not be stored within pipeline ROWs;
3. Vehicle and equipment parking will not be allowed within pipeline ROWs;
4. Access will not be constructed to allow the impoundment of water or erosion of earthen cover over existing underground facilities;
5. Stormwater measures will not be installed on pipeline ROWs that could prevent emergency access;

6. Fencing will not be installed within the pipeline ROW that inhibits access or line of sight inspection;
7. Obstructions will not be installed to prevent clear visible inspection by aerial measures from utility owners;
8. The ROW will be maintained in free and clear manner to facilitate emergency access; and
9. If a pipeline is hit and ruptured during construction, the Construction Contractor will evacuate crew members, call 9-1-1 and notify the utility.

6.0 Survey Marking

Prior to construction, the Construction Contractor will notify Dig Safely New York to identify underground utility locations. The Construction Contractor will meet with the utility representative to identify the location of the underground utility. After the pipeline is located in the field, flagging will be installed to delineate the approved crossing location, tolerance limits, and ROW setbacks. The following marking techniques will be used in the field:

1. Stakes or surface markings will be provided at the center of the line and at an interval that is necessary to clearly indicate the location and direction of the pipeline run;
2. Stakes and surface markings will be color-coded in accordance with New York State Law to identify the type of underground facility and owner;
3. Stakes and surface marking will indicate the size and diameter of the underground facility or encasement;
4. Each stake and surface marking will indicate the depth in inches of the underground facility, if known;
5. Surface markings will consist of paint, dye, or equivalent material that is color coded and contrasts with the ground or equivalent surface; and
6. Where conditions exist to render centerline staking or marking impractical or confusing, the operator may indicate the location of the underground facility by offset staking or remote tie-in markings that will clearly indicate the location of and run direction.

7.0 Construction Activity Limitations

Construction activities impacting underground utilities will be limited to crossing with heavy equipment. Crossings are anticipated to be done through the installation of timber bridges.

At no time will construction activities of any kind be conducted within any distance of an underground pipeline or related facility that would result in violation of a pipeline owners' standard/rules without prior notification to the owner(s) and without providing the owner or owner's appointed representative the opportunity to be present.

Other construction activity limitations around underground facilities include:

- Construction equipment will not be allowed to encroach into pipeline ROWs without written approval by the utilities;
- Construction equipment will only be allowed to cross at approved locations, provided in writing by the utility;
- Stockpiling of soil or topsoil on the pipeline ROW will not be allowed;
- Material or equipment storage on the pipeline ROW will not be allowed;
- Parking of vehicles or equipment will not be allowed on the pipeline ROW;
- If excavations are required, hand digging will be required when the excavation is within 18 inches of the pipeline;
- Grade cuts within the pipeline ROW are not allowed, unless approved by the utility in writing;
- Blasting within the pipeline ROW will not occur without a Blasting Plan that is approved in writing by the utility owner;
- Vibration equipment will not be allowed within 25 feet of the of the pipeline;
- No temporary or permanent obstructions will be allowed within the pipeline ROW; and
- Pipeline restoration will occur immediately after construction is complete within the ROW and will be conducted in accordance with the approved encroachment permit.

8.0 Cathodic Protection

NEETNY identified one facility in proximity to the Project requiring cathodic protection evaluation – the NYSEG Compressor Station. This facility is shown on sheet EST-D-T009-1 of the Plan and Profile Drawings in Appendix A of the Environmental Management and Construction Plan (EM&CP). Prior to the Project being placed in service, AC interference measurements will be recorded on the piping systems at this Compressor Station. This data will provide a baseline for any AC voltages at the Compressor Station prior to energization of this Project. After the Project is constructed and placed

into service, NEETNY will evaluate the effects of the Project on NYSEG’s existing cathodic protection system for the Compressor Station to ensure compatibility with the electric facility design and that alternating current (AC) interference imposed upon the existing gas facilities are mitigated to safe levels according to the National Association of Corrosion Engineers (NACE) guidelines. If further AC interference from the Project is detected after the Project is placed into service, NEETNY will implement AC interference testing procedures. As soon as is practical to do so, corrective action with respect to the gas facilities’ existing cathodic protection system, safety hazards, and fault threats will be taken by NEETNY to ensure measured voltages on the natural gas pipeline and at the Compressor Station are not higher than safe levels stated in NACE guidelines.

9.0 AC Mitigation

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

The existing pipelines are subject to AC electrical interference effects, depending on the location, of one to five existing NYPA and NYSEG electric transmission circuits; as well as the 345 kV NEETNY electric transmission circuit. The ARK study also examined the impacts of the Dysinger Tie-Ins and East Stolle Tie-Ins.

The ARK study presents the predicted AC electrical interference effects on the pipelines during normal peak load conditions on all electric transmission circuits within the overall existing system

ROW. Normal peak load conditions, as determined by NEETNY, are considered to be peak load conditions during normal operation. These predicted AC electrical interference effects take into consideration any of the existing mitigation systems that may exist along the pipeline segment(s).

Single phase-to-ground fault conditions on the electric transmission circuits were also simulated to determine the effects of AC inductive and conductive coupling on the pipelines.

Normal peak load electric circuit conditions were used to calculate the effects of steady-state AC interference on the pipelines. The induced AC pipeline voltage values used in this analysis and their effects are outlined in NACE Standard SP0177-2019. This standard indicates that pipeline AC touch voltages of 15 volts or more are considered a safety hazard for personnel.

NACE Standard SP21424-2018 outlines AC corrosion mechanisms that may occur on cathodically protected pipelines. This standard defines levels of AC density, the effect on pipelines, and remediation methods. For this project an AC density limit of 30 amperes per square meter (A/m^2 ; based on a simulated 1 cubic centimeter [cm^3] holiday) been defined as the design limit.

Single phase-to-ground fault conditions were used to calculate touch and step potential values. IEEE Standard 80 outlines touch and step potential issues and calculations for aboveground electric substation facilities. The pipeline industry also uses this standard for calculation of touch and step potentials at aboveground pipeline appurtenances associated with AC interference effects.

These calculations determine electric shock limits based on local factors. The voltage limit calculation is determined by the ground potential rise at the site along with the soil resistivity and known body current limits.

9.2 AC Mitigation

Of the seven pipeline systems modeled and analyzed as part of this AC interference analysis and mitigation system design, five pipeline systems require AC mitigation systems to reduce the AC interference effects from the Project and existing electric circuits.

The AC mitigation requirements for each pipeline operator vary based on pipeline location with respect to the electric circuits and influence from these circuits. Below is a brief description of the AC mitigation recommendations for each pipeline operator. Additional information is outlined in the AC mitigation design drawing packages for each pipeline operator (see Attachment ██████████



This zinc ribbon grounding conductor will be installed horizontally along the pipeline in sections in a 2-to-4-foot-wide trench at a depth of approximately 3-to-5 feet below grade. The installation will be offset from the pipeline at a distance of 1-to-25 feet depending on the requirements of the specific pipeline operator. At specified locations along each section of zinc ribbon grounding conductor, the zinc ribbon will be electrically connected to the pipeline through a direct current decoupling device (SSD). This connection allows AC current to flow from the pipeline to the zinc ribbon grounding conductor thereby reducing the AC interference effects to the pipeline. These connection points are routed through the SSD device, which is designed to be located above ground and mounted in a pedestal for testing and maintenance of this system.

Daily footage for the installation of this AC mitigation system is expected to be between 500 feet and 750 feet of zinc ribbon grounding conductor per day. This includes the SSD connections and installations.

The following is an outline of the installation and management procedures for an AC Mitigation System Installation:

1. Prior to any excavations, an 8-1-1 or (One Call) will be placed, and all locates will be verified by the installation contractor. If there are any conflicts, such as a foreign pipeline in the area, the installation contractor will notify the pipeline owner and get authorization and procedures to cross the foreign structure. In addition, any private landowners along the ROW shall be notified to determine if any private utilities are in conflict with the Project AC mitigation installation.
2. Pipe validation procedures will be reviewed and determined with the pipeline owner/operator. Examples of pipe validation can include, but are not limited to; probing/wet probing, conductive/inductive pipe locators, and mechanical excavations of the pipe. It is a pipeline safety recommendation that mechanical digging equipment will not be used within 2 feet of the pipe and/or pipeline equipment.
3. The zinc ribbon grounding conductor will be installed according to environmental conditions by vibratory plow or trenching with a rock saw type trencher.
4. The pipeline connection leads (negative connection) for the SSD will require exposing the top of the pipeline for the electrical connection. This method and procedures will be discussed and approved by the pipeline operator prior to commencement of this work. These connections will be exothermically welded or pin brazed to the pipeline.
5. Depending on the existing coating type on the pipeline, a coating removal tool (bristle blaster) will be utilized to remove the existing coating and establish an anchor profile for the approved repair coating to be used.
6. Prior to exothermic welding or pin brazing on the pipe for the connections, an ultra-sonic test for thickness will be administered to confirm adequate pipe wall thickness for these connections.
7. Prior to applying the repair coating, environmental and technical measurements will be recorded inside the excavated hole. All readings will be documented on the installation contractors exothermic weld/pin braze sheets. If all readings are within the manufacturer's specifications, the coating can be applied.
8. The pipeline leads (negative connection) will be checked for continuity prior to backfilling the excavated SSD location.
9. SSDs and pedestals will be placed directly over pipeline, unless specified for relocation by the pipeline operator's representative.

10. The installation of the zinc ribbon and the SSDs and connections will be installed per an approved drawing package. The zinc ribbon and the SSDs are to be placed at the station numbers or Global Positioning System coordinates in accordance with the approved design drawing package. Changes made to the placement of AC mitigation equipment must be approved by ARK.

Please refer to the AC mitigation system design drawing packages in Attachment B for additional information on the design, installation, and materials for the AC mitigation system.

In summary, with the addition of the Project, the AC mitigation system design by ARK reduces the pipeline AC electrical interference effects to acceptable levels for personnel safety and pipeline integrity.

9.2.1 Environmental Considerations for AC Mitigation

Environmental Considerations for AC Mitigation

As discussed below, AC mitigation will be completed in a way that avoids and/or minimizes environmental impacts to the greatest extent possible. NEETNY completed environmental field surveys of AC mitigation areas during August 2020 where land access was available. The limits of completed environmental surveys for AC mitigation areas are shown on the Plan and Profile drawings in Appendix A of the EM&CP. As of September 9, 2020, approximately 80% of the AC mitigation areas have been surveyed. NEETNY will complete the remaining field surveys as access is obtained from landowners and field survey results will be provided to the Department of Public Service (DPS) in a supplemental filing.

As discussed with DPS Staff, NEETNY is requesting approvals from other regulatory agencies for AC mitigation activities separate from pending approvals for the overall ESL Project. Specifically, NEETNY has confirmed with the U.S. Army Corps of Engineers that a separate Nationwide permit can be issued for AC mitigation. NEETNY will submit the Nationwide permit application to USACE once full survey access is obtained and remaining stream and wetland surveys have been completed. Likewise, NEETNY confirmed with the New York State Historic Preservation Office (SHPO) on August 13, 2020, that SHPO will be conducting a review of AC mitigation separate from the ESL Project. As noted below, NEETNY submitted a project review letter to SHPO for AC mitigation on September 16, 2020.

Access Roads

Based on the small size of the trenching device that will be used to install the zinc ribbon conductor, and given that it will make a single pass to complete the installation, no new access roads need to be constructed for AC mitigation. The trenching device will travel overland along designated pathways, as shown on the Plan and Profile drawings in Appendix A of the EM&CP. Temporary equipment matting will be installed where the pathways cross saturated or inundated agricultural fields or wetlands to avoid rutting in these areas.

Stormwater Pollution Prevention – Erosion and Sediment Control Procedures

A permanent seed mixture and mulch will be installed immediately after the trench has been backfilled to stabilize disturbed areas. If conditions require crews to leave the site prior to stabilizing disturbed areas, compost sock will be installed on the down slope side of the work area to prevent off-site sediment discharge.

Waterbodies

Table 1 identifies each surface water delineated along the length of the AC mitigation. Each stream crossing, stream crossing method, and stream crossing protective measure is identified on the Plan and Profile drawings in Appendix A of the EM&CP.

AC mitigation has been designed in such a way that the zinc ribbon conductor will not cross streams. The conductor will only extend to within approximately 5 feet of the top of the bank of the stream, where it will terminate. It will then continue from the opposite side of the stream at the same distance from the adjoining top of the bank. Consequently, no trenching activity will be completed in streams to install the AC mitigation.

Access roads have also been designed to minimize stream impacts. Construction equipment will only cross streams where necessary in order to access AC mitigation areas on opposite sides of streams. In such cases, a temporary access bridge will be installed across the stream. Please refer to Section 5.3.1 of the EM&CP narrative for a description of temporary access bridges.

Table 1 Waterbodies Crossed by AC Mitigation

Town	Stream Name	Field/ Map Identification Name	Flow Regime	New York Stream Classification	Crossing Method¹	Crossing Length² (ft)	Fishery Type	GPS Coordinates
Royalton	Mud Creek	S-T03-001	Perennial	C	N/A	N/A	Warm Water	43.11069 -78.56304
Newstead	UNT to Beeman Creek	S-T05-001	Perennial	C	Temporary Access Bridge (2)	12, 10	Warm Water	43.01393 -78.54618
Newstead	UNT to Beeman Creek	S-T01-026	Ephemeral	D	N/A	N/A	N/A	43.00200 -78.54065
Newstead	Dorsch Creek	S-T02-001	Perennial	C (T)	N/A	N/A	Cold Water	42.95669 -78.55482
Lancaster	UNT to Cayuga Creek	S-T02-017	Perennial	C	Temporary Access Bridge	30	Warm Water	42.89134 -78.58693
Lancaster	UNT to Cayuga Creek	S-T01-021	Intermittent	D	Temporary Access Bridge	3	N/A	42.88271 -78.58844
Lancaster	UNT to Cayuga Creek	S-T01-019	Intermittent	D	Temporary Access Bridge	4	N/A	42.87945 -78.58843
Lancaster	UNT to Little Buffalo Creek	S-T01-015	Ephemeral	D	N/A	N/A	N/A	42.87315 -78.58792
Lancaster	UNT to Little Buffalo Creek	S-T01-014	Intermittent	D	N/A	N/A	N/A	42.87302 -78.58804
Elma	UNT to Little Buffalo Creek	S-T01-012	Intermittent	D	Temporary Access Bridge	2	N/A	42.86124 -78.58132
Elma	UNT to Little Buffalo Creek	S-T01-010	Perennial	C	Temporary Access Bridge	14	Warm Water	42.85671 -78.58112
Elma	UNT to Little Buffalo Creek	S-T01-017	Intermittent	D	N/A	N/A	N/A	42.85620 -78.58121
Elma	UNT to Little Buffalo Creek	S-T08-002	Perennial	D	Temporary Access Bridge	4	N/A	42.85423 -78.58246
Elma	UNT to Little Buffalo Creek	S-T01-005	Perennial	C (T)	N/A	N/A	Cold Water	42.84330 -78.58030
Elma	UNT to Little Buffalo Creek	S-T07-003	Perennial	C (T)	Temporary Access Bridge	2	Cold Water	42.842703 -78.581595

Table 1 Waterbodies Crossed by AC Mitigation

Town	Stream Name	Field/ Map Identification Name	Flow Regime	New York Stream Classification	Crossing Method¹	Crossing Length² (ft)	Fishery Type	GPS Coordinates
Elma	UNT to Little Buffalo Creek	S-T01-003	Perennial	C	N/A	N/A	Warm Water	42.83779 -78.58032

¹ “N/A” crossing methods denote streams present along the path of AC mitigation that will not be crossed by the underground zinc ribbon conductor or require temporary equipment crossings. They are included herein due to their close proximity to the construction workspace.

² Crossing lengths calculated using the centerline of the proposed access across delineated stream polygons.

NEETNY will follow other standards and procedures for protecting streams along the AC mitigation routes, as listed in Section 5.3.3 of the EM&CP narrative.

Wetlands

Table 2 summarizes each delineated wetland crossed by the AC mitigation. Each wetland crossing, wetland crossing method, and wetland crossing protective measure is identified on the Plan and Profile drawings in Appendix A of the EM&CP.

Construction activities in wetlands to complete the AC mitigation will include installing temporary timber matted access roads and areas for temporary equipment staging, and minor trenching and backfilling.

A narrow trench approximately 1 to 2 feet wide and 3 to 4 feet deep will be excavated in the wetland crossings. Topsoil will be segregated from the subsoil and placed immediately adjacent to the trench. The trench will be backfilled with only suitable material excavated in kind and the disturbed area returned to existing grade immediately following placement of the zinc ribbon conductor, generally no more than 8 hours after initial excavation.

Temporary timber matting will be used to transport equipment across wetlands. The timber matting will be installed on the surface of wetlands and not allowed to impact surface flow, if present. If field conditions require stacking of timber mats within a wetland, gaps will be installed in the mats to allow flowing water to pass under or through the mats.

As noted in Table 2, some limited forested wetland conversion is anticipated to install the AC mitigation. As the exact location of AC mitigation activities are defined within the survey corridor NEETNY will make every effort to avoid any forested wetland clearing.

NEETNY will follow other standards and procedures for protecting wetlands crossed by the AC mitigation routes, as listed in Section 6.4.2 of the EM&CP narrative.

Table 2 Wetlands Crossed by AC Mitigation

Town	Wetland Field ID	NYSDEC Wetland ID (Classification Code)	Wetland Cover Type	Wetland Principal Functions and Values	Temporary Disturbance (acres) ¹	Temporary Forested Wetland Conversion (acres) ¹	
						NYSDEC Forested Wetland Conversion	Other Forested Wetland Conversion
Royalton	W-T04-001	N/A	PEM/PFO	Floodflow Alteration Nutrient Removal Wildlife Habitat	0.03	N/A	0.01
Royalton	W-T04-002	WO-17 (III)	PEM/PSS/PFO	Floodflow Alteration Nutrient Removal Wildlife Habitat	1.60	0.19	N/A
Royalton	W-T03-007	WO-17 (III)	PEM	Floodflow Alteration Sediment/Toxicant Retention Wildlife Habitat	0.61	N/A	N/A
Newstead	W-T04-020	WO-15 (II)	PEM/PSS/PFO	Floodflow Alteration Wildlife Habitat	0.20	N/A	N/A
Newstead	W-T16-011	N/A	PEM/PFO	Wildlife Habitat	0.04	N/A	N/A
Newstead	W-T15-012	N/A	PEM/PSS	Wildlife Habitat	0.06	N/A	N/A
Newstead	W-T01-028	N/A	PEM	Sediment/Toxicant Retention	0.01	N/A	N/A
Newstead	W-T01-027	N/A	PEM/PSS/PFO	None	0.52	N/A	0.05
Newstead	W-T01-024	N/A	PEM/PFO	Floodflow Alteration	0.05	N/A	N/A
Newstead	W-T16-008	N/A	PEM	Nutrient Removal	0.21	N/A	N/A
Newstead	W-T02-005	CL-6 (II)	PEM/PFO	Floodflow Alteration	1.78	0.25	N/A
Alden	W-T02-006	CL-6 (II)	PEM/PFO	Wildlife Habitat	0.10	N/A	N/A
Lancaster	W-T02-026	N/A	PEM	Wildlife Habitat	0.31	N/A	N/A
Lancaster	W-T16-004	N/A	PEM	Nutrient Removal	<0.01	N/A	N/A
Lancaster	W-T01-020	N/A	PEM/PSS/PFO	None	0.15	N/A	0.01
Lancaster	W-T01-016	Unmapped Wetland 4 (N/A)	PEM/PSS/PFO	Nutrient Removal Production Export Wildlife Habitat	2.03	N/A	N/A

Table 2 Wetlands Crossed by AC Mitigation

Town	Wetland Field ID	NYSDEC Wetland ID (Classification Code)	Wetland Cover Type	Wetland Principal Functions and Values	Temporary Disturbance (acres) ¹	Temporary Forested Wetland Conversion (acres) ¹	
						NYSDEC Forested Wetland Conversion	Other Forested Wetland Conversion
Elma	W-T01-015	N/A	PSS/PFO	None	0.33	N/A	N/A
Elma	W-T01-014	N/A	PEM/PFO	None	0.05	N/A	N/A
Elma	W-T01-013	N/A	PSS	None	<0.01	N/A	N/A
Elma	W-T01-012	N/A	PEM	None	0.02	N/A	N/A
Elma	W-T01-011	N/A	PEM/PSS/PFO	None	<0.01	N/A	N/A
Elma	W-T01-010	N/A	PEM/PFO	Groundwater Recharge/Discharge	0.04	N/A	N/A
Elma	W-T01-009	N/A	PEM/PFO	None	0.17	N/A	N/A
Elma	W-T14-003	N/A	PEM	Wildlife Habitat	0.20	N/A	N/A
Elma	W-T01-005	N/A	PSS	None	0.01	N/A	N/A
Elma	W-T01-004	Unmapped Wetland 5 (N/A)	PEM/PFO	Floodflow Alteration Sediment/Toxicant Retention Wildlife Habitat	0.39	N/A	N/A
Elma	W-T01-003	N/A	PFO	None	0.01	N/A	0.01
					8.91	0.44	0.08

Note:

¹ Temporary disturbance and forested wetland conversion calculated based on a 20-foot-wide workspace to install AC mitigation.

Land Use Considerations

Agricultural Areas

AC mitigation crosses 2.68 miles of active agricultural land, consisting of both row crops and hayfield. Agricultural land crossed by AC mitigation is shown on the Plan and Profile drawings in Appendix A of the EM&CP.

Construction activities in agricultural areas to complete the AC mitigation will include trenching and establishment of temporary access pathways. A narrow trench approximately 2 to 4 feet wide and 3 to 5 feet deep will be excavated in agricultural areas. Topsoil will be segregated from the subsoil and placed immediately adjacent to the trench. The trench will be backfilled with only suitable material excavated in kind and the disturbed area returned to existing grade immediately following placement of the zinc ribbon conduit, generally no more than 8 hours after initial excavation.

Due to the small size and low-impact nature of the equipment that will be used to install the underground wiring and considering such equipment will only make a single pass for construction, NEETNY does not intend to use temporary equipment for all agricultural land crossings. Temporary equipment matting will be used only as conditions warrant for soil-profile protection. Optimal conditions where matting will not be installed include dry or frozen ground surface. Conversely, temporary equipment matting will be used to cross agricultural lands that are saturated or inundated at the time of construction.

Agricultural lands crossed by AC mitigation will be de-compacted and restored in accordance with the measures described in Sections 7.2.5 and 7.2.7 of the EM&CP narrative, respectively.

Historic Resources

NEETNY is consulting with the SHPO regarding the potential effects of AC mitigation on archaeological resources that are historic properties (i.e., eligible for listing in the State or National Registers of Historic Places [S/NRHP]). NEETNY expects that potential effects are would be limited to physical effects on archaeological sites, as there are no substantive aboveground structures associated with AC mitigation that would result in visual effects on architectural

resources. NEETNY's correspondence to SHPO regarding AC mitigation is provided in Attachment C.

Six previously recorded archaeological sites are located within or adjacent to an AC mitigation area or an access path to an AC mitigation area; none of these sites contain human remains or evidence of human burials. Because AC mitigation will occur in areas that were previously disturbed during installation of the existing pipelines, no measures to avoid, minimize, or mitigate potential effects on previously recorded archaeological sites are proposed for AC mitigation areas. One access path to an AC mitigation area is in close proximity to one NRHP eligible archaeological site whose boundary was defined in part by the limits of a Project's area of potential effect. NEETNY is proposing temporary matting for this access path to avoid any potential physical effects to archaeological resources that may be present outside the boundary of this site.

For AC mitigation, NEETNY will also comply with the same procedures for the unanticipated discovery of archaeological materials or human remains or evidence of human burials identified in Section 7.5.1 of the EM&CP narrative.

Other Considerations

The AC mitigation areas do not cross nor are they located in immediate proximity to residential areas, scenic and park resources, and recreation areas. As such, no site-specific mitigation measures to address these land uses are planned.

Threatened and Endangered Species

The AC mitigation areas associated with the Texas Brine and WSP pipelines are located within the 5-mile buffer of the northern long-eared bat hibernaculum discussed in Section 10.2 of the EM&CP narrative. If any tree cutting is required to complete AC mitigation along these pipelines, NEETNY will complete the cutting only during the species' inactive period, from November 1 through March 31. Snag and cavity trees will be left uncut to the extent practicable.

NEETNY will comply with the other measures identified in Section 10.2 of the EM&CP narrative regarding protection of threatened and endangered species.

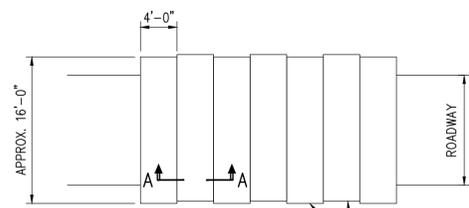
Invasive Species Management

NEETNY completed invasive species surveys for the accessible AC mitigation areas during September 2020. The results of those surveys are included in the Invasive Species Management Plan (see Appendix M of the EM&CP).

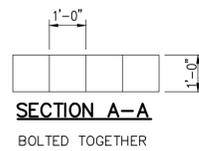
10.0 Safety Training Requirements

The Construction Contractor will provide all contractor and subcontractor employees with pipeline safety training prior to allowing access to the ROW. The Construction Contractor will work with all individuals on the identification of underground facilities; staking and/or marking identification; training on types of facilities crossed by roads or the ROW; restrictions and limitations for the underground facility type; emergency contact, evacuation and notification procedures; and maintenance of training logs. Individuals will receive the necessary pipeline safety training provided by the Construction Contractor and sign for receipt of training. The Construction Contractor will be responsible for maintenance of the training records and updating individuals on an as-needed basis.

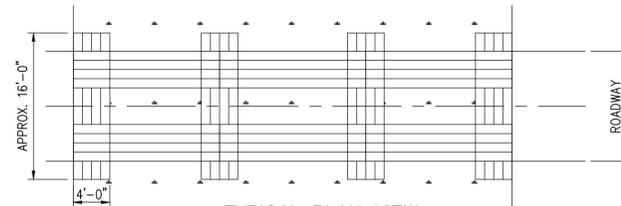
ATTACHMENT A – ACCESS DETAILS



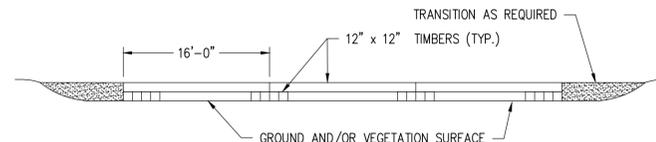
TYPICAL PLAN VIEW



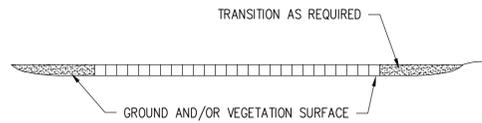
SECTION A-A
BOLTED TOGETHER



TYPICAL PLAN VIEW



TYPICAL SECTION VIEW



TYPICAL SECTION VIEW

NOTES:

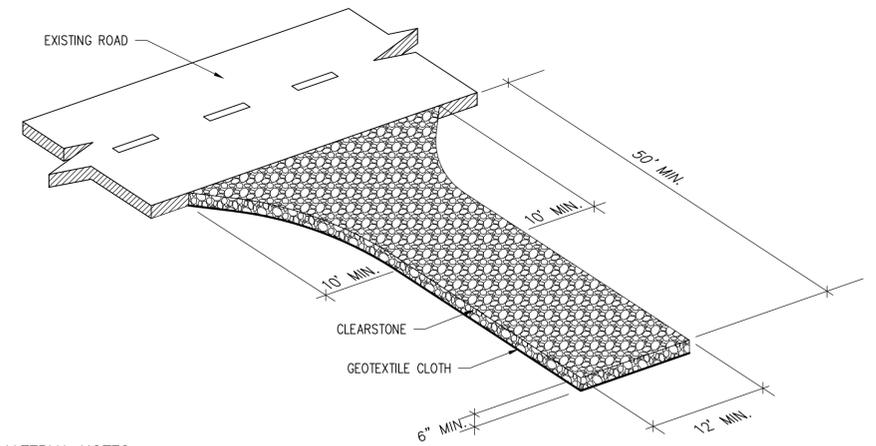
1. TO BE INSTALLED IF NECESSARY TO PREVENT RUTTING.
2. DETAIL SHOWS TYPICAL DIMENSIONS, SOME MATS ARE DIMENSIONALLY DIFFERENT FROM WHAT IS SHOWN HERE.
3. DEPENDING ON SITE CONDITIONS, MULTIPLE LAYERS OF MATS MAY BE INSTALLED.

TYPE 2 ACCESS ROAD – MATTED "DRY" CROSSING
SCALE: NONE

6A

TYPE 2 ACCESS ROAD – MATTED WETLAND CROSSING
SCALE: NONE

7A



MATERIAL NOTES

1. THE AGGREGATE FOR TRACKING PAD SHALL BE 2"-4" CLEAR, ANGULAR STONE.
2. THE TRACKING PAD SHALL BE UNDERLAIN WITH A WDOT TYPE R GEOTEXTILE CLOTH.

INSTALLATION NOTES

1. INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF STATE/COUNTY AND LOCAL REQUIREMENTS.
2. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY TRAFFIC. STONE TRACKING PAD SHALL BE USED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS.
3. DIMENSIONS OF THE TRACKING PAD SHALL BE MINIMUM AS NOTED ON THE FIGURE ABOVE. THE WIDTH SHALL BE 16" MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. THIRTY-TWO (32) FOOT IF SINGLE ENTRANCE TO SITE.
4. SURFACE WATER SHALL BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY FROM TRACKING PADS OR CONVEYED UNDER AND AROUND THEM USING CULVERTS. WHERE PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. CONSTRUCTION ENTRANCE SHALL BE REMOVED FROM THE SITE ONLY AFTER CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.

INSPECTION & MAINTENANCE NOTES

1. STONE TRACKING PADS SHALL BE INSPECTED IN ACCORDANCE TO THE BLUE BOOK.
2. ADDITIONAL AGGREGATE SHALL BE PLACED IF THE TRACKING PAD BECOMES BURIED OR IF SEDIMENT IS NOT BEING REMOVED EFFECTIVELY FROM THE VEHICLE TIRES.
3. A MINIMUM 6-INCH THICK PAD SHALL BE MAINTAINED AT ALL TIMES.
4. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
5. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED IMMEDIATELY.
6. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION FOR SITE CONDITIONS.
7. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

SAFETY NOTES:

1. THE PIPELINE AND APPURTENANCES AT OR NEAR THESE LOCATIONS CAN POSSESS POTENTIALLY LETHAL ELECTRICAL SHOCK HAZARDS UNTIL ALL GROUNDING IS INSTALLED.
2. NEXTERA ENERGY SHOULD PROVIDE A QUALIFIED ELECTRICAL SAFETY INSPECTOR ON-SITE DURING INSTALLATION OF THESE GROUND SYSTEMS TO ASSURE PERSONNEL SAFETY AND PIPELINE INTEGRITY.
3. ZINC RIBBON DEPTH AND SPACING ARE MINIMUM REQUIREMENTS. ADDITIONAL DEPTH OF ZINC RIBBON AND ADDITIONAL SPACING FROM THE PIPELINE IS ACCEPTABLE.

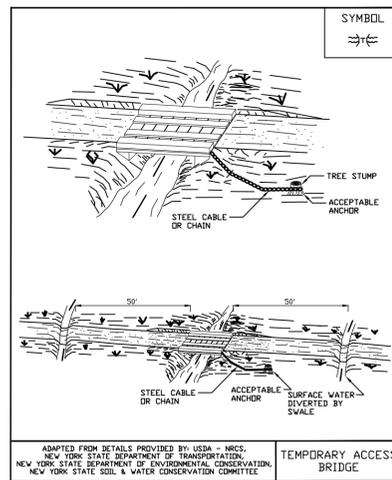
INSTALLATION NOTES:

1. HORIZONTAL DISTANCE FROM PIPELINE TO ZINC RIBBON CAN VARY BETWEEN 1' AND 25'.
2. INSTALL ZINC RIBBON TO SPECIFIED MINIMUM DEPTH.
3. INSTALL WARNING TAPE 12" ABOVE ZINC RIBBON THROUGHOUT PROJECT.

TEMPORARY CONSTRUCTION ENTRANCE

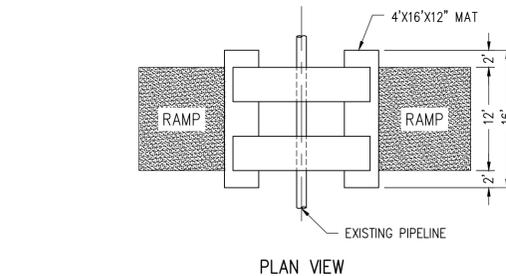
SCALE: NONE

8

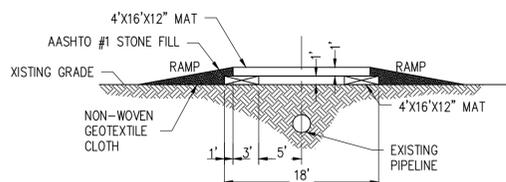


TEMPORARY ACCESS BRIDGE
SCALE: NONE

9



PLAN VIEW



TEMPORARY CONSTRUCTION RAMP OVER PIPELINE

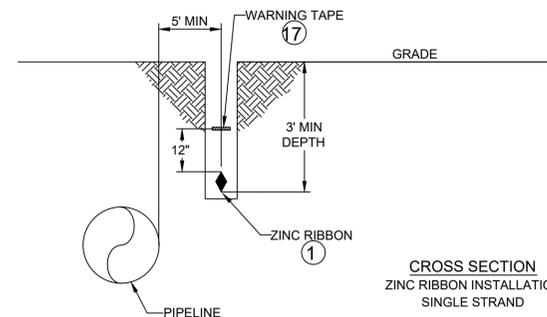
PIPELINE CROSSING

SCALE: NONE

10

SPECIAL NOTE:
PROPOSED VEHICLE AND EQUIPMENT WHEEL/TRACK LOADS WEIGHTS SHALL BE PROVIDED TO PIPELINE ENGINEERING SERVICES TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY BASED ON THE SPECIFIC PIPELINE TO BE CROSSED.

- NOTES:**
1. WOOD MATS WILL BE SUPPLIED AND INSTALLED BY CONTRACTOR.
 2. STONE FILL TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
 3. ADDITIONAL MATS, IF NEEDED, WILL BE SUPPLIED AND INSTALLED BY CONTRACTOR.



CROSS SECTION ZINC RIBBON INSTALLATION SINGLE STRAND

AC MITIGATION

SCALE: NONE

11

NOTES

A	ISSUED FOR REVIEW		XX/XX/20	XXX	XXX
NO	REVISION		DATE	BY	APR

ENGINEERING RECORD		DATE
DRAWN	T. WILCOX	06/18/20
DESIGNED		
CHECKED		
APPROVED		
	NONE	

ATTACHMENT B – AC MITIGATION SYSTEM DESIGN DRAWING PACKAGES

[Attachment B is submitted under separate cover for confidential treatment, because these pages contain confidential information]

ATTACHMENT C – NEETNY CORRESPONDENCE

Snyder, Natasha

From: Snyder, Natasha
Sent: Thursday, August 13, 2020 12:23 PM
To: Vu, Johnbinh; Zuczek, Jeffrey; Netti, Gregory; Kirchler-Owen, Leslie
Subject: RE: SHPO concurrence for Empire Project*** Attorney Client Privileged and Confidential Work Product ***

[REDACTED]

Kind regards,

N.

Natasha B. Snyder
Environmental Specialist
NextEra Energy Resources, LLC
Environmental Services (JES/JB)
700 Universe Boulevard
Juno Beach, Florida 33408
Office: (561) 691-7862
Mobile: (561) 427-9059
Natasha.Snyder@nexteraenergy.com



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September 16, 2020

Josalyn Ferguson
Historic Preservation Specialist/Archaeology
New York State Office of Parks, Recreation and Historic Preservation
Division of Historic Preservation
P.O. Box 189
Waterford, New York 12188-0189

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WSP USA
33 WEST MONROE ST
SUITE 1410
CHICAGO, IL 60603

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Attachment A

