STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on December 16, 2009

COMMISSIONERS PRESENT:

Garry A. Brown, Chairman
Patricia L. Acampora
Maureen F. Harris
Robert E. Curry, Jr.
James L. Larocca

CASE 08-T-1388 – Application of Long Island Power Authority for a Certificate of Environmental Compatibility and Public Need to Install a Second 138 kV Cable in the Certified Underground Conduit from the Riverhead Substation to the Canal Substation.

ORDER ADOPTING THE TERMS OF A JOINT PROPOSAL AND GRANTING A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

(Issued and Effective December 21, 2009)

BY THE COMMISSION:

INTRODUCTION

Procedural History

On November 24, 2008, the Long Island Power Authority (LIPA or the Authority) applied, pursuant to Public Service Law (PSL) Article VII, for a certificate of environmental compatibility and public need to construct and operate a major electric transmission facility. LIPA proposes to install a second 138 kV electric transmission feeder from Riverhead to Hampton Bays in an existing underground conduit between these locations.

Initially, LIPA's application did not fully comply with the requirements stated in the applicable regulations.[1] The

[1] Secretary Jaclyn A. Brilling's December 26, 2008 letter to Mr. Sam M. Laniado, LIPA's counsel.

Authority addressed the deficiencies with supplemental information provided on March 23, 2009 that placed the application in compliance with Public Service Law §122.[2]

Also, when LIPA submitted its application, it requested that certain filing requirements be waived. Notice of the Authority's request was provided and comments were received from the New York State Department of Transportation (DOT) and Department of Public Service (DPS) Staff. In May 2009, the Commission granted LIPA's waiver requests.[3]

On June 9, 2009, a hearing was held pursuant to PSL §123 in Hampton Bays to provide the interested public an opportunity to comment on the proposed transmission facility. No one appeared at the hearing; however, the Central Pine Barrens Joint Planning and Policy Commission submitted a letter, on May 22, 2009, stating that LIPA's proposal was preferable to the alternative routes for the facility because it avoids adverse environmental impacts to the Central Pine Barrens.

Following the public statement hearing, a schedule was set for the parties to litigate any contested issues.[4] However, by letter dated July 9, 2009, LIPA provided notice of its plan to conduct settlement discussions with interested parties. The presiding officer determined that the notice complied with the requirement that all appropriate persons be provided a reasonable opportunity to prepare and participate in the negotiations. To accommodate the settlement discussions and the

---

[2] Secretary Jaclyn A. Brilling's April 9, 2009 letter to Mr. Sam M. Laniado.

[3] Case 08-T-1388, Order Granting Waiver Requests (issued May 19, 2009).

[4] Case 08-T-1388, Ruling on Case Schedule (issued June 16, 2009).

parties' efforts, the case schedule was postponed twice.[5] On October 1, 2009, the parties executed and filed a Joint Proposal. The proposal is supported by LIPA, the State DOT and DPS Staff. The public was provided an opportunity to submit comments on the Joint Proposal and, on November 10, 2009, the presiding officer held a hearing to consider the proposed terms and provisions.

Description of the Proposed Facility

LIPA proposes to install a second 138 kV transmission facility in an existing, underground conduit between its Riverhead and Canal Substations. The 16-mile long conduit was constructed almost ten years ago when the Authority was given authority to install the first transmission feeder.[6] The Riverhead Substation is located south of the Peconic River and southeast of the intersection of Route 25 and Mill Road. The Canal Substation is on Route 27 in the Town of Southampton about 0.4 miles east of Canal Road.

From Riverhead, the existing conduit and the new transmission facility run east and south along a LIPA-owned right-of-way for 1.6 miles. After crossing County Road 51, the facility heads southwest for about 0.8 miles to Speonk-Riverhead Road which it follows for 2.4 miles until it reaches Route 27. The existing conduit and the new facility travel 11.2 miles along Route 27 to the Shinnecock Canal where they attach to the underside of the bridge and cross the canal. Two cable transition structures and cable trays will be installed on both sides of the bridge to accommodate the new facility. The

[5] Case 08-T-1388, Ruling Amending Case Schedule (issued August 20, 2009).

[6] Case 99-T-1423, Long Island Power Authority, Opinion and Order Granting Certificate of Environmental Compatibility and Public Need (issued February 29, 2000).

transmission facilities continue for 0.4 miles along Canal Road to the shoulder of Route 27 and terminate at the Canal Substation on its west side.

THE JOINT PROPOSAL

The Joint Proposal addresses all the factors relevant to the certification of a transmission facility, including the need for this underground cable and its compatibility with the environment.

Need for the Transmission Facility

The new 138 kV electric transmission facility will reinforce the available transmission capacity on the South Fork of Long Island. Existing facilities west of Riverhead cannot meet the locational requirement that the new facility will serve. On the radial system in eastern Long Island, the new facility will augment the first link serving the South Fork.

In recent years, the peak demand for electricity on the South Fork has steadily increased and it is expected to continue to increase at an annual average of about 3.3% through 2025. At this rate, the new facility is needed to serve customers during the summer of 2011. This amount of peak demand growth cannot be served either by the existing transmission system or by the peak generating resources available on the South Fork without the proposed transmission system reinforcement.

The new transmission facility will also support the electric system extending to Long Island's North Fork. In the event of a North Fork transmission outage, the new facility can supply power to the substations located there.

The new facility will be operated in accordance with criteria established by the New York State Reliability Council, the Northeast Power Coordinating Council and the North American Electric Reliability Corporation. A system reliability impact

study performed by KeySpan Energy indicates that the new transmission facility will improve the transfer limits east and west of Riverhead. The facility will not have an adverse impact on the bulk power transmission system on Long Island or elsewhere.

The proposed facility conforms to the long-range plans for the provision of electricity on Long Island. The Authority has adopted an Energy Plan with strategic objectives for the next decade. The objectives provide for a reliable bulk power and local distribution system, the minimization of customer rates for electric service and increased customer satisfaction, a healthy environment, and LIPA's ability to respond rapidly to change. The new cable serves these objectives by reinforcing transmission capacity on the South Fork, by ensuring reliability and by providing additional capacity for future demands. The proposal does not violate any provisions of the long-range plans.

Probable Environmental Impacts

The transmission facility's environmental impacts are expected to be minimal and limited mostly to the temporary construction disturbances associated with the introduction of additional structures and equipment in the existing underground conduit and at the substations. Temporary and insignificant impacts are expected from the cable pulling and splicing activity that will occur at 40 manholes. Disturbances to vegetation from entering the existing manholes will be kept to a minimum. Some trees along Route 27 will be removed to provide access to the trails and roads that LIPA will use to install and maintain the transmission facilities in the vicinity of the Sunrise Highway. Otherwise, the new facility will have minimal impacts on the physical environment, land use, critical environmental areas, vegetation, wildlife, water resources,

transportation, cultural, historical and archaeological resources.

The conduit installed in 2000 used trenchless technology in environmentally sensitive areas and for most of its road crossings. The additional trenching required now is limited to the vicinity of the Shinnecock Canal where the cable must transition from underground locations to the underside of the bridge deck. No significant environmental impacts are expected from this activity.

The new facility avoids long-term and permanent impacts to land use in surrounding locations outside the exiting right-of-way. Temporary land use impacts will occur during the cable installation, but they will not significantly affect any known or future land uses. The installation of new equipment and equipment upgrades at the two substations is not expected to produce any significant land use impacts. The installation of the access points and roads to reach the conduit along Route 27 will involve tree removals but this activity will have minimal visual and noise impacts during construction. LIPA is required to provide vegetation restoration to screen and mitigate the impacts resulting from the tree removals. No agricultural property is affected by the proposed facility.

To minimize impacts in residential areas along the route, construction activity will occur mostly during daylight hours. Cable pulling and splicing activity may take but a few hours at some locations and a few days at others. Homeowners will receive advance notice before construction starts and they will be provided a “hotline” telephone number to make inquiries and to air any concerns.

Continuous splicing operations will occur around the clock and unforeseen circumstances may require LIPA’s crews to work after 7 p.m. Also, night-time construction may be needed

to avoid interference with traffic on Route 27 during peak travel times. Otherwise, normal working hours will be used to the maximum extent practicable between 7:00 a.m. and 7:00 p.m. To minimize noise impacts on local residents, the use of equipment mufflers and noise shields will be addressed in the environmental management and construction plan (EM&CP) LIPA will provide to comply with the requirements of this order.

A full road closure is needed to install the new cable in the vicinity of the eastbound ramp at Exit 66 on Route 27. Canal Road may also have to be closed to install a 300 foot cable section in the roadway. Partial road closures will be required at Gate Street and Canal Road West but they will not impede access to residences. The road closures will be posted on portable, variable message boards at least two weeks before they occur. Property owners will be notified of road closures affecting their premises as far in advance as is reasonably practicable. All reasonable efforts will be made to accommodate property owners' access and egress requirements.

There are no commercial establishments along the existing cable route and no industrial properties will be impacted by the new cable installation. The educational buildings at the Suffolk County Community College Eastern Campus (located west of Speonk-Riverhead Road) are sufficiently distant from the road so as not to be affected by construction noise.

The existing facility and new cable run through critical environmental areas, including the Central Pine Barrens, the Central Suffolk Special Groundwater Protection Area and several hydrological zones. Within the Central Pines Barrens, flora and fauna are protected as is the aquifer. There will not be any operational environmental impacts to any critical areas due to the placement of the new cable in the existing conduit. Conventional cable pulling and splicing

activity will be used at 40 manholes and there will be some tree clearing to make the manholes accessible. The construction materials for the project are inert and not leachable. LIPA will use a non-toxic, water-based cable pulling lubricant.

The existing conduit and new cable are in the vicinity of two freshwater wetlands but they will not be adversely impacted by the second cable installation and construction activity. In both wetland areas, LIPA will comply with New York State Department of Environmental Conservation requirements so as not to encroach on the wetlands.

Groundwater along the route occurs at a depth of about 20 feet below the surface. No excavation activity will occur nor does the cable pull require any dewatering activity. No impacts are expected to the aquifer or to groundwater quality. To minimize the possibility of any liquid fuel, hydraulic fluid or oil being released into the environment during construction, no temporary storage tanks will be used along the route. The refueling of stationary equipment will be performed behind spill containment barriers and all apparatus will be inspected for leaks at the start of each workday. Refueling along Route 27 will only be allowed for cable-splicing operations and stationary message boards. Construction crews will be informed about the need to avoid environmental impacts and they will be trained to handle fuel and fluids properly. If a spill or release were to occur, the contaminated soil would be isolated and proper remedial action would be taken.

To install the new cable along Route 27, LIPA will not access the right-of-way from the main roadway, except at Bellows Pond Road. Instead, the Authority will install access points and roads on State DOT property. This will entail some tree removal and it will create temporary noise impacts due to construction vehicle movement in the vicinity of 22 residences.

Following construction, replanting and restoration measures will be used to improve tree density and provide noise abatement. Adjacent properties will not incur any permanent adverse impact or any impact affecting the use of land suitable for future use. The use of the access roads will minimize disruptions to traffic flow and the construction activity will be timed to avoid impacts on key road corridors during the tourist season. LIPA will provide a revised Maintenance and Protection of Traffic Plan that will detail its traffic disruption minimization practices.

Construction of the new cable will not have an impact on any cultural resources. The New York State Office of Parks, Recreation and Historic Preservation has confirmed that the cable installation will not impact any cultural resources eligible for inclusion in the State or National Registers of Historic Places.

In 1999, the Institute for Long Island Archaeology provided an assessment that evaluated the route for areas of archeological significance. The closest such area is a mile away and it will not be adversely impacted.

The existing facility and new cable largely avoid any dense forest areas. Vegetation along the route on an overhead transmission line right-of-way is kept low to permit ready access to the transmission facility. Minimal temporary impacts to vegetation will occur due to the movement and use of construction equipment. Some tree branches may be pruned or tied back to accommodate cable-pulling equipment. No tree disturbances will occur along Route 27, other than on the access roads. In the vicinity of Shinnecock Canal, a limited access area will be maintained at the existing manholes and it will require minor vegetation cutting once every five years. No

herbicides or pesticides will be used in conjunction with the cable installation activities.

The new cable is being installed in areas that have previously been impacted and disturbed. The wildlife species in this habitat are tolerant of human disturbances. Little, if any, impact is anticipated to occur to wildlife in adjacent habitats. Any such disturbances will be localized and limited to the duration of the construction activity. Species composition will return to normal after the cable is installed.

Potential impacts on such amphibians and reptiles as tiger salamanders, cricket frogs and mud turtles were evaluated. Cable construction is not expected to have an impact on wetlands. Similarly, no impact is expected in salamander habitat or movement between wetland and upland areas. No impacts are expected to aquatic life or to any fish habitat.

No long-term mammalian species impacts are expected to occur. The potential impacts are localized and limited to the duration of the cable installation. The identified species are tolerant of human disturbances and their habitat will return to its vegetative state soon after construction is completed.

Soil erosion is expected to be minimal along the cable route. The use of the existing conduit requires no grading activity. Also, there is no need to stockpile any soil along the route. No changes are expected to the local hydrology, topography or soil conditions. The existing conduit and the new cable avoid heavily timbered areas, high points, steep slopes and ridgelines.

The exiting route and new cable also avoid impacts to scenic, recreational and historic areas. The approved corridor does not contain any federal, state or municipal parkland. The underground cable is not visible and its termination points are inside the two substations. Cable transition structures are

visible at the Shinnecock Canal bridge on Route 27. The new structures will be located close to the bridge piers and they will not contrast with the existing structures.

The maximum electric field strength for the new cable is below the standard that the Commission has established for electric fields. Similarly, the maximum magnetic field levels for the new cable are below the Commission-established standard. The new underground cable is not expected to produce any interference with radio, telecommunication or television signals.

Alternatives

By using an existing conduit with sufficient capacity to house a second cable, the primary proposal has substantial advantages and fewer impacts on the environment than the other alternatives. Three specific alternative routes were considered. One of the routes included significant elevation changes and it traversed rough terrain that would make it very difficult to install a conduit and cable. The route would also have a large impact on the Pine Barrens Region and would require tree removals and many easements.

The second route LIPA studied was too narrow to accommodate a new overhead transmission circuit and it did not provide safe electrical system clearances from the existing facilities. In addition, it would run through the Pine Barrens Region and require tree removals and easements.

The third alternative was not selected because the installation of a new, underground conduit would cause significant environmental impacts and serious traffic impacts. The “no action” alternative was also considered and dismissed because additional transmission facilities are needed to avoid system outages, a voltage collapse and thermal overloads on the electric system serving Long Island’s South Fork.

Local generation was considered a potential alternative to the new transmission cable but this option has been rejected because there is limited space to store fuel oil on the South Fork and insufficient access to natural gas without the construction of a costly, natural gas pipeline to supply the generation units. The use of the existing local generation, with resource additions on Long Island, was considered and rejected because this alternative does not meet the system contingency requirements established by the New York Independent System Operator.

Demand Side Management programs and energy conservation were also considered, but they would not reduce electric system demands sufficiently to avoid the growing need for new supply-side facilities on eastern Long Island.

The use of high voltage, direct-current technology was also considered, but this technology is not well-suited to this location where the new cable must be integrated with the existing, alternating current electric system.

With respect to the solid dielectric conductor cable LIPA has chosen, the alternative would be a dielectric fluid-filled cable or pipe-type construction. They were rejected to avoid potential environmental issues that could arise if there were a cable leak. A solid dielectric cable does not use any fluids that can leak and it will match the existing cable design.

As to the voltage level for this transmission facility, 138 kV is compatible with the existing infrastructure between the two substations and it fits into the plans for the transmission system on the South Fork. The installation of a new 69 kV facility would only handle 100 MW and this alternative would necessitate another 69 kV facility to serve the area. Two 69 kV facilities would increase the environmental impacts and

require the installation of another underground conduit. The new underground cable on the proposed route represents the least cost among the configuration alternatives that were considered.

State and Local Laws

The construction and operation of the new transmission facility will comply with the requirements of the New York State Uniform Fire Prevention and Building Code to the extent the Code is applicable to this project. LIPA will submit to building plan review and obtain building permits, inspection and certificates of occupancy from the New York State Office of General Services or another state agency or private organization authorized by the Department of State.

LIPA will also submit to highway work permit and use and occupancy permit review, and it will obtain a highway work permit and use and occupancy permit from the State DOT (pursuant to 17 NYCRR Part 131) for the portion of the transmission facility in the Route 27 right-of-way. The Authority will file a request with the State DOT for the Federal Highway Administration to grant it an exception to the Accommodation Plan for Longitudinal Use of Freeway Right-of-Way by Utilities.

With respect to the substantive requirements of local laws and municipal regulations, LIPA has identified the provisions applicable to the proposed facility contained in the laws and ordinances of Suffolk County and the Town of Southampton. The facility will comply with all the County requirements. As to the Town, the construction of the new facility will comply with the noise limits. However, it is not clear whether the construction noises emitted by winches, backhoes, loaders, pavers and dump trucks would be considered “noise pollution” pursuant to Chapter 235 of the Town Code. Also, during the non-stop cable splicing activity, a generator and air conditioner must operate continuously and they will emit

noises in residential areas. For these reasons, the parties consider the "noise pollution" provisions of Chapter 235 of the Southampton Code to be unreasonably restrictive and the parties request that they be waived for the cable installation, splicing and final testing activity needed for the new transmission facility.

Chapter 312 of the Town Code contains the vehicle and traffic laws. The construction of the transmission facility requires the operation of vehicles, winches, excavators and paving equipment that must park, stop and back up in contravention of the local law. For this reason, the parties believe that Chapter 312 of the Southampton Code is unreasonably restrictive and the parties propose that it be waived for the construction activity required to install a second cable in the existing conduit.

Environmental Management and Construction Plan

Included in the Joint Proposal are the guidelines for the environmental management and construction plan (EM&CP) required for the new facility. LIPA has accepted the guidelines and it will provide a plan to comply with them.

DISCUSSION AND STATUTORY FINDINGS

The Joint Proposal submitted in this case is unopposed and it is endorsed by the three parties who have been active throughout the proceedings. LIPA, DPS Staff and the State DOT participated in the settlement discussions that produced the Joint Proposal and they attended the November 10, 2009 hearing to enter it into the record with their full support. The record of this case--starting with LIPA's original application and supplemental information, including the Joint Proposal and ending with the parties' supporting statements--provides us an ample basis to evaluate the proposed transmission facility, consider its probable environmental impacts and require the

actions needed to ensure that the installation of a second cable in the existing, underground conduit represents the minimum adverse environmental impact, considering the state of available technology, the nature and economics of various alternatives, and all other pertinent considerations.

The record in this case fully supports a finding of public need. A second 138 kV transmission facility is needed to provide and distribute electricity on Long Island's South Fork given the growing demand for electricity in this area. The Authority has a long-range plan for the expansion of the electric power grid that serves Long Island and the proposed facility is consistent with it. The electric system and engineering analyses in the record fully support the decision to construct and operate this transmission facility.

The new 138 kV facility will be located entirely underground in an existing conduit with sufficient capacity for a second cable, except where it must surface to cross the Shinnecock Canal. The underground location for the proposed facility provides substantial support for our finding that it represents the minimum adverse environmental impact.

Various alternatives to the proposed facility were identified and evaluated; however, no other sufficient alternative has as few impacts as does the Joint Proposal. We have carefully considered the parties' comparative analysis of the competing alternatives and we find that all the alternatives are less desirable than the primary proposal.

The Joint Proposal provides a full recitation of the environmental impacts expected from the construction and operation of the second cable. It has been demonstrated to our satisfaction that adequate mitigation measures will be taken to minimize the facility's impacts. Significantly, the impacts to local residents and vehicles that use Route 27 will be minimized

by LIPA's commitment to access the existing conduit from access roads and trails adjacent to the highway. This will entail construction activity and equipment movement in close vicinity to various residences near the access points the Authority will use. However, the residences' exposure to construction impacts will be of a limited duration and, on balance, such impacts are acceptable.

In this case we find it necessary to waive the application of local laws in the instances stated above. Chapters 235 and 312 of the Southampton Town Code, pertaining to noise pollution, vehicles and traffic, are unreasonably restrictive and must be waived to accommodate the construction of the new transmission facility using existing technology.

From our full consideration of LIPA's application and the parties' Joint Proposal, we find that the proposed terms and conditions for certification of the transmission facility are acceptable and should be adopted. Accordingly, we find and determine that:

1. The project, which is to install a new underground 138 kV alternating current transmission facility in an existing set of conduits between LIPA's existing Riverhead and Canal Substations, is necessary in order to protect against load shedding and outages and to meet the needs of anticipated future demand from the Suffolk County towns of Southampton and East Hampton.
2. The probable environmental impacts for this project are expected to be limited to ordinary construction impacts from clearing, installation and restoration activities along the route. The impacts will include temporary construction noise, temporary land use disturbance, and limited tree removal.
3. The facility, as proposed by the parties, represents the minimum adverse environmental impact, considering the state of available technology, the nature and economics of the various alternatives, and other considerations such as the effects on agricultural lands, wetlands, parklands and river corridors traversed.

4. The facility shall be located underground except for certain above-ground electrical equipment within the existing substations and where the cable crosses the Shinnecock Canal, where stainless steel conduits are attached and transitional equipment will be installed to the underside of the Shinnecock Canal Route 27 bridge.
5. Construction of the facility is consistent with the most recent New York State Energy Plan which sets forth the State's energy policies and long-range planning objectives and strategies for expansion of the electric power grid of the electric systems serving the state and interconnected utility systems, and is consistent with LIPA's Energy Plan for the transmission system on Long Island.
6. The location of the facility, as proposed by the parties, conforms to the substantive provisions of the applicable State and local laws and regulations, except with regards to the Code of the Town of Southampton Chapter 235 – Noise and Chapter 312 – Vehicles and Traffic. The Commission refuses to apply Chapter 235 as it is unreasonably restrictive for reasons of existing technology. The technology of installing and splicing electric transmission cables is such that, once installation and splicing are commenced, they must continue on a 24-hour basis until completed, and the running of a generator and air conditioning unit continuously is necessary while conducting manhole splicing operations. As to Chapter 312, installation of electric cable requires the use of construction vehicles on a controlled-access highway, and therefore the provision is unreasonably restrictive in view of existing technology.
7. The facility will serve the public interest, convenience and necessity.

The Commission orders:

1. The terms and provisions of the October 1, 2009 Joint Proposal submitted by the Long Island Power Authority, Department of Public Service Staff and the New York State Department of Transportation, attached to this Order, are adopted and made a part of this Order.

2. Subject to the conditions set forth in the October 1, 2009 Joint Proposal, the Long Island Power Authority is granted a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of a 178 kV

underground solid dielectric cable transmission circuit between the Riverhead Substation and the Canal Substation.

3. This proceeding is continued.

By the Commission,

(SIGNED) JACLYN A. BRILLING
Secretary

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 08-T-1388 - Application of the Long Island Power Authority for a Certificate of Environmental Compatibility and Public Need to Install a Second 138kV Cable in the Certified Underground Conduit from the Riverhead Substation to the Canal Substation

---

JOINT PROPOSAL TO THE NEW YORK STATE PUBLIC SERVICE COMMISSION

By: Long Island Power Authority
Staff of the New York State Department of Public Service
New York State Department of Transportation

Dated: October 1, 2009
Albany, New York

TABLE OF CONTENTS

APPENDIX 1 – List of Testimony, Exhibits & Appendices to Be Admitted

APPENDIX 2 – Proposed Findings

APPENDIX 3 – Proposed Ordering Clauses/Certificate Conditions

APPENDIX 4 – General Guidelines for Environmental Management and Construction Plan(s)

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 08-T-1388 - Application of the Long Island Power Authority for a Certificate of Environmental Compatibility and Public Need to Install a Second 138kV Cable in the Certified Underground Conduit from the Riverhead Substation to the Canal Substation

---

JOINT PROPOSAL TO THE
NEW YORK STATE PUBLIC SERVICE COMMISSION

THIS JOINT PROPOSAL is made on the ____day of ____, 2009 by and among the Long Island Power Authority ("LIPA"), Staff of the New York State Department of Public Service ("Staff") and the New York State Department of Transportation ("NYSDOT") (collectively referred to as the "Signatory Parties").

INTRODUCTION

On November 24, 2008, LIPA submitted a compilation of studies, analyses and other documents purporting to satisfy the requirements of Article VII of the Public Service Law ("PSL") with the New York State Public Service Commission ("Commission") seeking a Certificate of Environmental Compatibility and Public Need, pursuant to Article VII, to install a new underground 138 kV alternating current transmission facility—in an existing second set of conduits approximately 16 miles long—between LIPA's existing Riverhead and Canal Substations ("the Second Cable" or "the Project"). The Second Cable will be installed in existing underground conduits that were constructed as part of the installation of the first 138 kV

cable, certificated by the Commission in Case 99-T-1423 (the "Original Facility") between LIPA's Riverhead and Southampton Substations.[1]

Supplemental information was filed by LIPA with the Commission and served on the statutory parties on March 23, 2009 in response to the Secretary's letter of December 26, 2008. By letter dated April 9, 2009, the Secretary determined that the submitted documents, as supplemented, are filed or otherwise in compliance with the filing requirements of Article VII.

A public statement hearing was held before Administrative Law Judge Jeffrey Stockholm on June 9, 2009 in Hampton Bays, Long Island, including afternoon and evening sessions. No member of the public offered comments at either session.

After exploratory discussions among the parties, a Notice of Impending Negotiations was filed with the Commission by LIPA on July 9, 2009. Settlement conferences commenced with a conference call amongst interested parties held on July 15, 2009. Two settlement meetings, upon notice to the Statutory and Active Parties, were held on July 21 and August 10, 2009. Staff, LIPA and NYSDOT attended. Follow-up conference calls with LIPA, Staff and NYSDOT were held between September 15, 2009 and September 29, 2009.

After thorough discussion of the issues, the Signatory Parties recognize that the parties' various positions can be addressed through settlement and agree that settlement is now feasible. The Signatory Parties further believe that this Joint Proposal gives fair and reasonable consideration to the interests of all parties and that its approval by the Commission is in the public interest.

[1] Case 99-T-1423 Opinion and Order Granting Certificate of Environmental Compatibility and Public Need, Issued February 29, 2000. The cable was installed in 2000 at which time it operated at 69 kV. In 2005, the cable between Riverhead and the Canal Substation was converted to 138 kV.

TERMS OF JOINT PROPOSAL

I. GENERAL PROVISIONS

A. It is understood that each provision of this Joint Proposal is in consideration and support of all the other provisions of this Joint Proposal and is expressly conditioned upon approval of the terms of this Joint Proposal in full by the Commission. If the Commission fails to adopt the terms of this Joint Proposal, the Parties to the Joint Proposal shall be free to pursue their respective positions in this proceeding without prejudice.

B. The terms and provisions of this Joint Proposal apply solely to, and are binding only in, the context of the purposes and results of this Joint Proposal. None of the terms or provisions of this Joint Proposal and none of the positions taken herein by any party may be referred to, cited or relied upon in any fashion as precedent or otherwise in any other proceeding before the Commission or any other regulatory agency, or before any court of law for any purpose, except in furtherance of ensuring the effectuation of the purposes and results of this Joint Proposal.

C. The Signatory Parties agree to submit this Joint Proposal to the Commission along with a request that the Commission expeditiously adopt the terms and provisions of this Joint Proposal as set forth herein.

D. The Signatory Parties recognize that certain provisions of this Joint Proposal contemplate actions to be taken in the future to effectuate fully this Joint Proposal. Accordingly, the Signatory Parties agree to cooperate with each other in good faith in taking such actions.

E. In the event of any disagreement over the interpretation of this Joint Proposal or implementation of any of the provisions of this Joint Proposal, which cannot be resolved informally among the Signatory Parties, such disagreement shall be resolved in the following manner:

1. the Signatory Parties shall promptly convene a conference and in good faith attempt to resolve any such disagreement; and
2. if any such disagreement cannot be resolved by the Signatory Parties, any Signatory Party may petition the Commission for resolution of the disputed matter.

F. This Joint Proposal shall not constitute a waiver by LIPA of any rights it may otherwise have including, but not limited to, applying for additional or modified permits, approvals or certificates from the Commission or any other agency in accordance with relevant provisions of law.

G. This Joint Proposal is being executed in counterpart originals, and shall be binding on each Signatory Party when the counterparts have been executed.

H. The Signatory Parties agree to provide the necessary testimony and affidavits that will permit the testimony and exhibits agreed upon by the Signatory Parties— as set forth in Appendix 1, attached to this Joint Proposal—to be admitted as record evidence in this proceeding.

II. DESCRIPTION OF FACILITY LOCATION

A. The Project, which consists of an underground electric three-phase transmission line of approximately 16 miles in length, will be installed from LIPA's Riverhead Substation located south of the Peconic River to LIPA's Canal Substation located on NYS Route 27, which is approximately 0.4 miles east of Canal Road. Both substations are located in the Town of Southampton.

B. Specifically, an underground transition terminal will be built for the Second Cable at LIPA's Riverhead Substation, located in the Town of Southampton, south of the Peconic River, southeast of the intersection of NYS Route 25 and Mill Road. From this point the 16-mile installation route migrates east and south along LIPA-owned Right-of-Way ("ROW") for

approximately 1.6 miles, between LIPA's existing 69kV tower and wood pole lines to County Road 51 (Riverhead-Moriches Road), crossing NYS Road 94 (Nugent Drive).

C. The route crosses under the westbound lanes of County Road 51 and heads southwest along the northern segment of the median for approximately 0.8 miles to Speonk - Riverhead Road. The transmission line then turns south along the western shoulder of Speonk - Riverhead Road to NYS Route 27 for 2.4 miles. At the intersection of Speonk - Riverhead Road and NYS Route 27 the conduits were directionally drilled under Route 27 to its south side, where they travel east along the southern side of the roadway. The conduits were installed approximately 30 feet south of the edge of the eastbound lanes for 11.2 miles to the Shinnecock Canal. Stainless steel conduits were attached for both the existing cable circuit and proposed second circuit to the underside of the Shinnecock Canal Route 27 bridge, crossing the canal. In addition, cable transition structures and cable trays were installed on either side of the bridge for the existing cable circuit. The conduits, cable transition structures, and cable trays were installed pursuant to a NYSDOT Highway Work Permit in 2000. As part of this project, two additional cable transition structures and cable trays, identical to the ones installed in 2000, will be installed on either side of the bridge for the Second Cable. The additional cable transition structures and cable trays needed for the Second Cable were not installed in 2000 in order to defer the cost. The route continues approximately 0.4 miles along Canal Road and onto the shoulder of the NYS Route 27 entrance ramp and enters the Canal Substation on the west side. The cable route terminates near the western fence line of the substation.

D. The Canal Substation was constructed after the Original Facility was installed. The first cable was cut and brought into the Canal Substation when the substation was constructed at 138 kV and 69 kV transmission voltages. That cable now terminates and operates at 138 kV between the Riverhead and Canal Substations. The portion of the Original Facility from Canal Substation to the Southampton Substation continues to operate at 69 kV and

interconnects the two substations. This construction eliminated the need to expand the Southampton Substation to 138 kV.

III. ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

The Commission must consider the totality of all of the relevant factors in making its determination of environmental compatibility and public need. The relevant factors include, without limitation: the electric system, cost, environmental impact, the availability and impact of alternatives, undergrounding considerations, conformance to long-range plans, state and local laws, the public interest, convenience and necessity.

A. The Electric System

1. LIPA is the sole electric delivery company and the only entity authorized to provide local transmission and distribution of electricity on Long Island east of New York City. For those functions, LIPA holds a monopoly that is sanctioned by state law and policy. KeySpan Electric Services LLC operates LIPA's local electric transmission and distribution system as a contractor of LIPA.

2. The Project is a significant component of LIPA's plans to reinforce the existing transmission capacity of the South Fork of Long Island. The need for the Second Cable is locational (*i.e.*, specific to a particular area) because the North and South Fork of Long Island loads are served by radial lines. Reinforcements—be they supply, transmission, or demand side management programs implemented west of Riverhead—will not solve this local problem. Furthermore, since the Project is part of the first link in the chain of supply to the South Fork, it is critical to meeting the entire electric system requirements of the South Fork.

3. Peak demand for power in LIPA's service territory, including the South Fork, has been increasing steadily in recent years. Demand on the South Fork has increased over the six-year period between 2000 and 2006 by an annual average of 5.2 percent. Demand is

forecasted to increase on the South Fork at an annual average rate of about 3.3 percent through 2025. This growth rate is significantly higher than the 1.7 percent annual growth rate in electric demand projected for the remainder of LIPA's service territory. Based on forecasted load growth, the Project will be needed prior to the summer of 2011 in order to protect against significant load shedding and outages, in the event of the loss of the existing Riverhead to Canal 138 kV line as well as the unavailability of the East End generators that supply the East End.

4. Forecasting or projecting growth for the purposes of identifying utility needs for the South Fork of Long Island focuses upon the anticipated future demand from the Suffolk County towns of Southampton and East Hampton.

5. Studies indicate that Southampton has the largest number of potential new seasonal housing units in eastern Long Island, due to the steady proportion of seasonal usage over 30 percent. The population saturation estimate in East Hampton is an increase of 43 percent over the 2000 estimate, which is 89,566 persons. This estimate allows for 41 percent more seasonal housing units, to 15,095, and 48 percent growth in the year-round population, to 29,186 persons. According to the East Hampton Comprehensive Plan (May 6, 2005)[2], East Hampton and Southampton had the greatest population increases in Suffolk County in the decade 1990–2000, with 22 percent and 21.8 percent growth, respectively. This growth far exceeded Suffolk County as a whole, at 7.4 percent and New York State at 5.5 percent for this same 10-year period.

6. While the current U.S. Census population estimate for Suffolk County is indicative of a 3.5% rate of change (from April 1, 2000 to July 1, 2006), the saturation study by the Suffolk County Planning Department indicates considerably more growth potential for the two towns. "Saturation Population Analysis – Eastern Suffolk County (2001)"[3] Therefore the

[2] www.town.east-hampton.ny.us/comp_plan.cfm
[3] www.co.suffolk.ny.us/planning/saturationpop.pdf

utility demand growth projections which indicate the need for this infrastructure reinforcement project—being based upon a 3% per year growth in demand—is grounded upon prudent utility planning. Within both towns, a major portion of the new load growth on the LIPA system is expected to be from residential development.

7. This growth in peak demand has resulted in demand greater than the existing electrical transmission system and existing older, less efficient, peaking generating resources on the South Fork can satisfy without reinforcement. The purpose of the Project is to help ensure the continued reliable service to the East End of Long Island. The Second Cable is only one component of the several planned East End reinforcements needed to meet the growth in demand. Without this Project, the risk of electric outages on the East End will significantly increase, jeopardizing the health, welfare and economic prosperity of the two South Fork towns.

8. Reinforcing the South Fork also helps support the North Fork. Should a transmission outage occur on the North Fork, power is supplied over the Southold to Buell (East Hampton) Substations line which will assist in meeting energy needs. Furthermore, with the addition of the Second Cable, the need to utilize the existing less efficient East End generators will be reduced and the South Fork's energy needs can be met, in part, by using newer, more efficient, and less costly resources that are available from the west. The new second Riverhead to Canal 138kV circuit can be operated in accordance with New York State Reliability Council, Northeast Power Coordinating Council and North American Electric Reliability Corporation criteria and will not adversely impact the reliability of the New York State bulk power system.

B. Cost

1. The Project is projected to cost approximately $49.7 million.[4] The cost estimates for the alternative routes and technologies are provided below and are understated

[4] See also, Exhibit 9 to the Application.

because they are based on generalized benchmarks. They also do not include external costs, such as the economic effect of modified traffic patterns, impeded access to properties, and loss of business, which are expected to be higher for the alternative routes than the proposed route.

2. LIPA's proposed transmission line, exclusive of substation upgrades and interconnection costs, is estimated to cost approximately $39.7 million and will provide an additional performance benefit of approximately 200 MW. The unit cost is approximately $0.20 million/MW. The Alternate 1—underground/overhead hybrid transmission route—is estimated to cost approximately $164.8 million and will provide an additional performance benefit of approximately 200 MW. The unit cost is approximately $0.82 million/MW. The easements associated with Alternate 1, and included in the above-stated unit cost, are estimated to cost approximately $70.0-140.0 million. The Alternate 2 is the same transmission route as Alternate 1, except that the facility will be 100 percent overhead construction. Alternate 2 is estimated to cost approximately $147.5 million and will provide an additional performance benefit of approximately 200 MW. The unit cost is approximately $0.74 million/MW. The easements associated with Alternate 2, and included in the above-stated unit cost, are estimated to cost approximately $70.0–140.0 million. The Alternate 3—Route 24—will cost approximately $91.2 million and will provide an additional performance benefit of approximately 160 MW. The unit cost is approximately $0.46 million/MW.

3. With respect to alternative technologies, alternative costs and MW supply were collected for generation and demand side management options. Based on information being collected for LIPA's Energy Plan, LIPA estimated the typical capital cost for the following simple cycle peaking facilities:

- Dual LM6000s (79.9 MW); and
- LMS 100 (105 MW).

The cost data collected for the units above were for generic installations on Long Island and provide relative information of costs for comparison purposes only. Given the lack of gas supply and the expected difficulty in siting a new generating unit on the South Fork of Long Island, the actual costs, if a facility could somehow be sited, would be much higher.

4. Information on smaller scale generation projects were also developed and they include:

- renewable resources (200 kW photovoltaic roof panel); and
- distributed generation (10 MW biodiesel combustion turbine).

With respect to demand side management, a cost estimate based on LIPA's Clean Energy Initiative for the period 1999–2008 with a projected peak demand savings of 166 megawatts ("MW") was developed. The comparative costs for all these alternate routes, technologies and demand side management are summarized below.

Comparison of Capital Costs in Millions per MW	
Transmission and Route Options	**Cost**
Proposed Route	**$0.20**
Alternate 1	$0.82
Alternate 2	$0.74
Alternate 3	$0.46
Technology Options	
Peaking Unit: LMS100	$0.98
Peaking Unit: Duel LM6000	$1.29
DSM: CEI Program	$2.14
Distributed Generation: Biodiesel	$2.82
Solar Photovoltaics	$9.06

C. Environmental Impacts

1. The application, testimony and exhibits to be supplied for the record describe the nature of the probable environmental impacts of the Facility and are briefly summarized below. The environmental impacts are expected to be minimal, limited to temporary construction disturbance, the introduction of additional structures and equipment into the existing empty underground conduit and into LIPA substations, and limited tree removal for the creation of points to access Sunrise Highway. The Signatory Parties agree that the Facility, as located and configured for this Joint Proposal, represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations. The selected route, access points and configuration is preferred because it uses existing PSC-certified conduits, avoids or minimizes the disturbance of natural habitat, is reasonable in terms of cost, and avoids disturbance of residential and commercial properties and activities, traffic and emergency operations in a densely populated area.

2. The proposed Second Cable route and the installation methods for the Second Cable will, by their respective natures, have a minimal impact on the physical environment. The proposed Second Cable route has been reviewed with respect to potential impacts to land uses, critical environmental areas, vegetation, wildlife, water resources, transportation, and cultural, historical and archaeological resources. Impacts will be temporary and insignificant in nature, as they will consist of construction activities that involve cable pulling and splicing at 40 existing manholes installed along the corridor for the previously approved, existing electric transmission cable. The amount of potential vegetation disturbance will be kept to the minimum required to access the existing manholes to install the cables safely. Trenchless technology was previously employed in 2000 to install conduits for the second cable

beneath environmentally sensitive areas and most road crossings. Those existing conduits would be utilized to install the second cable. Additional trenching will be limited to areas in the immediate vicinity of the Shinnecock Canal, to accommodate the transition of the cable from its underground locations on either side of the Sunrise Highway Bridge over the canal to its location in an existing conduit on the underside of the bridge deck. No significant construction or operational environmental impacts have been identified.

The following sections address the potential for environmental impacts to result from the installation of the Second Cable with respect to various impact types.

D. Proposed Second Cable Route

Land Use

1. The Facility has been sited and designed to avoid long-term or permanent impacts to all land uses within and adjacent to the proposed right-of-way.

Exhibit 4 to the Application contains a detailed narrative describing the land uses along the proposed route. Exhibit 2, Attachment B contains a detailed map of the proposed route by Land Use Classification. Approximately 1,900 feet west of the proposed route are 35 acres of agricultural land. Approximately 18% of the proposed route is within 200 feet of residential areas. The route is within 200 feet of Town of Southampton commercial/business districts. The only commercial/industrial noise-sensitive receptors are (1) the Suffolk County Community College, approximately 300 feet west of the proposed route and (2) two churches, both in Hampton Bays, located 1,350 and 2,450 feet, respectively, from Sunrise Highway.

The proposed Second Cable route is proximate to four Town of Southampton areas designated as industrial zoning districts (see Land Use Map in Attachment B of Exhibit 2 of the Application). The areas include sand mines and salvage yards.

The Proposed Second Cable route is proximate to several areas designated Open Space Conservation in the Town of Southampton. The land surrounding the LIPA overhead utility line right-of-way that includes the proposed Second Cable route south of the Riverhead Substation is part of Cranberry Bog County Preserve.

A Shinnecock Indian Reservation, comprising approximately 161 acres of land, is located on the north side of Sunrise Highway, approximately 0.3 miles west of the Shinnecock Canal.

The Central Pine Barrens encompass more than 100,000 acres of land in Suffolk County, Long Island. The lands within the Central Pine Barrens encompass five land-use categories including:

- Core Preservation Area (CPA), which promotes compatible agricultural, horticultural and open space recreational uses, but prohibits or redirects new construction or development.
- Compatible Growth Areas (CGA), which discourage piecemeal and scattered development but allow appropriate patterns of compatible residential, commercial, agricultural and industrial development.
- Critical Resource Areas.
- Planned Development Districts, which can function as receiving sites for development rights or Pine Barrens credits. These areas are also known as Transfer Development Rights ("TDR") areas.
- As-of-Right Residential Receiving Areas, which identify receiving sites for development rights or Pine Barrens credits.

Dwarf Pine Plains County Nature Preserve is located on the southern side of Sunrise Highway west of Exit 63, immediately south of where the transmission line is proposed

to be installed underground in the existing conduit. The David A. Sarnoff State Pine Barrens Preserve is approximately 400 feet north of the proposed Second Cable route, on the north side of Sunrise Highway, roughly between Quogue – Riverhead Road and Speonk – Riverhead Road.

The proposed Second Cable route is within the Pine Barrens CPA from the Riverhead Substation to the vicinity of the Sunrise Highway/Route 24 interchange in Hampton Bays. The route exits the CPA and extends eastward through several hundred yards of CGA and TDR areas before exiting the Central Pine Barrens Area. Within the CPA, the proposed Second Cable route is in LIPA overhead transmission line right-of-way or roadway rights-of-way.

The proposed Second Cable route is within Hydrologic Zone III from the Riverhead Substation to just past the SR 24 interchange (Exit 65) on the Sunrise Highway in Hampton Bays. Zone III is an area that has good groundwater quality in both the Upper Glacial and Magothy aquifers and has been designated as a major deep recharge zone. A small portion of the route that is located near the intersection of Speonk – Riverhead Road and Sunrise Highway is located within Hydrologic Zone VI, the portion of the groundwater system that discharges to Moriches Bay and the eastern portion of Great South Bay. The shoreline of Zone VI comprises valuable recreational resources and the adjacent bay has important shellfish resources. The remainder of the route lies within Zone IV which is characterized by shallow flow systems that discharge directly into streams and marine waters.

The proposed Second Cable route is within the Central Suffolk SGPA from the Riverhead Substation to the vicinity of Exit 65 on the Sunrise Highway in Hampton Bays. The remainder of the route, to its terminus at the Canal Substation, is not within a designated SGPA.

Long-term impacts to land uses as a result of operation of the transmission cable have been avoided by placement of the cable underground in existing conduits and utilization of existing utility and public rights-of-way. Temporary land use disturbances will occur during installation of the cable; however, these temporary disturbances will not have significant impact

on existing and known future planned land uses. In addition, the installation of new equipment and equipment upgrades at the existing substations will not result in any significant land use impacts. LIPA's Response to Informal Information Request No. 1 explored the environmental impacts of additional tree removals by creating access points to avoid entering and exiting the main line of Route 27. Visual and noise impacts will be minimal during construction. Vegetative restoration plans will be prepared to create screening to mitigate impacts, to the extent practicable, caused by tree removals.

Agricultural

2. Agricultural properties will not be affected.

Residential

3. Construction activities through residential sections will occur principally during daylight hours. Since the cable installation method of pulling and splicing is essentially a moving process, construction activities are expected to be transient, i.e., a matter of hours to a few days, in any residential area. It is proposed that the homeowner notification procedures that were successfully used during the installation of the Original Facility in 2000 will be repeated for the installation of the Second Cable. All electrical service customers along the proposed Second Cable route will be identified based upon the National Grid customer base and the Computer Assisted Restoration of Electric Service System. Those customers identified will be sent a letter approximately 3-4 weeks prior to the start of cable installation work that includes a 'hotline' telephone number to call with questions or concerns about the installation, such as the presence of cable installation crews and equipment in residential neighborhoods. All homeowners calling the hotline will be contacted in person to review their concerns.

4. Except for 24-hour splicing operations, the occurrence of unforeseen circumstances or the need to complete work beyond 7 p.m., discussed further in this Joint Proposal, measures to minimize noise impacts to residents will be detailed in the EM&CP and

will include equipment mufflers, shielding where appropriate, and limiting work hours to the period between 7 a.m. - 7 p.m. to the greatest extent practicable. No lane closures will be permitted between 5 a.m. - 9 a.m. and 3 p.m. - 7 p.m. However, safety and avoidance of peak travel times may warrant night-time construction between 7 p.m. - 5 a.m. A full road closure will be required at the eastbound Route 27 entry ramp at Exit 66. That closure would not affect residential properties. Canal Road on the east side of Shinnecock Canal could require a road closure to install a 300 foot section of cable in the roadway. Partial closures will be required at Gate Street and Canal Road West. None of those partial closures would preclude access to residences. LIPA will install portable variable message boards at least two weeks before any road closures. If road closures do affect any residential or commercial property, LIPA will make reasonable efforts to notify the property owner with as much notice as is reasonably practicable under the circumstances and will make reasonable efforts to accommodate the property owners' need for access and egress.

Commercial

5. There are no operating commercial properties such as retail stores and restaurants directly adjoining the proposed Second Cable route. Buildings at the educational institution proximate to the proposed Second Cable route, Suffolk County Community College Eastern Campus, located west of Speonk - Riverhead Road, are sufficiently distant from the roadway that they will not be affected by construction noise. Industrial properties, such as salvage yards and sand mines, will not be impacted by installation of the Second Cable, due to their locations relative to the route.

Critical Environmental Areas ("CEAs")

6. As explained above, and in more detail at p. E-4-4 of the Application, the CEAs along the proposed Second Cable route include the Central Pine Barrens, Hydrologic Zones III, IV and VI, and the Central Suffolk Special Groundwater Protection Area ("SGPA").

The primary concerns with respect to the Central Pine Barrens are to protect the flora and fauna and to protect the underlying aquifer system. Protection of groundwater quality is also the primary concern of the Hydrologic Zones and the Central Suffolk SGPA. The proposed Second Cable route traverses the CEAs from its beginning point at the Riverhead substation to the vicinity of Exit 65 on Sunrise Highway in Hampton Bays. None of the CEAs extend an appreciable distance south or east of this interchange.

7. The only period of time that the Second Cable could potentially impact the flora and fauna or the underground aquifer system is during installation of the cable. There will be no operational environmental impacts, as the Second Cable will be installed within existing underground conduits. The technique for installing the new transmission line will be conventional cable pulling and splicing at 40 existing manholes along the proposed route. Tree clearing will be performed as necessary in order to access manholes along the route. In addition, the construction materials to be utilized for this project are inert, with no leachable constituents. The cable pulling lubricant specified for the installation (Polywater Lubricant J) is a non-toxic, water-based gel lubricant that is harmless to humans and environmentally safe, with no wax, grease or silicone content.

Freshwater Wetlands

8. The existing, installed conduits and proposed Second Cable route passes within the regulated area of two freshwater wetlands, as defined by the NYSDEC and Town of Southampton. These wetlands will not be adversely impacted by the Second Cable installation. A small wetland exists about 100 feet west of LIPA's cleared right-of-way immediately south of Nugent Drive and will not be impacted by construction activities. The second wetland exists on LIPA's right-of-way south of Nugent Drive and north of East Moriches – Riverhead Road (Route 51). This wetland is dominated by vegetative species such as leatherleaf, high-bush blueberry, sphagnum moss, and sundews. There will be no impact to this wetland, as the Second

Cable will be installed beneath it in existing conduits by accessing the existing manholes located upland and more than 100 feet from the wetland. For both wetland areas, LIPA will ensure compliance with applicable requirements of the NYSDEC and consult with the Town of Southampton. National Grid's Natural Resources Protection Guidelines, which will be part of the Environmental Management & Construction Plan, will be utilized, and construction monitors will ensure that the cable installation activities do not encroach upon the wetlands.

Protection of the Underlying Aquifer System

9. Review of the available data indicates that groundwater occurs at depths of 20 feet below ground surface ("bgs") or greater for the majority of the proposed Second Cable route. The proposed installation of the Second Cable along Route 27 does not include excavation activities; therefore, groundwater will not be encountered. The installation of the Second Cable, by pulling from existing manholes through existing conduits, is not expected to require dewatering activities. As the installation involves a buried electric transmission line that will be constructed with inert non-leachable materials, there will be no potential impacts to the underlying aquifer system and groundwater quality once the construction phase is completed.

10. During the construction phase, the primary concern for environmental impacts will be the potential release of liquid fuels (gasoline and diesel) and hydraulic fluids or oil from trucks and equipment. To minimize the potential for releases from construction vehicles and equipment, there will be no temporary fuel storage tanks placed along the proposed Second Cable route. Except for 24-hour splicing operations and message boards, no refueling will take place along Route 27. All refueling of stationary equipment will be conducted behind spill containment, protective barriers. In addition, each apparatus will be inspected prior to the beginning of each workday to ensure that it is free from leaks. Any piece of apparatus observed to be leaking will be immediately taken out of service and replaced. The construction crews will also be fully briefed on the potential environmental impacts of their actions and will receive

specific training on fuel handling procedures to minimize the potential for the release of fuel, hydraulic fluid, or oil. Should a spill or release occur, any impacted soils will immediately be placed on impermeable plastic, the NYSDEC Spills Unit will be notified, and appropriate remedial action will be taken to mitigate the release.

Highway Land Use (Transportation Corridor)

11. The Second Cable will be installed within existing conduits located primarily in roadway rights-of-way. Cable pulling will occur at existing manhole locations. Pursuant to a request by NYSDOT, LIPA will not access the proposed route along Sunrise Highway from the main roadway of Sunrise Highway, except at Bellows Pond Road, as provided herein. In a submission made by NYSDOT at the request of Staff, NYSDOT (Informal Information Request No. 5) detailed the highway safety concerns involved in accessing Sunrise Highway. Said submission will be included in the record. Accordingly, to avoid the traffic and safety concerns raised by NYSDOT, LIPA will access Sunrise Highway using four access roads to be created according to LIPA's Response to DPS Information Request No. 1 attached hereto. Pursuant to the terms of this Joint Proposal, NYSDOT will provide the appropriate easements, consents or permits to LIPA, provided that LIPA meets the requirements for the same, to construct the four access roads on NYSDOT property and to use them to install the Project and to maintain the cables and conduits along Route 27. If NYSDOT cannot convey to LIPA the necessary approvals for LIPA to use NYSDOT's property for creation of the access roads and/or maintenance of the underground facilities along Route 27, then the parties agree to work together to assess the feasibility of lane closures on Route 27. Based upon accident analysis data to be provided by NYSDOT, LIPA will prepare a traffic impact study for NYSDOT's review and approval. Pending the results of that study, NYSDOT will include its contents in its exception request to FHWA to support necessary Route 27 lane closures. Accordingly, as described therein, there will be some tree removal and temporary noise impacts during construction due to

vehicle movement at the four locations to approximately 22 houses. Following replanting and restoration measures, the four areas should have improved tree density and noise attenuation than currently exists.

The four access points:

Speonk Riverhead Road requiring one access point in order to enter the access road along the main line. LIPA will identify a path at the NYS Recharge Basin in the EM&CP that will be submitted to the Commission for approval. Alternatives were identified by LIPA at Speonk Riverhead Road in the Response to Informal Information Request No. 1. LIPA will file a plan in the EM&CP making use of the existing all terrain vehicle ("ATV") trail outside the fence of the NYSDOT Recharge Basin. LIPA anticipates, at this time, the use of vehicles requiring a 20 foot width. As such, the plan will provide for the construction of an approximately 20 foot wide access road, starting at the eastern/southern most edge of the ATV trail, and measure 20 feet towards the Recharge Basin. NYSDOT agrees to allow LIPA to move the fence towards the Recharge Basin a maximum of 10 feet, depending upon the need LIPA can demonstrate for the additional footage. This proposal would minimize tree clearance compared to LIPA building a road entirely outside the existing fence. The additional trees to be removed between the fence and the ATV trail appear to be smaller than the trees located closer to the Recharge Basin and are routinely cleared by NYSDOT in order to maintain the fence line.

Squiretown Road requiring two access points, one to leave the access road and one to get back onto the access road. LIPA has identified Old Riverhead Road and Daniels Road as access points. All points are acceptable to NYSDOT.

Newtown Road requiring one access point to leave the access road. LIPA has identified a cleared path along the ROW that would allow access to Newtown Road that is acceptable to NYSDOT.

There will be no permanent adverse impact to any adjacent properties. Construction impacts in general will be minimized by strict adherence to all NYSDOT requirements and close communication with involved local agencies and adjacent property owners. There will be no impact to utilization of land suitable for future use, primarily due to the cable's installation within existing conduits located under highway shoulders. No blasting operations are anticipated. All measures shall be taken to minimize disruption to traffic flow by adhering to the traffic control measures contained in the revised Maintenance and Protection of Traffic Plans ("MPT") to be submitted by LIPA to the parties and accepted by NYSDOT, and by close communication with applicable local agencies and officials along the cable route. In addition, construction activities will be sequenced to avoid impacts on key road corridors during the tourist season, and traffic management plans shall avoid peak travel demand and restrict NY 27 travel lane, single lane closures at Bellows Pond Road to the hours specified in Section III. D.4 herein.

12. The Application shows that LIPA explored alternative routes to access Route 27 without using the highway entrances and exits as requested by NYSDOT. Application, Section 1.5, p.9. On June 20, 2008, a field meeting between LIPA and the NYSDOT resulted in the NYSDOT Regional Permit Engineer confirming LIPA's findings that no cleared service roads nor utility roads exist that could be used to access the existing conduit for installation of the Second Cable from the Pine Barrens south of Route 27. The NYSDOT Regional Permit Engineer also suggested the use of existing border areas as a reasonable alternative to constructing new, longitudinal access roads for 11.2 miles of occupation. In July, 2009 NYSDOT requested LIPA to explore other potential access points for gated ingress and egress to the proposed route without using Sunrise Highway. As explained above, LIPA's Response to DPS Information Request No. 1 identified four access points which the Signatory Parties agree should be used.

With respect to the installation work along Sunrise Highway, where there is less than 30 feet from the white edge of pavement line, traffic channelization devices and other traffic safety measures, such as an impact attenuation vehicle, will be employed. Concrete barriers will not be required along the entire route, but may be required by NYSDOT at selected locations and will be discussed in the EM&CP. Attenuation trucks will also be required as LIPA moves equipment and material. During construction, access road traffic along Sunrise Highway cannot travel against the flow of traffic unless concrete barriers with curtain panels are used, as approved by NYSDOT. These measures and others are included in the revised MPT plans to be submitted by LIPA.

13. Exhibit 15 (E-6)—Effect on Transportation, attached to the Application—addressed traffic safety measures that LIPA proposed to implement to avoid or minimize any traffic disruptions and to otherwise comply with the applicable substantive provisions of NYSDOT's traffic and safety standards and the substantive requirements of Suffolk County and the Town of Southampton. Following settlement consultations with NYSDOT and Staff, LIPA will submit revised MPT plans detailing the traffic and safety standards that will be employed to install the Second Cable and maintain it.

Cultural & Historical Resources

14. The Second Cable's location within an existing underground conduit and related construction methods have been developed and designed to minimize impacts to cultural and historical resources. There will be no impact to cultural resources during construction. By letter dated June 12, 2008, the New York State Office of Parks, Recreation and Historic Preservation confirmed that installation of the Second Cable will have ". . . No Impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places."

Archaeological Resources

15. The Institute for Long Island Archaeology was retained to provide an archeological assessment to evaluate the potential of the 1999 Project to disturb areas of archeological significance. The archeological survey identified a small tool-making station in the Shinnecock Hills area. This archaeological resource is sufficiently distant (approximately one mile) from the eastern terminus of the proposed Second Cable route at the Canal Substation such that there will be no adverse impact to it resulting from installation or operation of the Second Cable.

Vegetation Impacts

16. The Second Cable route will largely avoid densely forested areas along roadways. LIPA's Response to Informal Request No. 1 explained the additional tree removal required at the four off-route access points, the limited noise and visual impacts, and the commitment to provide a vegetation restoration plan, discussed elsewhere herein.

17. In the LIPA overhead transmission line right-of-way between the Riverhead Substation and East Moriches – Riverhead Road, cable pulling will occur in a corridor where vegetation is maintained at low heights for transmission line access purposes, and where unvegetated tracks resulting from vehicle access are present. Minimal, temporary impact to vegetation is anticipated to result from movement and use of construction equipment in this area.

18. Along East Moriches - Riverhead Road, the Second Cable route runs along the maintained grassy median of the roadway. No permanent disturbance to vegetation is anticipated to be required to access the existing manholes to pull the cable. The existing conduit lies beneath the white edge of pavement line of the southbound travel lane pavement of Speonk - Riverhead Road. The distance between the edge of pavement and the tree line along the western shoulder of Speonk - Riverhead Road is such that some tree branches may need to be tied back or pruned to accommodate cable pulling equipment.

19. Along Sunrise Highway, the Second Cable route is in the previously disturbed grassy area of the highway right-of-way for its entire length. As a result, there will be no disturbance to trees along Sunrise Highway. In particular, the trees that border the southern portion of Sunrise Highway (*e.g.*, the Dwarf Pine Plains) west of the Shinnecock Canal will not be impacted. Except as described above concerning the creation of the four new access roads, LIPA's Response to DPS Informal Information Request No. 1 describes the tree removal required, and the restoration and revegetation measures that will be taken to replant the disturbed areas. Detailed restoration plans will be provided in the Environmental Management and Construction Plan.

20. In the vicinity of the Shinnecock Canal, the existing conduit and cables are located in the pavements of Newtown Road, Gate Street and Canal Road, where they will be accessible for cable pulling without disturbance to vegetation. It is anticipated that a limited access area around the previously installed manholes will be maintained on a periodic basis, approximately every five years through minor vegetation cutting. No herbicides will be utilized.

Wildlife Impacts

Avifauna

21. The Second Cable route is established adjacent to or within designated rights-of-way associated with roadways and utility lines. These areas are already disturbed and impacted. Species associated with such habitats are considered to be habitat generalists, ubiquitous throughout the area and tolerant of human disturbances. Therefore, little or no impact is anticipated to occur to the species that are considered to be interior species or utilize the adjacent habitat. Any disturbances will be extremely localized and limited to the duration of the construction. Species composition will return to its current state after the completion of the cable installation.

Herpetiles

22. Potential impact to herpetiles such as the endangered Tiger Salamander and the threatened Cricket Frog and Mud Turtle—associated with possible wetland disturbance—was evaluated. However, installation of the Second Cable in conduits previously placed beneath the wetland located south of Nugent Drive and north of East Moriches - Riverhead Road (Suffolk County Road 51), by means of conventional cable pulling and splicing techniques at existing manholes in upland areas, has no potential for wetland impacts. The NYSDEC will be consulted prior to installation of the Second Cable regarding the minimization of potential impacts to upland salamander habitat and avoidance of impeding movements of salamanders between wetland and upland habitats. No impact is anticipated to occur to upland species as they are not expected to be encountered in any significant numbers along the Second Cable route.

Mammalian Species

23. No long-term impacts are anticipated to occur to mammalian species along the Second Cable route. Any potential impacts are likely to be very localized and last only for the duration of cable installation. Areas currently maintained as rights-of-way will quickly return to their current vegetative state, providing similar habitat to that currently available. Most of the identified species are tolerant of human disturbances and will not be affected by the cable installation.

Soils

24. The potential for erosion along the Second Cable route is minimal, since the existing conduit will be utilized for the installation of the Second Cable. The potential for erosion is also minimized because the cable installation does not require any grading activities. It is not anticipated that there will be a need to stockpile soil along the route.

Potential Changes Induced by the Project

25. The Second Cable will be installed in existing conduits and manholes along a corridor that was approved by the Commission in 2000. Other than installation of a second transmission cable, construction of new facilities will be limited to termination structures at the Riverhead Substation and the Canal Substation, and transition structures at the Route 27 bridge over the Shinnecock Canal.

Changes to Physical or Biological Processes

26. The proposed Second Cable will utilize existing conduits and manholes in an existing corridor. As such, the construction and operation of the proposed Second Cable will not induce changes in the physical or biological processes of plant life or wildlife through any permanent or significant temporary change in the hydrology, topography or soil of the area.

Scenic, Recreational and Historic Areas

27. The Second Cable route comprises an existing corridor approved by the NYPSC in 2000 and avoids scenic, recreational and historic areas. No federal, state or municipal parkland will be traversed.

Visibility from Areas of Public View

28. The majority of the Second Cable will be installed underground and will not be visible from areas of public view. The proposed termination structures at the Riverhead Substation and the Canal Substation will be interior to the substations and will not be readily visible to the public. The proposed transition structures at the Route 27 bridge over the Shinnecock Canal, although visible to the public from the Shinnecock Canal and from Canal Road, will be installed near existing bridge piers and adjacent to existing, similar transition structures. The new transition structures will, therefore, result in a low level of visual contrast. There will be minimal visual impacts at the four off-route access points due to tree removal.

Said impacts will be mitigated, to the extent practicable, pursuant to the vegetation restoration plan to be submitted in the EM&CP.

Timbered Areas, High Points, Ridgelines and Steep Slopes

29. The Second Cable will be installed in existing conduits and manholes along a corridor that was approved by the NYPSC in 2000. The existing transmission facility was designed to avoid heavily timbered areas, high points, ridgelines and steep slopes.

Protection of Fish and Aquatic Life

30. The only part of the existing conduit near aquatic habitat is the proposed crossing of the Shinnecock Canal on the existing Route 27 bridge. The cable will be pulled through existing conduits on the underside of the bridge deck, so no impacts to fish or other aquatic life are anticipated to occur.

Use of Pesticides or Herbicides

31. No herbicides or pesticides will be applied as part of cable installation activities. The measures included in LIPA's long range ROW maintenance plan will be employed for maintenance of the cable and described in the EM&CP.

Impacts of Structures

32. New structures will be limited to termination structures at the Riverhead Substation and the Canal Substation, and transition structures at the Route 27 bridge over the Shinnecock. All of these structures will be installed in proximity to existing, similar structures, and no adverse environmental impacts are anticipated.

Cleanup and Restoration

33. Cleanup and restoration of the project area will be conducted as specified in the Environmental Management and Construction Plan.

Communications & Electromagnetic Fields

34. As explained in Exhibit 14 (E-5), the Second Cable is expected to have no adverse effects on communications (i.e., television, radio, etc.), primarily because all of the electric transmission facilities will be installed underground, producing zero electric fields which have no effect on communications signals transmitted through the air. No adverse effect on other underground communication cables, that is, copper conductor communication cables, will be realized from the installation of the electric transmission cable. Fiber optic communication cables are intrinsically unaffected by the new transmission cable. LIPA complied with applicable sections of the latest version of the National Electrical Safety Code ("NESC") related to appropriate spacing between power and communication cables when the conduit and manhole system was installed in 2000. As part of the final design of the Project, the electric cable path route and design information will be provided to third parties that may have underground communication cables along or near the same path (e.g., Verizon, Cablevision, LIRR, etc.) to assure appropriate clearances are achieved, as was done in 2000.

35. A study was performed to determine the present electric and magnetic field strength (EF and MF) along the Route and, through the use of mathematical formulae, assessed the expected electric and magnetic field strength during winter normal circuit operation as prescribed in the Commission's "Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities" dated September 11, 1990. The study is attached, as Attachment A, to the Application. See also Exhibit 14 (E-5) and the additional study provided by LIPA to the parties on August 4, 2009.

36. The study's modeling results clearly indicate that the calculated electric and magnetic field strengths at the edge of the Row's (+/- 50 feet from the centerline of the proposed cable) along the route is well below the interim magnetic field standard of 200 mG as well as the 1.6kV/m electric field level as established by the Commission. In addition, the

International Commission on Non-Ionizing Radiation Protection ("ICNIRP") and the American Conference of Governmental Industrial Hygienists ("ACGIH") specify field levels for worker (1,000 to 10,000 mG) and for general (830 mG) exposure that are much higher than combined levels that will be generated by the existing and proposed 138kV cable circuit.

37. The study also concluded that, on the basis of Electric and Magnetic Field levels generated by the 138kV cable circuits, no interference effects are expected for nearby underground copper communication cables. This study was reviewed by LIPA to assess the accuracy of the new magnetic field values considering a single trench design with two circuits spaced approximately 25 inches on center.

38. The study showed that with a specific phasing arrangement on the proposed cable, the combined effects of both circuits result in magnetic field levels significantly less than the established Commission standard of a maximum 200 mG level at the edges of the defined ROW throughout the proposed route. The phasing was shown on the drawings in Exhibit 5 of the Application.

The maximum calculated magnetic field levels under Winter Normal conductor loading are as follows:

Calculated Magnetic Fields Using Winter Ratings *

Study Locations		ROW Edge	Value	ROW Edge	Value
1	Distance from C/L	East	50'	West	50'
	mG:	[redacted]	54.9	[redacted]	48.8
2	Distance from C/L	East	50'	West	50'
	mG:	[redacted]	54.9	[redacted]	48.8
3	Distance from C/L	North	50'	South	50'
	mG:	[redacted]	58.7	[redacted]	19.3
4	Distance from C/L	East	50'	West	50'
	mG:	[redacted]	8.3	[redacted]	1.7
5 & 6	Distance from C/L	North	50'	South	50'
	mG:	[redacted]	2	[redacted]	1.8
7	Distance from C/L	North	50'	South	50'
	mG:	[redacted]	30	[redacted]	20.1
8	Distance from C/L	North	50'	South	50'
	mG:	[redacted]	2	[redacted]	1.8

* Extracted from Figures 2 through 6 in EMF TRC Report dated December 6, 2007

39. The Commission's interim policy on magnetic fields uses a worst-case peak calculation of magnetic fields based on the winter normal conductor rating of a transmission line. It was adopted in the absence of a consensus in the scientific community or direct causal evidence as to whether prolonged exposure to low levels of magnetic fields from power lines causes biological effects in humans. Because of the lack of definitive information, however, it is generally considered rational to follow a policy of "prudent avoidance" of magnetic fields where economical. Most studies of the biological effects of magnetic fields from power lines are based on typical actual exposures -- generally the annual average exposure -- rather than peak exposures. In order to model the magnetic fields on an average exposure basis, load flows for the average cases were developed. Using an average load methodology for the transmission line, in combination with the multiple transmission circuits existing in the same corridor, maximum average magnetic field levels calculated at the nearest occupied structures are as follows:

Calculated Magnetic Fields using Average Annual Ampacities

Study Locations		Nearest Occupied Structure	Value	Nearest Occupied Structure	Value
1	Distance from C/L	East	NA	West	NA
	mG:	[redacted]	-	[redacted]	-
2	Distance from C/L	East	NA	West	NA
	mG:	[redacted]	-	[redacted]	-
3	Distance from C/L	North	NA	South	NA
	mG:	[redacted]	-	[redacted]	-
4	Distance from C/L	East	NA	West	400'
	mG:	[redacted]	-	[redacted]	-
5 & 6	Distance from C/L	North	NA	South	65'
	mG:	[redacted]	-	[redacted]	0.4
7	Distance from C/L	North	50'	South	50'
	mG:	[redacted]	3.8	[redacted]	2.8
8	Distance from C/L	North	NA	South	37'
	mG:	[redacted]	-	[redacted]	1.0

NA: No structures within 400' of cable route
-: No magnetic field influence from LIPA's electric system

The values above include mitigation efforts in rolling phases on circuit 69-962 to further reduce the net magnetic field effect in that designated area of the cable route. This effort is in addition to the detailed design provided in the Second Cable Project, which rolls phases on the proposed underground cable to minimize the magnetic field effects of both underground cable circuits from LIPA's Riverhead to the Canal Substation. The highest calculated magnetic field level 50 feet away from the cable at Location 7 produced by calculations using average annual ampacities is 4.1 mG. The highest calculated magnetic field level 50 feet away from the cable at Location 8, produced by calculations using average annual ampacities, is 0.6 mG. The study reveals that all magnetic field levels at the edges of the right-of-way calculated in the supplemental calculations using average annual ampacities are significantly below the Commission 200 mG guideline at the edge of a transmission right-of-way.

E. The Availability and Impact of Alternatives

Alternative Routes

1. The Signatory Parties agree that the preferred route for the Project described above is the superior from both environmental and economic perspectives because the conduits for the placement of the transmission facility are already in place. The route and the placement of the second set of conduit were approved by the Commission in 2000 and necessarily predetermine the preferred placement of the Second Cable. Three alternative routes, as discussed below, as well as the merits of overhead and underground construction, were considered in the original 2000 Cable Project and rejected by the Commission.

2. In 1999 and then again in 2007 – 2008, LIPA evaluated the sufficiency of upgrading the existing, overhead double-circuit 69kV line along its easement from Riverhead to Tiana to 138kV, which would include the installation of larger steel poles, conductors and insulators. While feasible from a construction standpoint (if more than 150 easements could be renegotiated), this option did not satisfy LIPA's planning requirements, which involve the need for a second, independent electric supply source to the South Fork due to reliability issues.

3. During the aforementioned timeframe, LIPA's existing transmission ROW and easements were also evaluated to determine their suitability for construction of an additional overhead circuit at either 138kV or 69kV. The ROW was inadequate for this usage except in a limited area, near the Riverhead Substation. In addition, LIPA does not own the remainder of the ROW corridor. In certain easement portions of the ROW, limitations on the current easements would have required re-negotiation of over 150 easements for underground facilities. Application, Exhibits 3, p. E 3-2.

4. Usage of the Long Island Rail Road ("LIRR") ROW was also evaluated. Parts of LIPA's existing easement with the LIRR between the Tiana and Canal Substations are

adjacent to the LIRR ROW on the south side of the track. This alternative was found to be unacceptable for both overhead and underground construction for much of the route because of changes in natural terrain elevation and the difference between the track elevation and LIPA easement.

Alternative 1: Underground/Overhead Hybrid Route

This route, which is approximately 13.2 miles in length, exits the Riverhead Substation as an underground cable circuit heading south along the LIPA-owned ROW on which three existing overhead transmission lines occupy space from the Riverhead Substation to Riverhead - Moriches Road (Suffolk County Road 51). At Riverhead – Moriches Road, the route continues south and east along the LIPA right of way, which consists of numerous easements, traversing private properties, the Hampton Hills Golf Club, and travels through Sears Bellow Park until it reaches NYS Route 27. The route continues east along the north side of Route 27 to Exit 65 (NYS Route 24). At this point, the facility would transition to an overhead facility crossing NYS Route 27 and head south toward the Tiana Substation, which is south of NYS Route 27A and adjacent to the LIRR. The route will pass the Tiana Substation along the LIRR ROW, cross the Shinnecock Canal at the LIRR bridge and terminate at the Canal Substation. This alternative was rejected for several reasons:

- Underground construction would be extremely difficult on the LIPA ROW due to numerous elevation changes and rough terrain along the route making cable and conduit installation virtually impossible. Construction on the LIRR ROW east of LIPA's Tiana Substation faces similar terrain obstacles making overhead facilities very difficult to construct along this portion of the route.
- The portion of the LIPA transmission ROW consisting of private property easements, identified above, travels through the heavily-protected Pine Barrens Region. Access

to the ROW for material delivery and construction equipment would require significant tree removal and construction of temporary roads directly through the Pine Barrens region, approval of which is unlikely to be granted.

- Since LIPA does not own the ROW corridor between Riverhead – Moriches Road and NYS Rte 27A, in excess of 150 easements would need to be renegotiated to build and operate underground transmission facilities. This would be impracticable, very costly, and introduce a very high risk of failure to construct the new circuit by the required timeframe.

Alternative 2: Same as Alternative 1 Above, Except the Facility will be Overhead Construction

The existing LIPA overhead ROW from the Riverhead Substation to the Canal Substation was evaluated to determine its suitability for construction of an additional overhead circuit at either 138kV or 69kV. The overall ROW was inadequate for this usage except in a limited area, near the Riverhead Substation, which is owned by LIPA. The majority and balance of the ROW from Riverhead - Moriches Road toward the Canal Substation is:

- Not wide enough to accommodate a new overhead transmission circuit and still provide a safe electrical clearance to existing LIPA facilities on the ROW. The addition of a new overhead circuit would violate provisions of the National Electrical Safety Code related to safe operating distances between facilities.
- The portion of the LIPA transmission ROW consisting of private property easements, identified above, travels through the heavily-protected Pine Barrens Region and access to the ROW for material delivery and construction equipment would require significant tree removal and construction of temporary roads directly through the Pine Barrens region, approval of which is unlikely to be granted.

- Since LIPA does not own the ROW corridor between Riverhead – Moriches Road and NYS Rte 27A, easements in excess of 150 in total would need to be renegotiated to ensure construction and operation of additional overhead transmission facilities, if space were available on the ROW. This approach would be impracticable, very costly, and introduce a very high risk of failure to construct the new circuit by the required time-frame.
- Construction on the LIRR ROW east of LIPA's Tiana Substation faces significant terrain obstacles making overhead facilities very difficult to construct along this portion of the route. As stated above, the Commission rejected these alternate routes in 2000 and they should be rejected again.

Alternative 3: Underground Route Utilizing NYS Route 24

An additional alternative route was examined in the instant Application. This underground cable route, which is approximately 12.4 miles in length, exits the Riverhead Substation as an underground circuit heading south along the LIPA-owned ROW on which three existing overhead transmission lines occupy space from the Riverhead Substation and turns east on Nugent Drive (Suffolk County Route 94) for approximately 0.9 miles to the NYS Courthouse, Suffolk County Offices & Jail Complex, adjacent to the Peconic River. The route passes the front of the Complex (0.7 miles in length). This area is expected to require the placement of 2 electric cable manholes in the roadway in front of the Court and Jail complex. In addition, the cable route passes through two major traffic circles, which connect the North and South Forks of Long Island: the first traffic circle is located in front of the Courthouse, connecting Nugent Drive (Suffolk County Route 94), Center Drive, and Court Street and is adjacent to Suffolk County Road 51; the second traffic circle is a six-way intersection at Peconic Avenue.

From the Courthouse the cable route travels southeastward along NYS Rte 24 (Flanders Road), which is a 2-lane roadway through the Core Preservation Area of the Long Island Pine Barrens for approximately 7.4 miles to the north side of NYS Rte 27, a major interchange with NYS Rte 24. This route crosses a number of wetland areas in which horizontal directional drills ("HDD") to install conduit in lieu of traditional open trench technology will be necessary to mitigate disturbance to the natural environment along this route. The cable route continues to travel along NYS Rte 24 (Flanders Road) crossing Sunrise Highway (NYS Route 27), to Montauk Highway. The portion of the route from NYS 27 to Montauk Highway, approximately 0.8 miles in length, is along the controlled access portion of NYS Route 24 and NYS Route 27, which is expected to require NYSDOT and FHWA approval to construct. At Montauk Highway (Suffolk County Route 80) the route turns east for 2.1 miles crossing the Shinnecock Canal to North Shore Road. The route turns north for 0.5 miles on North Shore Road and onto the shoulder of the east NYS Route 27 entrance ramp and migrates eastward onto NYSDOT property into the Canal Substation where it will terminate onto the 138 kV termination structure.

According to LIPA, in 1999–2000, the NYS Route 24 alternative was discussed with NYSDOT, but was not included in the Riverhead to Southampton Article VII filing. At the time, NYSDOT objected to this route due to a concurrent NYSDOT approved highway widening construction project underway on NYS Route 24 as well as a KeySpan gas main project, Suffolk County Water Authority water main project, and a Verizon cable project. The cumulative and significant traffic disturbances that all these projects and the cable construction effort would impose on the community made this alternative unacceptable.

Environmental Impact

1. NYS Route 24 runs along a scenic area of Long Island's South Fork adjacent to Flanders Bay and the Great Peconic Bay. The construction of the cable in this area would create unnecessary environmental impacts and produce project delays. The excavation to

install a new manhole and duct system requires large trucks, trailers, dewatering equipment, and earth moving equipment to work in designated wetlands and parklands areas. If disturbed, these sensitive areas are difficult to restore to their natural state. Large drill rigs would be needed to directionally drill (HDD) the conduits under traffic circles, major intersections, rivers and streams. The directional drilling equipment requires a minimum of working area of approximately 50 ft by 100 ft to perform horizontally directional drills. Most of NYS Route 24 is a two lane road with open widths ranging from approximately 45' to 60', the HDD effort would, therefore, require complete road closures for periods of days at two traffic circles and numerous intersections to install the cable conduits.

2. The NYS Route 24 cable route runs directly through the Core Preservation Area of the Long Island Pine Barrens, an area in which vegetation cutback and clearing is rigorously restricted. Vegetation cutback, however, likely would be required. The route also crosses or is adjacent to the following park lands; Maple Parkland, Sears-Bellows Pond County Park, and Hubbard County Parkland. In addition, the NYS Route 24 cable route crosses or is adjacent to wetlands at Reeves Bay west of Pleasure Drive, Goose Creek, Birch Creek connecting to Birch Creek Pond, Mill Creek connecting to Sears Pond, and Hubbard Creek connecting to Bellows Pond. At a minimum, directional drills under these wetlands would be required by the NYSDEC.

3. The directional drills would require the cable and conduit to be installed at an approximate depth of 30 ft. below grade. At this depth, a significant reduction in the power flow capacity of the cable can be expected. The power capacity of the cable is proportional to the power flow ampacity as calculated by using commercial software that incorporates the Neher-McGrath formula, the basis for steady-state ampacity calculations since being published in 1957. Because a majority of NYS Route 24 maintains a high water table, a significant amount of dewatering also would be required to install the manholes and much of the conduit.

Dewatering would likely require the installation of well point and recovery systems. The numerous directional drills under the streams along the route and the dewatering systems would require a greater work zone than that for HDD and wetlands and Long Island well permits from the NYSDEC. In the event the required archaeological studies produce significant findings, considerable construction delays can be expected as a result of route redesign and construction changes. The NYS Route 24 alternative would require the abandonment of the existing spare duct connecting to the existing manhole system installed along NYS Route 27 in 2000 with the specific purpose of installing a second 138 kV cable from the Riverhead to Canal Substations. The abandonment of the existing spare duct connecting to the existing manhole system and the construction of a new manhole and duct system along NYS Route 24 would be expected to create significant public opposition from residents, businesses, politicians, community groups, and would also require FHWA approval for a portion of the overall route.

Traffic Impact

4. Construction at the entrance to the Suffolk County Court House, Suffolk County Jail, and Suffolk County Offices, and the Riverhead Traffic Circles at Court St., Suffolk County Road 51, and Peconic Ave. would significantly disrupt traffic associated with critical Suffolk County and New York State Operations. Lane closures and road closures from Nugent Drive to Sunrise Highway would be required. These lane and road closures would significantly disrupt access to local businesses, residential and recreational areas. The cable route along Montauk Highway, which will require both open trench and HDD construction, will create lane and road closures adversely affecting the commercial business district of Hampton Bays in addition to significantly and adversely affecting one of the only two east-west routes to the South Fork in the area. This construction will force traffic re-routes from the 2.1 mile stretch of Montauk Hwy (NYS Rte 24 to the Shinnecock Canal) onto NYS Rte 27 (Shinnecock Canal Crossing), creating a single vehicular crossing route of the Shinnecock Canal to the South Fork

of Long Island during the construction period. Traffic congestion ranging from moderate to severe would result depending upon the time of year construction would take place. In contrast, as explained elsewhere herein, under the preferred route, traffic on Sunrise Highway will be impacted minimally because egress or ingress from the roadway is not proposed, other than at Bellows Pond Road, and other safety measures, as contained in the revised MPT plans to be submitted by LIPA, will be employed.

Alternative Technologies

This section discusses alternative technologies that could fulfill the energy distribution requirements of the Project. The alternative technologies considered were: no action; generation; Demand Side Management; overhead transmission; high voltage direct current ("HVDC") technology; alternative underground transmission line technologies; and alternative transmission voltages.

1. No Action

This action was rejected as it does not solve the thermal overloads or the potential voltage collapse and outages on the South Fork system. This would require continued reliance on the combination of voltage load shedding and on local generation. Therefore, this option was deemed unacceptable.

2. Generation

This option consists of using generation to satisfy the level of demand so as to eliminate the need for the Project. As noted in the original Riverhead to Southampton Article VII Application at the time of the original Application, the South Fork relied on 51 MW of combustion turbine and diesel generating units installed at Southampton, East Hampton, Southold and Montauk. Since then a new generating unit, Hawkeye Energy Greenport Electric Generating Facility, with approximately 50 MW of capacity, was installed on the North Fork in Greenport in the Town of Southold in 2003 to help support the East End. As noted in the

Riverhead to Southampton Article VII Application, there is limited oil storage located on the South Fork, so new generation would require the addition of a costly, new, natural gas pipeline to supply a new unit. Consideration was also given to utilize the existing generation and resource additions on Long Island—such as the Neptune Regional Transmission System ("Neptune RTS") interconnection to New Jersey—that have been recently added or are being constructed (Caithness) to meet Long Island's resource needs, and addition of new generation in place of the proposed Cable. These generation alternatives were rejected because they do not meet NYISO contingency requirements.

3. Demand Side Management Programs

This option consists of using Demand Side Management ("DSM") Programs including conservation to reduce the demands on the East End so as to eliminate the need for the Project. As noted in the original Riverhead to Southampton Article VII Application, this option is inadequate to meet the growing demands in the area. LIPA continues to implement DSM programs across its system that are helping to reduce system demands. The impacts of these programs are incorporated in LIPA's load forecast and although they reduce the demand, they do not eliminate the need for this Project. The following paragraphs discuss LIPA's current and proposed programs:

As part of LIPA's energy efficiency and demand side management program ("EE" & "DSM Program"), LIPA has implemented the Clean Energy Initiative ("CEI"), LIPA *Edge* and the Peak Reduction Program ("PRP"). The CEI, originally approved for a five-year period in 1999, has produced approximately 1,341 gigawatt hours ("GWh") of energy savings and approximately 269 megawatts ("MW") of peak demand savings through 2005. In 2004, LIPA extended the CEI for another five-year period and has committed $185 million in funding for that initiative. LIPA *Edge* and PRP combined allow LIPA to control approximately 125 MW of electric demand during peak periods.

In summary, LIPA is extensively involved in existing and proposed additional EE and DSM programs. These programs and their impacts are incorporated into LIPA's forecasted demands. To the extent that this reduces the rate of growth in LIPA's electric demand it allows LIPA to adjust the need dates of its system improvements. However, all of the efforts described above will not reduce demand in the load sufficiently to eliminate the need for the Project. LIPA's programs are expected to reduce all of Long Island's growth in demand by about 100 MW by 2010. This is less than one-half of the capability of the Project's capacity of 227 MW. The estimated 100 MW reduction is based on the load in the entire LIPA service territory. EE and DSM program reductions that could be achieved in the South Fork will be well below the territory-wide 100 MW estimate. The Proposed Project, however, is needed to backstop the possible loss of the existing 138kV Cable, with a summer normal capacity rating of 227 MW, that serves the South Fork. Accordingly, EE and DSM penetration for the South Fork is unable to completely satisfy this local reliability need. In 2006 while the peak load on the South Fork was 236 MW, this is only about 5 percent of Long Island's peak demand which was over 5,500 MW that summer (NYISO's 2007 Load & Capacity Report). As such, the expected contributions from these EE and DSM programs represent an insignificant amount of demand reduction in the area and thus will not replace the ultimate need for this Project.

4. High Voltage Direct Current (HVDC) Design Technology

With respect to design technology, the use of high voltage direct current (HVDC) technology was considered. Use of HVDC technology is appropriate for connecting utility systems over long distances, where control of the power is required, where the control of electrical losses is important, or where there is a difference in operating frequency between power grids. HVDC technology requires converter stations, which are costly and require significant amounts of land for their placement. In the case of this Project, none of the typical justifications for use of HVDC exist because the Cable is to connect and be part of an existing

integrated AC system. Consequently, HVDC technology would not be warranted for this Application, and the more common alternating current technology would be most appropriate as deemed in the original Riverhead to Southampton Application.

5. Alternate Underground Transmission Line Technology

LIPA reviewed the use of two types of underground transmission line technology: solid dielectric conductor cable and dielectric fluid filled cable. The alternative to the proposed use of a solid dielectric cable in this Project would therefore be a dielectric fluid filled cable or a pipe-type construction. Fluid filled and pipe-type cables use a dielectric fluid to insulate and cool the transmission line and require buildings to house the necessary mechanical pumps and cooling equipment. In addition to the engineering complexity involved and the use of dielectric fluid to fill the pipe and/or insulate/cool the cable, LIPA has determined that in order to mitigate potential environmental issues in the event of a cable leak (although rare) the use of solid dielectric type cables is the most desirable alternative for this Project. Solid dielectric cables do not utilize any type of fluid to insulate the cables and are capable of operating at higher temperatures than fluid-filled cables. Utilizing solid dielectric cable would eliminate the need for the more complex equipment required for fluid-filled or pipe-type cables, and would be similar to the existing cable design.

6. Alternate Transmission Voltages

Lastly, alternative transmission voltages are not really an option given the capacity needed to meet the anticipated overall East End and more specifically, South Fork load growth. The existing 138 kV cable which was originally operated at 69 kV was converted to operation at 138 kV in 2005 to meet the increased loads. Use of 138 kV is compatible with the existing infrastructure at the two Substations and is consistent with the future plans for the South Fork transmission system. The Riverhead Substation, to which the Project will interconnect, consists of transmission equipment operating at both 69 kV and 138 kV levels. In addition to the existing

Riverhead to Canal 138 kV cable, there are two 138 kV lines delivering power from the west from LIPA's Wildwood and Brookhaven Substations. At the Canal Substation transformation equipment exits to step the voltage down to 69 kV for ultimate delivery to the South Fork area loads. Addition of a 69 kV line would be limited to approximately 100 MW of capacity, thus two cables would be required to provide approximately the same level of supply as the proposed Second Cable. This would increase the potential environmental impact since there is only one spare set of ducts, as well as add material and construction costs and line losses from each cable.

In conclusion, given the existence of the second set of conduits that was installed for the future addition of another 138 kV cable, the proposed Second Cable—a single 138 kV AC transmission line— is deemed the most appropriate technology to meet the needs of the South Fork. Furthermore, considering the existence of the existing, certified underground conduit, the Facility should only be sited underground with the exception of installing the cable in transitional structures and conduits under the bridge span at the Shinnecock Canal.

F. Conformance to Long-Range Plans for Expanding the Electric Power Grid

The Facility does not violate any long-range plans, is consistent with the most recent State Energy Plan, is consistent with the LIPA Energy Plan, and will not adversely impact the electrical system of the state and interconnected systems. The contributions of the Facility will help achieve the goals and objectives that LIPA's Energy Plan seeks for the transmission system on Long Island. In its most recently approved Energy Plan[5] LIPA developed five (5) strategic objectives that are intended to guide the initiatives and actions LIPA undertakes over the next decade. The objectives are: (i) enhance the reliability of the bulk power system, (ii) enhance the reliability of the distribution system, (iii) minimize customer rates and increase customer satisfaction, (iv) promote a healthy environment, and (v) position LIPA to respond rapidly to change. The design of and benefits provided by the Facility are consistent with these objectives.

[5] www.lipower.org/company/powering/energyplan04@html.

G. System Reliability Impact Studies

A system reliability impact study was performed by KeySpan Energy for LIPA to determine the impact of this Project on the LIPA system. Similar to a New York Independent System Operator ("NYISO") study, analyses of thermal, voltage, transient voltage, short circuit and angular stability were conducted by assuming summer peak load level system conditions. As indicated in the study, the proposed Riverhead to Canal project improves the normal and emergency transfer limits of Riverhead interface for west to east transfer by 47 percent and 39 percent, respectively. System voltage analysis, including the transient voltage recovery analysis, showed that the project improves the voltage constraints on the 69 kV lines in the event of a loss of the existing Riverhead to Canal 138 kV cable. In summary, the system reliability impact study presents the impact of this Project and concludes that the proposed Project will have no adverse impact on the LIPA and NYISO bulk power transmission system. The proposed Project will significantly reduce the exposure hours to voltage constraints on East End for the loss of the existing Riverhead to Canal 138 kV cable under various system conditions. This Project would alleviate the need for load shedding and reduces reliance on local generators and shunt capacitors. Moreover, the proposed Project would enhance the delivery capability of the South Fork transmission system and act as a strong source to support the South Fork electrical load growth.

H. State and Local Laws

Introduction

LIPA is a corporate municipal instrumentality of the state, a body corporate and politic and political subdivision of the state, exercising essential governmental and public powers. Public Authorities Law, § 1020-c(1). To carry out its state governmental purposes, LIPA is required solely to "apply to the appropriate agencies and officials of the federal and state

governments for such licenses, permits or approval of its plans or projects as it may deem necessary or advisable. . . ." *See,* Public Authorities Law 1020-g(e).

Notwithstanding LIPA's exemption from the jurisdiction of local municipalities, LIPA submitted an analysis of county and town codes in the Application. The analysis was submitted for the sole purpose of allowing the Commission to evaluate under Article VII the proposed Project's compliance with the substantive local requirements that would otherwise be applicable to a major utility transmission facility. Where code provisions cannot be complied with because they are unreasonably restrictive, LIPA requested the Commission not to apply them as certificate conditions. Previous Article VII decisions have waived similar provisions. Nothing herein should be construed or interpreted as LIPA agreeing to: subject itself to the jurisdiction of any county or local municipality; waive its exemption from such jurisdiction; or, waive or forfeit any right to which it is entitled under the law. The Signatory Parties agree that the Facility can be constructed by LIPA in a manner that conforms to all substantive requirements of such local laws and ordinances.

1. New York State Uniform Fire Prevention and Building Code ("NYSUFPBC")

To the degree that the subject matter of the NYSUFPBC applies to the proposed Second Cable, LIPA agrees to undergo building plan review and obtain building permits, inspections, and certificates of occupancy, as appropriate, upon the inspection and completion of construction from the New York State Office of General Services (NYSOGS) or any state agency or private organization authorized by the Department of State as having the requisite training or qualifications. The Signatory Parties agree that if LIPA follows such a course of action, the record in this proceeding supports a finding under PSL § 168(2)(d) that the Facility is designed to operate in compliance with applicable state laws, and regulations issued thereunder, concerning the New York State Uniform Fire Prevention and Building Code.

2. New York State Department of Transportation Permits

LIPA agrees to undergo highway work permit and use and occupancy permit review and obtain a highway work permit and use and occupancy permit from NYSDOT pursuant to 17 NYCRR Part 131 for the construction and operation of the Facility in the right-of-way of Route 27, including the filing by NYSDOT of a request with the Federal Highway Administration for an exception to the Accommodation Plan for Longitudinal Use of Freeway Right-of-Way by Utilities.

3. Suffolk County Local Laws and Ordinances

Consistent with the introductory paragraphs of this section, the Signatory Parties have reviewed all of the local laws and ordinances of Suffolk County that would otherwise be applicable to a major utility transmission facility such as the proposed Facility, but for Public Authorities Law § 1020-g(e). The Signatory Parties agree that the Facility can be constructed by LIPA in a manner that conforms to all the substantive provisions of such local laws and ordinances. LIPA has not asked the Commission to refuse to apply any of the substantive provisions of the local laws and ordinances of Suffolk County.

4. Town of Southampton Local Laws and Ordinances

Consistent with the introductory paragraphs of this section, the Signatory Parties have reviewed all of the local laws and ordinances of the Town of Southampton that would otherwise be applicable to a major utility transmission facility such as the proposed Facility, but for Public Authorities Law § 1020 – g(e), and agree that the Project can be constructed by LIPA in a manner that conforms to all substantive provisions of such local laws and ordinances, with the following exceptions.

Chapter 235 of the Town of Southampton Code governs noise pollution. The Project's operation will not produce any noise. Construction will create noise because cable pulling and

splicing equipment such as winches, backhoes, loaders, pavers, and dump trucks will be required to be operated. Although the noise will comply with ordinance thresholds, the noise may momentarily disturb some individuals and may be alleged to be "noise pollution." A generator and an air conditioning unit are also required to run continuously during the manhole splicing operation and produce moderate levels of noise. The technology of splicing is such that the activity, once commenced, must continue on a 24-hour basis until completed. The Signatory Parties agree that LIPA may conduct construction activities in designated non-residential areas on a 24-hour basis. In residential areas, LIPA would generally be allowed to conduct only splicing and final testing on a 24-hour basis. To the extent it may be applicable, the Signatory Parties agree that the Commission should refuse to apply Chapter 235 of the Code of the Town of Southampton to the degree that it would interfere with the construction of the Project as described above. Potential mitigation measures that will be used to minimize noise are described in Exhibit 7, pp. E 7-7 through 11 and include but are not limited to muffling devices, shielding and limiting, to the extent practicable, work hours to 7:00 a.m. - 7:00 p.m., subject to the exceptions described herein and in Section III. D. 4.

Chapter 312 of the Code of the Town of Southampton deals with vehicle and traffic laws. The Signatory Parties agree that the Commission should refuse to apply Chapter 312 of the Code of the Town of Southampton, because the existing route includes a controlled access highway and existing technology requires that vehicles which are the subject of these provisions be operated, parked, stopped, and backed up. Construction of the Project requires winch, excavation, and paving equipment such as backhoes, loaders, pavers, and dump trucks to be operated. The conduit is already in place underground and needs to be reached and opened, and the new Second Cable pulled through. This can be accomplished only by using the equipment listed above. Furthermore, the Applicant will take measures to minimize damage by utilizing vehicles that have rubber tires only and that conform to weight limits. The Applicant

has no control or alternative means to pursue mitigation of vehicle effects; no alternative design exists that would significantly alter the effects of vehicles. In addition, digging will be limited to small areas near Shinnecock Canal and the Canal Substation. All installation will be accomplished via use of manholes.

I. Public Interest, Convenience and Necessity

LIPA conducted a significant public outreach program regarding the Application including contacting elected officials, and making the Article VII application available on the Long Island Power Authority website, www.lipower.org. LIPA also notified property owners and residents within 500 feet of manholes along the proposed route by US mail. Copies of the application have also been provided to several local libraries. No person from the public or any municipality spoke at the public hearing held in this case. No significant adverse issues have been raised by the public regarding the Project, due primarily to the use of the existing underground conduit. No person other than LIPA, NYSDOT and Staff expressed an interest to participate in the settlement discussions. The Pine Barrens Commission ("PBC") has not objected to the Project. A copy of the PBC letter will be included in the hearing record.

J. Real Property Considerations

LIPA shall obtain written permission from the Shinnecock Nation to utilize the Nation's property for the Project. LIPA and NYSDOT agree that they will work together to resolve any remaining uncertainties related to the use of the Shinnecock Nation property for installation of the Project. LIPA has been informed by NYSDOT that the longitudinal placement of the Project along the Sunrise Highway will require the filing by NYSDOT of a request with the Federal Highway Administration for an exception to the Accommodation Plan for Longitudinal Use of Freeway Right-of-Way by Utilities. NYSDOT requires said exception to be approved by the Federal Highway Administration before the Second Cable may be installed. LIPA is relying

upon NYSDOT to facilitate the approval of said exception so that the Second Cable may be installed before its projected in-service date.

IV. PROPOSED FINDINGS

The Signatory Parties agree that the record in this proceeding supports the proposed findings set forth in Appendix 2 attached hereto.

V. PROPOSED CERTIFICATE CONDITIONS

The Signatory Parties agree that that the proposed certificate conditions set forth in Appendix 3 attached hereto are acceptable and appropriate for inclusion in a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of the proposed Project as configured herein.

VI. EM&CP GUIDELINES

The Signatory Parties agree that the General Guidelines for Environmental Management and Construction Plan(s) set forth in Appendix 4 attached hereto are acceptable and appropriate for application to the proposed Project as configured herein.

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Long Island Power Authority
By:
Sam M. Laniado
Counsel to Long Island Power Authority

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Staff of the New York State Department
of Public Service
By:
Ashley Priscott
Assistant Counsel

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

New York State Department of Transportation

By:
Gary R. McVoy, Director
Operations Division

APPENDIX 1

List of Testimony, Exhibits & Appendices to Be Admitted

Testimony:

Direct Testimony of a Joint Panel of Witnesses Consisting of James Parmelee, Steven W. Bruckner, Curt J. Dahl and Elizabeth McLoughlin.

Testimony of Thomas J.F. Ordon and Christopher Corrado.

Proposed Exhibits:

1. Application to the NYPSC for a Certificate of Environmental Compatibility and Public Need, submitted November 2008, and determined compliant on April 9, 2008.
2. Letter from Sam Laniado on behalf of LIPA to Secretary Brilling, dated March 23, 2009, transmitting additional oversized maps and other information (oversized maps are on file at the NYDPS).
3. Letter from the New York State Office of Parks, Recreation and Historic Preservation to Adam Yablonsky, dated June 12, 2008.
4. LIPA Response to NYDPS Staff Informal Information Request No. 1.
5. LIPA Response to NYDPS Staff Informal Information Request No. 2.
6. LIPA Response to NYDPS Staff and NYSDOT Informal Information Request No. 3.
7. LIPA Response to Informal Information Request No. 4 by NYSDOT.
8. Selected Magnetic Field Calculations at Average Annual Ampacity, prepared by TRC, dated August 4, 2009.
9. Additional affidavits of publication for June 9, 2009 Public Statement of Hearing.

10. Letter from Sam Laniado to the Hon. William Boutellier, dated August 20, 2009, transmitting confidential cost component information.
11. Letter from Sam Laniado to Steven Blow, Records Access Officer, dated November 21, 2008, transmitting Critical Infrastructure Information for certain pages of the LIPA Transmission Analyses.
12. NYSDOT Response to Informal Information Request No. 5 by DPS Staff.

APPENDIX 2

PROPOSED FINDINGS

1. The Project, which is to install a new underground 138 kV alternating current transmission facility in an existing second set of conduits between LIPA's existing Riverhead and Canal Substations, is necessary in order to protect against load shedding and outages, and to meet the needs of anticipated future demand from the Suffolk County towns of Southampton and East Hampton.

2. The nature of the probable environmental impacts for this project is expected to be limited to ordinary construction impacts from clearing, installation and restoration activities along the route. The impacts will include temporary construction noise, temporary land use disturbance, and limited tree removal.

3. The Facility, as proposed by the parties, represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other considerations such as the effects on agricultural lands, wetlands, parklands and river corridors traversed.

4. The Facility shall be located underground except for certain above-ground electrical equipment within the existing substations and where the cable crosses the Shinnecock Canal, where stainless steel conduits are attached and transitional equipment will be installed to the underside of the Shinnecock Canal Route 27 bridge.

5. Construction of the Facility is consistent with the most recent New York State Energy Plan which sets forth the State's energy policies and long-range planning objectives and strategies for expansion of the electric power grid of the electric systems serving the state and interconnected utility systems, and is consistent with LIPA's Energy Plan for the transmission system on Long Island.

6. The location of the Facility, as proposed by the parties, conforms to the substantive provisions of the applicable State and local laws and regulations, except with regards to the Code of the Town of Southampton Chapter 235 – Noise and Chapter 312 – Vehicles and Traffic. The Commission refuses to apply Chapter 235 as it is unreasonably restrictive for reasons of existing technology, the technology of installing and splicing electric transmission cables is such that, once commenced, it must continue on a 24-hour basis until completed, and the running of a generator and air conditioning unit continuously is necessary while conducting manhole splicing operations. As to Chapter 312, installation of electric cable requires the use of construction vehicles on a controlled-access highway, and therefore the provision is unreasonably restrictive in view of existing technology.

7. The Facility will serve the public interest, convenience and necessity.

APPENDIX 3

PROPOSED ORDERING CLAUSES/CERTIFICATE CONDITIONS

The Commission orders:

1. Subject to the conditions set forth in this Opinion and Order, Long Island Power Authority (LIPA) is granted a Certificate of Environmental Compatibility and Public Need ("Certificate") authorizing construction and operation of the Second Cable in the certified underground conduit from the Riverhead Substation to the Canal Substation , to be located within the town of Southampton, Suffolk County, along the route detailed in the Application. The Second Cable will be operated at 138 kV.
2. LIPA shall, within 30 days after the issuance of the Certificate, submit to the Commissioner either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate. Failure to comply with this condition shall invalidate the Certificate.
3. LIPA shall promptly notify the Commission in writing should it decide not to complete construction of all or any portion of this Project and shall serve a copy of such notice upon all parties.
4. LIPA shall integrate and coordinate maintenance of the certified Project with that of adjacent facilities.
5. Construction shall not commence on any segment of the Facility until LIPA has obtained such right-of-way or off-right-of-way access (whether obtained through a conveyance, consent, permit or other approval) as are necessary and applicable for such construction for such segment. Evidence of such approval should be provided to Staff prior to construction of such segment.

Description of Route

6. The proposed location of the Project is approved as set forth in the body of this Joint Proposal.

Laws and Regulations

7. Consistent with the discussion, supra, concerning state and local laws:
    a. Each substantive federal, state, and local law, regulation, code and ordinance applicable to the Facility authorized by the Certificate shall apply, except any substantive local law or regulation which the Commission has refused to apply as being unreasonably restrictive as discussed herein.
    b. The Commission has refused to apply the operation of noise prohibitions of Chapter 235 of the Code of the Town of Southampton to the degree that such prohibitions would prohibit LIPA from conducting manhole splicing operations on a 24 hour basis and certain vehicle and traffic law provisions of Chapter 312 of the Code of the Town of Southampton to the extent that those provisions would prohibit LIPA from operating necessary construction machinery along a controlled access highway. No other applicable provisions of the Codes of the Town of Southampton or Suffolk County have been found by the Commission to be unreasonably restrictive.
    c. No state or local legal provision purporting to require any approval, consent, permit, certificate or other condition for the construction or operation of the Project authorized by the Certificate shall apply, except (i) those of the Public Service Law and regulations and orders adopted thereunder; (ii) those provided by otherwise applicable state law for the protection of employees engaged in the

construction and operation of the facilities; (iii) those permits issued under a federally delegated environmental permitting program; and (iv) those referenced in this paragraph.

d. LIPA shall construct the Facility in a manner that conforms to all standards of the American National Standards Institute ("ANSI") including, without limitation, the National Electric Safety Code ("NESC") [including Institute of Electrical Engineers ("IEEE"Standard IEEE C2 latest version] and any stricter standards adopted by LIPA.

e. LIPA shall construct the facility in a manner that conforms to all applicable requirements of the New York State Uniform Fire Prevention and Building Code.

f. LIPA shall operate the Facility in conformance with Federal Energy Regulatory Commission ("FERC") approved tariffs, market rules, and operating procedures of the respective independent system operators ("ISO's").

8. Nothing herein shall preclude LIPA from voluntarily subjecting itself to any State or local approval, consent, permit, certificate or other condition for the construction or operation of the Project, subject to the Commission's ongoing jurisdiction.

    a. To the extent required in connection with the delivery of oversized components, LIPA or its suppliers shall obtain any necessary permits from state agencies, subject to the Commission's ongoing jurisdiction.

    b. As stated in the Joint Proposal, LIPA shall subject itself to highway work permit and use and occupancy permit review and obtain a highway work

permit and use and occupancy permit from New York State Department of Transportation (NYSDOT) pursuant to 17 NYCRR Part 131, for the construction, operation, and maintenance of the Project in the right-of-way of Route 27, subject to the Commission's ongoing jurisdiction. Said use and occupancy permit shall include payment of a fair market value fee for the use of State property, which shall be consistent with other use and occupancy permits that have been issued to LIPA. Pursuant to the terms of this Joint Proposal, NYSDOT will provide the appropriate easements, consents or permits to LIPA, provided that LIPA meets the requirements for the same, to construct the four access roads on NYSDOT property and to use them to install the Project and to maintain the cables and conduits along Route 27. If NYSDOT cannot convey to LIPA the necessary approvals for LIPA to use NYSDOT's property for creation of the access roads and/or maintenance of the underground facilities along Route 27, then the parties agree to work together to assess the feasibility of lane closures on Route 27. Based upon accident analysis data to be provided by NYSDOT, LIPA will prepare a traffic impact study for NYSDOT's review and approval. Pending the results of that study, NYSDOT will include its contents in its exception request to FHWA to support necessary Route 27 lane closures. LIPA shall coordinate with Department of Public Service (DPS) Staff (Staff) and NYSDOT for all work to be performed in the right-of-way of State highways subject to the Commission's ongoing jurisdiction. Prior to submitting its construction plan for the Sunrise Highway segment, LIPA will provide to DPS and NYSDOT a

preliminary design marked to avoid conflict with potential future transportation projects that NYSDOT may seek to undertake in the future and shall offer to consult with NYSDOT concerning any comments it may offer and will use reasonable efforts to accommodate any NYSDOT concerns, subject to the Commission's ongoing jurisdiction.

c. All work within state highway rights-of-way shall be designed and performed according to the traffic and safety standards and other substantive requirements contained in 17 NYCRR Part 131, entitled Accommodation of Utilities Within State Highway and applicable design standards of the American Association of State Highway Transportation Officials ("AASHTO"), the Manual of Uniform Traffic Control Devices ("MUTCD"), the Highway Design Manual, the Policy and Standards for Entrances to State Highways, the Requirements for the Design and Construction of Underground Utility Installations within the State Highway ROW, the Accommodation Plan, and the NYSDOT 2008 Standard Specifications, subject to the Commission's ongoing jurisdiction.

d. LIPA shall coordinate all work performed in the right-of-way of city, town and county highways with the respective highway departments for such highways, subject to the Commission's ongoing jurisdiction.

e. LIPA shall comply with the requirements for the protection of underground facilities set forth in 16 NYCRR Part 753 "Duties of Excavators".

f. A copy of each permit or approval received from the issuing agencies, if any shall be provided to Staff by LIPA promptly after receipt by LIPA of such

permit or approval and before commencement of construction across the affected area.

g. If LIPA believes that any action taken, or determination made, by a State or local agency in furtherance of such agency's review of the permits or approvals referenced herein, is unreasonable or unreasonably delayed, LIPA may petition the Commission, upon reasonable notice to that agency, to seek a determination of any such unreasonable or unreasonably delayed requirement. The permitting agency may respond to the petition, within three business days, to address the reasonableness of any requirement or delay.

h. LIPA is relying upon NYSDOT to prepare and file expeditiously with the FHWA a request for an exception to the Accommodation Plan, which NYSDOT has advised is required to issue a highway work permit and use and occupancy permit. LIPA and NYSDOT shall work cooperatively to facilitate the filing of said request and to obtain the subject exception in sufficient time so installation may begin to meet the in-service date of the Project.

i. In preparation of the exception request to Accommodate Plan, to be filed by NYSDOT with the FHWA, with respect to the portion of Sunrise Highway where the Second Cable will be installed, LIPA will prepare and submit to NYSDOT a traffic impact study and accident analysis, no later than 30 days after execution of this JP by all parties, which demonstrates a non-significant impact on the free and safe flow of traffic for all areas in which highway pavement, shoulder or clear zone areas will be encroached by LIPA's construction and maintenance operations.

Environmental Management and Construction Plan

9. LIPA shall not begin site preparation or construction with respect to a specific portion of the Project (except surveying, soils testing and such other related activities as are necessary to prepare the final design plans) before it has submitted to the Commission and the parties, and the Commission has approved, the Environmental Management and Construction Plan ("EM&CP") for the relevant portion of the Project.
10. The EM&CP shall be prepared in accordance with the EM&CP guidelines attached as Appendix 4 to the Joint Proposal. All construction plans shall be certified by a Professional Engineer that is licensed and currently registered in New York State.
11. Except where this Certificate requires otherwise, the terms of the Joint Proposal (to the extent not superseded in this Certificate) and the environmental protection measures contained in the Application shall be incorporated into the EM&CP. These measures shall be applied during construction, operation and maintenance of the certified Facility.
12. Deviation from the design height and location of structures shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a provision of the Joint Proposal or the Order would be created.

EM&CP Contents

13. LIPA shall provide as part of the EM&CP:
    a. A final design plan that reflects conformance of the Facility design with the Certificate, applicable federal and state requirements, and local substantive requirements (including, but not limited to, applicable regulations, including those of: The Bureau of Alcohol, Tobacco and Firearms, Occupational Safety and Health Administration, NYS Department of Labor, the Uniform New

York State Fire Prevention and Building Code (chemical and waste-storage use and handling regulations)).

b. An explanation for any proposed deviation from the location of structures, with supporting documentation.

c. Details of nearby electric, gas, telecommunication, water, sewer, and related facilities and measures to protect the integrity, operation, and maintenance of those facilities.

d. A plan indicating the details and design measures to protect the cathodic protection system and physical conditions of nearby facilities and structures, including any underground facilities. The plan shall include appropriate mitigation measures such as grounding and upgrade of existing protection devices or other facilities as appropriate for and identified in cooperation with owners or operators of adjacent or nearby structures, pipelines, tanks, fences, etc.

e. A detailed construction schedule as part of each segment of the EM&CP, indicating limitations on access, construction, wire pulling, and restoration within any distinct areas such as parklands, residential areas, highway right-of-way, etc.

f. The specification of noise mitigation procedures.

g. The delineation of certified right-of-way and additional work areas to which LIPA shall confine construction and subsequent maintenance activities, depicting property rights, clearing rights, access rights, and such other matters as appropriate to address the site and environmental conditions and property

interests of affected landowners and relevant conditions and requirements of the EM&CP. The delineation shall include the specific location and acreage of all needed real property or real property rights.

h. Details of street work, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and rights-of-way.

i. Drawings delineating the locations of existing and proposed access roads. Proposed access road improvements shall be indicated, including measures for environmental impact minimization and access control.

j. A traffic control plan for all the roadways directly affected by construction activities prepared in conformance with the Manual of Uniform Traffic Control Devices ("MUTCD"), including a separate traffic control plan for activities on Route 27.

k. A plan for access to construct the Facility on Route 27 clearly defining all access locations and rights, including the construction standards and measures necessary to respond to the construction-related requirements of 17 NYCRR Part 131, entitled Accommodation of Utilities Within State Highway Right-of-Way, applicable design standards of AASHTO, the Highway Design Manual, the Policy and Standards for Entrances to State Highways, the Requirements for the Design and Construction of Underground Utility Installations within the State Highway ROW and the Accommodation Plan, including the provisions of NYSDOT Standard Details and Standard Item Numbers.

Specifications shall be provided for construction and operation of access roads, including gates to be installed.

l. A plan for access to the Facility on Route 27 for operation and maintenance including a traffic control plan in conformance with the MUTCD in conformance with the proposal made by LIPA in the Response to the Department of Public Service Informal Information Request No. 1 dated July 31, 2009. The plan will detail the construction measures designed to minimize, to the extent practicable, the extent of trees removed at each access point, and any resulting incremental noise and visual impacts on adjacent homes. In addition, a restoration plan will be submitted, detailing the replantings to be done at the four off-highway access points designed to provide, where practicable, an improved level of visual screening compared to the current vegetation screenings.

m. Fuel and chemical handling procedures and a spill response and route emergency plan. This plan shall provide proposed methods of handling spills of petroleum products and any hazardous or controlled substance which may be stored or utilized during construction, operation or maintenance of the facility.

n. The designation of Facility construction worker parking areas.

o. A plan for removal and reuse, recycling or disposal of equipment.

p. Detailed soil handling and erosion control plans including details on the installation of sedimentation/erosion control devices around areas to be

distributed and any stockpiled soils, temporary seeding, and re-vegetation to prevent erosion during construction.

q. Clearing and vegetation treatment plans.

r. Best management practices and measures for monitoring construction and protecting water quality at or near groundwater recharge basins.

s. Appropriate controls and protocols for week-end and/or night-time work if otherwise allowed, including but not limited to noise controls and lighting controls.

EM&CP Process

14. LIPA shall submit five hard copies and one electronic copy of the EM&CP to the Commission, one copy to the Commissioner of the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP"); one copy to any other New York State agency (and its relevant regional offices) which requests the document; twelve copies to the NYSDOT Region 10 office in Hauppauge; and one copy to active parties on the service list who request the document. LIPA shall also place copies for inspection by the public in at least one public library or other convenient location in each municipality in which construction will take place. Contemporaneously with the submission and service of the EM&CP, LIPA shall provide notice, in the manner specified below, that the EM&CP has been filed.

15.

a. LIPA shall serve written notice(s) of filing the EM&CP on all active parties to this proceeding, on each person on the Commission's service list considered potentially affected by the subject matter in the EM&CP, and on all statutory parties to this proceeding, and shall attach a copy of the notice to each copy of

the EM&CP. Further, LIPA shall publish the notice(s) in a newspaper or newspapers of general circulation in the vicinity of the Project.

b. For all permanent right-of-way or off-right-of-way access to be acquired for the Project, LIPA shall cause an examination of title (title search) to be conducted in the same manner as would be conducted by a reputable title insurance company to identify all—of record—owners, mortgagees, lien holders, leaseholders or others with an interest in such property rights to be acquired. LIPA shall serve written notice(s) of filing the EM&CP on each such person identified, on each person owning the underlying land right to an existing easement being used and on each person currently leasing a portion of any right-of-way to be used for the Project.

16.

a. The written notice(s) and the newspaper notice(s) shall contain, at a minimum, the following:

1. a statement that the EM&CP has been filed;

2. a general description of the Project, the need for the Project, the alternatives considered, and of the EM&CP;

3. only for the written notice(s) for identified persons with a record interest in property to be acquired, a specific description of the permanent right-of-way or off-right-of-way access to be acquired for the Project;

4. a listing of the locations where the EM&CP is available for public inspection;

5. a statement that any person desiring additional information about a specific geographical location or specific subject may request it from LIPA;

6. the name, address, and telephone numbers of LIPA's representative;

7. the address of the Commission; and

8. a statement that any person may be heard by the Commission on any matter or objection regarding the EM&CP by filing written comments with the Commission and LIPA within 30 days of the filing date with the Commission of the EM&CP (or within 30 days of the date of the newspaper notice, whichever is later).

b. A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be submitted to the Commission at the time the EM&CP is filed, and shall be a condition precedent to approval of the EM&CP.

17.

a. LIPA shall report any proposed changes to the EM&CP to Staff; Staff will refer to the Secretary of the Commission (or a designee) reports of any proposed changes that do not cause substantial change in environmental impact or are not related to contested issues decided during the proceeding. Staff will refer all other proposed changes in the EM&CP to the Commission for approval. Any proposed change affecting state highways will be referred to the Commission.

b. Upon being advised that Staff will refer a proposed change to the Commission, LIPA shall notify all active parties that have requested (before

the approval of the EM&CP) to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (1) describe the original conditions and the requested change; (2) state that documents supporting the request are available for inspection at specified locations; and (3) state that persons may comment by writing or calling (followed by written confirmation) to the Secretary of the Commission within 15 days of the notification date and (4) provide the Secretary's electronic mail address, phone number and mailing address. Any delay in receipt of written confirmation will not delay Commission action on the proposed change.

c. LIPA shall not execute any proposed change until it receives oral or written approval, except in emergency situations threatening personal injury, property damage or severe adverse environmental impact, or as specified in the EM&CP.

Notices, Reports and Consultations

18. Applicable provisions of the Certificate, EM&CP, and orders approving the EM&CP shall be accommodated in any design, construction, ownership or maintenance contracts associated with the Facility. LIPA shall provide construction contractors with complete copies of the Certificate, approved EM&CP, updated construction drawings, and any site specific plans. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the contractors prior to execution of such contracts.

19. LIPA shall notify all construction contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from LIPA, but also from its construction contractors, and that construction contractors may also be liable for other fines, penalties and environmental damage.

20.

a. LIPA shall make available to the public a toll free or local phone number of an agent or employee where complaints may be received during the construction of the certified facilities. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section shall be provided.

b. LIPA shall report to Staff every complaint that cannot be resolved after reasonable attempts to do so, or within 30 days after receipt of the complaint (whichever comes first).

21.

a. No less than two weeks before commencing site preparation, LIPA shall:

    1. provide notice to local officials and emergency personnel;

    2. provide such notice for dissemination to local media and display in public places (such as general stores, post offices, community centers and conspicuous community bulletin boards); and

    3. provide notice to NYSDOT.

b. The notice shall contain:

    1. a map and a description of the Facility in the local area;

    2. the anticipated date for start of construction;

    3. the name, address and local or toll-free telephone number of an employee or agent of LIPA;

    4. a statement that the Project is under the jurisdiction of the New York State Public Service Commission, which is responsible for enforcing

compliance with environmental and construction conditions, and which may be contacted at an address and telephone number to be provided in the notice; and

5. the notice will be written in language reasonably understandable to the average person.

c. Upon distribution, a copy shall be submitted to the Secretary of the Commission.

22. Neither LIPA nor any contractors in its employ shall construct, improve or use any access roads not described in the EM&CP. Should the need arise for additional off-right-of-way access, LIPA shall submit a request to Staff; the request will be considered consistent with the provisions listed above and if the change may involve a site listed or eligible for listing on the State or National Register of Historic Places, Staff will consult with OPRHP.

23.

a. At least two weeks prior to the start of construction, LIPA shall hold a preconstruction meeting. An agenda, location and attendee list shall be agreed upon between Staff and LIPA. NYSDOT shall be invited.

b. LIPA shall supply draft minutes from this meeting to all attendees, the attendees may offer corrections or comments and LIPA shall issue the finalized meeting minutes to all attendees.

c. If, for any reason, the construction contractor cannot finish the construction of this Project, and a new construction contractor is needed, there will be another preconstruction meeting with the same format as outlined above.

24.

a. LIPA shall inform the Commission and Staff (and NYSDOT when state highways are affected) at least five days before commencing construction or clearing.

b. Affected and nearby homeowners will be notified of planned construction activities and schedules before construction commences.

c. Affected and nearby homeowners shall be notified of construction activities planned in their areas in writing no more than three weeks before commencement of construction in those areas.

25. Before Facility construction begins, and after considering the nature of the particular right-of-way segment with respect to issues such as highway and traffic safety, one or two edges of the Facility right-of-way shall be delineated and marked as specified in the EM&CP for that segment. Also, LIPA shall stake and flag all off-right-of-way access roads and extra workroom areas.

26. During construction LIPA shall provide Staff (and NYSDOT when state highways are affected) with weekly status reports summarizing construction, and indicating construction activities and locations scheduled for the next two weeks.

27. Within ten days after the Project is in service, LIPA shall notify the Commission and NYSDOT of that fact.

28. Within ten days of the completion of final restoration, LIPA shall notify the Commission and NYSDOT that all restoration has been completed in compliance with this Certificate and the EM&CP.

29. During construction, LIPA shall periodically consult with state and local highway transportation agencies about traffic conditions near the Project site and shall notify each

such transportation agency of the approximate date work will begin using access points that take direct access from the highways under their respective jurisdictions. LIPA shall regularly consult with NYSDOT about traffic conditions near work in the right-of-way of Route 27.

30. LIPA shall keep local fire department and emergency management teams apprised of chemicals and waste on site.

31. LIPA shall immediately notify DEC of any fuel or chemical spills.

Environmental Supervision

32. LIPA shall designate a full-time supervisor, inspector and environmental monitor with stop work authority over all aspects of this Project; the supervisor shall be on site during all phases of construction and restoration. The environmental monitor(s) and construction inspector(s) shall be equipped with sufficient documentation, transportation and communication equipment to effectively monitor contractor compliance with the provisions of this Certificate, applicable sections of the Public Service Law, and the EM&CP. The name and qualifications of the supervisor, inspector(s) and environmental monitor(s) shall be submitted to Staff at least two weeks prior to the start of construction. NYSDOT shall have authority to place inspectors on site to monitor and observe LIPA's activities on State highways, and/or to request the presence of state or local police to assure the safety of freeway travelers, at such times and for such periods as NYSDOT deems appropriate. All costs thereof shall be borne by LIPA.

33. The authority granted in the Certificate and any subsequent order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such order(s):

    a. LIPA shall regard Staff representatives (certified pursuant to Public Service Law Section 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or

maintenance activities that violate or may violate the terms of the Certificate or any other order in this proceeding, such Staff representatives may issue a stop-work order for that location or activity.

b. A stop-work order shall expire in 24 hours unless confirmed by a single Commissioner. If a stop-work order is confirmed, LIPA may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop-work order is resolved to the satisfaction of the Commissioner or the Commission, the stop-work order will be lifted. If the emergency has not been satisfactorily resolved, the stop-work order will remain in effect.

c. Stop-work authority shall be exercised sparingly and with due regard to the potential economic costs involved and possible impact on construction activities. Before exercising such authority, Staff representatives shall consult (wherever practicable) with LIPA representatives possessing comparable authority. Within reasonable time constraints, all attempts shall be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter shall be immediately brought to the attention of LIPA, the Project Manager and the Department of Public Service, Chief, Office of Energy Efficiency and the Environment. In the event that a Staff representative issue a stop-work order, neither LIPA nor the contractor will be prevented from undertaking any such safety-related activities as they deem necessary and appropriate under the circumstances. Stop-work or implementation of measures, as described below, may be directed at the sole discretion of the Staff representative during these discussions.

d. If a Staff representative discovers that a specific activity is a significant environmental threat that is, or may immediately become, a violation of the Certificate or any other Order in this proceeding, the Staff representative may—in the absence of responsible LIPA supervisory personnel or the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action—direct the field crews to stop the specific environmentally harmful activity immediately. If responsible LIPA personnel are not on site the Staff representative shall immediately thereafter inform the Construction Supervisor and/or Environmental Coordinator of the action taken. The stop-work directive may be lifted by the Staff representative if the situation prompting its issuance is resolved.

e. If the Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the Staff representative may, in the absence of responsible LIPA supervisory personnel, or in the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action, direct LIPA or its contractors to implement the corrective measures identified in the EM&CP. The field crews shall comply with the Staff representative directive immediately. The Staff representative shall immediately thereafter inform LIPA's construction supervisor and/or environmental monitor of the action taken.

34. LIPA shall organize and conduct site compliance audit inspections for Staff as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases of the Project, and at least annually for two years after the Project is operational.

a. The monthly inspection shall include a review of the status of compliance with all certification conditions, requirements, and commitments, as well as a field review of the Project site, if necessary. The inspection report shall also include:

   1. review of all complaints received, and their proposed or actual resolutions;

   2. review of any significant comments, concerns or suggestions made by the public, local governments, or other agencies;

   3. review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and

   4. other items LIPA or Staff consider appropriate.

b. LIPA shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit.

Cultural Resources

35. Should archeological materials be encountered during construction, LIPA shall stabilize the area and cease construction activities in the immediate vicinity of the find and protect the same from further damage. Within twenty-four hours of such discovery, LIPA shall notify Staff and OPRHP Field Services Bureau to determine the best course of action. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation has been determined.

36. Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be immediately halted and the remains shall be protected from further

damage. Within twenty-four hours of any such discovery, LIPA shall notify Staff and OPRHP Field Services bureau. All archaeological or burial encounters and their handling shall be reported in the status reports summarizing construction activities and reviewed in the site compliance audit inspections.

Public Health and Safety

37. All chemicals and waste shall be secured in a locked and controlled area.

38. LIPA shall engineer and construct the Project to be fully compatible with the operation and maintenance of nearby electric, gas, telecommunication, water, sewer, and related facilities.

39. The Project shall be designed and constructed to avoid adverse effect on the cathodic protection system and physical conditions of existing structures and facilities, including any underground facilities.

Electric and Magnetic Fields

40. LIPA shall design, engineer and construct the Project such that its operation shall comply with the electromagnetic field ("EMF") standards established by the Commission in *Opinion No. 78-13* (issued on June 19, 1978) and the *Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities* (issued September 11, 1990), respectively.

Construction

41. Equipment and component delivery, trenching, backfilling, and transformer and cable installation shall only take place between 7:00 a.m. - 7:00 p.m. on weekdays, except that for State highways which NYSDOT may require night-time operations if warranted by high traffic volumes during the day. Notwithstanding the 7 a.m. - 7 p.m. restriction, splicing operations are permitted on a 24-hour basis. In addition, extended work hours

beyond 7 p.m. to complete work at a particular site along the route or extended work hours beyond 7 p.m. in the event unforeseen circumstances occur, will be permitted upon LIPA's request to NYSDOT for permission and NYSDOT's approval to conduct construction activities during the extended hours requested. DPS will be notified upon receipt of NYSDOT's permission. No lane closures will be permitted between 5 a.m. - 9 a.m. and between 3 p.m. - 7 p.m. Safety and avoidance of peak travel may warrant night-time construction between 7 p.m. - 5 a.m. Nothing therein shall preclude LIPA from making the necessary arrangements for the extension of work hours with appropriate local agencies in compliance with local ordinances. Staff shall be notified at least 48 hours in advance if planned weekend, evening or holiday construction should become necessary.

42. The construction schedule shall be coordinated so as to minimize outages of the existing circuits adjacent to the Project, outages of the substations and interconnected transmission facilities, and the full or temporary closure of roads, travel lanes and access driveways, and to minimize simultaneous closures of north/south routes.

43. Existing transmission facility components replaced as part of construction of this Project shall be removed from the right-of-way to appropriate destinations and handled appropriately for re-use as available based on conditions (transformers, wood poles, conductors, etc.). Staff shall be notified if any major equipment is removed and/or replaced.

44. Appropriate measures shall be taken to minimize fugitive dust and airborne debris from construction activity.

45. Disturbed areas, ruts, and rills will be restored to original grades and conditions with permanent re-vegetation and erosion controls appropriate for those locations. Disturbed

pavement, curbs and sidewalks shall be restored to their original preconstruction condition or improved.

46. Sedimentation/erosion control devices shall be installed around areas to be disturbed and any stockpiled soils to prevent soil erosion during construction. These erosion control devices shall be installed prior to construction and shall be maintained in place until the right-of-way has been re-vegetated and/or stabilized in accordance with pre-existing conditions.

47. The clearing and vegetation treatment plans shall minimize the clearing of vegetation to that necessary to allow construction and operation of the Project.

48. All merchantable logs resulting from creating roads to access the right-of-way or other authorized operations shall be removed from the road, unless otherwise noted on the construction drawings and approved by Staff. All non-merchantable weedy debris resulting from clearing the right-of-way shall be chipped, unless noted on the EM&CP, and approved by Staff, or removed from the point of origin. No chips shall be stored in park lands, wetlands, active agriculture fields, or within 50 feet of streams or drainages.

49. Neither LIPA nor any contractors in its employ shall clear or alter any areas outside the boundaries of the certified Project, except off right-of-way access roads designated in the EM&CP.

50. All trees over two inches diameter breast height ("DBH") or shrubs over four feet in height damaged or destroyed by activities during construction, operation, or maintenance, regardless of where located, shall be replaced within the following year by LIPA with the equivalent type trees or shrubs, except if:

    a. permitted by the approved EM&CP;

b. equivalent-type replacement trees or shrubs would interfere with the proper clearing, construction, operations, or maintenance of the certified Transmission Facility;

c. replacement would be contrary to sound right-of-way management practices, or to any approved long-range right-of-way management plan applicable to the Transmission Facility or adjoining transmission facilities; or

d. the owner of land where the damaged or destroyed trees or shrubs were located (other than LIPA) declines replacement (or other recorded easement or license holder with the right to control replacement declines replacement).

51. LIPA shall, upon completion of the Project:

a. provide an assessment of the need for landscape improvements, including vegetation planting, earthwork or installed features to screen or landscape the Project;

b. consult with Staff (and with NYSDOT for the Route 27 Expressway segment) on the content and execution of its assessment, resultant landscaping plan specifications and materials list; details shall include measures for maintenance and for controlling third party or wildlife damage to any landscape and vegetation plantings;

c. such assessments and plans shall be presented for Staff review within one year of the date the Project is placed in service and shall be implemented as soon thereafter as practicable; and

d. LIPA shall provide to Staff (and for Project segments on Route 27 highways, to NYSDOT) as-built drawings of the Project certified by a Professional Engineer that is licensed and currently registered in New York State.

Transportation

52. LIPA shall minimize the impact of the construction of the Project on traffic circulation. Traffic control personnel and safety signage will be employed to ensure safe and adequate traffic flow when secondary roadways are affected by construction. LIPA shall submit, as part of the EM&CP, the revised MPT plans for access to the existing conduits off Sunrise Highway from the four off - ROW access points discussed in this Joint Proposal and identified in the LIPA's Response to Staff's Informal Information Request No. 1, dated July 31, 2009. Said plans provide for LIPA's use of the border area along Sunrise Highway for the movement of construction vehicles. No access to the Second Cable ROW will be permitted directly from the Sunrise Highway main roadway other than at Bellows Pond Road, as provided in LIPA's Response No. 3 to NYSDOT's Information Request. Construction vehicles shall not move in the opposite direction of the traffic flow unless concrete barriers with curtain panels are used, which shall be described in the EM&CP. LIPA shall use appropriate traffic channelization and safety devices where it is impractical to maintain a distance of 30 feet or more from the centerline of the Second Cable to the white edge of the pavement line. Attenuation vehicles will also be used during installation operations. Concrete barriers will not be required along the entire route, but may be required by NYSDOT at selected locations, as will be discussed in the EM&CP. The plans shall also provide that LIPA shall perform routine maintenance operations within the LIPA Highway Work Project limits in which NYSDOT is scheduled to perform such operations, but is prevented by LIPA's operations from performing them, until NYSDOT's final acceptance of the Project and the Highway Work permit is closed. The EM&CP shall provide that NYSDOT shall be responsible for the Route 27 main line snow plowing and carcass removal

outside the LIPA Work Permit Project limits. NYSDOT agrees to perform final inspections in three segments at LIPA's request as LIPA's restoration is completed for each segment. Upon NYSDOT's final acceptance of each segment, which acceptance shall not be unreasonably withheld or delayed, LIPA shall be relieved of maintenance obligations for said segment. For LIPA's preparation of the revised MPT plans, NYSDOT shall provide LIPA with the criteria NYSDOT ordinarily would use to maintain the subject area and special notes used by contractors and permitees to develop a Maintenance Jurisdiction Table acceptable to NYSDOT. The extent of the project area to be maintained by LIPA will be determined by NYSDOT, based on the accepted MPT and project plans. In addition, any swales damaged by LIPA will be repaired to their original functionality in a manner acceptable to the NYSDOT Engineer in Charge and approved by the NYSDOT Resident Engineer for the Eastern Suffolk Residency.

53. Facility construction worker parking shall be in designated areas off of Route 27 which do not interfere with normal traffic, cause a safety hazard or interfere with existing land uses and specified in the project specific EM&CP.

54. Direct disturbance to properties shall be avoided by accessing the right-of-way from existing roadways or approved off-right-of-way access roads, except as provided herein and in the Joint Proposal with respect to Bellows Pond Road. Construction access to the ROW of Route 27 will be provided from off-highway locations.

Maintenance

55. LIPA shall submit to the Commission for approval prior to operation of the Project, and provide a copy to NYSDOT and any party so requesting, a long-term right-of-way management plan for the Project. The plan shall:

a. contain a list of residential areas and environmentally significant features (including as a minimum any stream-crossings, wetlands, vegetation planning areas, important wildlife habitats, parks, officially-designated trails and visual screens) and provisions to minimize maintenance impacts on those areas and features;

b. contain a vegetation and land-use inventory for the first and each subsequent treatment (the vegetation inventory shall include the right-of-way location, vegetation type, height, density and treatment technique);

c. contain a list of potential undesirable right-of-way uses (e.g., trash dumping, trespass or encroachment) and policy to remedy or control such uses;

d. describe the treatment techniques and chemicals proposed for use, and limit chemical use to approved usages and dosages;

e describe a LIPA policy on surveillance, posting and installation of deterrents to adverse access;

f. describe Project management including Project monitoring, patrols, marking and maintenance of facilities, coordination of activities with underlying landowners or land managers, and maintenance of erosion control features, access roads, landscape plantings and vegetation;

g. describe how the Project maintenance and management is integrated into applicable LIPA system-wide management plans; and

h. provide that NYSDOT shall maintain the right-of-way of the segment of the Project on Route 27, including the management of encroachments, pursuant to paragraph 52 of this section.

APPENDIX 4

GENERAL GUIDELINES FOR
ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PLAN(S)

The environmental management and construction plans (EM&CP), consisting of appropriate maps, charts, illustrations, and text, shall include, but need not be limited to, the following information.

A. Plan and Profile Details. A Line Profile[6] (at an appropriate scale) and plan drawings (scale minimum 1 inch = 200 feet)[7] showing:

1. Facility Location

a. The boundaries of any new, existing and/or expanded right-of-way (ROW)[8] or road boundaries if cables are to be constructed underground in streets; plus areas contiguous to the ROW or street within which the applicant will obtain additional rights; and an explanation of the need for those additional rights.

b. The location of each facility structure (showing its size, material and type and indicating the GSA-595A federal standard color designation or manufacturers color specification to be used for painted structures), structural foundation, fence, gate, down-guy anchor, and any counterpoise (typical counterpoise drawings will suffice) required for the proposed facility; conductors, insulators and static wires and other components attached to facility structures.

---

[6] The lowest conductor of an overhead design should be shown in relation to ground at the maximum permissible conductor temperature for which the line is designed to operate, i.e., normally the short-time emergency loading temperature specified by the New York ISO. If a lesser conductor temperature is used for the line profile, the maximum sag increase between the conductor temperature and the maximum conductor temperature shall be indicated for each ruling span. For underground facility design, show relation of facility to final surface grade, indicating design depth-of-cover.

[7] Contour lines (preferably at 5-foot intervals) are desirable on the photo-strip map if they can be added without obscuring the required information.

[8] The term "ROW" in these *Guidelines* includes property to be used for substations, disposal sites, underground terminals, storage yards, and other associated facilities. Where such properties cannot reasonably be shown on the same plan or photo-strip, maps or plan drawings used for the transmission line, additional maps or drawings at convenient scales should be used.

c. Existing utility or non-utility structures on the ROW, and indicate those to be removed or relocated (include circuit arrangements where new structures will accommodate existing circuits, indicate methods of removal of existing facilities, and show the new locations, types and configurations of relocated facilities).

d. Any relocated or underground facility.

e. The relationship of the proposed facility to nearby fence lines, roads, railways, airfields, property lines, hedgerows, water bodies, associated facilities, flowing water springs, nearby buildings or structures, major antennas, oil or gas wells, and pipelines or blowdown valves. State any objections raised by federal, state or local transportation (highways, waterways, or aviation) officials to the final location or manner of installation of, or access to, the certified Facilities.

f. The location of any proposed new or expanded switching station, substation, or other terminal or associated facility (attach plan[9] - plot, grading, drainage, and electrical – and elevation views with architectural details at appropriate scales). Indicate the type and expected impact of outdoor lighting, including design features to avoid off-site illumination and minimize glare; the color and finish of all structures; the locations of temporary or permanent access roads, parking areas, construction contract limit lines, property lines, designated floodways and flood-hazard area limits, buildings, sheds, relocated structures, and any plans for water service and sewage and waste disposal.

g. The location and boundaries of any areas whether located on- or off- ROW proposed to be used for fabrication, designated equipment parking, staging, lay-down and conductor pulling. Indicate also any planned fencing or screening of storage and staging areas.

h. The proposed location of all on- or off- ROW access, temporary construction and permanent maintenance roads, indicating access from other roadways.

[9] Preferably 1” = 50’ scale with 2-foot contour lines.

2. ROW Clearing

a. The locations of sites, if any, requiring trimming or clearing of vegetation and the geographic limits of such trimming or clearing. Indicate in text and on the drawings the specific methods for the type and manner of cutting, and disposition or disposal method for cut vegetation (i.e., chip; cut and pile; salvage merchantable timber, etc.). Designate methods for management of vegetation to be cut or removed at each site, indicating the rationale for the method designated. Sites should be based on an initial ROW vegetation inventory conducted prior to clearing and access road construction, and should be distinguished by criteria such as:

1. any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods; or
2. any geographical area bounded at each end by areas requiring distinctly different cut-vegetation methods due to site conditions such as land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards or other factors;
3. different property-owners requesting specific vegetation treatment or disposal methods;
4. delineation and protection of desirable vegetation species; and
5. indication of areas requiring (off-ROW) danger tree removal.

b. The location of any areas where specific tree protection measures will be employed to avoid damage to specimen trees, stands of desirable species, important screening trees or hedgerows. Details of specific measures should be specified in text and site plans.

3. Building and Structure Removals

Indicate the locations of any buildings or structures to be acquired, demolished, moved or removed. In text, provide the rationale for the acquisition and removal of buildings or structures.

4. Waterbodies

a. Indicate the name, water quality classification and location of all rivers and streams (whether perennial and intermittent) within 100 feet of, or crossed by, the proposed ROW or any off-ROW access road constructed, improved or maintained for this facility. Indicate the procedures that were followed to inventory such resources and provide copies of any resulting data sheets and summary reports. Describe the measures to be taken in each location to protect streambank stability, stream habitat, and water quality including, but not limited to: crossing technique; crossing structure type, timing restriction; and other site-specific measures appropriate to the location for impact minimization, resource protection, and facility construction management. On the plan maps, indicate:

1. stream crossing method and delineate any designated streamside "protective or buffer zone" in which construction activities will be restricted to the extent necessary to minimize impacts on rivers and streams;
2. the activities to be restricted in such zones; and
3. delineate any designated floodways or flood hazard areas to be traversed by the proposed facility or access roads, or otherwise used for facility construction or the site of associated facilities.

b. Show the location of all potable water sources including springs and wells on the ROW or within 100 feet of the ROW or access roads indicating on a site-by-site basis, precautionary measures to be taken to protect each water source.

5. Wetlands

Indicate the location and type of any wetland (e.g., marsh, meadow, bog, or scrub-shrub or forested swamp) within or adjoining the ROW or any access road, as determined by site investigation and delineation. Indicate in text, and on plans as appropriate, on a site-by-site basis

the precautions or measures to be taken to protect such wetlands, associated drainage patterns, and wetland functions.

6. Landscaping

Show locations of existing or proposed vegetative planting, earthwork, or installed features to screen or landscape substations or other facility components. Describe in text and on detailed drawings, any screening or landscaping plans proposed.

7. Noise Sensitive Sites

Show the locations of noise-sensitive areas along the proposed ROW and then specify procedures to be followed to minimize noise impacts related to ROW clearing, facility construction, and operation. Indicate the types of major equipment to be used in construction or facility operation; sound levels at which that equipment operates; days of the week and hours of the day during which that equipment will normally be operated; any exceptions to these schedules; and any measures to be taken to reduce audible noise levels caused by either construction equipment or facility operation.

8. Other Environmentally Sensitive Areas

a. Indicate the general locations of any known ecologically and environmentally sensitive sites (including rare and endangered species or habitats, deer winter yards, and archaeological sites), within or nearby the proposed ROW or along the general alignment of any access roads to be constructed, improved or maintained for this facility. Indicate the procedures that were followed to identify such resources and specify the measures that will be taken to protect or preserve these resources. Reports prepared to identify and analyze such sites shall be made available to Staff upon request.

b. Indicate the location and identification of sensitive land uses and resources that may be affected by construction of the facilities or by construction-related traffic (i.e., hospitals,

emergency services, sanctuaries, schools, residential areas, etc.). Specify measures to minimize impacts on these resources.

9. Recreational Areas

Indicate the locations where existing or planned recreational uses, if known to the applicant at the time of the submission of the EM&CP, would affect or be affected by facility location, construction or other ROW preparation. Explain in text how these recreational uses or plans were (or can be) accommodated in facility construction operation and maintenance.

10. Agricultural Areas

Indicate the locations of prime, unique and significant agricultural lands, vulnerable soils, and underground drainage systems and the locations of sites under cultivation or in active agricultural use, where structures, access roads, counterpoise wires, lay-down areas or wire stringing operations will be located. Designate the site-specific techniques to be implemented to minimize or avoid construction-related impacts to agricultural resources.

B. Description and statement of objectives, techniques, procedures and requirements.

1. Erosion Control

a. Describe the temporary and permanent measures to be taken during all construction phases to stabilize and restore soils, control erosion, and preserve natural drainage patterns in areas where significant soil disturbances (including removal of vegetative cover, grading or excavation) are proposed. Include standards, practices, erosion control measures and techniques to address construction management, communications, planning, monitoring and reporting requirements as appropriate for conformance with Storm Water Pollution Prevention Plan details.

b. In areas of coastal erosion hazard, include plans to demonstrate compliance with the standards for coastal erosion hazard protection as required by 6 NYCRR Part 505.

2. Fuel Chemical Handling Procedures

Describe precautions and measures to be followed during clearing, construction and site restoration:

a. to control the storage, handling, transporting and disposal of fuels, oil, chemicals, and other potentially harmful substances; and

b. to avoid spills and improper storage or application in the vicinity of any wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site, or existing recreational area along the facility ROW and access roads.

3. Environmental Supervision

a. Describe protocols for supervising demolition, vegetation clearing (including any use of herbicides), construction and site restoration activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Certificate.

b. Specify the titles and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the demolition, clearing, construction and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate and the *EM&CP*. Indicate the amount of time each supervisor is expected to devote to the project.

c. Explain how all environmental protection provisions will be incorporated into contractual specifications, and communicated to those employees or contractors engaged in demolition, clearing, construction, and restoration.

d. Describe the procedures to “stop work” in the event of a certificate violation. Identify the company’s designated contact including phone number, for assuring overall compliance with certificate conditions.

4. Clean-up and Restoration

Describe the applicant’s program for ROW clean-up and restoration, including:

a. the removal of any temporary roads; restoration of lay-down or staging areas; the finish grading of any scarified or rutted areas; the removal of waste, scrap metals, surplus or extraneous materials or equipment used; and

b. plans, standards and a schedule for the restoration of vegetative cover; include specifications to address:

1. design standards for ground cover:

(a) species mixes and application rates by site;

(b) site preparation requirements (soil amendments, stone removal, subsoil treatment or drainage measures); and

(c) acceptable final cover % by cover type.

2. planting installation specifications and follow-up responsibilities; and

3. a schedule or projected dates of any seeding and/or planting.

5. Herbicides

a. Specify the locations where herbicides are to be applied. Provide a general discussion of the site conditions (e.g., land use, target and non-target vegetation species composition, height and density) and the choice of herbicide, formulation, application method and timing.

b. Provide a general comparative analysis of any proposed herbicide applications using the following selection criteria: selectivity, efficacy, toxicity, persistence, and cost-effectiveness.

c. Describe the procedures that will be followed during application to protect non-target vegetation, streams, wetlands, potable waters and other waterbodies, and residential areas and recreational users on or near the ROW.

d. The ROW and adjoining properties shall be posted and notified by using the DEC-approved format (ECL part 33 and 6 NYCRR part 325); or as may be implemented subject to interim utility guidance, if issued.

6. Agricultural Areas

a. Describe the program, policies and procedures to mitigate agricultural impacts, and explain how construction plans avoid or minimize soil compaction, crop production losses, and potentially wet agricultural soils. Also, list locations where such procedures have been and will be followed by facility construction and restoration.

b. Indicate specific techniques and references to appropriate agricultural protection measures recommended by the NYS Department of Agriculture and Markets, as available.

7. Access Roads

a. Discuss the necessity for access to the ROW, including the areas where temporary or permanent access is required; and the nature of access improvements based on natural features, equipment constraints and vehicles to be used for construction and maintenance, and the duration of access needs through restoration and the maintenance of the facility.

b. Identify the types of access which will be used and the rationale for employing that type of access including consideration of:

1. temporary installations (i.e., over-land provisions, corduroy, mat and fill, earthen road, geotextile underlayment, gravel surface, etc.);
2. permanent installations (i.e., cut and fill earthen road, geotextile under-layment, gravel surface, paved surface, etc.);
3. use of roads, driveways, farm lanes, rail beds, etc.; and
4. other access, such as helicopter or barge placement.

For each temporary and permanent access type provide a figure or diagram showing a typical installation (include top view, cross section and side view with appropriate distances and dimension). Where existing access ways will be used, indicate provisions for upgrading to meet appropriate standards.

c. Indicate the associated drainage and erosion control features to be used for access road construction and maintenance. Provide diagrams and specifications (include plan and side views with appropriate typical dimensions) for each erosion control feature to be used, such as:

1. staked hay bale or check dam (for ditches or stabilization of topsoil);
2. broad-based dip or berm (for water diversion across the access road);
3. roadside ditch with turnout and sediment trap;
4. french drain;
5. diversion ditch (water bar);
6. culvert (including headwalls, aprons, etc.);
7. sediment retention basin (for diverting out-fall of culvert or side ditch); and
8. silt fencing.

d. Indicate the type of stream crossing method to be used in conjunction with access road construction. Provide diagrams and specifications (include plan and side view with appropriate dimensions) for each crossing device and rationale for their use. Stream crossing devices may include, but are not limited to:

1. ford (with or without gravel);
2. ford with sill;
3. timber mat;
4. culverts including headwalls; and
5. bridges (either temporary or permanent).

All diagrams and specifications should include type and size of material to be placed in stream and on stream approaches.

8. <u>ROW Management Plans</u>

a. Describe the interim ROW vegetation management plan to be used for the proposed facility from the beginning of vegetative clearing until the comprehensive site-specific long-range

ROW management plan is submitted. Include a description of the initial and follow-up vegetation treatment techniques; and the proposed contents of any post-construction and long-range ROW management plans. Such plans when submitted, shall describe the goals and objectives and include supporting inventories and analyses, proposed and alternative techniques (including consideration of vegetative screening and buffer areas at locations such as stream crossings, public roadways and residential areas). Schedules and other important environmental information deemed necessary.

b. Describe interim ROW management plans and standards for securing, stabilizing, monitoring and addressing ROW access roads, facility maintenance and analysis of compliance with any post-restoration requirements.

9. Organization of Document

The document should include appropriate cross-references, indicating where the plan address specific requirements including:

a. These Environmental Management and Construction Plan Guidelines;

b. The Commission Article VII Certificate conditions and describing the procedures followed or that will be followed to comply with those requirements.

c. If any particular requirements of these documents are not applicable, so indicate.