Chapter 15: Construction

A. INTRODUCTION

This chapter addresses the short-term impacts that could be associated with the installation of the new 69 kilovolt (kV) transmission line between the Southampton and Bridgehampton Substations and the expansion of the Bridgehampton Substation. The construction methods for both the overhead and the underground transmission lines are first described. Then, potential impacts from installation of the transmission line are analyzed. Following the analysis of the installation of the transmission line, the construction sequencing for the expansion of the Bridgehampton Substation is described and the potential impacts analyzed.

B. TRANSMISSION LINE

CONSTRUCTION SCHEDULE

The installation of the transmission line is expected to take about 3 to 4 months. Under the current schedule, work would commence in March 2008 and be completed by June 2008. During this time, about 5 to 10 construction workers and engineers are expected to be employed at one location at any given time.

CONSTRUCTION METHODS

INSTALLATION OF OVERHEAD TRANSMISSION LINE

Because the transmission line would follow the existing roadways, little, if any, clearing would be needed. Each new pole would be located along the side of the road. An auger or vacuum truck would typically drill a 24- to 30-inch diameter hole into the ground to a depth of about 8 to 10 feet to accommodate the new poles. The poles would be installed, and the hole backfilled to stabilize the poles.

Using a bucket truck, the new transmission line, which consists of three wires separated from one another, would be installed on the upper part of the new pole. Each wire is hung from an insulator located on the poles. The static line, which acts as a lightning arrestor, would be strung from the tops of the new poles. The highest transmission conductor would be about 10 feet below the top of the pole. The distribution lines would be removed from the old pole and reattached to the new pole on cross arms with insulators, if needed. During moving of the distribution lines, individual houses may lose electric service for a short period of time, probably less than an hour. One pole would be removed at a time, and the existing distribution lines detached from the pole. During times of active construction, the distribution lines could temporarily span twice the normal distance. At night, over the weekends, and during times when no construction is occurring, the distribution lines would span their normal distance. Two to five poles would be replaced during a normal working day.

After the new transmission line is installed and the distribution lines attached to the new pole, the top of the old pole would be cut off above the cables for the other utilities, such as telephone, cable television, and fiber optics. These utility companies would send crews to move their lines to the new poles. After all of the utilities are moved, the old pole would be cut close to the ground, the underground portion of the pole removed, and the hole backfilled and compacted. The poles would be sent for recycling.

This work would involve several pieces of construction equipment. Drills or vacuum trucks would be used to make the holes for the poles, and cranes would be used to lift and install the poles. Bucket trucks would be used to install the insulators for the transmission conductors. Large reel wire trailers would be needed for the installation of transmission and static lines. Each reel can hold about 4,000 to 5,000 feet of wire. Specialized equipment would be used to install the transmission conductors and to tension the conductors. Other trucks would be used to transport the workers and their equipment. At any given time, about 5 to 10 construction workers would be in one location, working one shift a day, five to six days a week. On occasion, the shift would be extended to more than 8 hours during certain portions of the construction period. During periods of active construction, a lane of traffic would be closed at the construction site. Flaggers and sign boards would be used to control traffic.

INSTALLATION OF UNDERGROUND TRANSMISSION LINE

The contractor would have its choice of directional drilling or open cut and restore construction methods to install the underground portion of the transmission line. Typically, contractors use open cut for the majority of the line, and directional drilling only under intersections, streams, and wetlands. However, the contractor would be allowed to select the method of installation. However, the contractor would be directed to use directional drilling below wetlands and other sensitive habitats to avoid creating impacts.

In directional drilling, small pits are dug, and specialized equipment drill micro-tunnels between the pits. The distance between the pits varies depending on the equipment used and/or changes in the direction of the transmission route due to road intersections. Conduits to protect the transmission conductors are installed in the micro-tunnels, and then the transmission conductors are pulled through the conduits. Three conduits 6 inches in diameter and three transmission conductors would be installed. The conduits would be “butt” fused to make them continuous. Manholes would be installed about every 2,200 feet for maintenance, repair, and splicing of the conductors.

In open cut and restore construction, a trench is dug and the conduits installed. The trench would be about 2 to 3 feet wide at the surface and 4 to 6 feet deep. Each conduit would be joined together and laid next to the trench. Often, the fusing operation is ahead of the trenching operation, and long lengths of fused conduit would be on the side of the road. After the trench is dug, the conduits would be installed. The trench would be backfilled, and temporally patched, once the conduit is installed. Then, the transmission conductors pulled through the conduit between manholes. As above, three conduits and transmission conductors would be installed. The excavator could possibly be larger than for directional drilling, but the drilling equipment would not be needed. In both cases, 11- to 14-foot holes would be excavated for the manholes, and the manhole structure would be installed by large cranes or hoists. The manhole structures are about 10-feet tall by 8-feet wide by 16 feet long. Fusion and cable-pulling equipment and trucks for moving workers, supplies, and equipment would be used.

Equipment would include excavators to dig the trenches, and the specialized directional drilling equipment. Cranes or hoists would be used to install the manholes. The transmission conductor would be on reels, and the conduit would be transported to the area on trucks. Tensioning equipment would be used to pull the conductor through the conduit. Trucks would be used to transport the workers and equipment.

It is expected that the work would be performed one shift a day, five to six days a week. However, once splicing of the conductor is started, the operation does not stop until the splice is completed. Therefore, in some cases, splicing may be a 24-hour operation. This operation is quiet and does not involve large, noisy equipment. Splicing of the conductor would only take place at manhole locations. The work day may be extended to complete a particular task. At the end of each day's work, the pits and trenches would be covered. Underground work typically progresses about 500 feet per day.

COMMISSIONING OF TRANSMISSION SYSTEM

During construction of the underground portion of the transmission system, an analysis of the cable's tensioning data would be performed. The cable's outer jackets would then undergo an electrical high potential test at approximately 10 kV. After the overhead and underground circuit is physically connected to the Southampton and Bridgehampton Substations, it will undergo a 24-hour electrical test at operating voltage (69 kV, but not under electrical load). After successful completion of all tests, the transmission line would be interconnected into the electrical grid and would transmit electricity.

IMPACT ASSESSMENT AND CONTROLS

Construction activities would have a small, short-term effect on various resource areas. The following sections describe the construction effects on these individual resource areas, as appropriate.

LAND USE AND COMMUNITY CHARACTER

Throughout the construction period, access to residences and businesses would be maintained. During this time, measures would also be implemented to control noise, vibration, and dust. Because construction would not be continuous in any one location and would last less than a week in any one particular area, no significant adverse impacts on land use patterns or neighborhood character would occur.

CULTURAL RESOURCES

The area is moderately to highly sensitive for archaeological resources. Archaeological Phase 1B testing along the Direct Route Alternative is taking place and will be included in the Final Environmental Impact Statement. If potential archaeological resources are identified along portions of the routes where the transmission line may be underground, detailed resource recovery work by qualified archaeologists would be completed prior to the start of construction. With the Direct Route Alternative, it is not expected that there would be significant adverse construction impacts on archaeological resources.

Installation of the transmission line, either overhead or underground, would not have a direct impact on any architectural resources. A Construction Protection Plan (CPP) would be developed, if necessary, in consultation with the New York State Office of Parks, Recreation,

and Historic Preservation (OPRHP). The CPP would specify measures to be taken to prevent vibration from the construction affecting historic structures. LIPA would employ and enforce the CPP to prevent any significant adverse impacts on architectural resources.

TRAFFIC

Construction would occur over about a 12 to 16 week period and would include both truck and construction work traffic. Construction is currently planned for March through June to avoid taking place during the peak summer traffic season. Installation of the overhead portions of the transmission line is expected to have little impact on traffic. One lane of traffic would be temporarily closed at active construction locations. Traffic flow would be managed by use of flagmen. Some truck delivery of construction materials would likely occur during the construction period. However, there would not be an extensive nor prolonged material delivery of equipment or personnel to the route. Heavy equipment and construction material delivery would average less than 10 trucks per day over the construction period.

The installation of the underground portions would typically be performed during normal construction hours, between 7:00 AM and 4:00 PM. The workday, on occasion, could extend to the times of natural daylight, up to 12 hours per day. However, based on scheduling, some activities, such as splicing, may take place outside of this timeframe (weekends and after 6:00 PM). These activities that may take place outside of normal working hours are typically quiet and do not use large equipment. The exact locations of the underground transmission lines within the right-of-way are not known at this time. Generally, utilities are installed along the edge of the roadway, but interference with existing utilities, such as water lines, may dictate the exact location of the new underground cable. In any case, the contractor would use standard construction traffic control methods, including flaggers, barriers, and signage. Generally 500 to 1,000 feet of trench would be open at any one time, but longer lengths of fabricated conduit may be laid parallel to the trench on the roadside. The trench would be closed at night either with steel plate or by backfilling the trench and cold patching the road surface.

During the construction period, the total number of workers would vary from about 20 to 25 personnel at any one time. It is likely that two or more crews would be working at the same time. These crews would not be working in the same location, and the worker traffic would be dispersed throughout various roads. The addition to the worker vehicular traffic during construction would add from 15 to 25 additional vehicles daily. This minor increase in worker traffic volume would not be a significant impact.

The short-term effects of equipment movement, material deliveries, and construction worker trips would not be expected to have any significant adverse traffic impacts.

AIR QUALITY

Possible impacts on local air quality during construction of the Direct Route Alternative include: fugitive dust (particulate) emissions from earth movement; and mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide emissions from construction workers and delivery vehicles and construction equipment operation.

Fugitive Emissions

Fugitive dust emissions are possible from earth movement, wind erosion and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of clearing

operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated and the type of fugitive dust control methods employed. Generally, no site clearing would be needed for the overhead portion of the transmission line. The only exposed earth would be the small volume of soil excavated for the pole. For the underground portion, only short distances, about 500 to 1,000 feet, would be exposed at any given time. Appropriate fugitive dust control measures, including watering of exposed areas, street sweepers, and dust covers for trucks, would be employed to minimize any impacts. As a result, no significant air quality impacts from fugitive dust emissions are anticipated.

Mobile Source Emissions

Mobile source emissions are emissions of air pollutants from motor vehicles, referred to as mobile sources. During construction, such emissions may result from trucks delivering materials or removing debris, workers' private vehicles, and construction equipment operation. Construction activities would involve a small number of workers and therefore the number of construction worker vehicle trips would be small in comparison to existing traffic volumes. Because the Direct Route Alternative is either along or near roadways, truck deliveries and workers' private vehicles would not need to travel large distances, and are subsequently not expected to have a significant impact on mobile source emissions. Therefore, mobile source emissions are not expected to be significant.

NOISE

Impacts from noise during construction of the Direct Route Alternative include noise from construction equipment operation and noise from vehicles traveling to and from the work site. The level of impact from these noise sources depends on the noise characteristics of the equipment and activities, the construction schedule, and the location of the potentially sensitive noise receptors. Noise levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. In general, construction of the transmission line would result in some increased noise levels for a limited period of time.

The Town of Southampton and the Village of Southampton have regulations that limit noise from construction activities, and the United States Environmental Protection Agency (EPA) has regulations that limit noise from construction equipment.

The Town of Southampton Noise Code allows construction activities between the hours of 7 AM and 7 PM. The Village of Southampton Noise Code allows construction activities between the hours of 8 AM and 6 PM weekdays and 9 AM and 5 PM on Saturday. The Village of Southampton Noise Code regulates construction noise on holidays and Sundays.

Noise from construction equipment is regulated by the EPA noise emission standards. These federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards and construction material be handled and transported in such a manner as not to create unnecessary noise.

These EPA regulations would be carefully followed. To the extent possible, the Town and Village noise codes would be observed. If late or Sunday work is needed, it would be quiet tasks, such as splicing cables. In addition, where practical, at noise sensitive locations, including residences, low-noise emission level equipment and quiet operational procedures would be

utilized. Compliance with noise control measures would be ensured by including them in the contract documents as material specifications, and by directives to the construction contractor.

Noise levels caused by construction activities would vary, depending on the phase of construction and specific tasks being performed. In general, construction activities for the Direct Route Alternative would take place on weekdays. However, based on scheduling and to minimize traffic disruptions, some activities may take place outside of this timeframe (weekends and after 6:00 PM).

Increases in noise levels caused by the small number of delivery trucks, workers traveling to and from the site, and other construction vehicles would not be significant, and would be limited to public roadways.

Increased noise levels caused by construction activities can be expected to be most significant during the stages of construction that require the use of impact equipment. This type of equipment would be used only during the daytime, and impact equipment for both overhead and underground installations is used for short periods of time. The longer activities involve either digging the trench and installing the conduit or stringing and connecting the new overhead cables.

In general, noise from construction activities associated with the Direct Route Alternative could be intrusive at nearby residences. However, these impacts would be short-term in duration and would not be considered a significant adverse impact.

CONTAMINATED MATERIALS MANAGEMENT

Installation of the transmission line may generate limited amounts of some waste solvents and cleaning materials. A licensed contractor would remove these materials for appropriate off-site disposal.

Solid waste and debris that cannot be recycled, reused, or salvaged would be stored in dumpsters or similar containers for disposal. Potentially hazardous wastes would be separated from normal waste including segregation of storage and proper labeling of containers. Licensed contractors would remove all waste from the project site in accordance with applicable regulatory requirements.

LIPA would require the construction contractor to develop and implement a Health and Safety Plan to ensure that the potential for exposure of construction workers, workers on nearby sites, and others in the area is minimized. The Health and Safety Plan would define worker safety training, monitoring procedures, and personal protective measures.

The construction phase would require use of various petroleum and chemical products, including medium-weight oil, waste oil, aerosol lubricant, thinners, solvents, paint, gasoline, and diesel. None of these products would exceed 500 gallons with aerosol lubricant and thinners and solvents at less than 50 gallons.

STORMWATER AND EROSION CONTROL

An analysis of the potential for significant adverse impacts on ground and surface water is contained in Chapter 12, “Groundwater and Surface Water Resources.” Under the current Phase II stormwater permitting program, site disturbance of more than 1 acre requires the development of a Stormwater Pollution Prevention Plan (SPPP) and submission of a Notice of Intent (NOI) to

New York State Department of Environmental Conservation. The installation of the underground portions of the transmission line would expose and involve less than 1 acre at any given time. Nevertheless, any contractor would be required to adhere to KeySpan's Wetland Construction Guidelines during the installation of the transmission lines. Those guidelines provide for procedures that prevent or minimize intrusions into the wetlands and minimize sediments being deposited into the wetlands. Adherence to these guidelines would provide for erosion control and stormwater management during construction activities. KeySpan has a General Wetlands Permit that regulates utility activities within the adjacent area and within the wetland itself. The purpose of the restrictions in the General Wetlands Permit is to prevent degradation of the wetlands. The KeySpan guidelines and restrictions in the NYSDEC issued General Wetlands Permit would be strictly enforced during the construction period in order to prevent any impacts on nearby wetlands, drainage courses, and properties.

NATURAL RESOURCES

A detailed analysis of the potential for significant impacts on natural resources is contained in Chapter 9, "Natural Resources." Installation of the transmission line, whether overhead or under ground, would be limited to a narrow corridor along side already developed land and roads. Thus the area of disturbance would be small. The areas along side the roads were found not to contain sensitive habitats or valuable natural resources. If wetlands are encountered, the transmission line poles would not be placed in the wetlands for overhead portions of the line, and the transmission line would be horizontally directionally drilled under the wetlands for the underground portion of the line. Therefore, no significant adverse impacts from installation of the transmission line are expected.

AGRICULTURAL PESTS

Portions of the transmission line route are located within a New York State agricultural district. According to the US Department of Agriculture and Cornell Cooperative Extension, nuisance pest species, such as the golden nematode, Colorado potato beetle and others, could be found in the farm fields. In addition, invasive species, such as Asiatic bittersweet, are found along the roadside. To minimize the potential for spreading these agricultural pests, the equipment would be decontaminated prior to moving from one field to another. The decontamination procedures would prevent any significant adverse impacts from agricultural pests and the spread of invasive species during construction.

C. SUBSTATION EXPANSION

CONSTRUCTION SCHEDULE

The expansion of the Bridgehampton Substation is expected to take about 12 months. Under the current schedule, work would commence in June 2008 and be completed by June 2009. The number of construction workers would vary depending on the particular type of construction underway at the time. The number of workers on-site could range from 5 to 50 at any one time.

CONSTRUCTION METHODS

The existing Bridgehampton Substation would be expanded on the same LIPA-owned parcel as the existing substation, which is located on the west side of Bridgehampton Sag Harbor Turnpike approximately 0.4 miles north of Scuttle Hole Road. The location is shown on Figure

1-3 in Chapter 1, "Project Description". The equipment at the existing substation would remain in place, and the expanded substation would be located at the north end of the lot. The expansion of the substation would require clearing and grading, as well as construction of an access road to the site along with culverts for the 2 streams on the property. On-site soils would be used to regrade the area for the expanded substation. Only topsoil and unsuitable material, which can not be used for site grading, would be removed from the site. It is expected that about 12,000 cubic yards of material would be removed from the site.

The expanded substation would be approximately 210 by 735 feet, or just under 3.5 acres. Four existing 69 kilovolt (kV) transmission lines would reach the substation; one each from the East Hampton and Buell Substations, two from the Deerfield Substation, plus the new transmission line from the Southampton Substation, making a total of five transmission lines.

New equipment would include:

- 3 phase bus,
- underground transmission cables,
- 13 breakers,
- equipment enclosure, and
- battery enclosures.

In addition, steel would be used to support the equipment, and concrete would be used for foundations and slabs. The entire expanded substation would be fenced and would have locked gates.

The construction steps are described below.

SITE PREPARATION

The construction sequence proceeds in a series of overlapping phases. It begins with site preparation. This would include clearing, grubbing, and initial grading of the 3.5-acre site and the access road. Site preparation also includes excavation of the storm water infiltration areas and formation of drainage swales.

As site preparation progresses, the delivery of temporary trailers to house offices and worker lockers would occur. An on-site area would be set aside for temporary laydown and storage of facility materials and equipment and construction parking. A gravel parking area would be constructed to serve workers and park construction vehicles when not in use.

Site preparation would require heavy equipment for grading and excavation. This would include excavators, bulldozers, graders, front-end loaders, and dump trucks. During this period, which should last about 1 to 2 months, there would be an estimated 10 to 20 workers at the site.

EXCAVATION AND FOUNDATION POURING

The next major step in the construction sequence would be excavation and compaction for foundations for the equipment and placement/backfilling of underground conduits. Excavated materials would be stored on-site and reused as fill and topsoil material for final grading, to the extent possible.

Immediately following excavation, the equipment foundations would be formed, rebar and conduit would be installed, and concrete would be poured. Dust from construction activities would be controlled by measures such as wetting of exposed soils on a regular basis and stabilizing storage piles by wetting and/or seeding. These measures would be implemented as standard practice for the construction effort. Truck trips would be heaviest during this period and would include concrete and steel delivery and removal of excess soil.

Excavations would require heavy equipment for pad and foundation construction. This would include excavators, bulldozers, graders, front-end loaders, dump trucks, and concrete trucks. During this period, which should last about 3 months, there would be an estimated 25 to 50 workers at the site.

ERECTION OF STRUCTURAL STEEL AND DELIVERY OF MAJOR EQUIPMENT

Following site preparation and installation of foundations, erection of structural steel would begin. Major equipment would be delivered and set in place. On-site cranes are required to lift the components from the transport vehicles for placement on the individual equipment pads. Transport would be by truck. Equipment required during this construction phase includes cranes, compressors, welding machines, and hand held equipment.

UNIT ASSEMBLY AND SITE FINISH

Following the erection of structural steel and delivery of major equipment, the labor-intensive process of installing a complex array of interconnecting electrical and instrument wiring and ductwork would begin.

Equipment required during this construction phase includes cranes, compressors, welding machines, and hand held equipment. This construction phase is anticipated to last about 3 months.

SYSTEMS TESTING AND COMMISSIONING

The culmination of project construction would be the system testing. During this phase of the work, new equipment and systems would be prepared for operation, followed by initial operation and performance testing. The initial operation involves operating individual pieces of equipment within the manufacturer's recommended limits and as an integrated system. After the systems are tested, electricity would be transmitted to the substation for a test period. After successfully completing the test period, the expanded substation would be put into operation.

IMPACT ASSESSMENT AND CONTROLS

CULTURAL RESOURCES

The Bridgehampton Substation is not located near any architectural resources, and the expansion of the substation would not have any significant adverse impacts on architectural resources.

Detailed archaeological Phase 1B testing on the substation site has been completed, and no archaeological resources were found

TRAFFIC

Construction would occur over about a 12 month period and would include both truck and construction work traffic. Unlike installation of the transmission line, expansion of the substation would not cause lane closures. All construction would take place distant from the road network. The only effects on traffic would be workers arriving in the morning and departing in the afternoon, and trucks making deliveries during the day.

During the construction period, the number of workers would vary from about 5 to 50 personnel at any one time. The addition to the worker vehicular traffic during construction would add up to 50 additional vehicles daily at hours outside of peak traffic. Typical peak truck traffic would be approximately 10 to 20 trucks per day. However, during the 2 month period when soil removal would take place, a maximum of approximately 30 to 40 truck trips per day may occur. This minor increase in worker and truck traffic volume would not have a significant adverse traffic impact.

AIR QUALITY

Possible impacts on local air quality during construction of the Direct Route Alternative include fugitive dust (particulate) emissions from earth movement; mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide emissions from construction workers and delivery vehicles and construction equipment operation.

Fugitive Emissions

Fugitive dust emissions are possible from earth movement, wind erosion and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated and the type of fugitive dust control methods employed. Appropriate fugitive dust control measures, including watering of exposed areas and dust covers for trucks, would be employed to minimize any impacts. As a result, no significant air quality impacts from fugitive dust emissions are anticipated.

Mobile Source Emissions

Mobile source emissions are emissions of air pollutants from motor vehicles, referred to as mobile sources. During construction, such emissions may result from trucks delivering materials or removing debris, workers' private vehicles, and construction equipment operation. The additional truck and personal worker trips would not be expected to have a significant impact on mobile source emissions. Therefore, mobile source emissions are not expected to be significant.

NOISE

Impacts from noise during construction of the Direct Route Alternative include noise from construction equipment operation and noise from vehicles traveling to and from the work site. The level of impact from these noise sources depends on the noise characteristics of the equipment and activities, the construction schedule, and the location of the potentially sensitive noise receptors. Noise levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. In general, upgrading of the transmission line would result in some increased noise levels for a limited period of time.

The Town of Southampton has regulations that limit noise from construction activities, and the EPA has regulations that limit noise from construction equipment. The Town of Southampton Noise Code allows construction activities between the hours of 7 AM and 7 PM.

Noise from construction equipment is regulated by the EPA noise emission standards. These federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards and construction material be handled and transported in such a manner as not to create unnecessary noise.

These regulations would be carefully followed. In addition, appropriate low-noise emission level equipment would be used and operational procedures implemented. Compliance with noise control measures would be ensured by including them in the contract documents as material specifications, and by directives to the construction contractor.

In general, noise levels caused by construction activities would vary, depending on the phase of construction and specific tasks being performed. In general, construction activities for the Direct Route Alternative would take place on weekdays. However, based on scheduling, some activities may take place outside of this timeframe (weekends and after 6:00 PM).

Increases in noise levels caused by delivery trucks, workers traveling to and from the site, and other construction vehicles would not be significant, and would be limited to public roadways.

Increased noise levels caused by construction activities can be expected to be most significant during the stages of construction that require the use of impact equipment.

In general, noise from construction activities associated with the Direct Route Alternative could be intrusive at the close-by residences. However, these impacts would be short-term in duration and would not be considered a significant adverse impact.

CONTAMINATED MATERIALS MANAGEMENT

Expansion of the substation may generate limited amounts of some waste solvents and cleaning materials. A licensed contractor would remove these materials for appropriate off-site disposal.

Solid waste and debris that cannot be recycled, reused, or salvaged would be stored in dumpsters or similar containers for disposal. Potentially hazardous wastes would be separated from normal waste including segregation of storage and proper labeling of containers. The existing lattice towers may have paint containing lead. Licensed contractors would remove all waste from the project site in accordance with applicable regulatory requirements.

LIPA would require the construction contractor to develop and implement a Health and Safety Plan to ensure that the potential for exposure of construction workers, workers on nearby sites, and others in the area is minimized. The Health and Safety Plan would define worker safety training, monitoring procedures, and personal protective measures.

The construction phase would require use of various petroleum and chemical products, including medium-weight oil, waste oil, aerosol lubricant, thinners, solvents, paint, gasoline, and diesel. None of these products would exceed 500 gallons with aerosol lubricant and thinners and solvents at less than 50 gallons.

NATURAL RESOURCES

A detailed analysis of the potential for significant impacts on natural resources is contained in Chapter 9, “Natural Resources.” The expansion of the Bridgehampton Substation would involve

the clearing of about 3.5 acres for the substation and about 1/3 of an acre for a 14-foot wide access road from the Bridgehampton Sag Harbor Turnpike. The existing substation covers just less than 1 acre. Of the total 10 acre parcel, slightly more than half would remain wooded with the remainder as road or housing the substation equipment.

During the construction period, a large amount of activity would occur on-site and would displace animals from the site and nearby areas while construction is ongoing. Animals are mobile and without injury are able to leave an area that is being disturbed. When the construction activities cease temporarily, such as nights and weekends, the animals, primarily mammals and birds, would return to forage. When the construction activity ceases permanently, the animals, including reptiles and amphibians, would return to nest, reproduce and forage, except on the cleared portions of the parcel. Fencing and specific strategies, such as turtle exclusion devices would be employed to prevent animals from entering the construction area. Therefore, no significant adverse impacts on the animal population are expected from expansion of the Bridgehampton Substation.

Unlike animals, plants are not mobile and cannot leave the area of construction activity. As discussed in Chapter 9, "Natural Resources," the permanent loss of the small acreage of the expanded substation is not expected to have a significant adverse impact. The construction site, including staging and laydown areas, would have construction fencing to prevent workers and equipment from entering the surrounding areas that are not part of the construction. This would serve to protect the plants in the surrounding areas and no significant adverse impacts on plants and habitat in the surrounding areas are expected.

STORMWATER AND EROSION CONTROL

A detailed analysis of the potential for significant adverse impacts on ground and surface water is contained in Chapter 12, "Groundwater and Surface Water Resources." Under the new Phase II stormwater permitting program, site disturbance of more than 1 acre requires the development of a SPPP and submission of a NOI to New York State Department of Environmental Conservation. The SPPP would be prepared and the NOI would be submitted prior to the start of any construction for the expansion of the substation. KeySpan has a General Wetlands Permit that regulates utility activities within the adjacent area and within the wetland itself. The purpose of the restrictions in the General Wetlands Permit is to prevent degradation of the wetlands. This General Wetlands Permit would be employed the expansion of the Bridgehampton Substation.

Erosion and sediment control measures would be installed prior to beginning other land disturbances and would not be removed until the disturbed land areas are stabilized. Such practices include seeding or mulching for surface stabilization, silt fences, haybale dikes, and water quality swales. Maintenance would be performed as necessary to ensure continued stabilization. Below are descriptions of measures that would or may be used during project construction:

- Protection of trees/mature vegetation—Natural vegetation would be preserved whenever possible in accordance with the site clearing plan. Preserving natural and mature vegetation would provide aesthetic buffer, preserve habitat, and reduce soil erosion. When preserving vegetation, fences would be installed to prevent equipment from damaging areas designated for preservation.

- Stabilized Construction Entrance—All points of construction ingress and egress would be protected to prevent the deposition of materials onto traversed public thoroughfare(s) by installing and maintaining a stabilized construction entrance.
- Vegetated swales—During the early phases of construction, surface runoff that is relatively clean and free of sediment would be diverted or otherwise prevented from flowing through areas of construction activity via a system of temporary swales. The swales would route flow to temporary runoff collection ponds. During the remainder of the construction period, as well as during operation, areas outside the buildings and pavement would continue to utilize vegetated swales in preference to a piped collection system.
- Haybale Barriers—Haybale barriers would be used to prevent sediment inflow into catch basins during the construction process. They may also be used in place of silt fencing, where applicable.
- Temporary Seeding—Planting of fast-growing grasses provides rapid stabilization of disturbed surfaces that would experience further disturbance or construction activity at a later date. Temporarily seeded surfaces would have greater resistance to stormwater runoff and/or wind erosion. All disturbed areas would be seeded and stabilized with erosion control materials within 30 days of final grading. If construction is suspended, or sections completed, areas would be seeded and stabilized with erosion control materials. Maintenance would be performed as necessary to ensure continued stabilization. This control can be used only if it is the growing season for grass seeds.
- Geotextiles—Geotextiles are porous fabrics known in the construction industry as filter fabrics, road rugs, synthetic fabrics, construction fabrics, or simply fabrics. They are used for filtration, reinforcement, material separation, mats, drainage applications, and erosion control. For sediment and erosion control applications, they are most commonly used as mats to stabilize flow in channels and swales and on recently planted slopes, and as separators to prevent the migration of sediments into other layers such as soil from beneath gravel.

All erosion and sediment control measures and best management practices (including specifications for temporary and permanent seeding) used during construction would comply with the specifications contained in the New York State Stormwater Management Design Manual dated August 2003. In addition, KeySpan's Wetland Construction Guidelines would be used for erosion control and stormwater management. These guidelines meet or exceed the New York State Best Management Practices. The guidelines would be strictly enforced during the construction period to prevent any impacts on nearby wetlands, drainage courses, and properties Observance of KeySpan's Wetland Construction Guidelines and the restrictions contained in the NYSDEC issued General Wetlands Permit would prevent significant adverse impacts from stormwater. ✷