



February 5, 2015

City of New Bedford
Conservation Commission
Office of Environmental Stewardship
133 William Street, Room 304
New Bedford, MA 02740
ATTN: Ms. Sarah Porter

Re: Request for Amended Order of Conditions- MA DEP File No. SE-049-0705
1277 Kempton Street, New Bedford Assessor's Map 61 Parcel 2

Dear Ms. Porter:

On behalf of our client, the Massachusetts Clean Energy Technology Center (MassCEC), Apex Companies, LLC is providing the enclosed updated drawings and methodology for the above referenced parcel for which the Order of Conditions was issued on July 16, 2014. After some informal discussions with you, we have concluded it is best to request and Amended Order of Conditions for this project to include a modified scope of work that was developed based on the conditions we discovered after the initial clearing work at the site.

Originally, the project proposed only vegetation and tree removal inside of the 50 Foot buffer zone. However, after initial clearing work was performed and during the installation of the guy wire foundations for the Tower, the Tower Contractor notified us that the site contained significantly more and larger boulders and tree stumps than originally anticipated. The nature of the work requires that the Contractor install a grounding array, which is comprised of copper wires installed utilizing a vibratory plow. The machine hydraulically presses the plow to a depth of approximately eight inches to one foot and pulls the cable through the "trench". The plow, however, would be unable to "trench" through areas where there are boulders or significantly large tree stumps. Based on input from the Contractor, any effort to try and place these wires would be futile and result in damage to the equipment. In addition, the Tower Owner expressed concern over allowing exposure of the ground array wires at ground surface. Doing so reduces the function of the wires and the exposed copper wires would be prone to theft and damage.

Based on this feedback and after several discussions with the Contractor to review alternate methodologies, we concluded that the most effective way to install the grounding array while minimizing the impact to the wetland resource areas was to identify, mark and carefully remove large stumps and boulders up to the wetland boundary. The removal would be performed in a manner that limits disturbance to the existing ground surface and the boulders would be placed elsewhere on site, outside of the resource area and its respective buffer zone. The impacts of this work would be temporary and will still allow regrowth inside of the buffer zone as originally intended. Limiting activity to large stumps and boulders will preserve a portion of small saplings, undergrowth, and the original root mat.

To support this request we are providing the following documentation:

- Revised Project Drawings dated 2/5/15 with revision clouds to highlight the changes made
- An updated Project Narrative to address the modified methodology discussed in this letter
- An updated Construction Methodology narrative to also address the modified methodology.

In addition, we would like to address Special Condition No. 54 of the original Order of Conditions. This condition required we determine the elevation of the seasonal high groundwater table in the vicinity of the recharge galley and bio-retention basin during construction activities. The recharge galley is intended to serve as an infiltration BMP for the roof runoff from the Radio Tower Transmitter Building. As shown on the plans with the revision date of 12/4/14, which were provided to the Office of Environmental Stewardship on December 5, 2014, the location of the building and recharge galley were relocated outside of the buffer zone as requested by the Tower Operator in order to be located closer to the power supply source, which is on the eastern end of the property. On December 5, 2014, a project engineer from Apex was on site with the site clearing contractor and observed a test pit in the proposed location of the recharge galley. A copy of the test pit log is included with this letter.

During the logging of the test pit, seasonal high groundwater was identified at 4.8 feet below existing grade (approximate elevation 116) based on observation of redoximorphic features; putting the estimated seasonal high groundwater at elevation 111.2. Standing groundwater was observed at 6.5 Feet below grade, elevation 109.5.

The recharge galleys must be able to withstand heavy vehicles loads, as equipment will need to travel directly over the buried recharge galley to install and access utility pole locations that provide power to the tower site. Therefore, based on recommendation of the galley manufacturer, a minimum of nine inches of cover over the galley is needed. In order to maintain nine inches of cover over the 18 inch tall galley, and provide twelve inches of stone below the galley, bottom of stone was set at 3.2 Feet below grade, elevation 112.8. This will provide approximately 19 inches of separation between bottom of stone and high groundwater based on redoximorphic observation. Typically two feet of separation is preferable, however given the site constraints associated with this installation, 19 inches was the maximum practicable separation from the bottom of stone. In order to provide the two foot separation, we need only "take credit" for six inches of stone below the galley since our original design had already far exceeded the required recharge volume. The other six inches of stone can be considered extra, for the times of the year when the groundwater levels are below their highest points.

Please review all of the information provided with this letter. We believe there is sufficient information provided and controls proposed that allow the Order of Conditions to be Amended as proposed. Should you have any questions, please do not hesitate to contact me at (617) 936-9024.

Sincerely,
Apex Companies, LLC



John B. McAllister, P.E.
Senior Project Engineer



REQUEST FOR AMENDED ORDER OF CONDITIONS

CERTIFIED ABUTTER'S LIST

Emily H. Grande 

2/3/2015

Administrative Assistant to the Board of Assessors of the City of New Bedford, do hereby certify that the names and addresses as identified on the attached "Abutters List" are duly recorded and appear on the most recent tax.

Date: 5/8/2014

SUBJECT PROPERTY: MAP 61 LOT 2

LOCATION 1277 Kempton Street

OWNER'S NAME City of New Bedford c/o Massachusetts Clean Energy Center

MAILING ADDRESS 1213 Purchase Street, Room 301, New Bedford MA 02740

CONTACT PERSON John McAllister → Rob Ryan

TELEPHONE NUMBER 617-934-9024 508-455-8787

REASON FOR REQUEST

Zoning Board of Appeals Application and

Conservation Commission Application

PLANNING

MAY 0 / 2014

DEPARTMENT

Con Comm

May 7, 2014

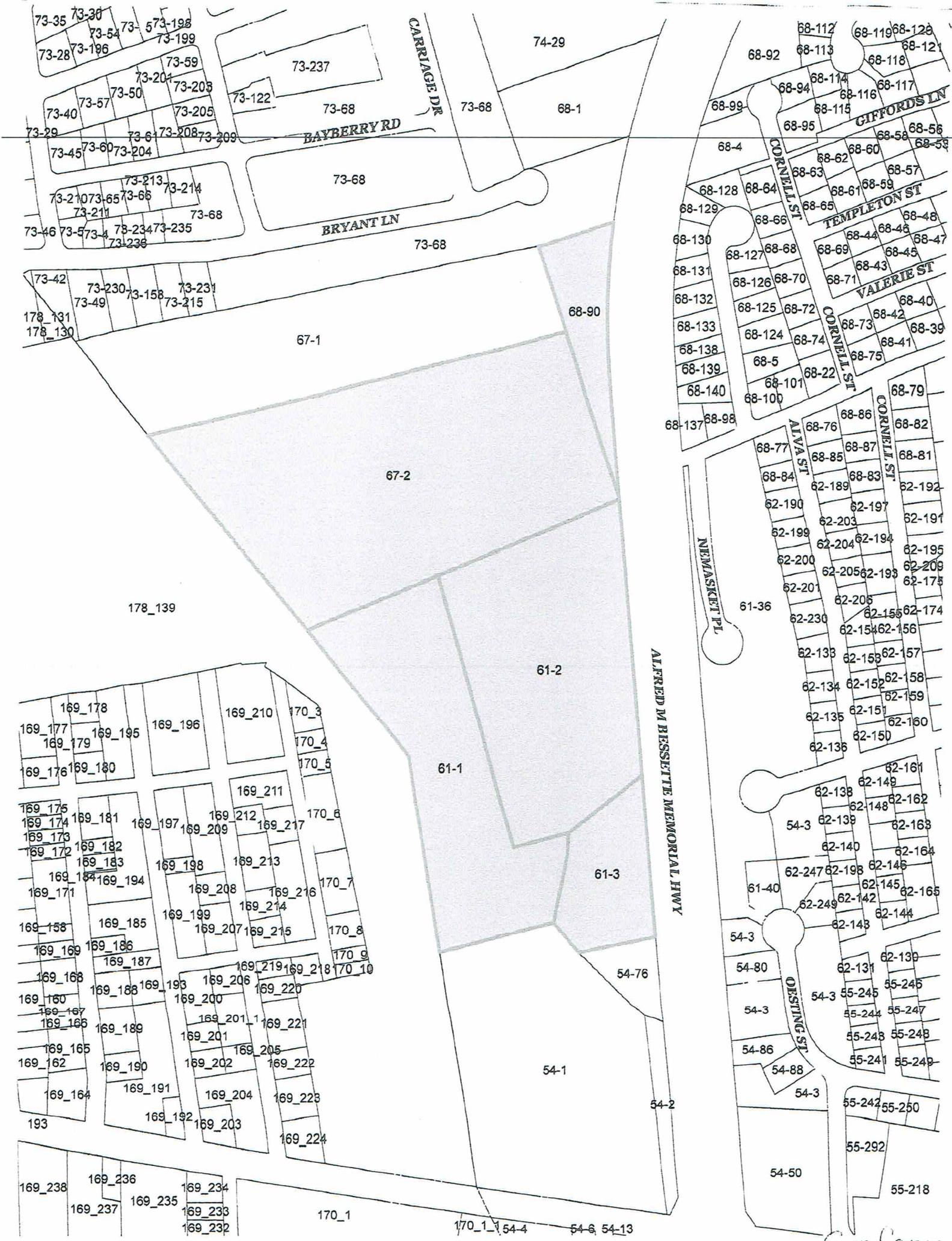
Dear Applicant,

Please find below the List of Abutters within 100 feet of the property known as 1277 Kempton Street (61-2). The current ownership listed herein must be checked and verified by the City of New Bedford Assessor's Office. Following said verification, the list shall be considered a Certified List of Abutters.

Parcel	Location	Owner and Mailing Address
61-3 ✓	WS KEMPTON ST	ROMAN CATHOLIC BISHOP OF, FALL RIVER CEMETERY 47 UNDERWOOD ST FALL RIVER, MA 02721 02720-5427
61-1 ✓	NS KEMPTON ST	ROMAN CATHOLIC BISHOP OF, FALL RIVER ST MARYS NEW BEDFORD, MA 02740
61-2 ✓	KEMPTON ST 1227 Kempton St.	CITY OF NEW BEDFORD, 131 WILLIAM ST NEW BEDFORD, MA 02740 Massachusetts Clean Energy Technology Center 63 Franklin St. - 3rd Floor Boston, Ma 02110-1301
67-2 ✓	NS KEMPTON ST	ROMAN CATHOLIC BISHOP OF, FALL RIVER ST MARYS NEW BEDFORD, MA 02740
68-90 ✓	BRYANT LN R 55 Bryant LN	CITY OF NEW BEDFORD, 133 WILLIAM STREET NEW BEDFORD, MA 02740-6132

Sincerely,


Patrick C. Day
Staff Planner



Con Comp



REQUEST FOR AMENDED ORDER OF CONDITIONS

UPDATED PROJECT NARRATIVE

Project Narrative

Introduction

On behalf of our client, the Massachusetts Clean Energy Technology Center (MACEC), Apex Companies, LLC (APEX), along with Beals and Thomas, Inc. is filing this Notice of Intent (NOI) for the parcel of land identified by the City of New Bedford Assessor's Department as Map 61 Lot 2, also known as 1277 Kempton Street. This NOI is being filed on behalf of MassCEC in complement of its efforts to develop the New Bedford Marine Commerce Terminal off Blackmer Street. As part of MACEC's development of that Terminal, they will need to re-locate the existing AM-FM Tower that is located adjacent to the Commerce Terminal parcel. The Commerce Terminal is intended to be a multi-use port capable of handling heavy cargo and off-shore wind components. In order to work with the heavy loads associated with those uses, Terminal operators will need to use large cranes to maneuver cargo, machinery, and equipment. There is a significant health and safety (shock) hazard associated with operating cranes near an active AM radio tower signal, so in order to mitigate those hazards, MassCEC is proposing to re-locate the existing AM radio tower.

Due Diligence for Siting the Re-located Tower

MassCEC, in its due diligence efforts, looked at numerous different parcels throughout the City and the local area to see if they could find a suitable parcel for the relocation of the tower. The broadcast of an AM radio signal requires an above-ground antenna as well as an underground cable array. The Hall Communications AM Radio Tower, which broadcasts the radio station WNBH, requires that the antenna be placed 185 feet above ground level, in order that the signal can be broadcasted the appropriate distance and reach the required population under the FCC Broadcasting Permit. Thus, the AM Radio Tower is required to extend 185 feet above ground level. In case of a catastrophic malfunction in which the Radio Tower falls, the Radio Tower Site has to be at least so wide that the Radio Tower could fall in any direction and not impact adjacent properties. To accommodate the possibility of a fall, an AM Radio Tower extending 185 feet above the ground level needs to be constructed on a property with a footprint of at least 3 acres.

In addition to the tower, the AM station requires the placement of an underground cable array ("ground array"). The ground array consists of copper wires buried approximately 1 foot below the ground surface and radiating out from the base of the tower to a radial extent of 180 feet. Therefore, the site must have a geometry sufficient to encompass this ground array. Furthermore, the site must be cleared and fenced in order to place the ground array, as well as for safety and security reasons.

Based on this criteria, the various parcels throughout the region that MassCEC was looking into were deemed unsuitable and the parcel where the current project is proposed was deemed as the most suitable parcel for this project. A copy of the memorandums and supporting documentation associated with this due diligence effort is included in the Appendix.

Historic Use of the Property

Apex personnel completed a Cultural Resource Survey for the parcel to review the historic uses and as part of the overall Environmental/Cultural Resources assessment of the project lease area performed by Apex

on behalf of Hall Communications. There are over 66 documented archaeological resources listed for the New Bedford and Dartmouth area – New Bedford/40 and Dartmouth/26 – of Bristol County. Correspondence with the Massachusetts Historical Commission (MHC) indicates no archaeological or historical resources for the project location. A review of historic topographic maps from the years 1858, 1885, 1911 and 1941 show that the project location is proposed to be constructed in an area that was a man-made pond for ice manufacturing circa 1911 – Burns River Ice Company. The historic topographic maps are included in the Figures section of this filing. Apex has received notification from the MHC (9/30/13) indicating that after review of the MHC files and materials submitted by Apex, “...the MHC has determined that the proposed project will have no adverse effect on significant historic or archaeological properties”.

General Site Description

The project location is bounded by State Route 140 and then commercial-residential development to the east; US Route 6 and then parkland and commercial development to the south; St. Mary’s Cemetery and then commercial development to the west; and, St. Mary’s cemetery and residential to the north.

Regional topography suggests a groundwater gradient toward the east/southeast. We note that there may be localized variations in hydrology created by sewers, wells and other human engineering. Please note also that hydrologic conditions in the vicinity may be subject to variations in seasonal precipitation and geological conditions not evident during our review of publicly available records.

Sources used to evaluate surface and subsurface characteristics in the vicinity of the project site included the U.S. Department of Agriculture (USDA) Soil Survey of Bristol County, Massachusetts (1979) and the U.S. Geological Survey (USGS) 7.5 Minute Topographic Map (New Bedford North, Quadrangle, 1979). The project site is located within the Seaboard Lowland Section of the New England Province, which is within the Appalachian Highlands physiographic division and lies at an elevation of approximately 140 feet above mean sea level. Approximately 10,000 years BC erosion and deposition of till occurred in the upland areas of coastal Southeast Massachusetts as the Laurentide Ice sheet began to recede. The geology at the project location would have been affected by the action of the Buzzards Bay Lobe.

Soils at the Radio Tower site area are classified as Whitman fine sandy loam, which is a very poorly drained, friable coarse-loamy eolian deposit over dense coarse-loamy lodgment till derived from granite and gneiss, 0 – 2 % slopes. The Whitman is listed as a hydric soil for Massachusetts. Soils at the utility building and access drives are classified as Paxton fine sandy loam which is a well-drained, friable coarse-loamy eolian deposit over dense coarse-loamy lodgment till derived from granite and gneiss, 0 – 8 % slopes. The property slopes down overall toward the south and east, draining partially into a southward-flowing intermittent stream - Buttonwood Brook, which runs into a man-made pond just over 0.5 miles southeast of the project lease area across Kempton Street in the northwest area of Buttonwood Park. It then continues southward from the pond to the Apponagansett River.

FEMA Floodplain Designation

The project site is located in Zone X “Areas determined to be outside the 0.2% annual chance floodplain as shown on FEMA Flood Map 25005C0389F, effective date July 7, 2009. Please note the FEMA Map for this area is anticipated to be update in June.

Wetland Boundary Determination Methodology

The City of New Bedford's Conservation Agent conducted site evaluations in August of 2014 to delineate the boundaries of existing protectable Wetland Resource Areas located on the site. The wetland delineation included Bordering Vegetated Wetland (BVW) and bank associated with an intermittent stream. The extent of BVW located on-site was determined through observations of the existing plant communities, the interpretation of soil characteristics, and other indicators of hydrology, in accordance with the principles of DEP's handbook, Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act (March 1995), the Field indicators for Identifying Hydric Soils in New England (April 2004), and the criteria set forth in 310 CMR 10.55(2), and the Bylaw. Based on these methods, the BVW boundaries were demarcated with sequentially numbered surveyor's tape embossed in bold, black print. Wetland flagging stations WF1- WF-18 represents the BVW and 1A- 5A, and 1B – 5B represent the boundary of the bank associated with the intermittent stream. All wetland flags were originally survey located by the City of New Bedford Department of Public Infrastructure and then located by Thompson- Farland Engineering.

Proposed Conditions

In order to support the development and full use of the New Bedford Marine Commerce Terminal, the existing AM radio tower (WNBH) needs to be relocated so that cranes and other heavy equipment can operate safely at the Terminal. The chosen site was selected to support a 199 ft. tall guyed tower, with a 180 foot diameter grounding array (modified to reduce impact on the resource area), a 16' x 16' utility building and associated gravel access roadway and stormwater and electrical infrastructure. The utility building will not be continuously occupied and the site will only be visited periodically for maintenance. No heavy machinery will be required for the typical maintenance visit.

In order to construct the tower and its associated infrastructure a large portion of the upland area will need to be cleared and selective clearing will be performed within the buffer zone and wetland resource area. The clearing in the buffer zones and resource area will result mostly from the implementation of the 180 diameter grounding array. Because of the presence of boulders and some large tree stumps within the 180 foot diameter grounding array footprint, some selective identification and removal of these stumps and boulders will be necessary to facilitate the installation of the grounding array. The grounding array consists of 180 foot lengths of #8 AWG copper wire emanating out from the tower in the center at 3 degree intervals. However to reduce the impact to the wetland resource areas, a finite number of radials will be reduced to 168 feet and a 6-8 foot copper spike shall be driven at the end of those radials to extend the effect of the radio signal. The guy wires will be set on a concrete deadman foundation. The utility building will house the radio transmitters and some HVAC equipment to make sure the transmitters operate within an acceptable temperature range. The vegetation will be allowed to grow back naturally in the wetland and buffer zone. Also, to compensate for that temporary disturbance, we are proposing a high density replanting schedule and maintenance program. More on the construction methodology, wetland resource evaluation, re-planting and maintenance is described in other sections of this NOI.

Wetland Resource Areas and the Performance Standards

The on-site BVW generally consists of a forested red maple (*Acer rubrum*) swamp with typical species including tupelo (*Nyssa sylvatica*), high bush blueberry (*Vaccinium corymbosum*), sweet pepperbush (*Clethra alnifolia*), cinnamon fern (*Osmunda cinnamomea*), and green briar (*Smilax rotundifolia*)

present. The wetland is associated with an intermittent stream that will not be impacted by proposed work. The wetland generally slopes down to the southwest with pit and mound topography prevalent. Upland plants such as holly (*Ilex opaca*) and red oak (*Quercus rubra*), as well as small amounts of beech (*Fagus grandifolia*) are present on hummocks and in the surrounding uplands. Additional vegetation within the upland area in the vicinity of the proposed radio tower includes red cedar (*Juniperus virginiana*), red maple, ash (*Fraxinus* sp.), and high bush blueberry.

BVW is presumed to be significant to public or private water supply, groundwater supply, flood control, storm damage prevention, prevention of pollution, protection of fisheries, and to wildlife habitat. Given that proposed work in the BVW consists of installing underground cables using a vibratory plow, which will generally result in a 3-5 foot wide disturbed area, and that the disturbed area is proposed to be restored to original elevations if necessary, and replanted with native high wildlife habitat value shrubs, it is anticipated that the BVW interests (functions) listed above will be maintained. Specifically, as indicated by 310 CMR 10.55, BVW is presumed to be significant to these interests because:

- *The plants and soils of BVW remove or detain sediments, nutrients and toxic substances that occur in run-off and flood waters.*

The project will not alter on-site soils, and disturbed areas will be replanted at a high density with both herbaceous and woody (shrub) species.

- *The vegetation in a BVW slows down and reduces the passage of flood waters during periods of peak flows, and during dry periods, the water retained in a BVW helps to maintain base flow levels in streams.*

The BVW impact area will be restored to original elevations (if necessary) and replanted such that the area will continue to provide these functions.

- *Wetland vegetation supports various insects, reptiles, amphibians, small mammals, and birds.*

The disturbed area will be replanted at a high density with a variety of shrubs as well as an herbaceous seed mix, which will continue to provide habitat for wildlife.

- *Shade from wetland vegetation moderates water temperatures important to fish life, and when wetlands are flooded they may provide habitat for fish.*

The impacted BVW areas will be limited to a temporary impact of thin lines for the installation of the grounding array. Given the character of the intermittent stream and wetland system, it is not anticipated that the BVW provides significant habitat for fish when flooded; however, the replanting of the impact area with shrubs will maintain shaded conditions, and because the impact areas are generally narrow it is not anticipated that the shading regime in the wetland will be significantly different than existing conditions.

- *The hydrologic regime, plant community, soils, topography and water chemistry provide food, shelter, migratory, overwintering areas, and breeding areas for many birds, mammals, amphibians and reptiles. Varied species utilize a wide variety of vegetated wetland plants for mating, nesting, brooding, shelter and food.*

Given that proposed impacts are temporary and that a high density of plantings within the impact area are proposed, and because soils and topography will not be permanently altered, it is anticipated that the BVW will continue to provide habitat similar to what it currently provides.

- *The diversity and interspersed structure of the vegetative structure is important in determining the nature of a BVW's wildlife habitat.*

Although there will be temporary impacts to the wetland during construction, restoration of impacted BVW is proposed, and includes planting a variety of woody shrub as well as herbaceous species. It is anticipated that the inclusion of plants that provide various forms of cover and food sources at different times of the year may enhance the overall habitat value of the wetland. The

enclosed plans provide a summary of the habitat value afforded by the different plants proposed to restore the impacted BVW.

Although proposed work will result in a temporal impact to the BVW during construction, and may result in a change in vegetative community composition within the impact areas (from forested to shrub), it is not anticipated that the project will result in a permanent negative impact to the BVW or its ability to protect the interests discussed above. Specifically, proposed work will meet the applicable performance standards for BVW (detailed below), and mitigation in the form of replanting disturbed areas with high wildlife habitat value plants is also proposed, in addition to allow natural recolonization.

310 CMR 10.55(4) (b) - The loss of up to 5,000 sf of BVW may be permitted when replaced in accordance with the following conditions:

1. *Surface of the replacement area to be created equals the lost area*
Because proposed impacts are temporary (associated with construction), the replacement area is proposed within the impact footprint, and therefore meets this performance standard.
2. *Groundwater and surface elevation of the replacement area approximately equal the lost area*
Because proposed impacts are temporary (associated with construction), the replacement area is proposed within the impact footprint, and therefore meets this performance standard. Specifically, the existing elevation within the BVW will be maintained, or if necessary, restored, subsequent to construction.
3. *Overall horizontal configuration and location of the replacement area with respect to the bank is similar to that of the lost area*
Because proposed impacts are temporary (associated with construction), the replacement area is proposed within the impact footprint, and therefore meets this performance standard.
4. *Replacement area has an unrestricted hydraulic connection to the same waterway associated with the lost area*
Because proposed impacts are temporary (associated with construction), the replacement area is proposed within the impact footprint, and therefore meets this performance standard.
5. *Replacement area is located in the same general area of the reach of the waterway as the lost area*
Because proposed impacts are temporary (associated with construction), the replacement area is proposed within the impact footprint, and therefore meets this performance standard.
6. *At least 75% of the surface of the replacement area is reestablished with indigenous wetland plant species within two growing seasons, and prior to vegetative reestablishment any exposed soil in the replacement area is stabilized*
Disturbed BVW is proposed to be replanted with a seed mix as well as a variety of wetland shrubs, such that 75% cover is anticipated to be achieved within two growing seasons. Erosion control barriers will be maintained around the limit of disturbance until the site is stabilized.
7. *Replacement area is provided in a manner consistent with performance standards for other applicable resource areas*
The project is not located within any resource areas other than BVW.

310 CMR 10.55(4) (d)- Projects resulting in adverse effects on specified habitat sites of rare vertebrate or invertebrate species may not be permitted.

The project site is not mapped as containing Priority or Estimated Habitats, nor is the vicinity, based upon Mass GIS mapping reviewed on May 15, 2014.

310 CMR 10.55(4) (e) - Destruction/impairment of BVW within an Area of Critical Environmental Concern may not be permitted.

The project is not located within an Area of Critical Environmental Concern.

Wildlife Habitat Evaluation

Beals and Thomas, Inc. (B&T) visited the site for observations on February 18, 2014. At that time, the anticipated BVW impact area was larger than is currently proposed (the Proponent has since been able to minimize impacts as described elsewhere in this Notice of Intent). B&T performed a site reconnaissance of the wetland in general as well as the larger previously anticipated impact area. The BVW provides habitat typical of a red maple swamp, and none of the important habitat features noted in MassDEP's "Wildlife Habitat Protection Guidance" (the Guidance document) were observed. As required, a Simplified Wildlife Habitat Evaluation form is included herein. The proposed work will not impact any important habitat features pursuant to MassDEP's guidance document.

Avoidance Minimization & Mitigation

MassCEC understands the value and importance of wetland resource areas. During its due diligence process, MassCEC searched quite a number of sites to find one where there would be no impact to any wetland resource area, however due to the other siting evaluation criteria, only the proposed site was deemed acceptable for the re-location of the AM radio tower.

MassCEC explored several different options and layouts on this site to avoid any impacts to the wetlands. The locations of the foundations for the guy wires was rotated to remain outside of the resource area. The center of the tower was located as far away from the resource area as would allow the ground array to remain on the subject property.

In an effort to minimize the impact to the resource area, MassCEC worked with the radio tower operator (Hall Communications) to come up with the minimum allowable length of the grounding array that would maintain the broadcasting capabilities of the facility but reduce the impact to the resource area. As a result of those efforts, the proposed design shows the grounding array radials reduced to 168 feet in the areas where the radials transect the resource area.

As part of the mitigation effect for the impacts, all of the proposed disturbance to the wetland resource area will be temporary only, to allow the installation of the grounding wire with a vibratory plow. After the installation of the grounding array, the disturbed area will be re-planted with native vegetation with beneficial qualities to the resource area. The resource area will be allowed to re-grow and re-establish, as a shrub covered resource area. Deep rooted trees could impact the grounding array, so they will not be allowed to re-establish over the grounding array. The re-vegetation of the area will be monitored and maintained in order to allow the disturbed area to re-establish properly. The New Bedford Conservation Commission will

be kept apprised of the status of the re-establishment and inspection and corrective action reports will be provided to them. A more detailed Operation and Maintenance Plan is provided in the appendices.



REQUEST FOR AMENDED ORDER OF CONDITIONS

UPDATED CONSTRUCTION METHODOLOGIES



North of Kempton Street

Wireless Communication Facility Construction Methodology

Updated February 2015

Background

MassCEC proposes the construction of a Wireless Communication Facility (WCF) at the Kempton Street property. The WCF will be utilized to transmit an AM Radio Signal, and it will also have the ability to co-locate up to 3 cellular antennas. This memorandum will provide a brief overview of the construction methodologies for the major components at the site. It should be noted that all of the hard structures at the site will be outside of the resource, but some of hard structures will be within the 50 and 100-foot buffer zone.

Proposed Structures

The broadcast of an AM signal requires an antenna and a ground array, as well as ancillary appurtenances. The proposed WCF is comprised of the following main structures:

- Tower
- Ground Array
- Foundations
- Broadcast Building

As seen on Drawing P-1, in which each of the structures' location is depicted.

Construction Methodology

The proposed development will be constructed utilizing traditional construction equipment. The construction fits into two general types of construction: land disturbing activities and vertical construction.

Land Disturbing Activities

Prior to any land disturbing activity, erosion sedimentation controls will be installed as shown on the Erosion Sedimentation Controls plan. Once the erosion and sedimentation controls have been installed, the site will be cleared. Limited grubbing will occur outside of the wetland resource area. Limited removal of large boulders and stumps may need to occur within the resource area however the area will be traversed with care, preserving as much as possible the original ground surface.. Vegetation will be chipped and removed from the site or stored in the staging area and utilized to stabilize onsite soils after

construction has been completed, however no woodchips shall be placed within the wetland resource area.

To facilitate the remainder of the construction activities, an access roadway will be constructed to connect the roadway in St. Mary's Cemetery to the location of the WCF, as shown on the attached plan. The access roadway design will utilize a permeable surface product (grasspave2) to minimize runoff and promote groundwater infiltration at the site.

Construction of the tower requires the installation of one pier style foundation where the tower will be located, as well as three ground anchors /dead-men that each will be approximately 12 feet by 12 feet and be a poured on site with approximately three feet of each dead-man above the ground surface, to which the guyed wires will be secured. If any dewatering is required for the implementation of the ground anchors, that groundwater will be pumped to a settling area outside of the buffer zone and shall be done in compliance with the NPDES Construction General Permit. There will also be a foundation for the (10 ft x 15 ft) transmitter/electrical building that will be constructed on site outside of the resource. The building will be constructed as a slab on grade with footings.

Foundation construction will be performed primarily with a backhoe or excavator. All excavated materials will be stored on site in a manner that will minimize erosion from stockpiles, per the Erosion and Sedimentation Controls specifications/plans and the governing NPDES Construction General Permit. Stockpiles will be located in the staging area, well away from the buffer zone and resource area to ensure that the impacts to the resource area are minimized.

The final land disturbing activity is the installation of the underground cable array for the broadcast of the AM Radio Signal. It should be noted that this activity will be within the buffer zone and the resource area. The ground array is comprised of copper wires, which are installed utilizing a vibratory plow. The machine hydraulically presses the plow to a depth of approximately 8 inches to 1 foot and pulls the cable through the "trench;" this method of installing the ground array results in minimal impact to the site. The area where the plow operates may show tire marks; however, as the plow is designed for the installation of irrigation lines, the ground pressure is very low and will minimize any impacts to existing groundcover in the resource area. . If any boulders or large tree stumps are encountered in the buffer zone, they will be identified, marked and carefully removed, with a conscious effort to minimize the amount of disturbance caused by this work. Removal of boulders and tree stumps will not occur in the wetland itself. Each wire will extend radially from the tower mast every 3 degrees, depending on the onsite soil properties, and each wire will extend 180 feet from the tower mast. In total, there will be approximately 120 wires. We anticipate that approximately 18 wires will intrude into the resource area by between 4 ft and 62 feet of length (see Plan P-1 for the estimated impact of the wires into the resource area).

After the construction of the Radio Tower and its appurtenances is complete, we will return to the site and complete wetlands plantings as show on the Plantings Plan. The Planting Plan has been prepared to enhance the functions and values of the existing resource area and buffer zone.

Vertical Construction

The AM Radio Tower and transmitter/electrical building will be constructed utilizing a crane. The tower sections will be assembled in the adjacent construction lay down area (located outside of the buffer zone), and then the pieces will be hoisted into place utilizing the crane. Guy wires will be attached from the tower to the three deadmen to secure it in place, and then the transmission equipment will be installed on the tower. The transmitter/electrical building will be a prefabricated structure, which will be delivered to the site and placed on the prepared foundation pad. Vertical construction activities should not have further impact on any resource area or the associated buffer zones.



REQUEST FOR AMENDED ORDER OF CONDITIONS

TEST PIT LOG

