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October 2, 2014

New Bedford Conservation Commission  
New Bedford City Hall  
133 William Street – Room 304  
New Bedford, Massachusetts 02740

Subject: Fishermen's Memorial  
Response to Review Comments on the Notice of Intent  
City of New Bedford - Applicant

Dear Commission Members:

On behalf of the City of New Bedford, Department of Public Infrastructure (DPI), CDM Smith Inc. (CDM Smith) has prepared the following responses to comments received from Ms. Sarah Porter in an email dated July 30, 2014 regarding the Notice of Intent (NOI) submitted for improvements to the Monkey's Island pier located at the intersection of East Rodney French Boulevard and Nina Street for the purposes of constructing a Fishermen's Memorial. The email received by Ms. Porter indicated that there were no further comments from the Conservation Commission's external review.

The Conservation Commission's comments are shown in italic with responses provided immediately after.

1. *Address concerns related to construction methodology, sequence of construction, how the work area is to be contained (the length of the silt curtain through the water column for example).*

DPI crews will be constructing the pier improvements and Fishermen's Memorial using in-house crews. The construction sequence provided on Sheet L-1 of the as-submitted drawings was developed jointly between CDM Smith and DPI. As noted, work will need to be scheduled around the tide cycle to conduct work below the mean high water line at the lowest points of the tide cycle to ensure the north-eastern portion of the pier where foundation improvements are required is not submerged. As show on the attached photo taken on March 15, 2014 during a low-low tide event, the eastern portion of the pier is not submerged. Based on the New Bedford tide cycle, this typically occurs during the fall or spring months allowing DPI crews an approximate 6-hour window to construct the footing and pour the rapid setting concrete. This type of activity involves standard construction activity and can be completed within the allowable time period during low-low tide. The Mean Low Water (MLW) line of -1.57 feet (NBCD) as shown on the Project Plans was estimated by taking the average slope leading up to elevation -1.57 feet (NBCD) and offsetting average contour distances.



Prior to initiating any construction activities, a floating turbidity barrier will be installed to the limits shown on the drawings to mitigate silt migration. As detailed on the drawings, the silt curtain protects the complete water column by extending from a floating boom to the sea floor. Additional fabric is provided to account for the elevation differences between low and high tides. It is anticipated that based on visual observations of water depths that the length of the silt curtain through the water column will approximately 4-ft. The curtain is protected from movement by a galvanized steel ballast chain.

Construction of the pier improvements will take place from the landward side of the pier to the extent practicable. This will involve removal of the existing concrete cap, saw cutting and removal of the existing bituminous concrete pavement around the area of wall repair, followed by excavation and removal of the existing granite blocks. The granite blocks removal and excavation will be completed using a rubber tracked excavator which will be positioned perpendicular to the granite block wall (Note – This work can occur during non-low-low tide events as access to the ocean side of the pier is not required). Once the blocks have been removed, crews will excavate the area for the new footing, prepare the subgrade, install filter fabric and compacted gravel, form the footings and cast rapid setting concrete. Once cured, the granite blocks will be reset and the excavation area backfilled with compacted gravel.

During the excavation of the footing and installation of the formwork, temporary access to the ocean side of the pier (i.e., within Coastal Beach and Land Under Ocean) will be required. DPI crews will minimize access as much as possible. It is anticipated that much of the work can be done from the landward side of the pier. Should access be required to the water side, a rubber tired machine and DPI crew members will access the ocean side of the pier via timber planking (or timber mats) placed across the beach area to access the north east corner. (See description of dune restoration and plantings below.) Prior to ocean side access, DPI will notify the Division of Marine Fisheries (DMF) in accordance with their letter dated July 30, 2014 to coordinate all activities on the ocean side of the pier with Marine Fisheries Shellfish Program(s). Pointing of joints as noted on the drawings can be done so via barge or boat, or in some instances from the landward side of the pier.

The type of materials, suggested sequence of construction provided on the plans, and timing of construction have been coordinated with DPI to facilitate the foundation repair work during low-low tide events and to mitigate disturbance to the resource areas through construction activities occurring on the landward side of the pier. DPI will have an in-house engineer on site during construction to ensure conformance with the approved plans and Notice of Intent.

- 2. It was noted during a site visit during low tide that the end of the pier was submerged. The low tide shown on the plan is an extreme low tide. How does DPI propose to make the repairs if the sea level is within the work area?*

As stated above, the work will need to be scheduled around low-low tides that occur during spring, fall, and summer months. DPI is aware of this schedule and will coordinate activities accordingly. The foundation reconstruction work, placement of the first several courses of granite blocks, and backfill of those courses is the only work that will need to occur during low-low tide; all other work can take place during normal low tide events. This work can be completed within the allowable time frame.

3. *A maintenance plan should be developed for the pier and Fishermen's Memorial following construction to avoid the site from deteriorating over the years.*

The maintenance plan for DPI for the pier and the memorial will include:

- Pavement sweeping should be conducted at least once per year. Sweeping should be performed in the spring to capture the sediment load after winter sanding operations are completed and built up sand from the beach areas that is blown onto the pier. Should the City choose to not sand this during the winter, then sweeping operations can be reduced as deemed appropriate.
- Drain pipes, catch basins, and pipe outlets should be inspected for their condition and operation during and after storm events, as well as on a semi-annual basis during wet weather. The frequency should be evaluated and adjusted, if warranted by inspection results. Any debris or sediment collected will be removed and disposed of off site consistent with the City policy for drainage structure cleaning.
- Planted areas should be inspected on a semiannual basis to monitor vegetation health and conduct maintenance pruning to remove broken, dead or unhealthy branches.
- All trash and other litter that is observed during these inspections should be removed.
- Snow should be plowed off paved surfaces as needed during and after snow storms to maintain access to the flagpole. Snow on the ramp will be plowed to the rain garden/planting area.
- Concrete and pier components will be inspected annually to identify maintenance activities that need to occur including repairs, repointing, etc.
- Electrical components and lighting will be inspected each spring and fall.
- Following a storm event the City will conduct an inspection of the pier, the memorial, and associated elements for damage. Should the pier and/or memorial be damaged by a storm event, the memorial will be closed to pedestrians and the repairs will be completed prior to reopening to the public.

4. *There is no assessment of the impacts or mitigation for impacts to resource areas, including land containing shellfish as this is a popular shellfishing area and it is proposed to run a machine over intertidal area where the shellfish are located.*

In a letter dated July 30, 2014 from the DMF, they noted that they reviewed the Notice of Intent and that as part of the review, they determined that the project is located adjacent to the southern end of the New Bedford Quahog Mitigation Project. They also noted that the area lies within mapped shellfish habitat for bay scallop and quahog.

In the second bullet of DMF's comments, they noted "restoration work should be performed from the landward side of the pier whenever possible." They go on to further state that for work that occurs on the ocean side of the pier that "construction should be done in coordination with the Marine Fisheries shellfish program to avoid impacts to the mitigation project." DPI will complete as much of the work from the landward side of the pier as possible. As outlined within the Suggested Sequence of Construction and the description of construction methods above, there will be disturbance to the ocean side resulting from excavation of the footing. In addition, at this time, it is not anticipated that machines will need access to the ocean side of the pier; however, based on field conditions, they may be required. It is expected that DPI crews will need to access the ocean side to facilitate construction work. Work within the ocean side will be limited to a maximum of 10-ft from the face of the pier; however, it is more likely that less than 10-ft will be needed to facilitate installation of the forms and footing. Silt mitigation measures will be installed around the pier in the form of a floating silt curtain.

The DMF will be notified prior to any and all construction activities to coordinate protection of the shellfishing resources.

The NOI did not quantify impacts to Land Under Ocean and Land Containing Shellfish. It is estimated that approximately 400 square feet of Land Under Ocean and Land Containing Shellfish will be temporarily altered for resetting the displaced and/or missing granite block masonry to the pier footings. As mentioned above, board will be laid down to protect the resource areas.

Performance Standards for Work on Land Containing Shellfish 310 CMR 10.34(4):

Except as provided in 310 CMR 10.34(5), any project on land containing shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by:

- a) Alteration of water circulation
- b) Alterations in relief elevation

- c) The compacting of sediment by vehicular traffic
- d) Alterations in the distribution of sediment grain size
- e) Alterations in natural drainage from adjacent land
- f) Changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants

Any construction vehicles or man access necessary to assist constructing the footing or in resetting the missing/displaced granite blocks at the seaward end of the pier will be required to travel on boards or timber mats laid down on the ocean floor. Using boards will protect the sediment from compacting and will prevent the destruction of shellfish. There will be some very short term alteration in water circulation during the proposed work which is estimated to last 3 to 7 days; however, actual construction activities are expected to be completed within the 6-hour tide window. It is not anticipated that the proposed work will result in alterations in relief elevation, distribution of sediment grain size, or natural drainage from adjacent land.

5. *Please submit a planting plan for the beach grass mitigation where the boards will be placed over the beach grass so the machine can drive over the grass.*

It is not anticipated that machine access will be required for repairs to the pier; however, if it is necessary, a Coastal Beach Restoration Plan was included in the NOI, see Section 5.1.1. This restoration plan has been added to Sheet L-2 and a detail showing the culm spacing has been added to Sheet L-5 (Details II).

6. *There is concern regarding the development of the plans and the ability of the structure to withstand the 100-year storm event as it is located in the Coastal Velocity Zone of the floodplain.*

An analysis was completed to identify the 100-year storm wave height and FEMA's base flood elevation that could overtop the memorial during those events. Based on this analysis, it was determined that the 100-yr wave would be approximately 4-ft above the highest point of the memorial with FEMA's base flood elevation approximately 10-ft above the highest point of the memorial. This information was discussed with the DPI to identify measures to mitigate damage during such events. It was determined that due to the excessive forces involved, and the damage that would occur as a result of those forces and from the complete structure being submerged, it was not feasible or cost effective to reinforce the memorial to accommodate such forces. As such, the DPI is accepting the risk to repair the memorial and the costs associated with those repairs in the event of such a storm event.

7. *The plans are not stamped by a structural engineer.*

There are no structural components associated with the pier design or monument design that require stamping by a structural engineer.

8. *We have not yet received comments from the Division of Marine Fisheries (DMF) but it is anticipated that they will be coming soon.*

DMF issued the following two comments in their letter dated July 30, 2014. In their letter DMF states that the project site lies within mapped shellfish habitat for bay scallop (*Argopecten irradians*) and quahog (*Mercenaria mercenaria*). The project is also within the southern portion of the New Bedford Quahog Mitigation Project associated with the South Terminal Project.

DMF Comment 1 - The project site currently houses a flag pole and flag used to show the status of the Conditionally Approved shellfishing area. Project plans did not identify this flag pole or indicate its proposed location post-construction. Without this flagpole in place, the Conditionally Approved area would need to be closed. Plans should verify that the flag pole will in fact be in place at this site post-construction.

Response to DMF Comment 1 - Sheet L-1 (Existing Conditions, Demolition, and Removal Plan) does show the existing flagpole to be removed, stockpiled, and protected. This note has been modified to state "flagpole to be relocated". Sheet L-2 (Layout, Materials, Planting, Grading, and Drainage Plan) shows the flagpole relocated to the south side of the pier.

DMF Comment 2 - As noted in Section 4.2.1, restoration work should be performed from the landward side of the pier whenever possible. Any work performed from the water side of structure could interfere with nearby shellfish mitigation work. Any barge or boat-based construction should be done in coordination with the Marine Fisheries shellfish program to avoid any impacts to the mitigation project.

Response to DMF Comment 2 - As stated in the NOI, Section 4.2.1 the resetting of the displaced and/or missing granite black masonry down to the pier footings will require access from the Land Under Ocean/Land Containing Shellfish. Any construction equipment will be required to travel on boards within Coastal Beach, Land Containing Shellfish, and Land Under Ocean to minimize impacts to these resource areas. The City will coordinate these activities with the Marine Fisheries shellfish program to avoid any impacts to the mitigation project.

9. *I would also look at the City Ordinance and be sure you have addressed Section 9 the Burden of Proof.*

The applicant for a permit shall have the burden of proof that the proposed work will not adversely affect the interest of the Ordinance and of the WPA.



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In response to concerns voiced during the July 1, 2014 meeting, we submit the attached information from the Manual of Woody Landscape Plants, sixth edition, which confirms the suitability of Japanese Black Pine (*Pinus thunbergii*) for coastal dune plantings and stabilization.

Please contact either Kim Drake or me at (617) 452-6000 if you have any questions regarding the responses to your comments in the Notice of Intent.

Very truly yours,

Magdalena Lofstedt  
Environmental Scientist  
CDM Smith Inc.

c: MassDEP - Southeast Regional Office  
Ron Labelle - City of New Bedford  
Kim Drake, Shawn Syde - CDM Smith

Attachments:

- Site Photo from March 15, 2014 Field Visit
- Revised Drawings dated September 2014
- Excerpt and title page from "Manual of Woody Landscape Plants, Sixth Edition" by Michael A. Dirr, rev 2009.

