

## **Construction Services: Storm Cleanup and Erosion Repair at Port-Greenbelt Shoreline Trail**

### **Scope of Services:**

The Scope of Services listed below outlines the services required. Due to the December 2022 storm, extensive storm cleanup and repair services are required. This scope of work addresses the cleanup of debris generated from the storm and deposited throughout the work areas along with the required repairs to restore the embankments and other areas damaged from the storm. Refer to all Contract documents for complete scope of work and project requirements.

### **Permits and Notifications:**

All work will be conducted above the high-water level and in accordance with the Port-Greenbelt Shoreline Improvement Project Site Management Plan Dated August 2011. Excavation of existing material is not anticipated as part of the repair work and therefore, Community Air Monitoring will not be required. NYSDEC and USACE permits are not required. The Contractor shall submit the NYSDEC Import Request Form and receive NYSDEC approval prior to start of work at the Port-Greenbelt Shoreline Trail site.

Following completion of the work, LiRo Engineers, Inc. will submit a certification letter detailing the work activities and repair work conducted.

### **Port-Greenbelt Storm Cleanup**

**Work Area A** – The cleanup shall include the removal of various size stone, displaced fill material, wood debris and other materials from the area shown on Figure 1. Displaced fill material may be collected and placed back in the eroded areas behind the stone embankment. Other materials shall be collected and staged onsite at a location to be determined. Staged material designated for disposal shall be samples and characterized for landfill disposal criteria. The limits of the debris cleanup shall extend from the top of the lakeside bank to the landside edge of the mow path. The work shall include the removal of four trees uprooted by the storm. Trees shall be cut flush with the stone bank. Trees stumps and roots will remain.

**Work Area B** - The cleanup shall include the removal of various size stone, displaced fill material, wood debris and other materials from the area shown on Figure 1. Materials shall be collected and staged onsite at a location to be determined. Staged material designated for disposal shall be samples and characterized for landfill disposal criteria. The limits of the debris cleanup shall extend from the top of the lakeside bank to the landside edge of the mow path except where indicated on Figure 1.

**Work Area C** - The cleanup shall include the removal of various size stone, displaced fill material, wood debris and other materials from the area shown on Figure 1. Materials shall be collected and staged onsite at a location to be determined. Staged material designated for disposal shall be samples and characterized for landfill disposal criteria.

**Work Area D** – The cleanup shall include removal and disposal of the damaged fencing. The Contractor shall replace the fencing in-kind. Fencing shall be anchored into the existing concrete at the bulkhead to match existing installation. The contractor shall remove and dispose of damaged gate and gate support post. The contractor shall replace the gate and post in-kind.

### **Work Area A & B Approach - Port-Greenbelt Trail Cover System and Shoreline Restoration:**

The General approach to the restoration of the shoreline and cover system around the Greenbelt Trail includes the following:

Eroded areas will be cut back as needed to provide a uniform edge. In areas where the filter fabric is intact but has been displaced, the fabric will be laid out flat to its original extents. In areas where the filter fabric is missing or deteriorated, new filter fabric will be placed. New filter fabric shall meet the specs of Mirafi 600X geotextile.

Following repair/replacement of the filter fabric, a Heavy Stone Fill will be placed on the shoreline slope to the extent of the erosion. The Heavy Stone Fill placement will build up the revetment to slightly exceed

the height of the slope at the limit of erosion. The stone placed along the slope break will take the force of the wave action and help prevent further erosion of the bank. Prior to import of material to the site, the Request to Import/Reuse Fill or Soil Form will be submitted to NYSDEC for approval.

Placement of the Heavy Stone Fill will be above the water line and no excavation, soil removal, or stone fill placement will impact the water.

Areas of erosion, behind new and/or existing Stone Fill will be filled with imported fill to create a uniform slope, covered with 6 inches of topsoil, and seeded.

Approximate work locations are shown on Figure 1 in Attachment 1. Specific work locations and stone placement will be as directed by LiRo in the field.

#### **Port-Greenbelt Bell Slip Shoreline Restoration**

Areas of the Bell Slip Embankment have been washed away/eroded due to the storm event. The General approach to the restoration of the embankment along the Bell Slip includes the following:

Eroded areas will have filter fabric laid out to cover the extent of the eroded area. Filter fabric shall meet the specs of Mirafi 600X geotextile.

Following placement of the filter fabric, a Heavy Stone Fill will be placed on the embankment to the extent of the erosion. The Heavy Stone Fill placement will build up the revetment to slightly exceed the height of the slope at the limit of erosion. Medium stone will be placed to fill any large gaps or voids in the heavy stone to aid in interlocking the stone and reducing voids. The stone placed along the slope break will take the force of the wave action and help prevent further erosion of the embankment.

Areas of erosion, behind new and/or existing Stone Fill will be filled with imported fill to create a uniform slope, covered with 6 inches of topsoil, and seeded.

Approximate work locations are shown on Figure 1 in Attachment 1. Specific work locations and stone placement will be as directed by LiRo in the field.

Prior to import of material to the site, the Request to Import/Reuse Fill or Soil Form will be submitted to NYSDEC for approval.

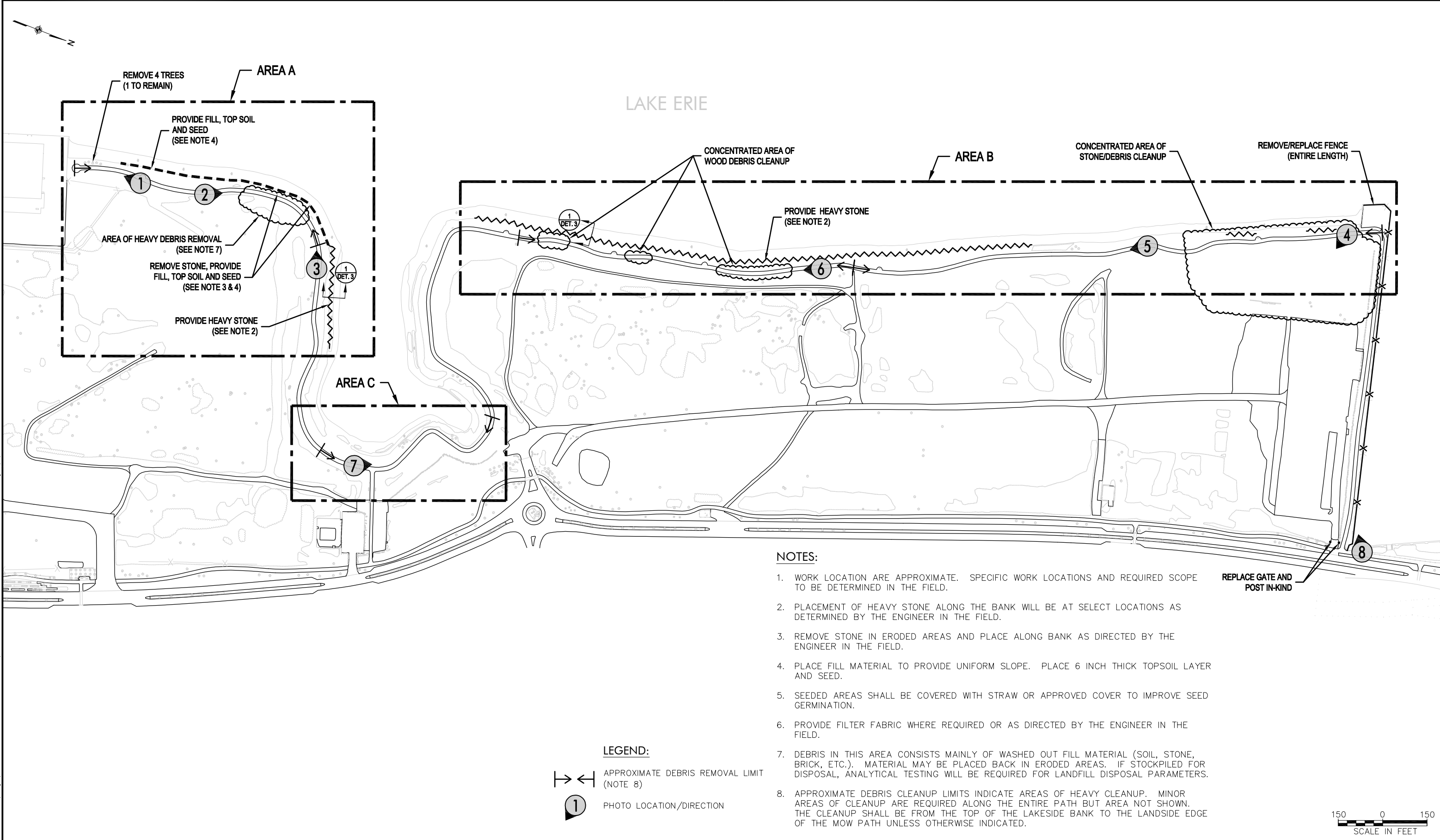
#### **Anticipated Schedule**

Debris Cleanup – December 29, 2022 – January 26, 2023

Erosion Repair – March 27, 2023 - April 28, 2023



**ATTACHMENT 1**  
**FIGURE 1**  
**APPROXIMATE WORK AREA LOCATIONS**




NOTES:

- 1. WORK LOCATION ARE APPROXIMATE. SPECIFIC WORK LOCATIONS AND REQUIRED SCOPE TO BE DETERMINED IN THE FIELD.
- 2. PLACEMENT OF HEAVY STONE ALONG THE BANK WILL BE AT SELECT LOCATIONS AS DETERMINED BY THE ENGINEER IN THE FIELD.
- 3. REMOVE STONE IN ERODED AREAS AND PLACE ALONG BANK AS DIRECTED BY THE ENGINEER IN THE FIELD.
- 4. PLACE FILL MATERIAL TO PROVIDE UNIFORM SLOPE. PLACE 6 INCH THICK TOPSOIL LAYER AND SEED.
- 5. SEEDED AREAS SHALL BE COVERED WITH STRAW OR APPROVED COVER TO IMPROVE SEED GERMINATION.
- 6. PROVIDE FILTER FABRIC WHERE REQUIRED OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
- 7. DEBRIS IN THIS AREA CONSISTS MAINLY OF WASHED OUT FILL MATERIAL (SOIL, STONE, BRICK, ETC.). MATERIAL MAY BE PLACED BACK IN ERODED AREAS. IF STOCKPILED FOR DISPOSAL, ANALYTICAL TESTING WILL BE REQUIRED FOR LANDFILL DISPOSAL PARAMETERS.
- 8. APPROXIMATE DEBRIS CLEANUP LIMITS INDICATE AREAS OF HEAVY CLEANUP. MINOR AREAS OF CLEANUP ARE REQUIRED ALONG THE ENTIRE PATH BUT AREA NOT SHOWN. THE CLEANUP SHALL BE FROM THE TOP OF THE LAKESIDE BANK TO THE LANDSIDE EDGE OF THE MOW PATH UNLESS OTHERWISE INDICATED.

LEGEND:

- APPROXIMATE DEBRIS REMOVAL LIMIT (NOTE 8)
- PHOTO LOCATION/DIRECTION

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					DESIGNED BY:					SHEET 1 OF 3		
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	NO.	DATE	DESCRIPTION			DRAWN BY: A.M.K.	DATE: 6/2022	SCALE: AS SHOWN	DRAWING TITLE:  SITE PLAN APPROXIMATE WORK AREA LOCATIONS		1	
	REVISIONS											



**Erie Canal Harbor  
Development  
Corporation**

**ATTACHMENT 2  
PORT GREEN-BELT PHOTOS**



## **Port Green-Belt Cleanup Photos**



**Photo 1**



**Photo 2**



**Photo 3**



**Photo 4**





**Photo 5**



**Photo 6**





**Photo 7**



**Photo 8**