THE GREAT BAY
LIVING SHORELINE PROJECT

Schanda Park Living Shoreline

Living Shorelines Workshop

April 8, 2022

Project Team

Land Owner: Town of Newmarket

Design Team

- Tristan Donovan, PE, ENV SP, Structural Engineer, Ports & Maritime Group, Jacobs
- Jessica Hunt, Associate, Environmental Services, Stantec
- Patrick McNally, Project Coordinator, ABB
- Elizabeth Olliver, Ph.D., Senior Wetland Scientist, Wetland Group, Normandeau Associates, Inc.
- Deanna Suzor, Ecological Horticulturist & Designer
- Robert Uhlig, FALSA, LEED AP, CCS/CSI, VP of Landscape Architecture & Urban Design, Halvorson Tighe & Bond

Project Coordinators:

- Aidan Barry, MS, Coastal Resilience & Habitat Specialist, NHDES Coastal Program
- Lynn Vaccaro, Coastal Training Program Coordinator, GBNERR
- Kirsten Howard, Resiliency Program Coordinator, NHDES Coastal Program

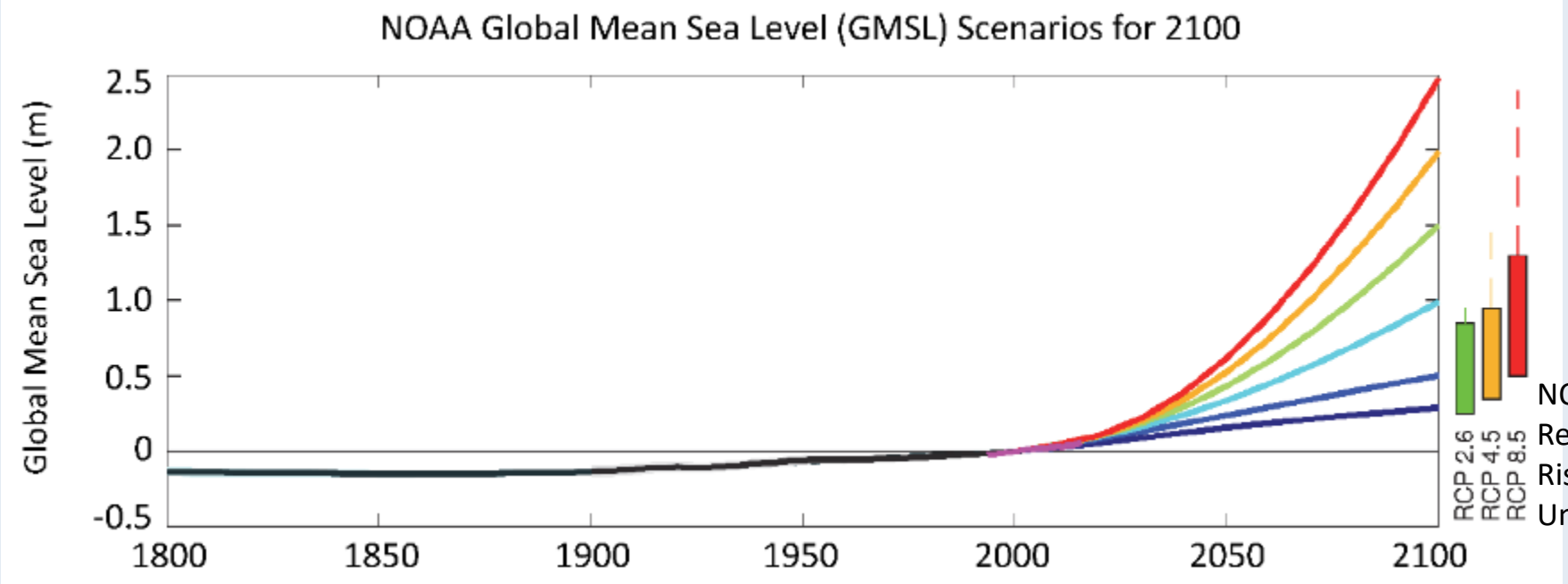

EXISTING CONDITIONS
PARKING LOT
MOONLIGHT BROOK CULVERT AND EARTHEN LEVEE PARK CONNECTOR
STONE RUBBLE WALL
MOONLIGHT BROOK
KAYAK STORAGE
BOAT RAMP
WATERFRONT PLAZA
FIELDSTONE WALL
STONE REVETMENT
COLLAPSING STONE RUBBLE WALL
EXTENT OF PROPOSED LIVING SHORELINE
FISH WEIR
STONE REVETMENT
BLUFF
EXISTING TIDAL MARSH SLOPE
FLOATING DOCK AND RUBBLE ABUTMENT
LAMPREY RIVER
EBB
FLOW
THE GREAT BAY
LIVING SHORELINE PROJECT

Site Constraints

- Limited space for marsh retreat due to hardscape
- High profile site
- Permitting considerations for fill in Lamprey River
- Managing stormwater quality/quantity and bank erosion
- Accommodations for future work at Moonlight Brook (culverts, realignment, impairments, etc.)

Sea Level Rise

- Intermediate-high scenario, 2050: 1.6’
- Limited vertical space to work with
- Main goal is to establish tidal marsh
- Future park improvements should be designed to flood



NOAA Global and Regional Sea Level Rise Scenarios for the United States, 2017

THE GREAT BAY
LIVING SHORELINE PROJECT

Site Goals

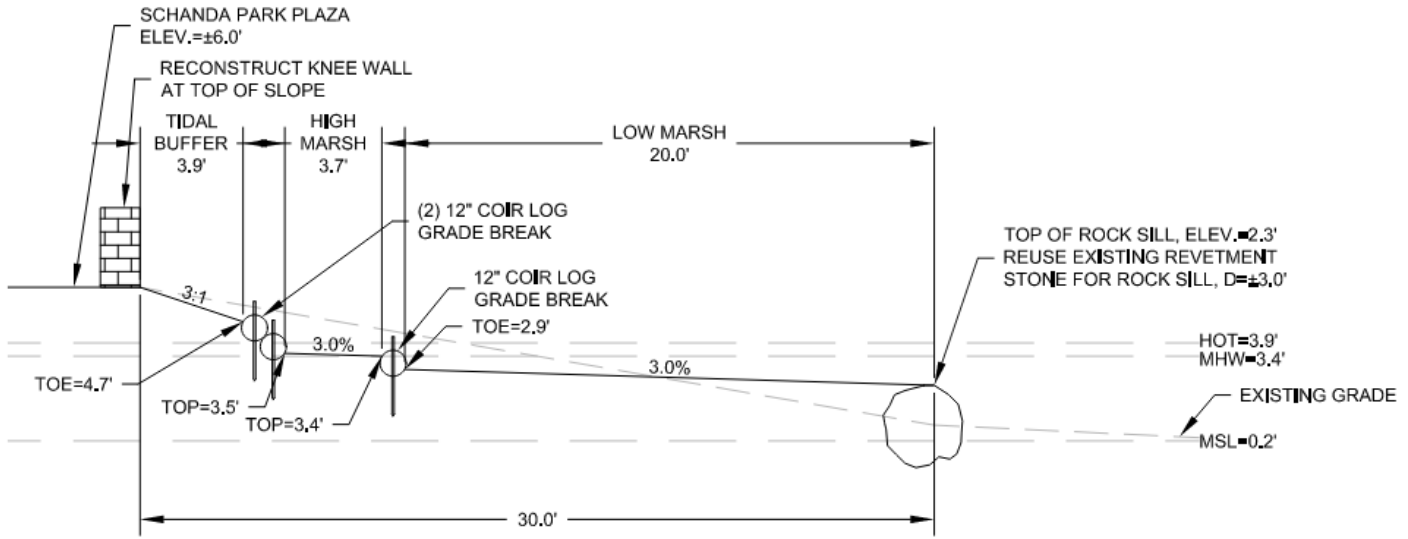
- Maintain upland park space
- Activate waterfront
- Create living shoreline
- Improve water quality from parking lot runoff
- Repair partially collapsed stone wall along Moonlight Brook

THE GREAT BAY
LIVING SHORELINE PROJECT

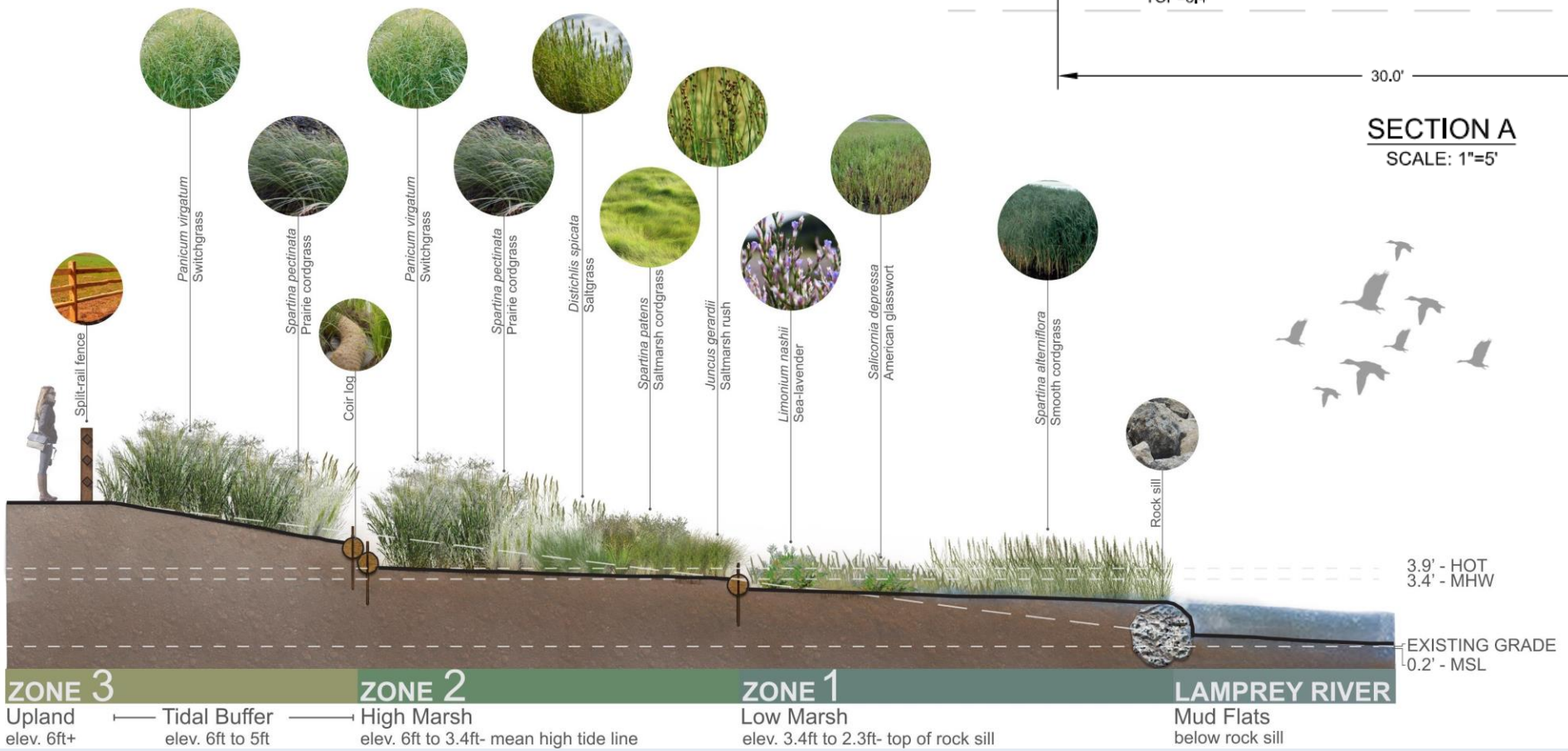
THE GREAT BAY
LIVING SHORELINE PROJECT

Proposed Tidal Marsh

PROPOSED LIVING SHORELINE - SECTION C



SECTION A
SCALE: 1"=5'



- Top of sill: MSL+SLR+6"
- Reuse existing stone for sill
- 12" coir logs
- 3% slope enough for drainage, but not too much to cause scour
- Marsh locations in "delta" of Moonlight Brook, promotes sediment accretion

THE GREAT BAY
LIVING SHORELINE PROJECT

Other Considerations

- Holistic programmatic approach, narrowed scope for final design
- Moonlight Brook culverts/daylighting
- Separate Piscassic River breach upstream
- Reduce pollutants entering Moonlight Brook from non-point sources

Next Steps

- Further stakeholder input
- Seek grant opportunities
- Engage consultant for baseline data collection through final design
- Baseline Surveys
  - Hydrodynamic analysis
  - Upland and bathymetric surveys
  - Long term water levels
- Permitting Pathway
  - NHDES Standard Dredge & Fill Permit
  - US Army Corps of Engineers Review
- Maintenance & Monitoring
  - Invasive species
  - Tidal marsh plants

Questions

- Tristan Donovan: tristan.Donovan@jacobs.com
- Jessica Hunt: jessica.hunt@stantec.com
- Patrick McNally: mcnallypatrick13@gmail.com
- Elizabeth Olliver: eolliver@normandeau.com
- Deanna Suzor: dsuzor94@gmail.com
- Robert Uhlig: bobu@halvorsondesign.com