Industry Pre-Bid Meeting for the Reconstruction of the Low Battery

March 25, 2019

Presented By:
Project Vicinity

![Map of Project Vicinity showing US Coast Guard Chisolm's Mill, Tradd Street, King Street, Colonial Lake, and a 4800 ft. Seawall.]

1909 - 1911
1917 - 1919
Historical Perspective
Historical Background - 1877

Map of the City of Charleston, South Carolina from J.H. Colton & Co., 1855 (Rev 1877)
Historical Background - 1889

- Minimum point of low tide surveyed and flagged for project
Historical Background – 1909 - 1911

- Retaining wall started in June 1909

- Approx. 667,000 cubic yards of fill pumped by dredges to create **47 acres** of developable land **8.5 ft.** above MLW
Historical Background - 1909

Wooden pilings driven 30-70 ft. into the mud to support the sea wall.

Cobble stones, oyster shells, and granite rubble laid at toe of the wall.
Promenade was built along with oyster shell roadways, and eventually the southern peninsula was tied to White Point Gardens and the East Battery.
Historical Background
At the end of 1911, 47 acres had been reclaimed and was divided into 191 residential building lots by The Ashley River Water Front Corporation.
Current Condition of the Low Battery
Visible Degradation of wall
Visible Degradation of wall
Test Pits to examine wall condition
B-11 at Ashley Ave to 100 ft.
Geotechnical Investigation

Cooper Ma
By 55 ft.
Geotechnical Investigation

15 ft. Silty Sand
Cooper Marl
By 70 ft.
stiff, cohesive
calcareous soils
undrained shear of 5ksf
Geotechnical Investigation

Cooper Marl
By 70 ft.
Pore pressure increase
Accessibility Issues Prevalent

A significant length of the sidewalk has settled over the years.
More Frequent Storm and Tidal Flooding

- Leading up to Hurricane Mathew
- Oct 3, 2015 - 11 inches of rain
- Tide peaked at 8.29 ft. above MLW
- The highest tide level in Charleston Harbor since Hurricane Hugo
More Frequent Storm and Tidal Flooding

- Hurricane Irma
- September 11, 2017
- 10’ tide at 1:30 PM.

Photo by Jared T. Bramblett
Design & Permitting
Concept Design

- **Raised Wall and Promenade**
  - Restore Degraded Infrastructure
  - Increased Flood Protection with wall height
  - Improve Drainage Conveyance

- **Enhanced Public Space with Parklets**
  - Seating & Landscaping
  - Neighborhood Sense of Place

- **Create Entryway at Tradd St. Intersection**
  - Incorporate Cheney Park at Tradd Street
  - Bookend to White Point Garden

- **Increased Safety for Pedestrians, Bicycles & Vehicles**
  - Improved Accessibility
  - Raised Intersections
  - Crosswalks
  - Delineated parking with handicap parking included
Construction Phasing
Phase 1 - Project Limits

950 ft. Overall Project Length

U.S. Coast Guard

Tradd

Ashley Ave.
Tradd Street
Ashley Blvd.
Ashley Blvd.
Ashley Blvd.
Ashley Blvd.
Permitting
Wall Rehabilitation
Tradd Street Typical
LOADS APPLIED UP TO STATION 1+00 ARE ASSUMED TO BE ON THE LEE SIDE AND NOT SUBJECT TO WAVE LOADS DURING THE DESIGN STORM EVENT. FULL HEIGHT STATIC LOAD AND DYNAMIC WATER PRESSURE LOADING WILL BE USED FOR DESIGN AS WELL AS IMPACT BUT NOT BREAKING WAVE.

B.F.E. 15.0'

POST SPACING @ 8' O.C.

LOADS APPLIED UP TO STATION 1+00 ARE ASSUMED TO BE ON THE LEE SIDE AND NOT SUBJECT TO WAVE LOADS DURING THE DESIGN STORM EVENT. FULL HEIGHT STATIC LOAD AND DYNAMIC WATER PRESSURE LOADING WILL BE USED FOR DESIGN AS WELL AS IMPACT BUT NOT BREAKING WAVE.

10.0' T.O. CURB

1% SLOPE

THIS SECTION OF SIDEWALK TO REMAIN AT GRADE

THE 12% SECTION WILL RAMP UP TO THE 11% ELEVATION

4.93' ABOVE STD

TEST PIT #1

STA 00+91

-2.16' MLLW

-3.68' LAT

STAY 00+00
Civil and Roadway Reconstruction
Phase 1 Site Plan
Tradd Street
Phase 1 Site Plan

TYPICAL MURRAY BLVD. CROSS SECTION AT INTERSECTION (LOOKING UPSTATION)
Drainage Details
Traffic Control
Traffic Control

Legend

Traffic Control Notes

1. The construction site will be marked with temporary fencing and barriers.
2. All vehicles, including trucks and trailers, will be required to follow the marked lanes.
3. Pedestrians will be directed to use designated crosswalks.
4. The contractor will ensure access to all homeowners and businesses throughout the construction.
5. The contractor will advise residents on the impact of the work.

Traffic Control, JMT
Construction Details
Construction Details
Construction Details
Thank you!

Questions?