State Project No. 15-385
Rehabilitation of Bridge No. 03637
Route 130 over Yellow Mill Channel
City of Bridgeport

Virtual Public Information Meeting
Thursday, January 5, 2023, at 7:00 pm

A recording of the formal presentation will be posted to YouTube after the live event.
Closed captioning, including non-English translation options, will be available at that time.

La grabación de esta presentación estara disponible despues del evento en YouTube,
Incluyendo subtitulos y acceso a traducciones en otros idiomas.

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Join us for a Question & Answer Session following the Formal Presentation & Send Us a Question or Comment during the session

By Email: DOTProject15-385@ct.gov

By Telephone: (860) 594-2020

By Chat: Zoom Q & A

Via Project Website: https://portal.ct.gov/DOTBridgeport15-385

Survey: https://portal.ct.gov/ctdotsurvey

Note: The comment period is open through January 20, 2023

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TITLE VI – CIVIL RIGHTS

- Brief Voluntary Feedback Survey Appreciated.
  - http://portal.ct.gov/ctdotsurvey
- Title VI Notice to the Public Available:
  - https://portal.ct.gov/DOT/Business/Contract-Compliance/Title-VI-Page
- No Person shall, on a basis of race, color or national origin, be excluded from participation or subject to discrimination in the development of this project.

Project Team

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Project Manager
H&H

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Project Engineer
CTDOT

Brian Kinsley, P.E.
Project Engineer
H&H

Project Location

Project Goals

Rehabilitate Bridge No. 03637 to ensure continued safe and reliable use for the traveling public.

- **Upgrade Bridge to a "State of Good Repair"**

  The bridge is currently rated in Fair condition

- **Mechanical & Electrical Upgrades " State of the Art"**
- **Extend Service Life Of Bridge**
- **Promote & Enhance area commerce and traffic**

Project Purpose and Need

The purpose of the project is to address the operational, safety and preventative maintenance concerns, and to upgrade the structural integrity of the entire bridge to a "state of good repair" extending its service life.

- **Structural:**
  - **Improve access and general safety**
  - **Repair deteriorated structural steel**
  - **Improve balance condition**
- **Electrical:**
- **Control system, motor control center, and generator are near the end of their useful life**
- **Mechanical:**
  - **Drive motors, reducers, brakes are near the end of their useful life**
  - **Jaw and diaphragm span lock is difficult to align and maintain**
- **Architectural:**
  - **Improve operator visibility**
  - **Improve control house safety and functionality**
- **Fender:**
  - **Improve safety and maintenance**

Bridge History

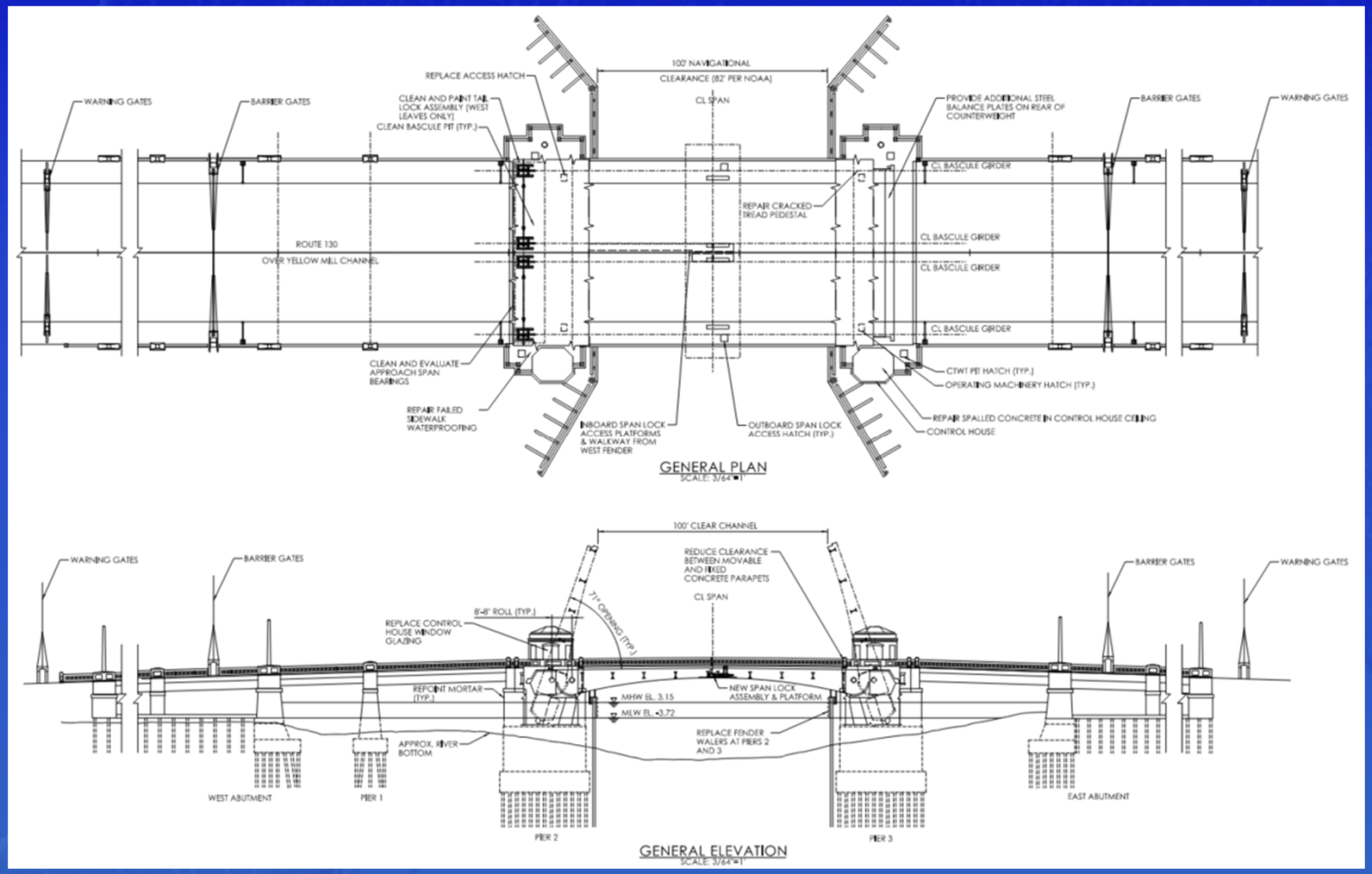
- 1926 – Original construction
- 1998 – Structural, Mechanical & Electrical Rehabilitation
- 2016 – Storm Armoring & Resilience Upgrades
- 2022 – Rehabilitation Study

Existing Bridge Overview

- **Structure Type**
  - Four-Span Bridge (Bridge Length = 340 feet)
  - Four-Leaf Rolling Leaf Bascule Span (122 feet)
  - Pre-stressed Concrete Box Beam Approach Spans
  - Overall Bridge Width = 81.5 feet
  - Curb-to-curb roadway width = 60 feet
  - Pedestrian Sidewalks (9.75 feet) on both sides
  - Clear Navigable Channel Width = 100 feet

- **U.S. Route 130 (Stratford Avenue)**
  - Two-lanes each direction (Four 11-foot travel lanes)
  - 2022 ADT: 13,600
  - Draw span opens with 24-hour notice

EXISTING PLAN & ELEVATION



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South Elevation

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North Elevation

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West Elevation

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Existing Bridge Condition

- **Deck = 7**
- **Superstructure = 5**
- **Substructure = 5**
- **Mechanical = 6**
- **Electrical = Adequate**
- **Fender System = 4**

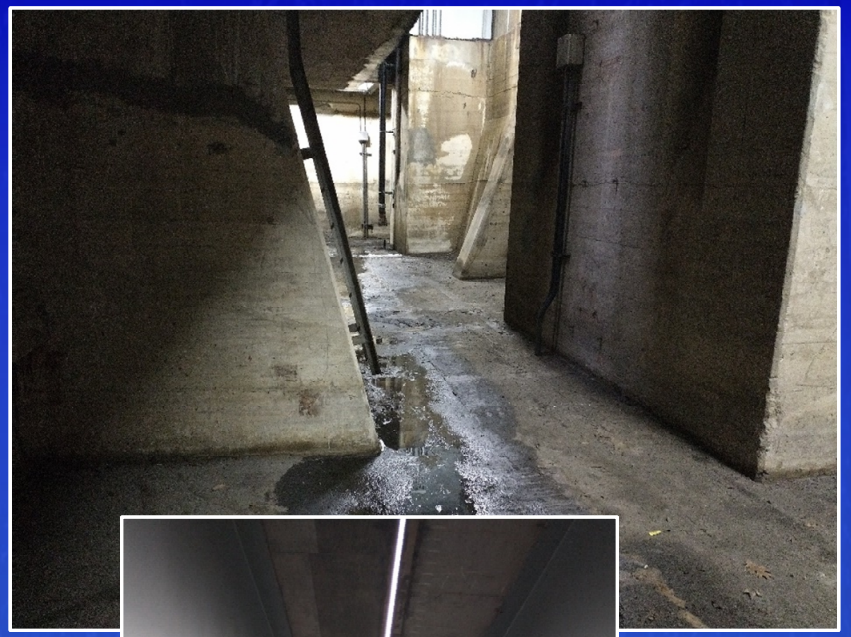
Bridge Condition Ratings

Scale: 1 to 9

9 – Excellent
8 – Very Good
7 – Good
6 – Satisfactory
5 – Fair
4 – Poor
3 – Serious
2 – Critical
1 – Imminent Failure

Structure Condition

Structure Condition



Mechanical Condition

Primary Gear Reducer (green), Brake (center), Motor (right). Replace as new.

Reduced Rack and Pinion Tooth Root to Tip Clearance. Remove Rack Shims

Span Drive Machinery

Mechanical Condition

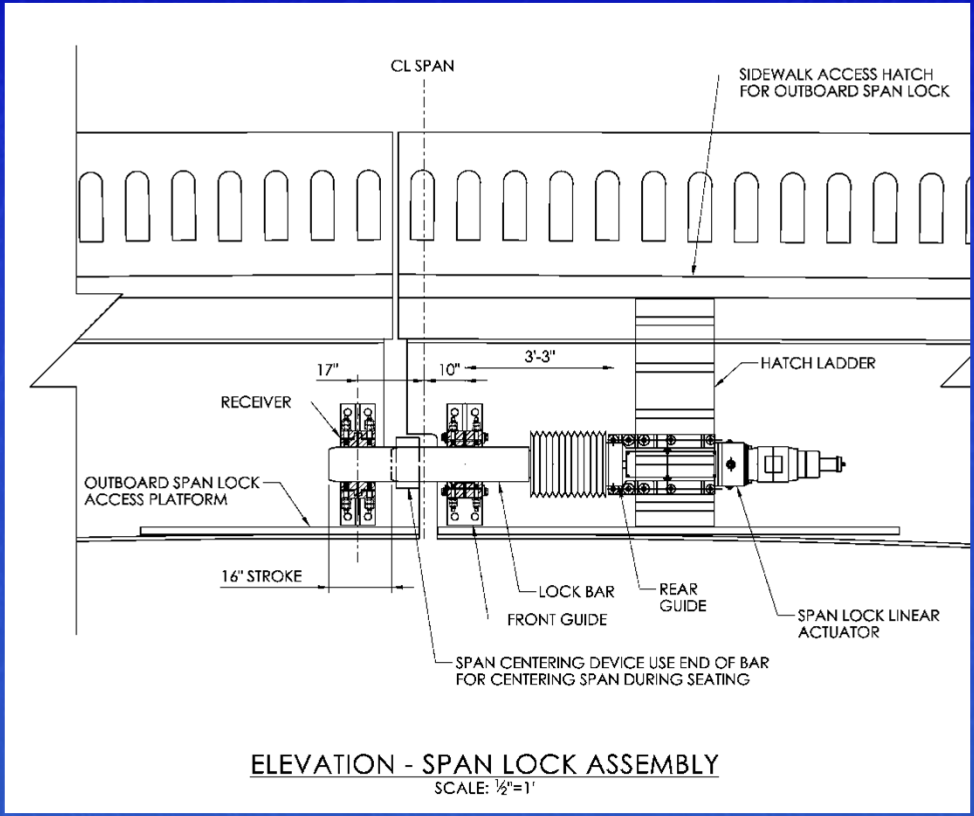
Jaw with added Extension Bar. Will be Replaced with New Lock Bar type Motor Actuated Span Locks

Diaphragm with Bent Live Load Shoe

Existing Span Lock Hinge

(Jaw and Diaphragm)

Mechanical Condition



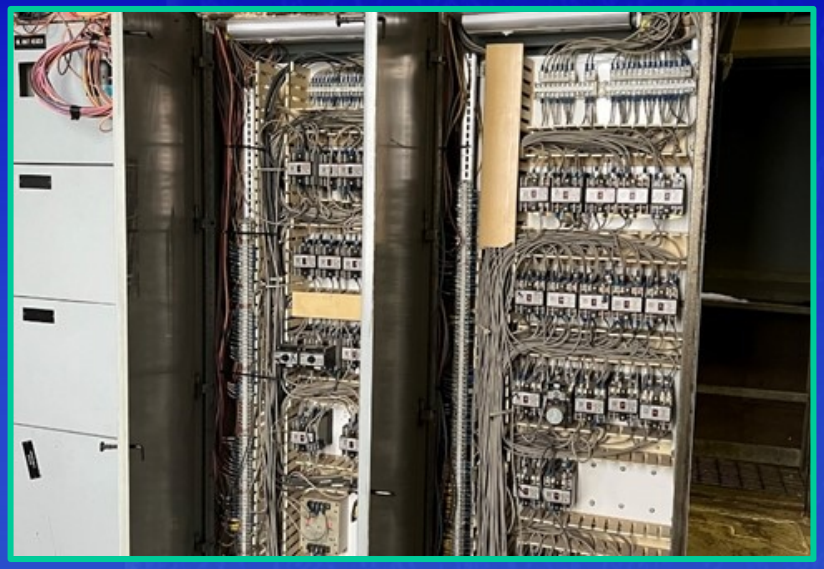
New Proposed Span Lock with Bar Actuated by Linear Screw and Motor with Brake

New Span Lock

Electrical Condition

- Fire damage was observed in the west submarine cable cabinet.
- Propose submarine cable replacement.
- Existing emergency generator in west house, lower level.
- Propose generator replacement including new transfer switch equipment.

Electrical Condition



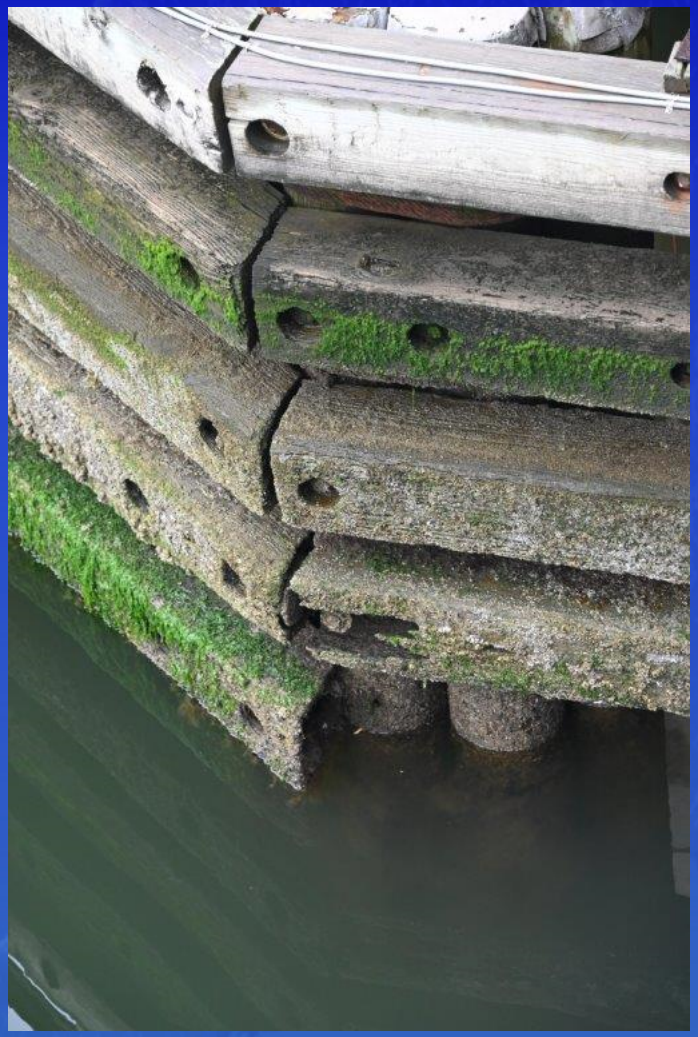
- Existing MCC (relay system) does not provide any diagnostics information.
- Proposed replacement with PLC based system with diagnostic features.

- Existing 40HP wound rotor span drive motor.
- Proposed vector duty motors with proposed variable frequency AC drives.

Architectural Condition

- Windows
  - Windows have polycarbonate glazing with low visibility due to age at Control House (east) and Generator House (west).
  - Replace existing polycarbonate glazing.
- Miscellaneous flooring and roofing repairs

Fender Condition



- Horizontal timber wale section loss
- No marine borer activity in the vertical and battered timber pile supports.
- Zinc sheets over pile tops are in good condition.
- Access walkways, posts and rail conditions vary.
- Missing Tidal markers.

Summary of Structural Work

- Improved Machinery and Maintenance Access
  - Access and platforms for proposed span lock assemblies
  - Additional counterweight for span balance
- Structural Steel Repairs
  - Stringer Web Repairs over Counterweight
- Concrete spall repairs
  - Parapet
  - Control house lower-level ceilings
- Architectural work
  - Window glazing replacement
  - Miscellaneous floors and roof repairs

Summary of Mechanical Work

- New span lock assemblies
- New primary reducer
- New auxiliary motors, clutch assemblies, and brakes
- Shim and adjust: Rear live-load shoes, tail locks, bumper blocks, secondary reducers
- Replace pit diaphragm pumps and piping
- Replace traffic gates
- Replace Oil-Water Separator
- Replace backup generator
- Provide new heat pump to control house
- Clean and paint

Summary of Electrical Work

- Install brake heaters
- Modify interlocks
- Replace barrier gates
- Replace MCCs
- Replace main motors, thyristor drives, and transfer switches
- Furnish new wireless PLC communications and CCTV system
- Furnish new space heaters
- Replace roadway lighting and upgrade existing lights to LED fixtures
- Replace submarine cables

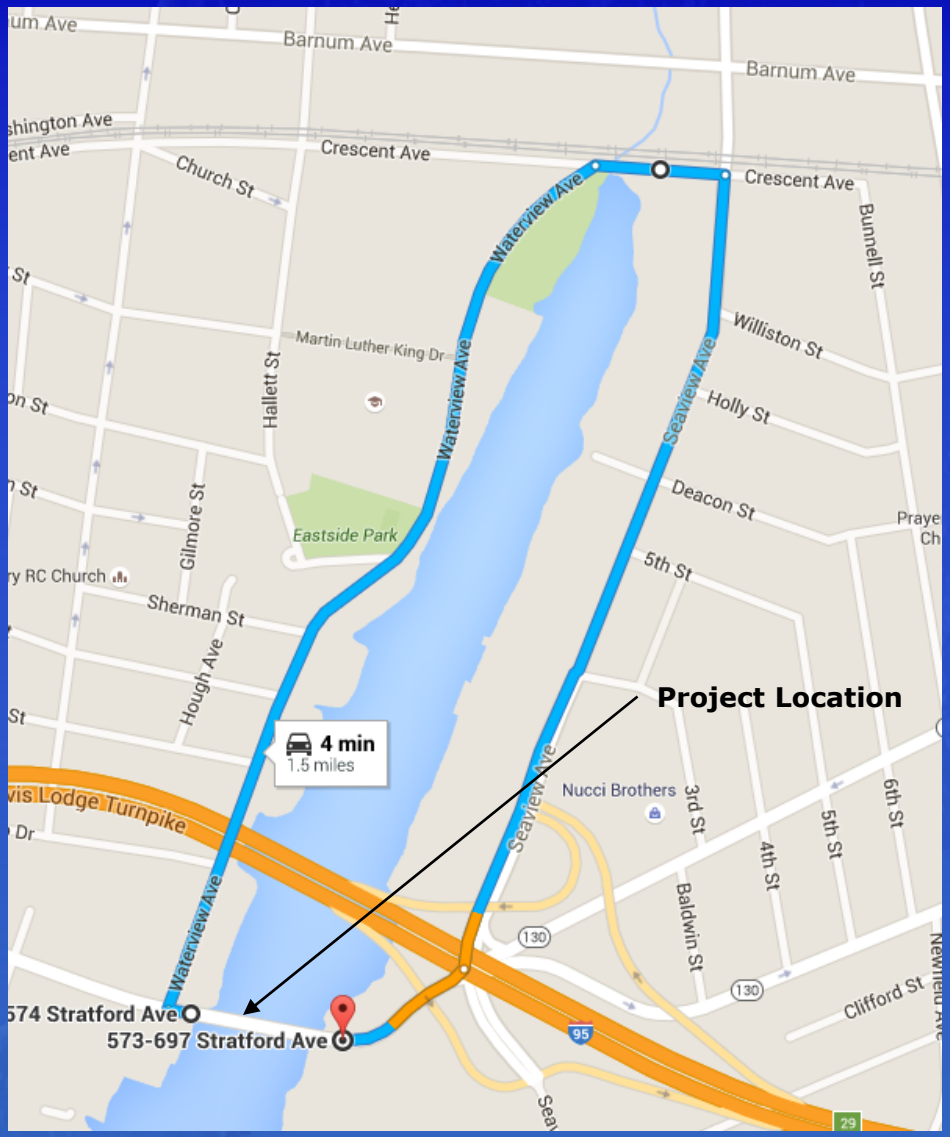
Summary of Fender Work

- Retain the existing pile system
- Replace the deteriorated wale system
- Replace the walkways, posts and rails as needed
- Replace tide markers

Traffic Maintenance

- Two construction stages (Four-to-six-month duration / stage).
- Shift traffic to one span while the other span is closed.
- Maintain one lane in each direction through most activities.
- Short Term Detours during Major Activities Only.
- Maintain a pedestrian walkway on one side of the bridge.
- Temporary bolted MBR in center of Movable Bridge Span.
- Marine Traffic will be maintained during construction.
- Contractor's work requires close coordination with Public 24-hour advance opening notice.
- Extended Detours are not anticipated. There may be some short-term roadway closures.

Traffic Detour Plan



Detour in effect only during periodic, short term, full width roadway closures, and off-peak hours.

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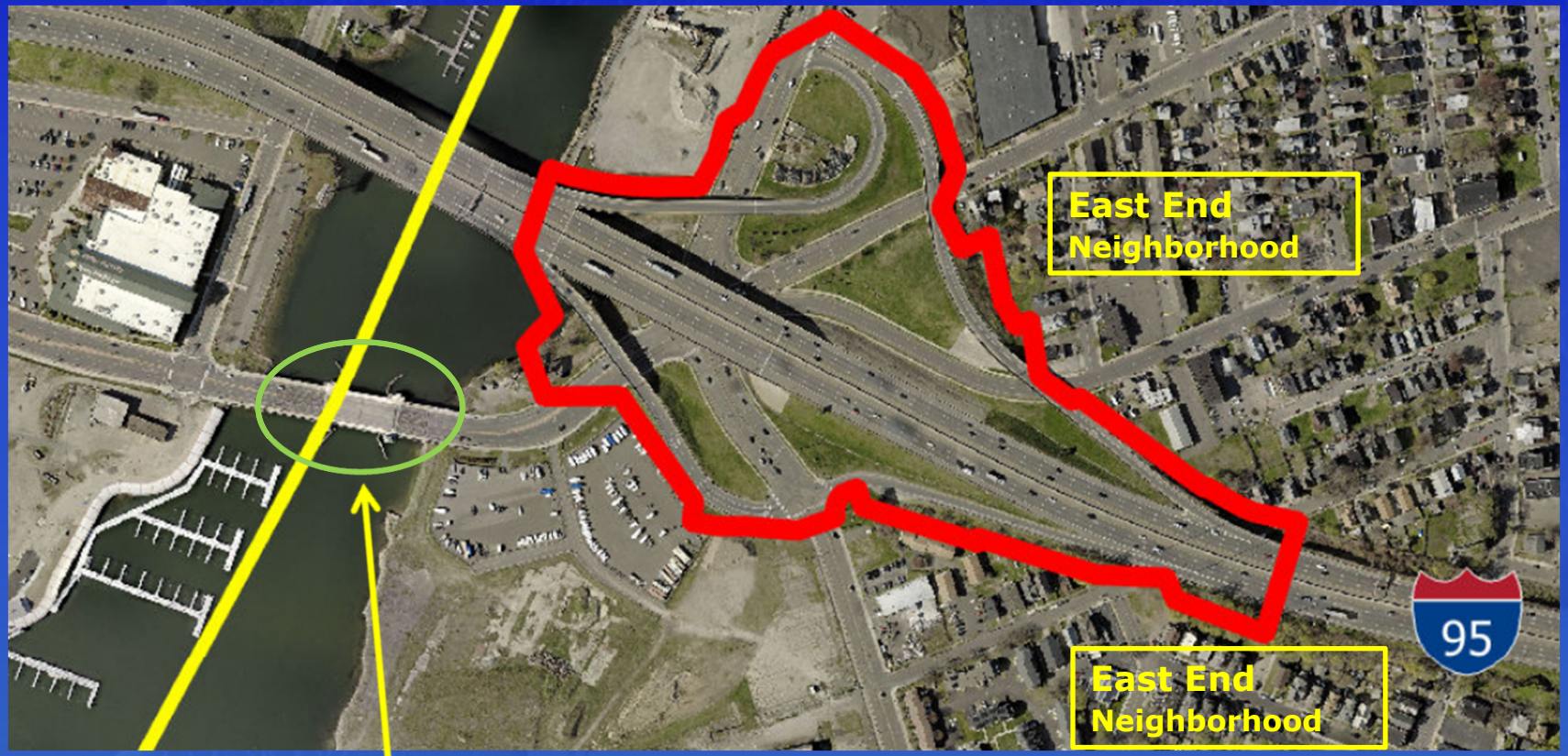
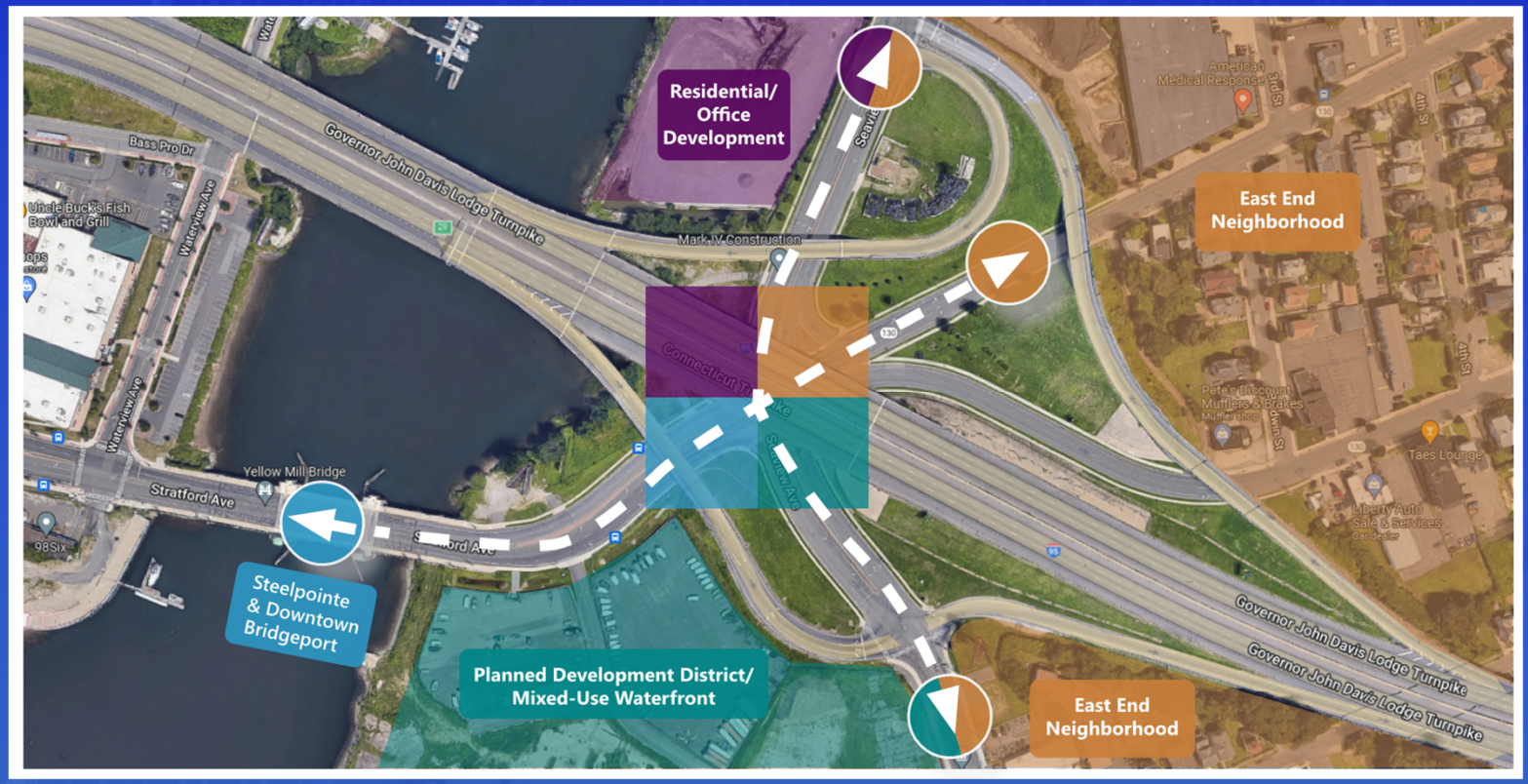
Bicycle and Pedestrian Considerations



MetroCOG Study



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Project Schedule & Cost

- **Current Project Schedule:**
- **FDP**: 8/28/2024
- **DCD**: 10/09/2024
- **ADV**: 11/06/2024
- These Dates Subject To Availability of Funds & Completion of Required Environmental Permits
- **Proposed Estimated Construction Cost:**
- **$15 Million.**
- **80% Federal Funds: 20% State Funds**

Construction Schedule

- **Construction is anticipated to start in the Spring of 2025**
- **Two construction seasons are anticipated to complete the project.**

Rehabilitation Study
Cost Estimates

MECHANICAL	$3,274,000
ELECTRICAL	$2,654,000
STRUCTURAL	$2,537,000
CONST. COSTS*	$6,160,000
TOTAL	$14,630,000

STRUCTURAL ESTIMATE INCLUDES FENDER & ARCHITECTURAL WORK

ESTIMATED COST INCLUDES 20% OH&P PLUS 15% CONTINGENCY

* Construction Costs include MPT, Mobilization, Construction Staking, Minor Items, Inflation and Incidentals

Regulatory Permitting

1. CT DEEP OLISP Structures Dredging and Fill.
2. CT DEEP Flood Management General Cert.
3. Section 401 Water Quality Certification.
4. ACOE Pre-construction Notification (PCN).
5. Coast Guard Letter of Approval.

Question & Answer Session – Send a Question or Comment

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THANK YOU FOR YOUR TIME.

QUESTIONS?