PUBLIC INFORMATION MEETING

Bridge No. 04091
REPLACEMENT OF
JEROME AVENUE BRIDGE
OVER FREEMAN HILL BROOK
BRISTOL, CONNECTICUT
December 6, 2021

WMC
CONSULTING ENGINEERS

MEETING AGENDA

- General Information
- Introduction
- Project Description
- Question and Answer

WMC
CONSULTING ENGINEERS

WMC CONSULTING ENGINEERS

The City of Bristol has retained WMC Consulting Engineers, Inc. to provide design services for the bridge, roadway and site improvements.

Contacts:

Keegan Elder, P.E.
Vice President

Emanuel Duarte, P.E.
Project Manager

WMC
CONSULTING ENGINEERS

AERIAL VIEW OF BRIDGE NO. 04091

WMC
CONSULTING ENGINEERS

BRIDGE LOOKING NORTH

WMC
CONSULTING ENGINEERS

BRIDGE LOOKING SOUTH

WMC
CONSULTING ENGINEERS

PEDESTRIAN BRIDGE

Located Downstream

WMC
CONSULTING ENGINEERS

EXISTING BRIDGE ELEVATIONS

Upstream View

WMC
CONSULTING ENGINEERS

EXISTING BRIDGE ELEVATIONS

Downstream View

WMC
CONSULTING ENGINEERS

REASON FOR THE PROJECT

Replacement of the bridge is required based on its current condition rating. According to the recent ConnDOT Bridge Inspection Report, the superstructure is rated to be in serious condition, scoring a 3 out of 9 due to heavy spalls with exposed & rusted rebar and severed prestressed deck unit strands.

Requires High Priority of Corrective Action and Warrants Replacement

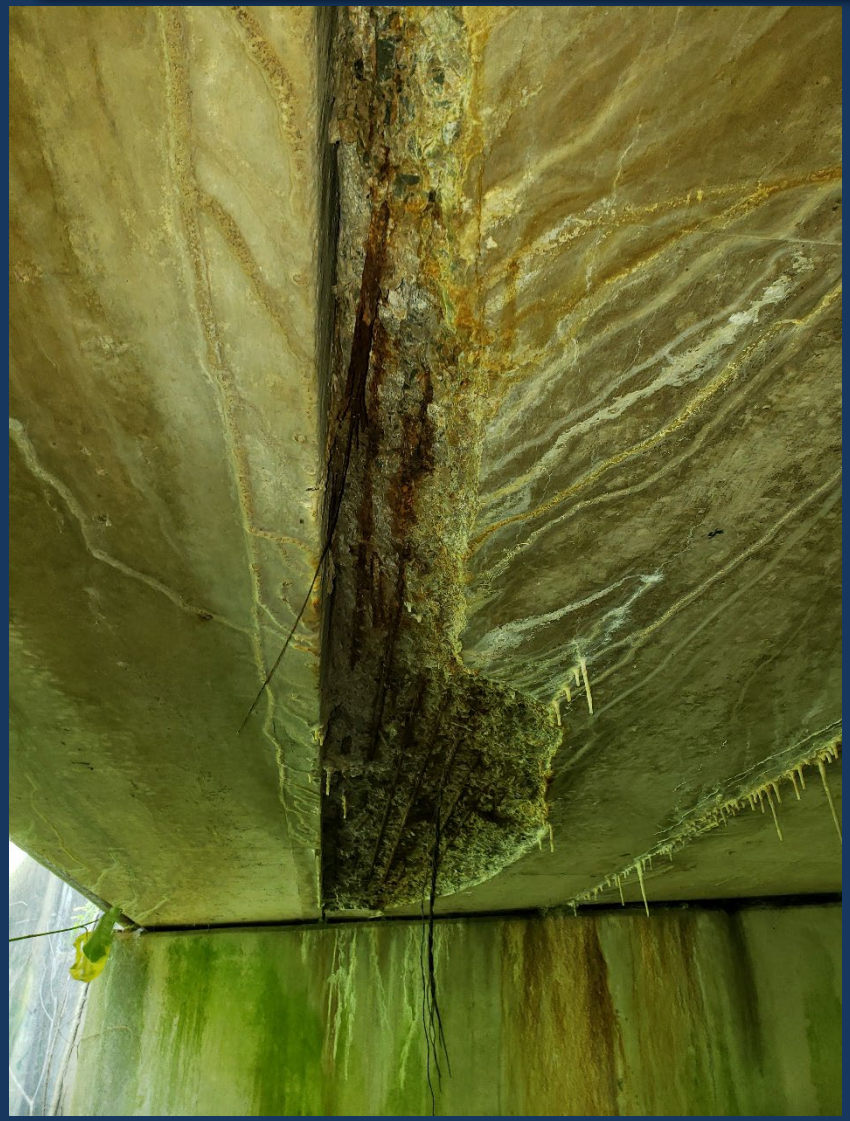
WMC
CONSULTING ENGINEERS

EXISTING BRIDGE CONDITIONS

Crumbling Concrete Parapet

WMC
CONSULTING ENGINEERS

EXISTING BRIDGE CONDITIONS



Beams Deterioration

WMC
CONSULTING ENGINEERS

PROJECT GOALS

- Replacement of The Jerome Avenue Bridge
- Minimize disturbance to traveling public
- Complete construction in a timely manner
- Effectively use available funding for the project

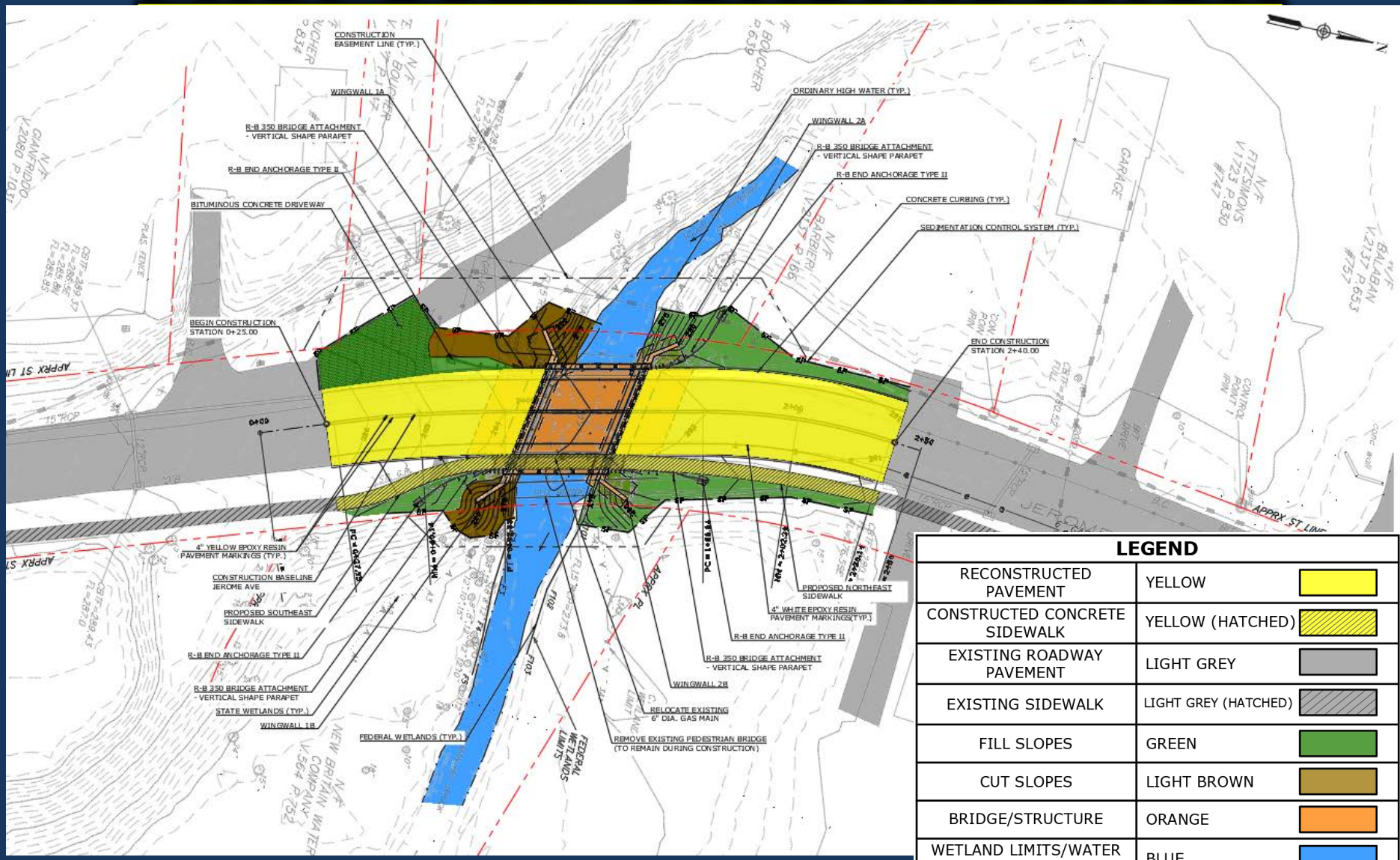
WMC
CONSULTING ENGINEERS

PROPOSED CONSTRUCTION

- Replace the existing bridge with a 30’ clear span NEXT beam bridge bearing on concrete spread footing supported abutments
- Widen Bridge –Two 12’ lanes, two 4’ shoulders, one 5’-6” sidewalk, and two 2’ parapets. Total bridge width= 41’-6”
- Remove existing pedestrian bridge
- Roadway Reconstruction – Approximately 200 Feet
- Aesthetically treated wingwalls & approach walls
- Install new Bridge Rail
- Slightly raise roadway profile – Reducing Roadway Flooding

WMC
CONSULTING ENGINEERS

PROPOSED CONSTRUCTION

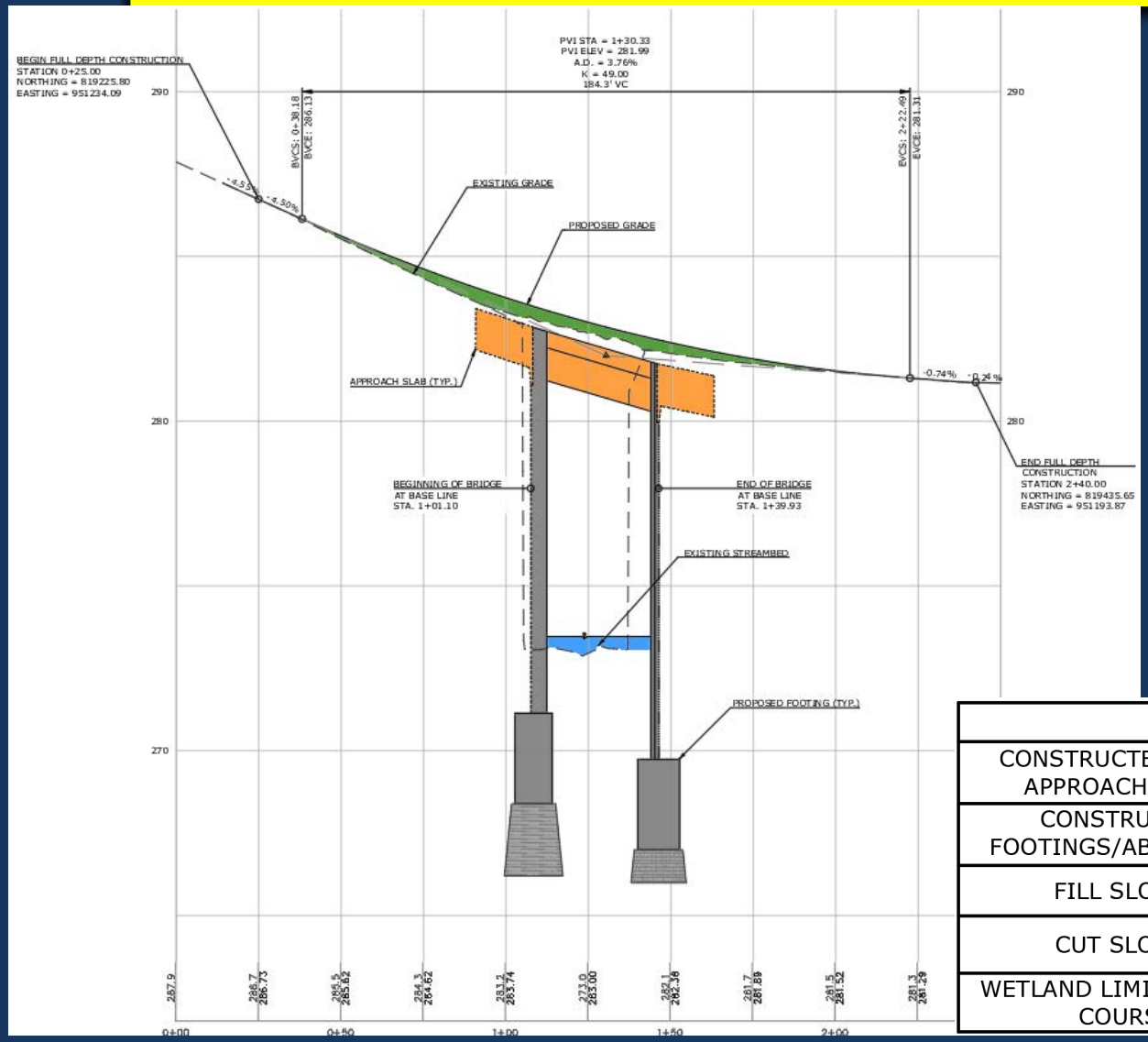


LEGEND	
RECONSTRUCTED PAVEMENT	YELLOW
CONSTRUCTED CONCRETE SIDEWALK	YELLOW (HATCHED)
EXISTING ROADWAY PAVEMENT	LIGHT GREY
EXISTING SIDEWALK	LIGHT GREY (HATCHED)
FILL SLOPES	GREEN
CUT SLOPES	LIGHT BROWN
BRIDGE/STRUCTURE	ORANGE
WETLAND LIMITS/WATER COURSE	BLUE
APPROXIMATE STREET LINES/R.O.W. LINES	RED

Roadway Plan

WMC CONSULTING ENGINEERS

PROPOSED CONSTRUCTION

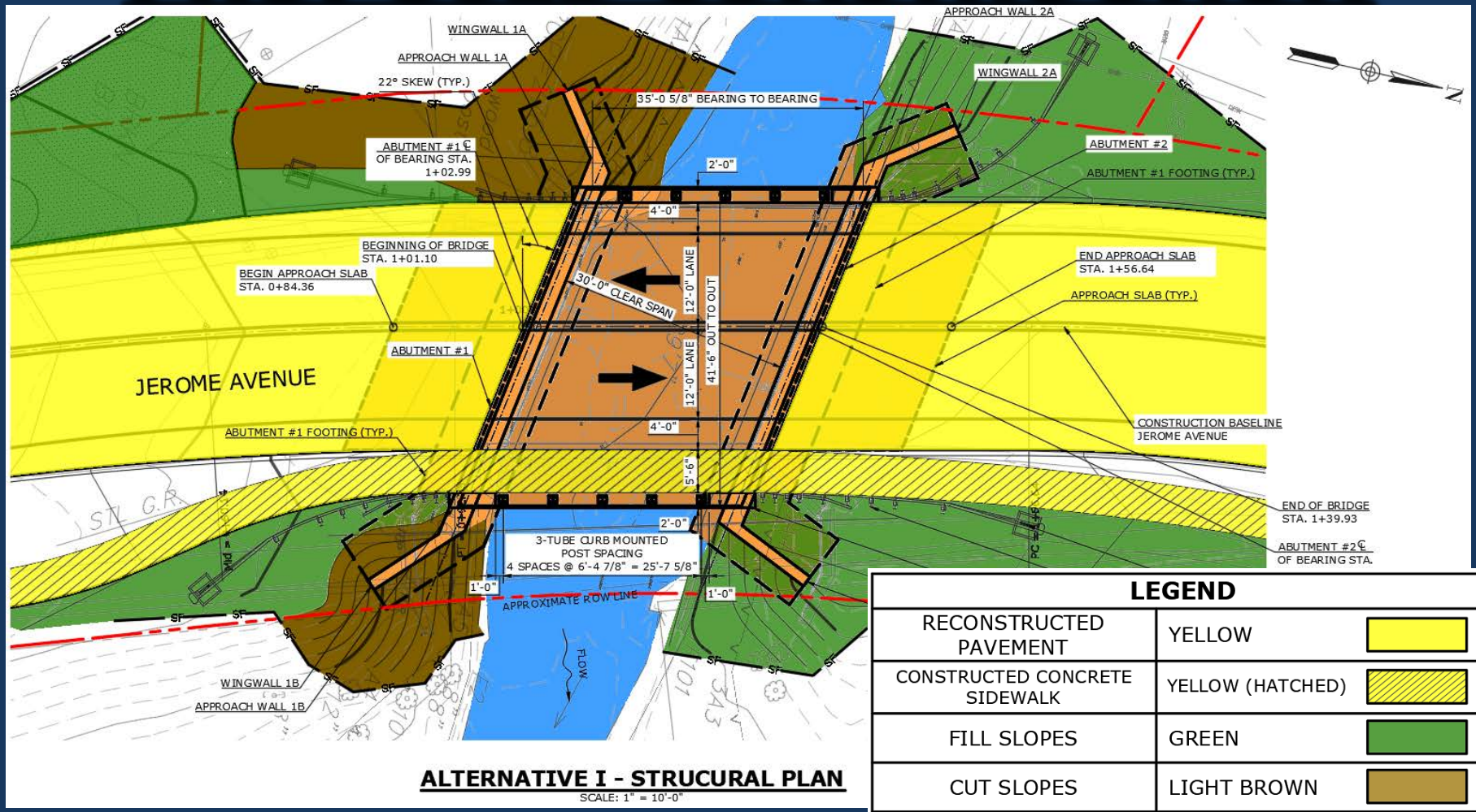


LEGEND	
CONSTRUCTED DECK/ APPROACH SLABS	ORANGE
CONSTRUCTED FOOTINGS/ABUTMENTS	DARK GREY
FILL SLOPES	DARK GREEN
CUT SLOPES	LIGHT BROWN
WETLAND LIMITS/WATER COURSE	BLUE

WMC CONSULTING ENGINEERS

Roadway Profile

PROPOSED CONSTRUCTION



ALTERNATIVE I - STRUCURAL PLAN

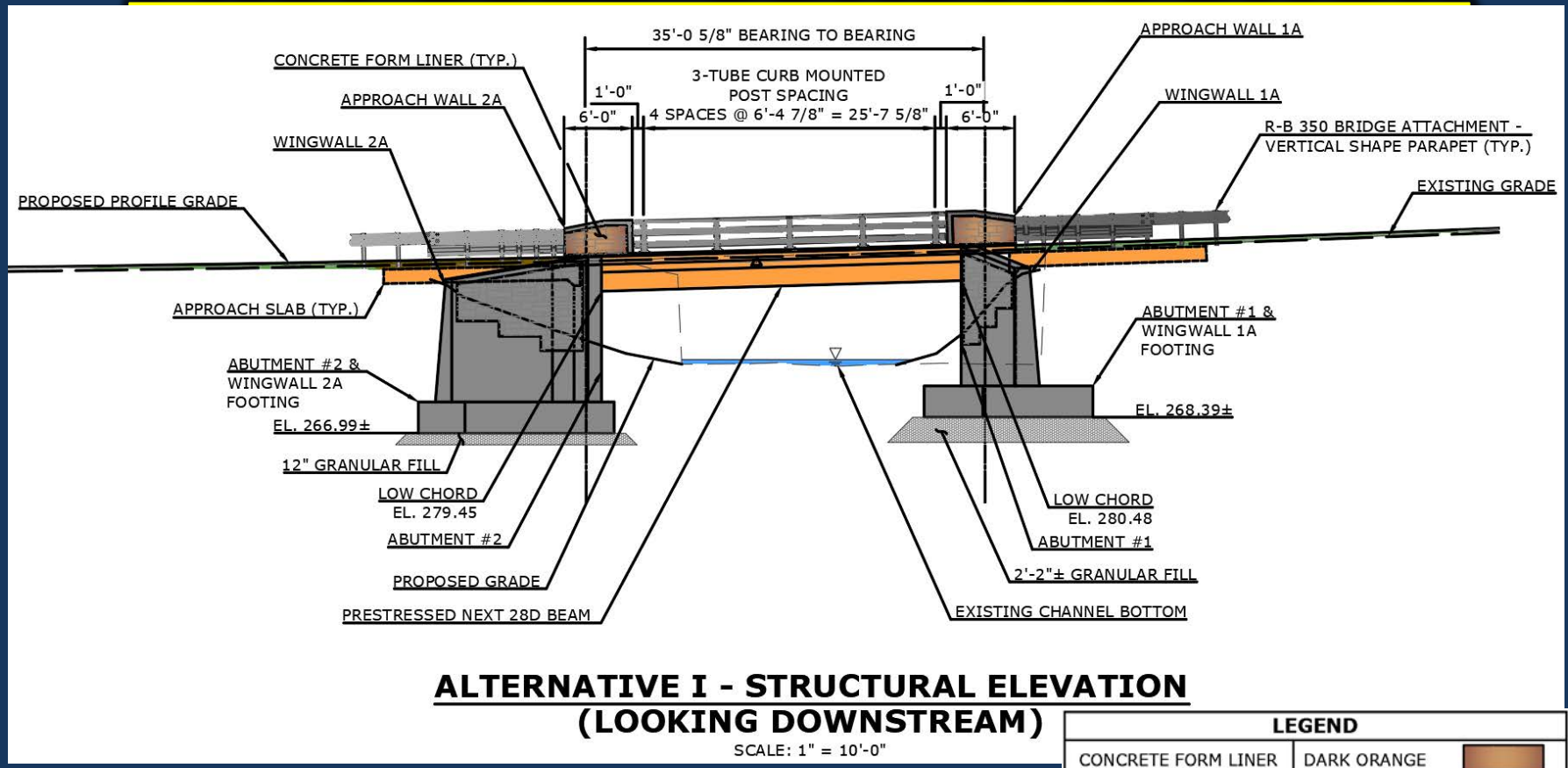
SCALE: 1" = 10'-0"

LEGEND	
RECONSTRUCTED PAVEMENT	YELLOW
CONSTRUCTED CONCRETE SIDEWALK	YELLOW (HATCHED)
FILL SLOPES	GREEN
CUT SLOPES	LIGHT BROWN
BRIDGE/STRUCTURE	ORANGE
WETLAND LIMITS/WATER COURSE	BLUE
APPROXIMATE STREET LINES/R.O.W. LINES	RED

General Structure Plan

WMC
CONSULTING ENGINEERS

PROPOSED CONSTRUCTION



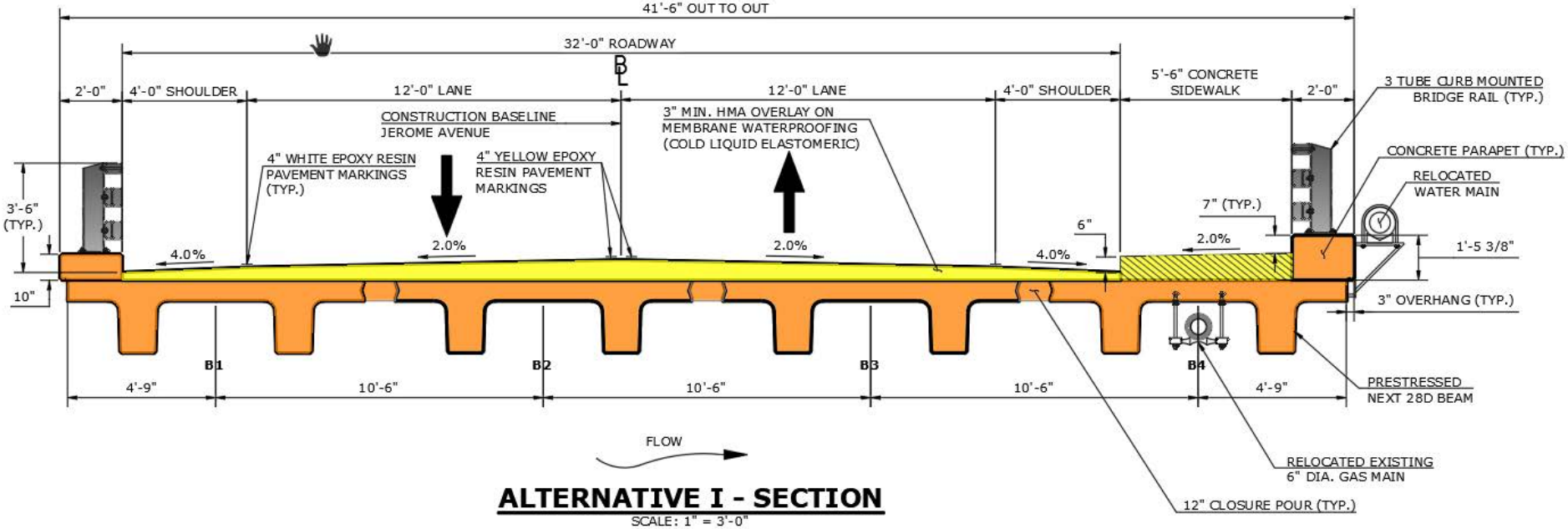
ALTERNATIVE I - STRUCTURAL ELEVATION
(LOOKING DOWNSTREAM)
SCALE: 1" = 10'-0"

LEGEND	
CONCRETE FORM LINER	DARK ORANGE
FILL SLOPES	DARK GREEN
CUT SLOPES	LIGHT BROWN
BRIDGE/STRUCTURE	ORANGE
WINGWALLS/APPROACH WALLS	DARK GREY
BRIDGE ENDWALLS/RAIL	LIGHT-DARK GREY
WETLAND LIMITS/WATER COURSE	BLUE

Structure Elevation

WMC
CONSULTING ENGINEERS

PROPOSED CONSTRUCTION



ALTERNATIVE I - SECTION

SCALE: 1" = 3'-0"

LEGEND	
RECONSTRUCTED PAVEMENT	YELLOW
CONSTRUCTED CONCRETE SIDEWALK	YELLOW (HATCHED)
BRIDGE/STRUCTURE	ORANGE
BRIDGE ENDWALLS/RAIL	LIGHT-DARK GREY

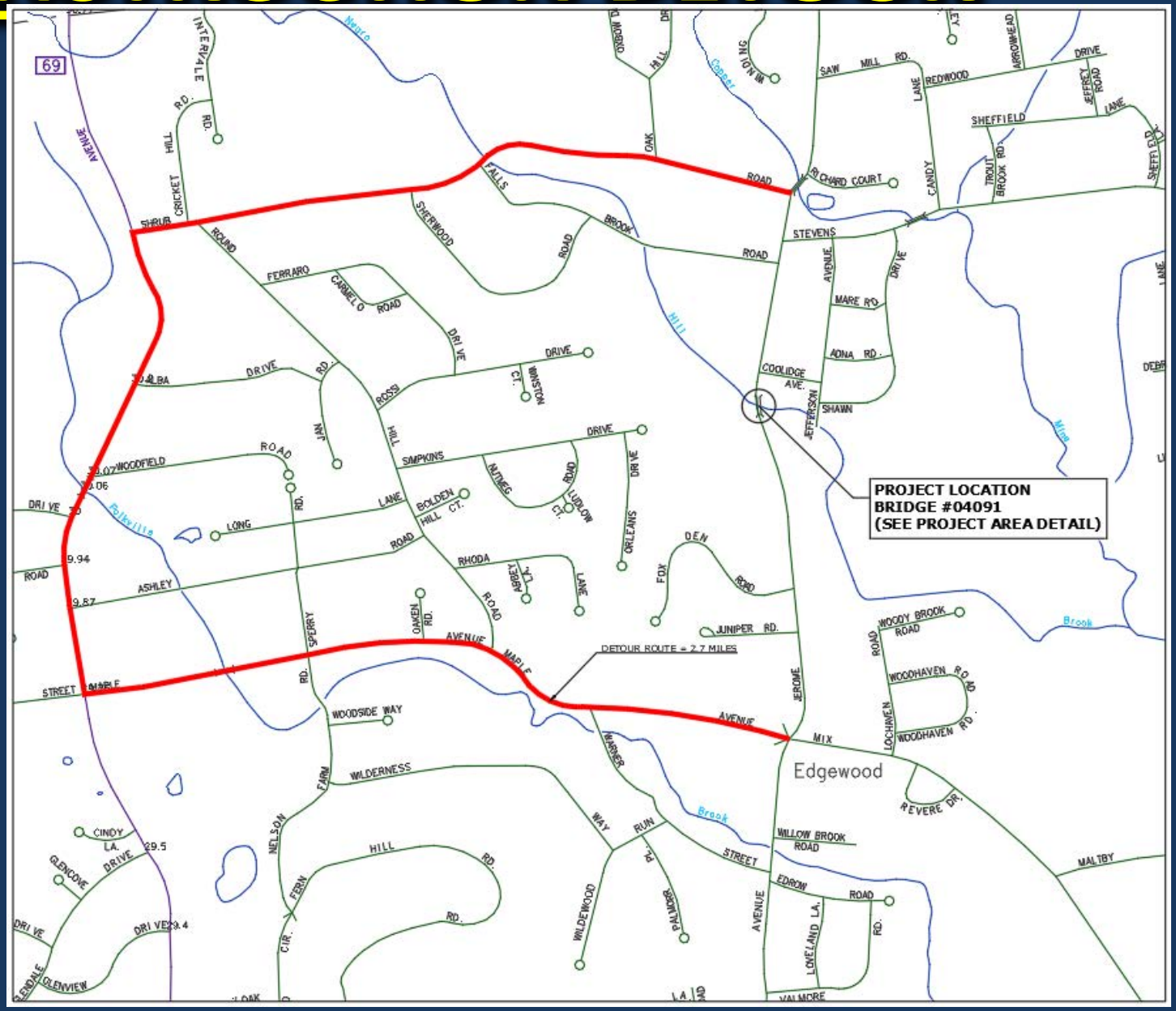
Structure Section

WMC CONSULTING ENGINEERS

CONSTRUCTION DETOUR

2.6 MILE DETOUR

- Shrub Road
- Route 69
- Maple Avenue

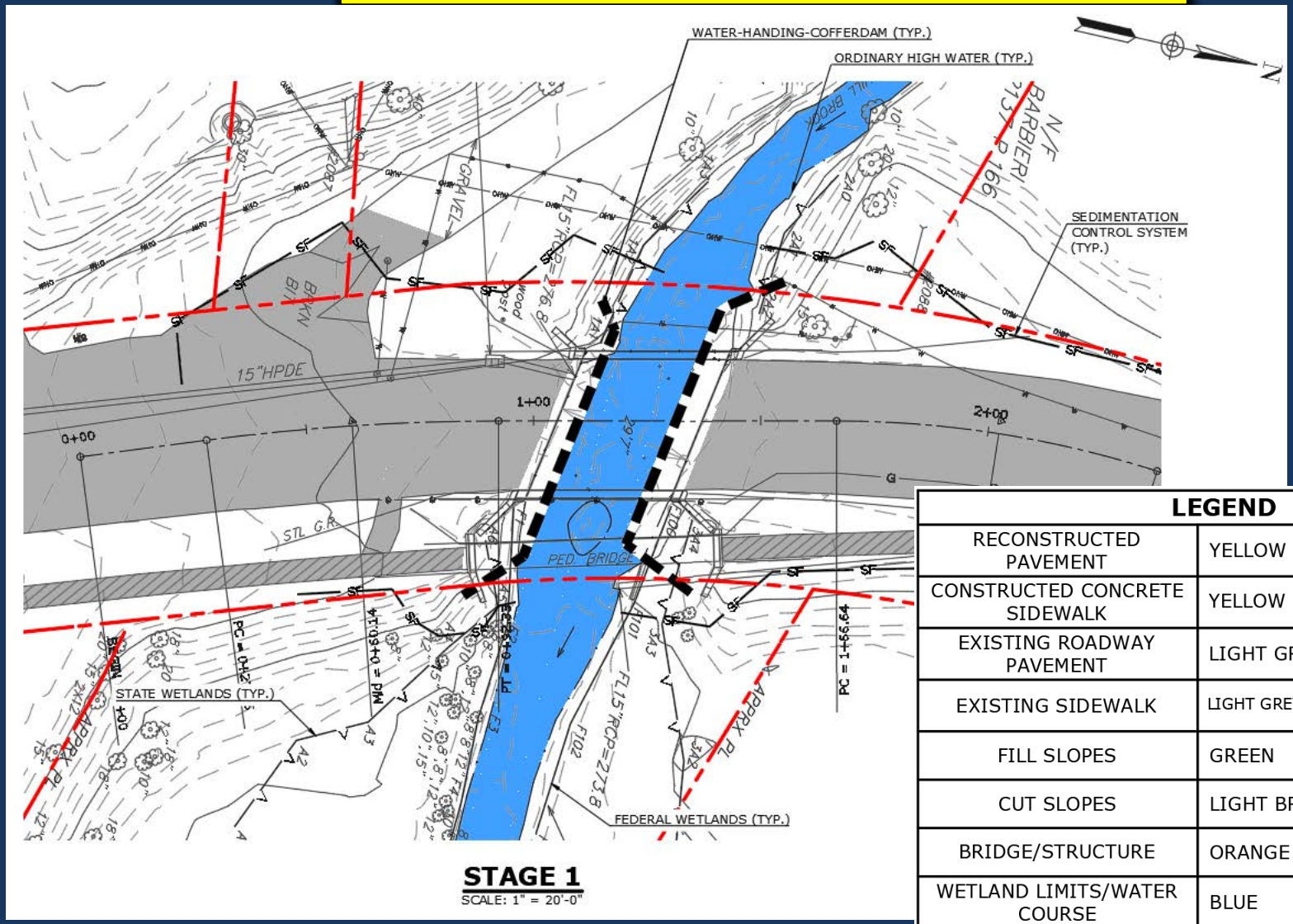


WMC
CONSULTING ENGINEERS

SEQUENCE OF CONSTRUCTION

- Close the bridge and detour traffic
- Install necessary erosion and sedimentation controls
- Install debris shield
- Remove existing superstructure & pedestrian bridge
- Install temporary cofferdams
- Removed existing abutments and wingwalls
- Construct proposed abutments and wingwalls
- Remove temporary cofferdam
- Install NEXT beams, gas/water main, parapets, bridge rail, and pavement
- Stabilize impacted areas, restore vegetation, and remove erosion and sedimentation controls

HANDLING WATER



STAGE 1
SCALE: 1" = 20'-0"

LEGEND	
RECONSTRUCTED PAVEMENT	YELLOW
CONSTRUCTED CONCRETE SIDEWALK	YELLOW (HATCHED)
EXISTING ROADWAY PAVEMENT	LIGHT GREY
EXISTING SIDEWALK	LIGHT GREY (HATCHED)
FILL SLOPES	GREEN
CUT SLOPES	LIGHT BROWN
BRIDGE/STRUCTURE	ORANGE
WETLAND LIMITS/WATER COURSE	BLUE
APPROXIMATE STREET LINES/R.O.W. LINES	RED

WMC
CONSULTING ENGINEERS

ENVIRONMENTAL CONSIDERATIONS

- Inland wetlands and regulated area impacts will be kept to a minimum during bridge construction
- Disturbed areas during construction will be restored upon completion
- No findings of historic or native American archeological significance in the areas of project disturbance
- No Known Contaminated Soil or Groundwater at the site
- Temporary Cofferdams will be used to handle water during construction and confine construction work
- Best management practices will be utilized to handle sedimentation control during construction and to protect wildlife in the stream channel
- All Local, DEEP & ACOE Environmental Permits will be acquired

PUBLIC UTILITIES

- The gas main will be reinstalled on the bridge
- New watermain will be installed on the bridge
- No overhead utilities are in conflict with the project

WMC
CONSULTING ENGINEERS

RIGHTS-OF-WAY

- Rights, Easements & Minor Acquisitions will be required based on Preliminary Design

WMC
CONSULTING ENGINEERS

PROJECT COST/FUNDING

- The estimated cost of construction for the year 2023 is approximately $2,970,000
- Project is funded under the State Local Bridge Program
- Funding will be 50% State funds and 50% City funds
  - State $1,485,000
  - City $1,485,000

PROJECT SCHEDULE

- Start/End of construction: April 1, 2023 – November 30, 2023
- Duration of construction: 8 months
- If the bridge is staged with alternating one-way traffic, the duration of construction will be two seasons with an increased cost of about 10% = $300,000.

WMC
CONSULTING ENGINEERS

CONTACT INFORMATION

City of Bristol

Raymond Rogozinski, PE
Director of Public Works
111 North Main Street
Bristol CT 06010
raymondrogozinski@bristolct.gov

City of Bristol

Nancy Levesque, PE
City Engineer
111 North Main Street
Bristol CT 06010
nancylevesque@bristolct.gov

WMC Consulting Engineers (Designer)

Keegan Elder, P.E. (Vice President)
Emanuel Duarte, P.E. (Project Manager)
87 Holmes Road
Newington, CT 06111
eduarte@wmcengineers.com
860-667-9624

WMC
CONSULTING ENGINEERS

THANK YOU…

Q&A

CITY OF BRISTOL

WMC
CONSULTING ENGINEERS