Bridge Sections

Existing

Proposed

NOTE: ALTERNATIVES 2-6 SHOWN WITH THE PREFERRED BRIDGE SECTION WIDTHS.
Alternative 1 - Rehabilitate Existing Structure - Staging

**LEGEND**

- **PREVIOUSLY RECONSTRUCTED**
- **WORK AREA:** Vehicular Traffic Maintained With Alternating Traffic Pattern Utilizing Temporary Traffic Signals
- **TEMPORARY TRAFFIC SIGNAL**
- **DRUMS, 25- FEET SPACING**
Alternative 2A - Replace Approach Spans (Maintain Existing Bascule Span) (Off-season closures) - Plan/Elevation
Alternative 2A - Replace Approach Spans (Maintain Existing Bascule Span) (Off-season closures) - Staging

**STAGE 1**
(Estimated Duration 12 Months)

**STAGE 2**
(Estimated Duration 12 Months)

**STAGE 3**
(Estimated Duration 12 Months)

**STAGE 4**
(Estimated Duration 12 Months)

**STAGE 5**
(Estimated Duration 12 Months)
Alternative 2B - Replace Approach Spans (Maintain Existing Bascule Span) (One-Way Traffic Off Season) - Plan/Elevation
Alternative 2B - Replace Approach Spans (Maintain Existing Bascule Span) (One-Way Traffic Off Season) - Staging

**STAGE 1**
(Estimated Duration 24 Months)

**STAGE 2**
(Estimated Duration 8 Months)

**STAGE 3**
(Estimated Duration 24 Months)

**LEGEND**

- PREVIOUSLY RECONSTRUCTED
- WORK AREA: Vehicular Traffic Maintained
- WORK AREA: Vehicular Traffic Detoured
- WORK AREA: Vehicular Traffic Utilizing Alternating Traffic Pattern
- PROPOSED NAVIGATION FENDER
- TEMPORARY BUOY
Alternative 3 - Replace on Existing Alignment (with a multi-year detour) - Plan/Elevation
Alternative 3 - Replace on Existing Alignment (with a multi-year detour) - Staging

STAGE 1
(Estimated Duration 18 Months)

STAGE 2
(Estimated Duration 18 Months)

LEGEND

PREVIOUSLY RECONSTRUCTED

PROPOSED BASCULE SPAN

WORK AREA: Vehicular Traffic Detoured

PROPOSED NAVIGATION FENDER
Alternative 4 - Replace on Existing Alignment (Bridge Open During the Summer) - Plan/Elevation

- Area of Severe Scour
- Marine Access
- Proposed Navigational Opening

**Notes:**
- MIDDLE TOWNSHIP
- WETLANDS
- GREEN ACRES
- AVALON BOROUGH
- SEA ISLE CITY

**Key Features:**
- Proposed 90° bascule span location
- Proposed structure maintaining existing vertical profile
- Proposed navigational opening
- Proposed fender system
- Proposed north abutment
- Proposed south abutment
- Original spans replaced with widened structure
- Modified previous pier 7
- Proposed pier 1
- Channel bottom (1938)
- Channel bottom (2017)
- M.H.W. EL. 1.34
- 4-bar bridge railing
Alternative 4 - Replace on Existing Alignment (Bridge Open During the Summer) - Staging

- **STAGE 1** (Estimated Duration 12 Months)
- **STAGE 2** (Estimated Duration 12 Months)
- **STAGE 3** (Estimated Duration 12 Months)
- **STAGE 4** (Estimated Duration 12 Months)
- **STAGE 5** (Estimated Duration 12 Months)
Alternative 5 - Replace along West Alignment (Hold North Abutment) - Plan/Elevation

- Area of Severe Scour
- Marine Access
- Proposed Navigational Opening
- Repurposed Fishing Pier

**Proposed Structure with Increased Vertical Profile to Maintain Minimum Vertical Clearance Within Bascule Span**

- Proposed South Abutment
- Proposed Pier 1
- Proposed Fender System
- Proposed Navigational Opening
- Proposed North Abutment

**Channel Bottom (2017)**
Alternative 5 - Replace along West Alignment (Hold North Abutment) - Staging

**STAGE 1**
(Estimated Duration 24 Months)

**STAGE 2**
(Estimated Duration 24 Months)

**STAGE 3**
(Estimated Duration 12 Months)
Alternative 6 - Replace along West Alignment (Meet Roberts Ave) - Plan/Elevation

- Area of Severe Scour
- Marine Access
- Proposed Navigational Opening
- Repurposed Fishing Pier
- Waterfront Park
- Land Use Swap
- Marine Access
- Proposed Structure with Increased Vertical Profile to Maintain Minimum Vertical Clearance Within Bascule Span
- Proposed 90° Bascule Span Location
- Previous Bascule Span Location
- Proposed North Abutment
- Proposed Pier 1
- Proposed Fender System
- 4-Bar Bridge Railing
- Channel Bottom (2017)
Alternative 6 - Replace along West Alignment (Meet Roberts Ave) - Staging

**STAGE 1**
(Estimated Duration 36 Months)

**STAGE 2**
(Estimated Duration 12 Months)

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**LEGEND**

- **WORK AREA:**
  - Vehicular Traffic Maintained
  - Vehicular Traffic Detoured
- **DEMOLITION OF EXISTING STRUCTURE**
- **PROPOSED BASCULE SPAN LOCATION**
- **PROPOSED FISHING PIER**
- **PREVIOUSLY RECONSTRUCTED STRUCTURE TO REMAIN**
- **PROPOSED NAVIGATION FENDER**
- **TEMPORARY BUOY**
Alternative 7 - Replace along East Alignment - Plan/Elevation

- Repurposed Fishing Pier
- Marine Access
- Area of Severe Scour
- Proposed Navigational Opening

Proposed Structure with increased vertical profile to maintain minimum vertical clearance within bascule span.
Alternative 7 - Replace along East Alignment - Staging

**STAGE 1**
*(Estimated Duration 24 Months)*

**STAGE 2**
*(Estimated Duration 24 Months)*

**STAGE 3**
*(Estimated Duration 12 Months)*
### Alternative Analysis Matrix

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1</th>
<th>Alternative 2A</th>
<th>Alternative 2B</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
<th>Alternative 5</th>
<th>Alternative 6</th>
<th>Alternative 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Life</strong></td>
<td>25 Years</td>
<td>25 years bascule span</td>
<td>25 years bascule span</td>
<td>100 years approach spans</td>
<td>100 years approach spans</td>
<td>100 years approach spans</td>
<td>100 years approach spans</td>
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</tr>
<tr>
<td><strong>Construction Cost (in Millions)</strong></td>
<td>$15 - 20</td>
<td>$85-90</td>
<td>$120 - 125</td>
<td>$105 - 110</td>
<td>$140 - 145</td>
<td>$150 - 155</td>
<td>$145 - 150</td>
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<tr>
<td><strong>Construction Duration</strong></td>
<td>3 yr</td>
<td>5 yr</td>
<td>5 yr</td>
<td>3 yr</td>
<td>5 yr</td>
<td>5 yr</td>
<td>4 yr</td>
<td>5 yr</td>
</tr>
<tr>
<td><strong>Detours</strong>&lt;sup&gt;*&lt;/sup&gt;</td>
<td>Intermittent lane closure (Alternating traffic)</td>
<td>5 yr</td>
<td>1 yr off-season detours</td>
<td>3 yr</td>
<td>5 yr</td>
<td>3-4 yr off-season detours</td>
<td>6 month off-season detours</td>
<td>3-4 yrs off-season detours</td>
</tr>
<tr>
<td><strong>Bridge Live Load Capacity</strong></td>
<td>Maintain existing posting - 15 tons</td>
<td>All vehicles HS20 + 10%</td>
<td>All vehicles (HL-93 &amp; NJDOT Permit Vehicle)</td>
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* Off-Season Detours - September to May (After Labor Day and Before Memorial Day Weekend)
# Environmental Constraints & Permits

## Alternative \ Key Environmental Permits & Constraints

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## Permits & Approvals

- US Coast Guard (Navigation)
- State Historic Preservation Office & Federal Section 106
- NEPA
- US Army Corps of Engineers Section 404
- NJDEP Green Acres
- NJDEP Tidelands
- NJDEP Waterfront Development
- NJDEP Flood Hazard Area
- NJDEP CAFRA
- NJDEP Stormwater Management
- NJDEP FW/Coastal Wetlands & Open Water

## Construction Restrictions

- US Fish & Wildlife In-Water Moritorum (a. fish)
- US Fish & Wildlife Above-Water Moritorum (plover)

### Legend
- ![No Involvement] No Involvement
- ![Minor Involvement] Minor Involvement
- ![Significant Involvement] Significant Involvement
- ![Unknown] Unknown
South Approach On Structure, Add-On Option Plan & Section

Proposed Southern Approach Typical Section

Repurposed Fishing Pier Access Drive

Repurposed Fishing Pier
Thank you!

Questions?
Detour Plan
Navigational Channel Issues

Alternatives 1 & 2 – Maintain Existing Bascule Span

Alternatives 3 & 4 – Maintain Existing H/V Alignment

Alternatives 5 - 7 – H/V Alignment Shift
Span 1-7 Replacement Options

Alternative 1 – Rehabilitation
Replacement Spans Part of Rehabilitated Bridge

Alternative 5-7 – Replacement New Alignment
Replacement Spans Become Fishing Pier

Approximate Cost: $11 Million

Alternative 2-4 – Replacement Existing Alignment
Replacement Spans Become Part of New/Wider Structure

Approximate Cost: $17 Million

Span 1-7 Replacement
Construction Starts Fall 2019