When Neighbors Say No:
Navigating Complex Property Owner Relationships
Waterway projects within multiple jurisdictions are commonplace.

Runnins River at Warren Ave:

- **2 States**
- **2 Towns**
- **6 Property Owners**
Runnins River defines the RI/MA state line

- 7.5 miles long
- 10 square mile watershed
  - 70% in Seekonk, MA
  - 23% in East Providence, RI
  - 7% in Rehoboth, MA
Increase in frequency of flood incidents over the past 40 years in this East Providence, RI neighborhood prompted mitigating actions.
Past Studies recommended replacing the Warren Avenue Bridge to increase the effective flow area.

- 1986 Warren Avenue Drainage Study
- 2007 Runnings River Drainage Study
2013 Rhode Island DOT Bridge Inspection did not support replacement.

- Hairline cracks with efflorescence
- FW x 2'H x 6''D spall, see photo 9
- 2''L x 6''H x 3/4''D spall
- 2''W x 10''L x 2''D form void
- Up to 1'' deep scale
- West Abutment
- East Abutment
East Providence Takes Action

1. Secured a CDBG Disaster Recovery Grant for $500,000.

2. Requested Design-Build proposals for construction of two 60-inch high relief culverts adjacent to the Warren Avenue Bridge.

3. J.H. Lynch & Sons, Inc. was the successful bidder and was awarded the contract in November 2015.

The project begins...

Funding

Design

Permitting
Alternative Design Options Developed

1

2

3
## Option Comparison

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<thead>
<tr>
<th></th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
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<tbody>
<tr>
<td>Added Cost</td>
<td>$</td>
<td>$$</td>
<td>$$+</td>
</tr>
<tr>
<td>Added Road Closure</td>
<td>Days</td>
<td>Month</td>
<td>Month</td>
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<tr>
<td>Capacity (CFS)</td>
<td>285</td>
<td>285</td>
<td>345</td>
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The CDBG grant conditions drove the schedule

- 30% Design & Hydraulic Modeling: October 2016
- 90% Design & Permit Applications: December 2016
- Draft Environmental Assessment: March 2017

Timeline:
- September 2016
- October 2016
- November 2016
- December 2016
- January 2017
- February 2017
- March 2017
- April 2017
Easements then become the primary driver

- RIDOT required a temporary construction easement and a perpetual maintenance easement
  - AND
- The selected option required easements from four private property owners

Easement pursuit begins in December 2016
By June 2017 one opposing property owner forces Option 4

- An East Providence property owner would not allow a temporary construction easement.
- The potential loss of business from the 30-day bridge closure could not be overcome by property improvements or sale of a portion of that property to the City.
Funding then becomes the project driver

- The CDBG-DR grant could not be used for construction in Massachusetts.
The BWRF rescues the project

- The project was eligible because it mitigates flooding problems in Rhode Island.
- East Providence applied for and received a $544,025 grant.
Design proceeds with two new culverts in Massachusetts.
Hydrologic/Hydraulic Modeling

- Plans of Record
- Peak flow rates developed using RI and MA GIS
- HEC-RAS Model
- Supplemental Dynamic H/H Model
- Findings
  - Significant drop in water elevation upstream (objective of the Project)
  - No adverse impact downstream
  - A FEMA No-Rise Certificate was required
Design Considerations

- Base Flow / Low Flow
- Existing RIDOT Arch Culvert
- Existing Utilities
- Town Drainage System Connections
- Future RIDOT / Town of Seekonk Projects
- MassDOT Small Bridge Criteria
Geotechnical Design

- Structural Stability of Existing Arch Culvert
- Poor Subgrade Conditions
- Dewatering
- River Bypass
- Accelerated Construction Techniques
Permits were received from:

- RI Department of Transportation:
  - Physical Alteration Permit
  - Traffic Management Plan
- Massachusetts Department of Transportation:
  - Traffic Management Plan
- Seekonk Conservation Commission:
  - Order of Conditions
- Army Corps of Engineers:
  - General Permit 10 for Linear Transportation Projects and Stream Crossings
Construction was ready to proceed in July 2018

- Temporary easements for construction
- The schedule met the MA Division of Marine Fisheries Time of Year restrictions
- Notifications were sent to all stakeholders two weeks in advance
When suddenly…

The Town of Seekonk realized construction was imminent.

- The road opening permit was withheld until:
  - A second peer review was performed on the river hydraulics;
  - The culvert design was revised to separate the two new culverts by 2+ feet to avoid classification by Mass DOT as a BRI bridge;
  - The Seekonk Conservation Commission approved the modified design with the culvert separation; and
  - Miscellaneous additional amenities to County Street were incorporated into the project.
Two months later

- The Division of Marine Fisheries approved the work within the fall time of year restriction.
- Heavy rains throughout September and October 2018 foretold problematic construction.
- The team decided to delay construction to July 2019.

November 2015
Project Award

July 2019
Construction Start
Construction

Existing Utilities

Drainage

Dewatering
Construction
Construction was completed within 30 days
The Project removed 25 homes from a 100-year flood area.
The Project removed 30 homes from a 10-year flood area.
Key project take-way:

Communicate early in the project and aggressively seek responses from all stakeholders

- Early easement negotiations with the property owners would have confirmed the Massachusetts location before design began and avoided:
  - RIDEM permitting
  - Permit modifications
  - Preparation of an Environmental Assessment
  - CDBG time extensions

- A visit to the Seekonk DPW could have prompted the director to perform a detailed project review months earlier, thus avoiding the one-year construction delay.

- A pre-application meeting with the RIDEM grant administrator contributed to the BWRF grant award.
Questions?

Jan Greenwood, P.E.
jgreenwood@woodardcurran.com

Paul Jacques, P.E.
pjacques@woodardcurran.com