

Newport River Trail Feasibility Study



Agenda

- **Partners**
- **Review of existing conditions & constraints**
- **Concept alignments**
- **Planning-level cost estimates**
- **Considerations for implementation**

Partners

- Town of Newport (grant recipient and lead agency)
- Delaware Greenways
- New Castle County Executive's Office
- New Castle County Department of Public Works
- New Castle County Department of Land Use
- Harvey, Hanna & Associates, Inc.
(primary property owner in the study area)



Existing Conditions & Constraints

- Environmental
 - Tidal wetlands
 - DNREC and U.S. Army Corps of Engineers (USACE) jurisdiction
 - DNREC will require a “wetlands and subaqueous lands permit” and mitigation for permanent shading impacts beneath the structures
 - USACE will require a Nationwide Permit (NWP) 14 (Linear Transportation Projects); mitigation is not anticipated

Existing Conditions & Constraints

- Environmental
 - Non-tidal wetlands
 - USACE jurisdiction only
 - USACE will require a Nationwide Permit (NWP) 14 (Linear Transportation Projects)
 - USACE will require a Nationwide Permit (NWP) 23 (Categorical Exclusion, If NEPA applies)
 - Any non-tidal impacts would be permanent “conversion” impact where forest is removed and wetlands become emergent.

Existing Conditions & Constraints

- Environmental
 - Mitigation
 - If credits from private mitigation bank are not available, then onsite or offsite mitigation would be required
 - If cost beneficial, mitigation could be avoided by spanning all non-tidal wetlands and replanting trees in forested wetlands to a minimum 20-foot clearing width

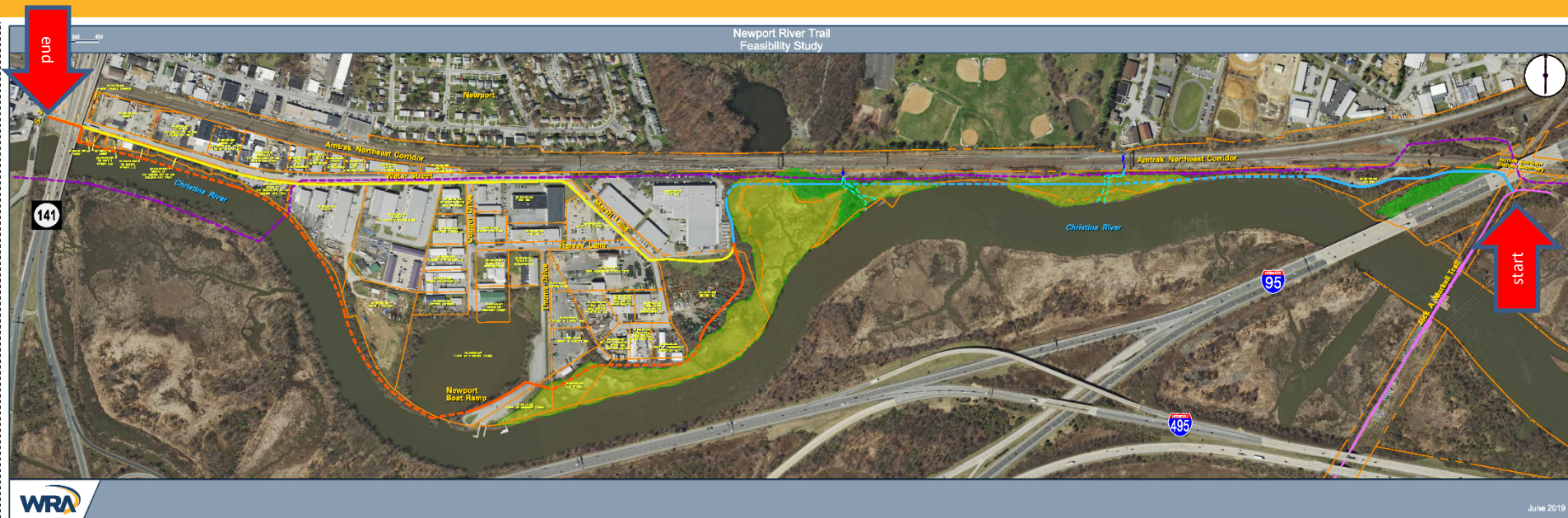
Existing Conditions & Constraints

- Utilities
 - New Castle County Christina River Force Main (CRFM)
 - WRA met with the County to discuss the 72” sewer force main coordination requirements for the trail
 - NCC requested a 20-foot minimum offset from either side of the utility for boardwalk and elevated structures
 - Offset may not be required for at-grade trail sections where sufficient soil cover is in place (Water Street)
 - Monitoring during construction will most likely be required
 - 40-foot easement through privately owned parcel

Existing Conditions & Constraints

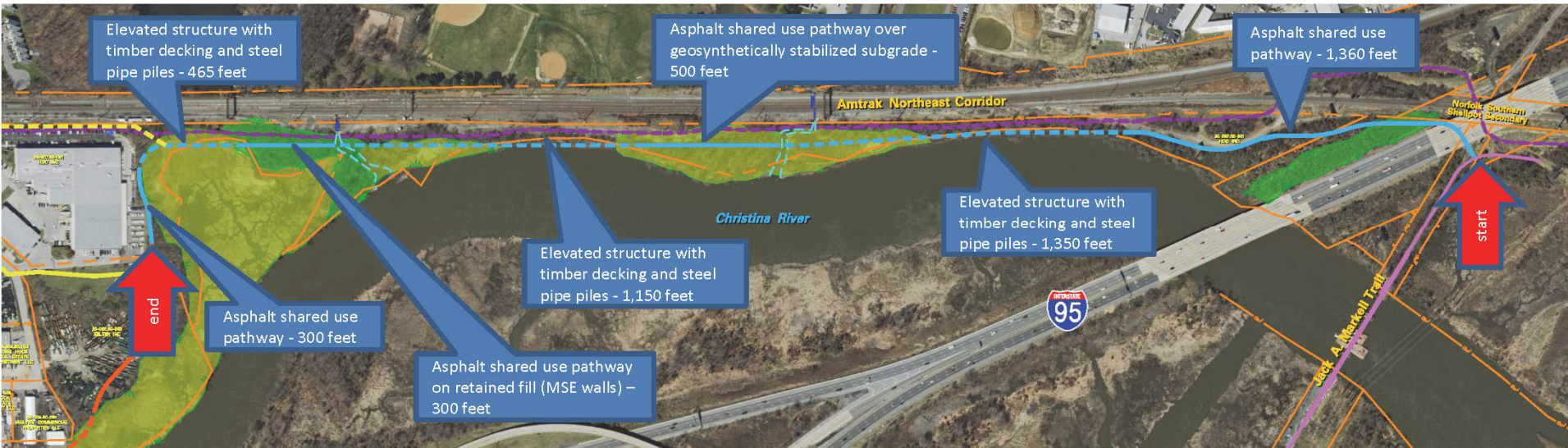
- Property ownership
 - Primarily on privately owned property east of the industrial park
 - Other private properties in the industrial park
 - DeIDOT at the Markell Trail end
 - Town of Newport at the boat ramp or along Water Street
 - Avoids Amtrak/Norfolk Southern properties
 - 40' wide New Castle County Sewer easement

Concept Alignments



- Approximately two miles of shared use path connecting the Jack A. Markell Trail to S. James Street
 - Blue alignment
 - Yellow alignment alternative
 - Orange alignment alternative

Concept Alignments



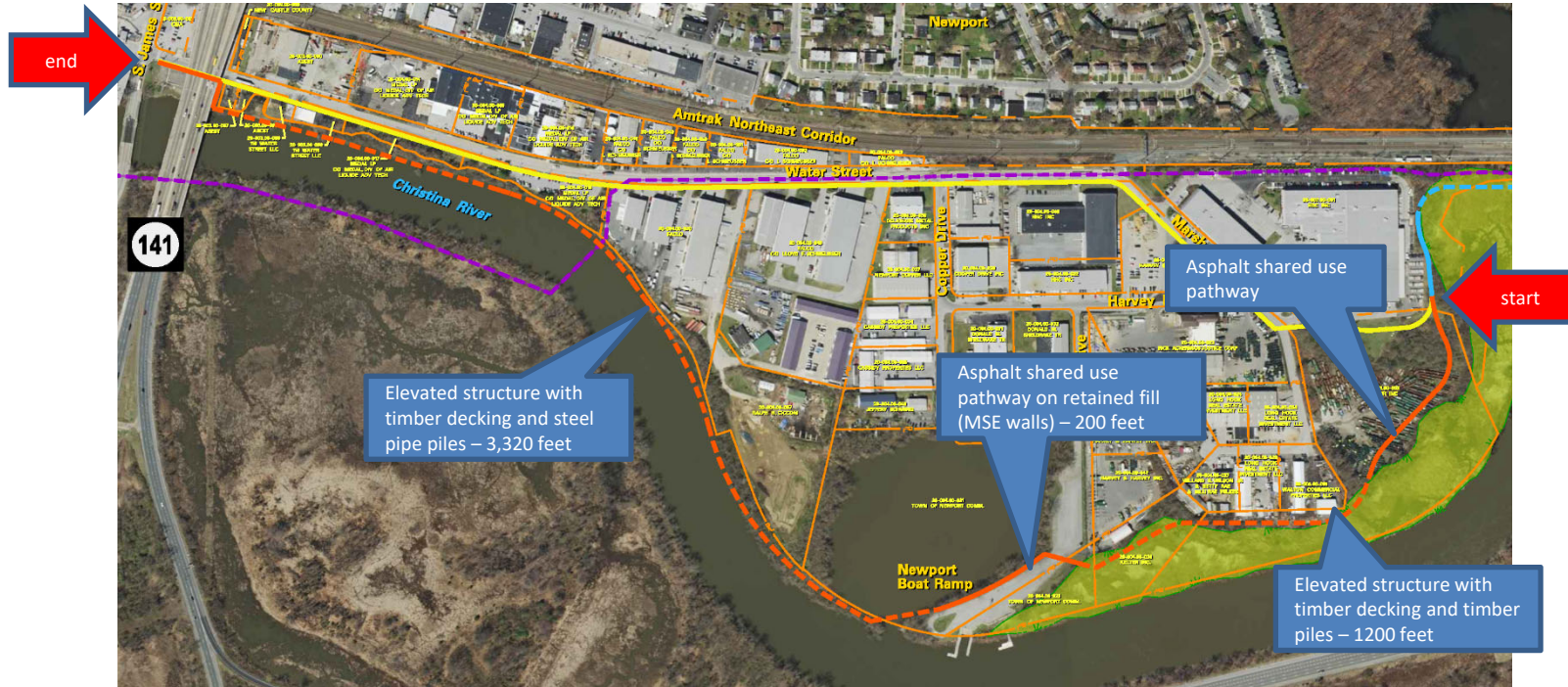
- Blue alignment – approximately one mile
 - Avoids CRFM impacts
 - Significant environmental impacts
 - Contains both paved and on-structure segments

Concept Alignments



- Yellow alignment – approximately one mile
 - Shared use path adjacent to low volume (high truck use) travel lanes
 - Minimal environmental impacts
 - Lower cost
 - Potential for temporary on-road marked facility

Concept Alignments



- Orange alignment – approximately one and a quarter miles
 - Off-road shared use path
 - Mostly on elevated structure
 - Significant environmental impacts
 - Significant cost

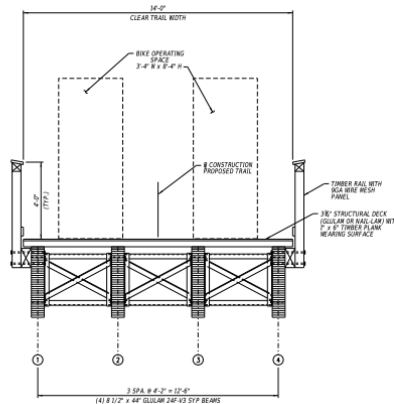
Planning-Level Cost Estimate

- Major cost considerations
 - Design vehicle requirements
 - H-10 Vehicular Load (2009 AASHTO Guide Specifications for Design of Pedestrian Bridges): increased structural capacity and robustness, increased material quantities
 - 14-ft wide trail width: increased material quantities
 - Handrail and protection fencing designs
 - Cost/LF for procurement and fabrication, long term maintenance costs, materials
 - Environmental mitigation costs
 - Construction access
 - Barge construction required (Blue and Orange Alignments in-water), may require Coast Guard Permitting due to stationing within channel and channel width reduction
 - Amtrak haul road access, boat ramp access for material on/off loading
 - Clearance below existing SR141 bridge (Orange Alignment)

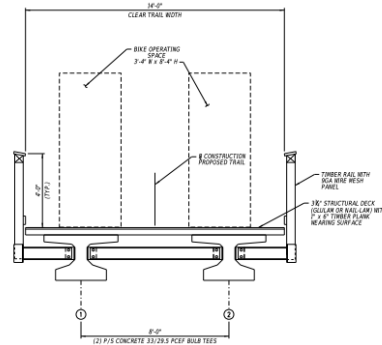
Structure Alternatives

- Structure Alternatives Considered

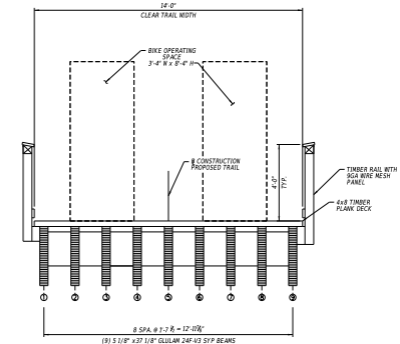
60-ft Span Length Alternatives



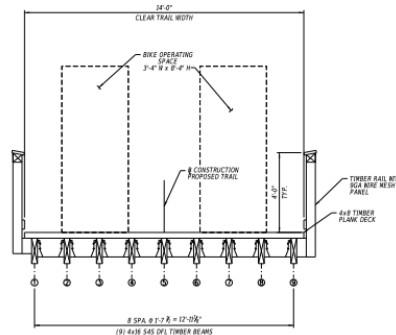
(4) Glulam Beams, Structural Timber Deck, Timber Plank Wearing Surface
Steel Pipe Pile Bent Piers



(2) P/S PCEF Bulb Tees, Structural Timber Deck, Timber Plank Wearing Surface
Steel Pipe Pile Bent Piers



(9) Glulam Beams, Timber Plank Deck
“Boardwalk”
Steel Pipe Pile Bent Piers



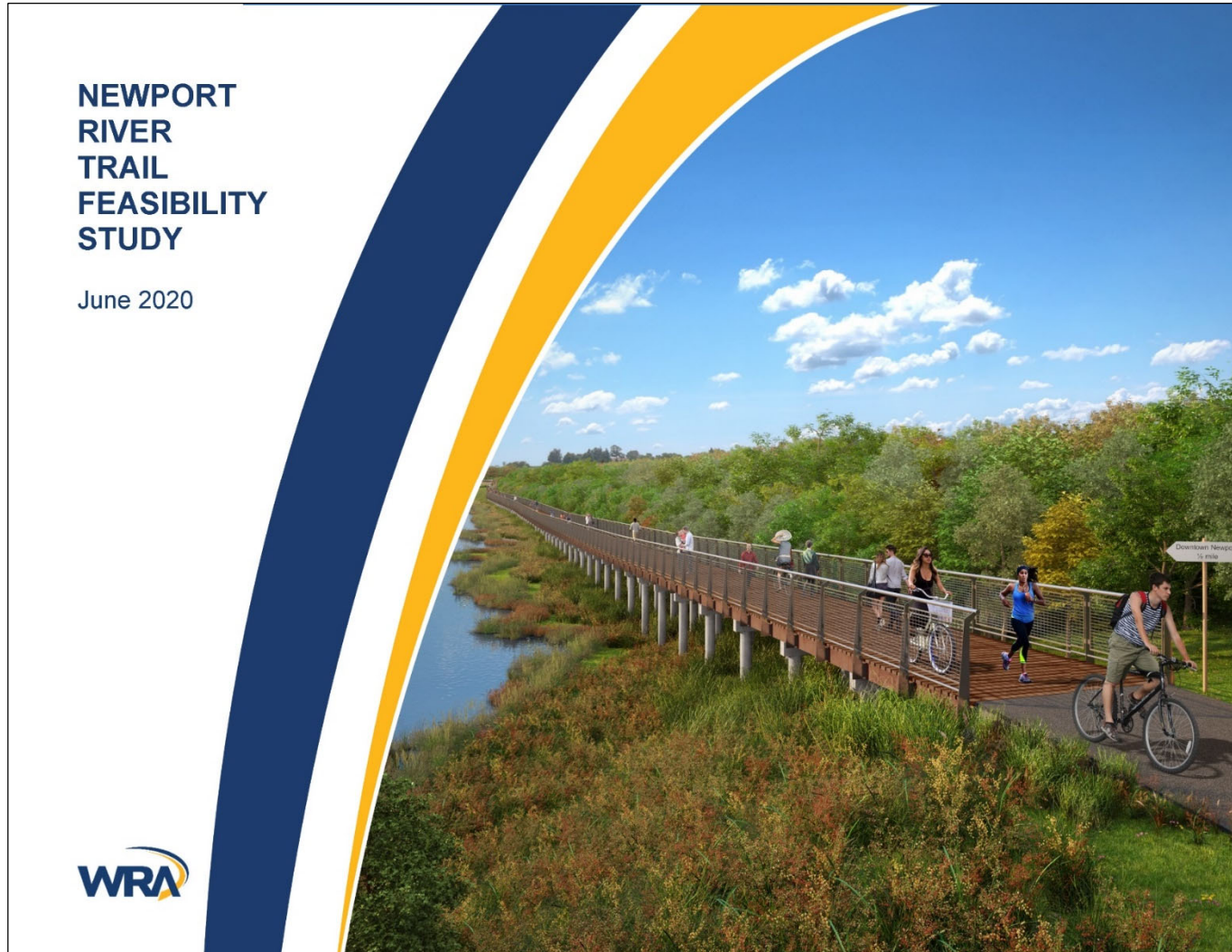
10-ft Span Length Alternatives

(9) Sawn Timber Beams, Timber Plank Deck
“Boardwalk”
Timber Pile Bent Piers

Planning-Level Cost Estimate

- Blue Alignment
About \$18 – \$20 million
- Yellow Alignment Alternative
About \$2 million
- Orange Alignment Alternative
About \$20 – \$25 million

Feasibility study was published in June



Considerations for implementation

- Incorporate project into Town and County comprehensive plans
- Concept development process using current Bond Bill funding
 - Identify responsible parties and organizational dynamics (design, construction, maintenance, and operations)
 - Confirm design criteria and resolve design issues and costs
 - Prepare environmental document and obtain initial approvals
 - Set project up for potential funding
- Identify construction funding
- Phase implementation as needed
- Design the project(s) and obtain permits
- Move forward into construction

Questions?

Jeff Riegner
Whitman, Requardt & Associates, LLP
1013 Centre Road, Suite 302
Wilmington, Delaware 19805
302.571.9001
jriegner@wrallp.com

