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

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Newport River Trail Feasibility Study – August 2020
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 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

NEWPORT RIVER TRAIL FEASIBILITY STUDY

June 2020
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