



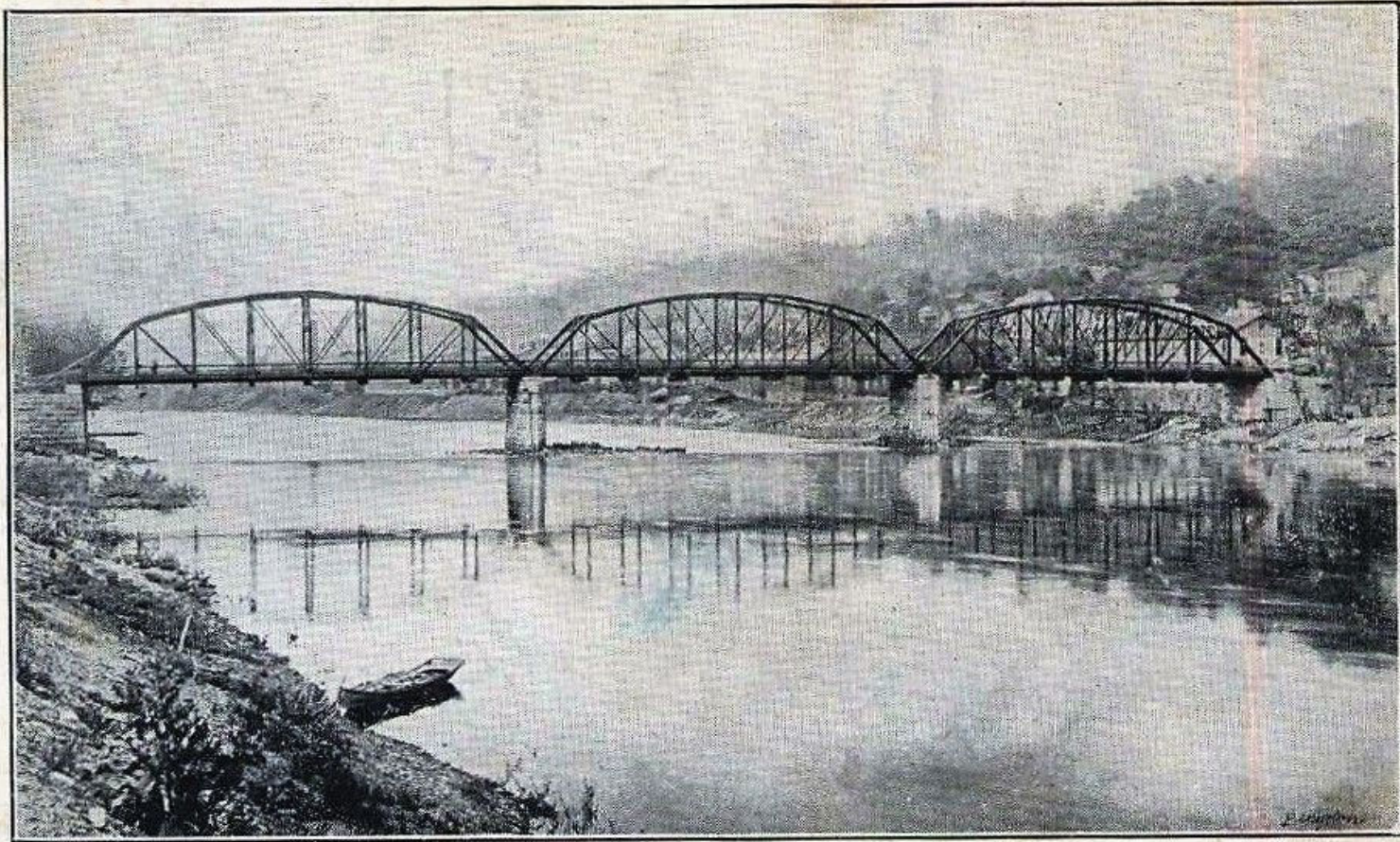
**EXPERIENCE** | Transportation



# WEST NEWTON BRIDGE

*PUBLIC MEETING*  
*PennDOT District 12-0*  
*August 31, 2022*

# HISTORICAL APPEARANCE

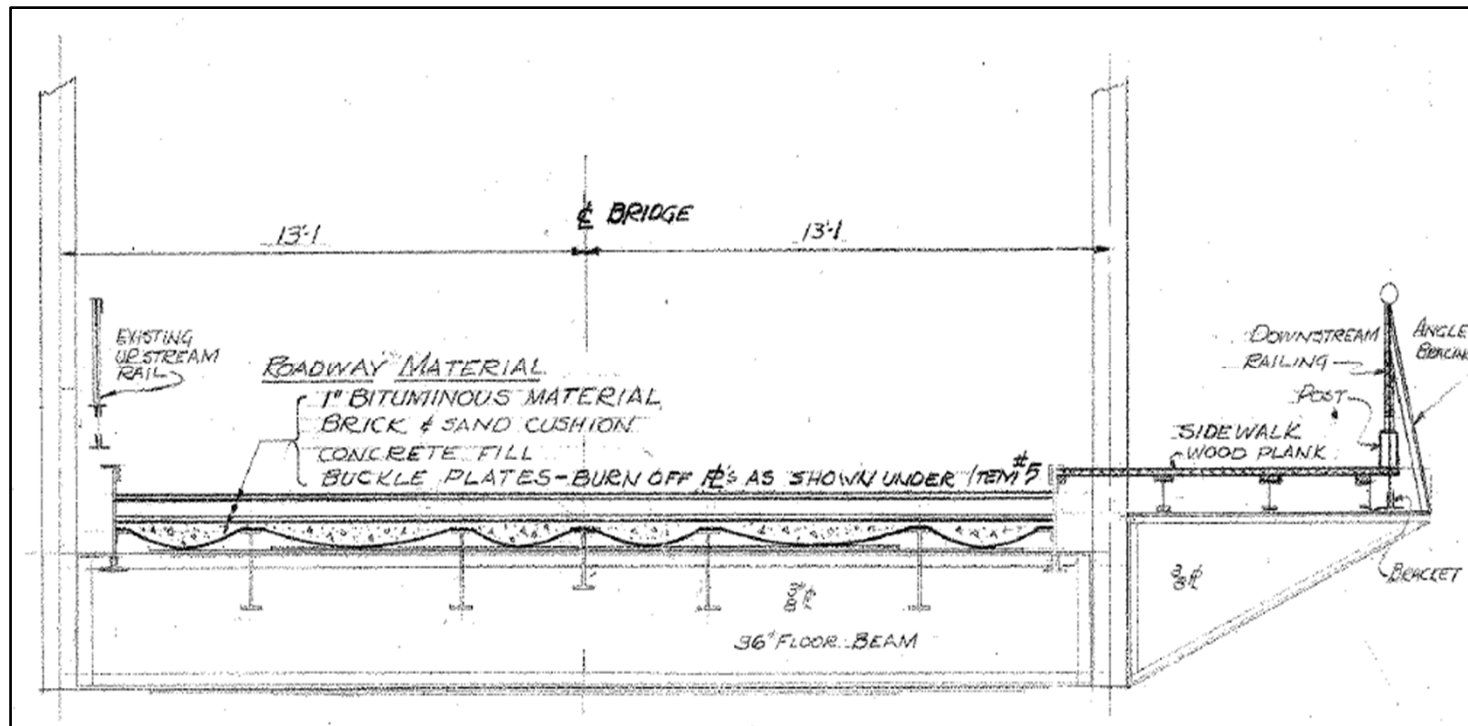


NEW STEEL BRIDGE, WEST NEWTON, PA. DEDICATED JULY 4, 1908

# PROJECT BACKGROUND

## Original Bridge (Built in 1907)

- 3-span Pin Connected Parker Through Truss (each span 160'-0")
- Stone Masonry Abutments and Piers
- Wooden Upstream Sidewalk
- 23'-4" Roadway Width

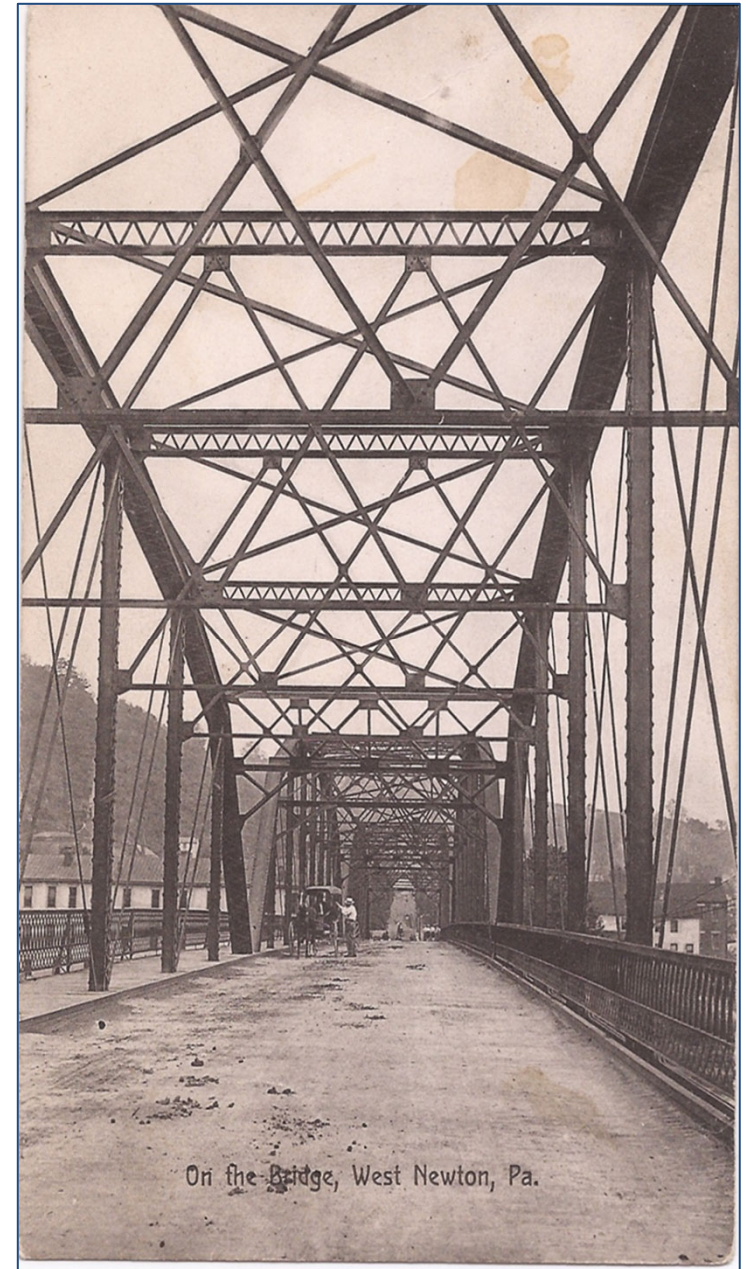




# HISTORICAL APPEARANCE



1930's

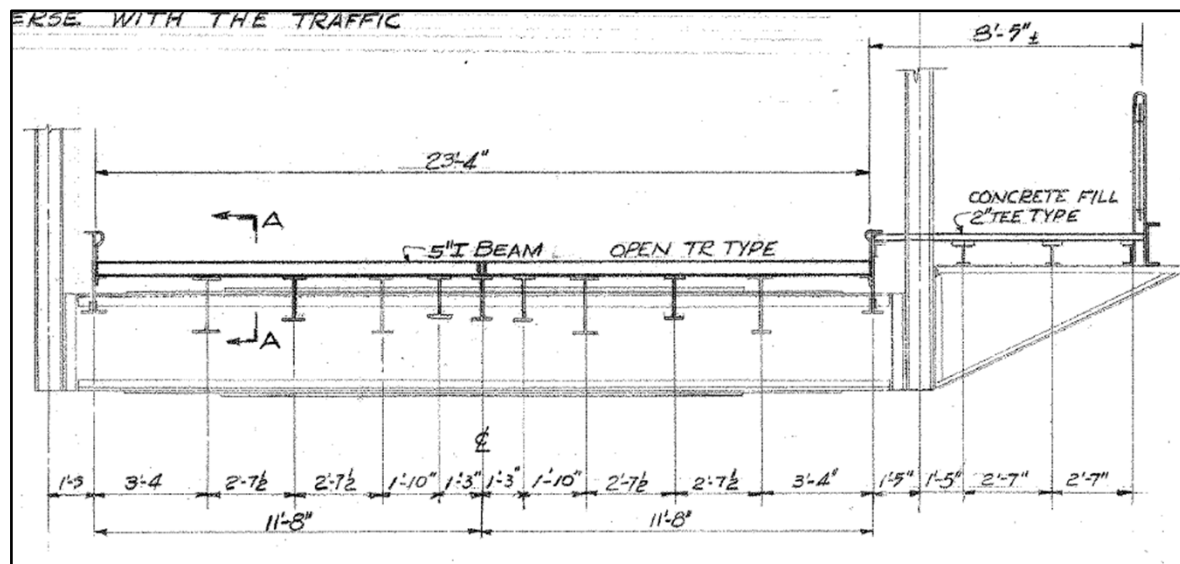




# PROJECT BACKGROUND

## Rehabilitated Bridge (1950's)

- Rehab included:
  - Installation of open steel grid deck and concrete filled steel grid sidewalk
  - Installation of new steel stringers
  - Installation of new pedestrian railing
  - Installation of new vehicular guiderail system
  - Miscellaneous steel repairs
- Maintained 23'-4" roadway width



# HISTORICAL APPEARANCE



1980's



# HISTORICAL APPEARANCE

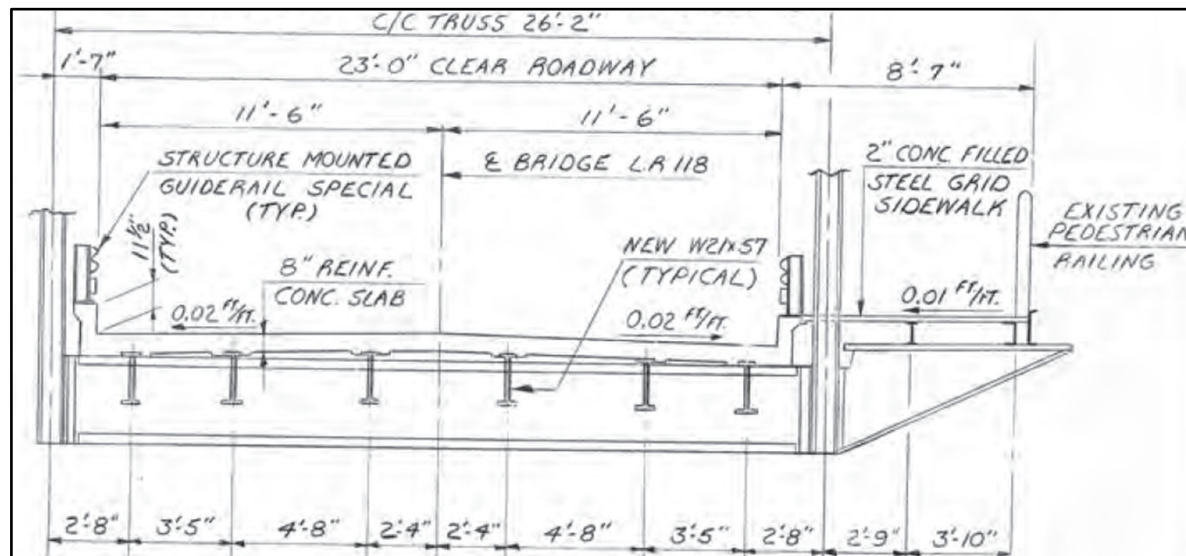


1980's

# PROJECT BACKGROUND

## Rehabilitated Bridge (1980's) - Current Bridge Configuration

- Rehab included:
  - Installation of new concrete deck, concrete filled steel grid sidewalk and vehicular guiderail system
  - Installation of new steel stringers, bearings and concrete pedestals
  - Abutment backwall reconstruction
  - Miscellaneous steel repairs
  - Reuse of existing pedestrian railing system from 1950's rehabilitation
- 23'-0" roadway width





# PROJECT BACKGROUND

## 2010 Preservation Project

### ➤ Rehab included:

- Truss Zone Painting
- Miscellaneous Steel Repairs
- Removal of Welded Brackets

### ➤ Deck Repairs

### ➤ Expansion Joint Replacement

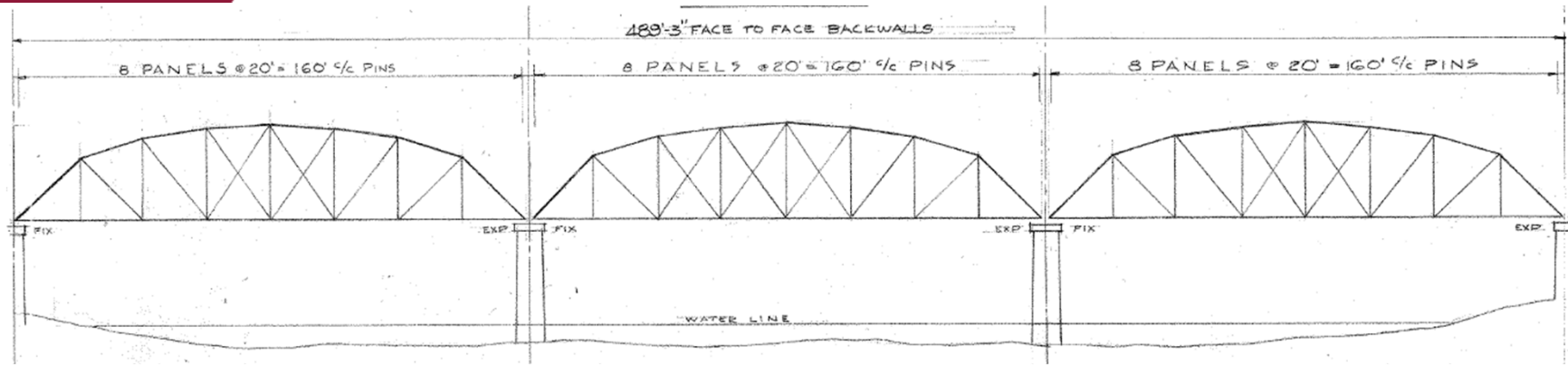
### ➤ Emergency Repairs

- Truss Diagonal & Vertical Member Repairs
- Bridge was Closed and Traffic was Detoured During Construction
- Long Detour Impacted Borough and Local Businesses



Diagonal Member Retrofit

# ORIGINAL BRIDGE ELEVATION



CURRENT UPSTREAM ELEVATION



CURRENT DOWNSTREAM ELEVATION



## SECTION 106 PROCESS

### ➤ **ProjectPATH** ([projectpath.org](http://projectpath.org))

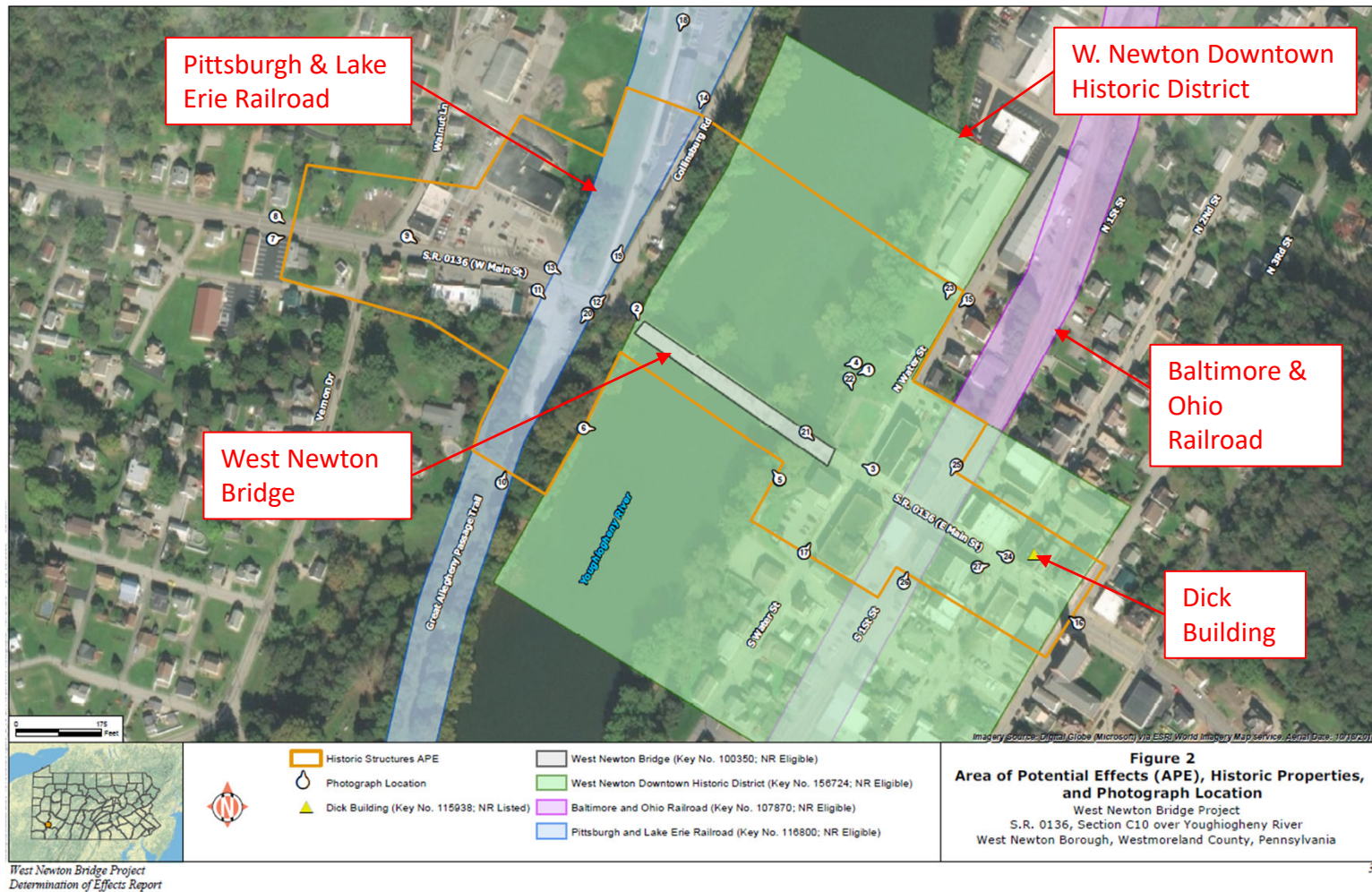
- Project Purpose & Need (8/18)
- APE (9/18)
- Historic Bridge Rehabilitation Analysis (HBRA) (10/18)
- Determination of Effects (2/21)
- Consulting Party Meeting Minutes  
CP Mtg #1 (4/21)

### ➤ **Summary of Effects**

- West Newton Bridge – No Adverse Effect
- Pittsburgh & Lake Erie Railroad – No Effect
- West Newton Downtown Historic District – No Adverse Effect
- Baltimore & Ohio Railroad – No Effect
- Dick Building – No Effect

### ➤ **SHPO Concurrence (8/21)**

# SECTION 106 PROCESS





# ENVIRONMENTAL PROCESS

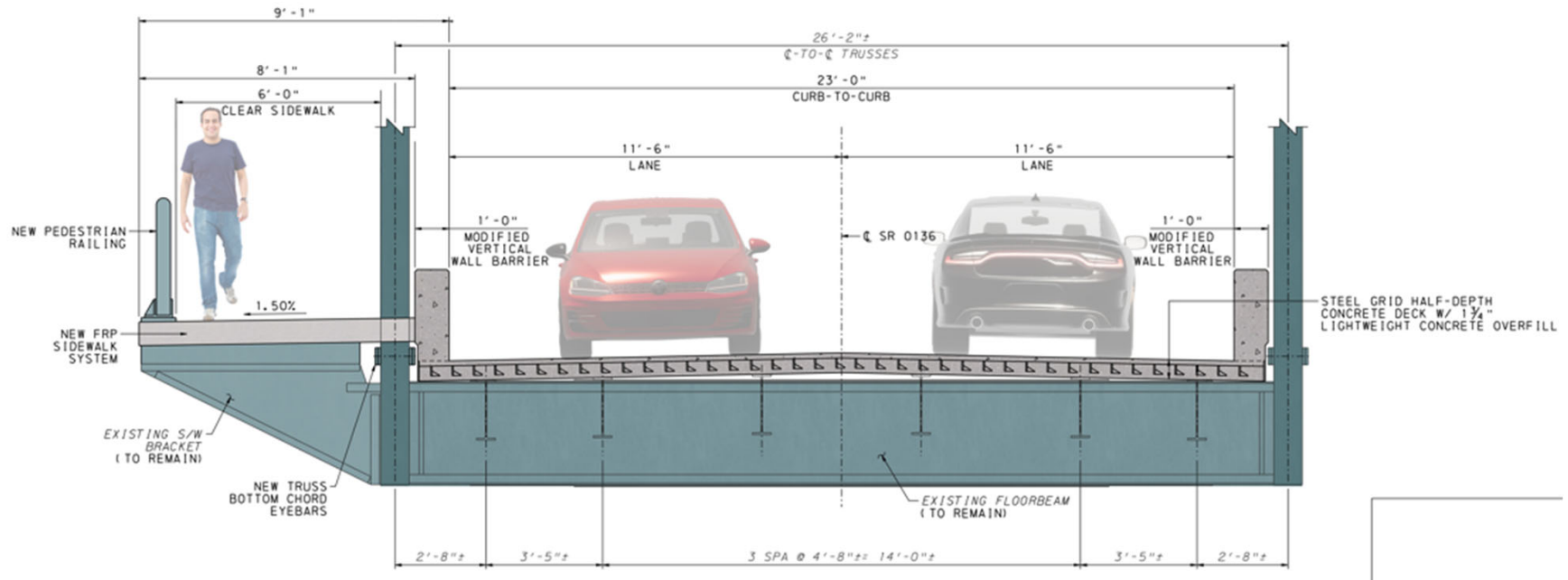
## ➤ **4(F) CHECKLISTS**

- Historic:
  - West Newton Bridge
  - West Newton Downtown Historic District
  - Pittsburgh and Lake Erie Railroad
  - Baltimore and Ohio Railroad
  - Dick Building
- Recreational:
  - Great Allegheny Passage
  - Youghiogheny River Trail
    - Aid to Navigation Plan

## ➤ **CEE DOCUMENT**

- Public Meeting
- Complete 4(f) Checklists
- Complete CE Documents in Expert Systems
- Anticipated CE Approval - Early 2023

# RECOMMENDED ALTERNATIVE

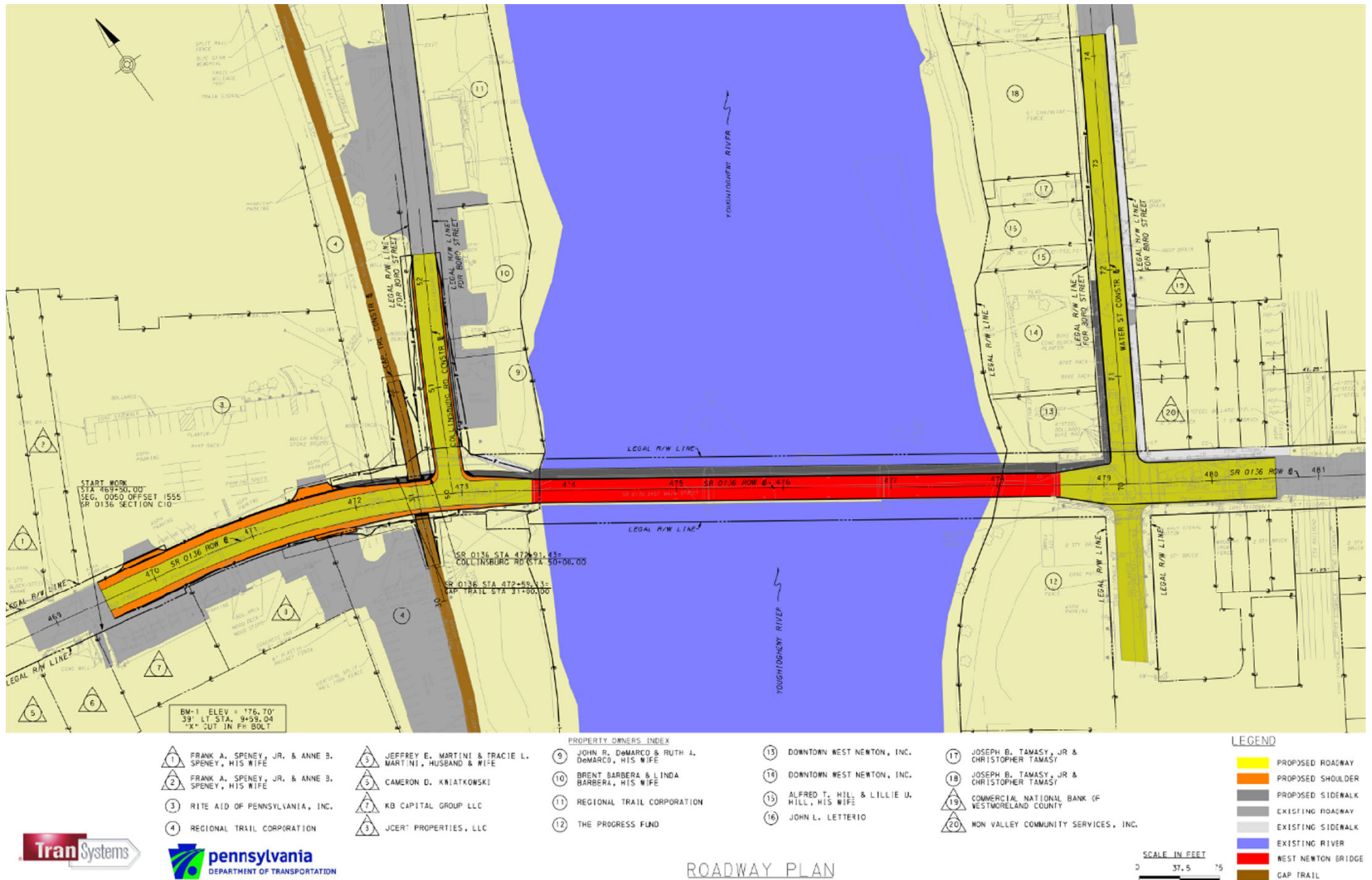


- New deck and sidewalk
  - 23'-0" Curb-to-Curb (same as existing)
  - 6'-0" Sidewalk
  - New Pedestrian Railing

- Replace downstream truss bottom chord
- Miscellaneous steel repairs
- New bridge bearings







# SITE PLAN





## MAINTENANCE AND PROTECTION OF TRAFFIC (MPT)

- Bridge will be closed during rehabilitation
- PennDOT and TranSystems detour and temporary bridge structure.
- Based on Life Cycle Cost Analysis, which included Road User's Liquidated Damages (RULD), and lessons learned during 2010 preservation project, PennDOT decided to use Temporary Bridge.
- The temporary bridge will feature two 12'-0" lanes and one 5'-0" sidewalk to carry both vehicular and pedestrian traffic.



# COLLINSBURG ROAD INTERSECTION





# GAP TRAIL CROSSING



(LOOKING NORTH)

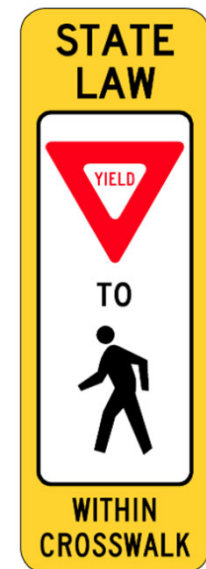


(LOOKING SOUTH)

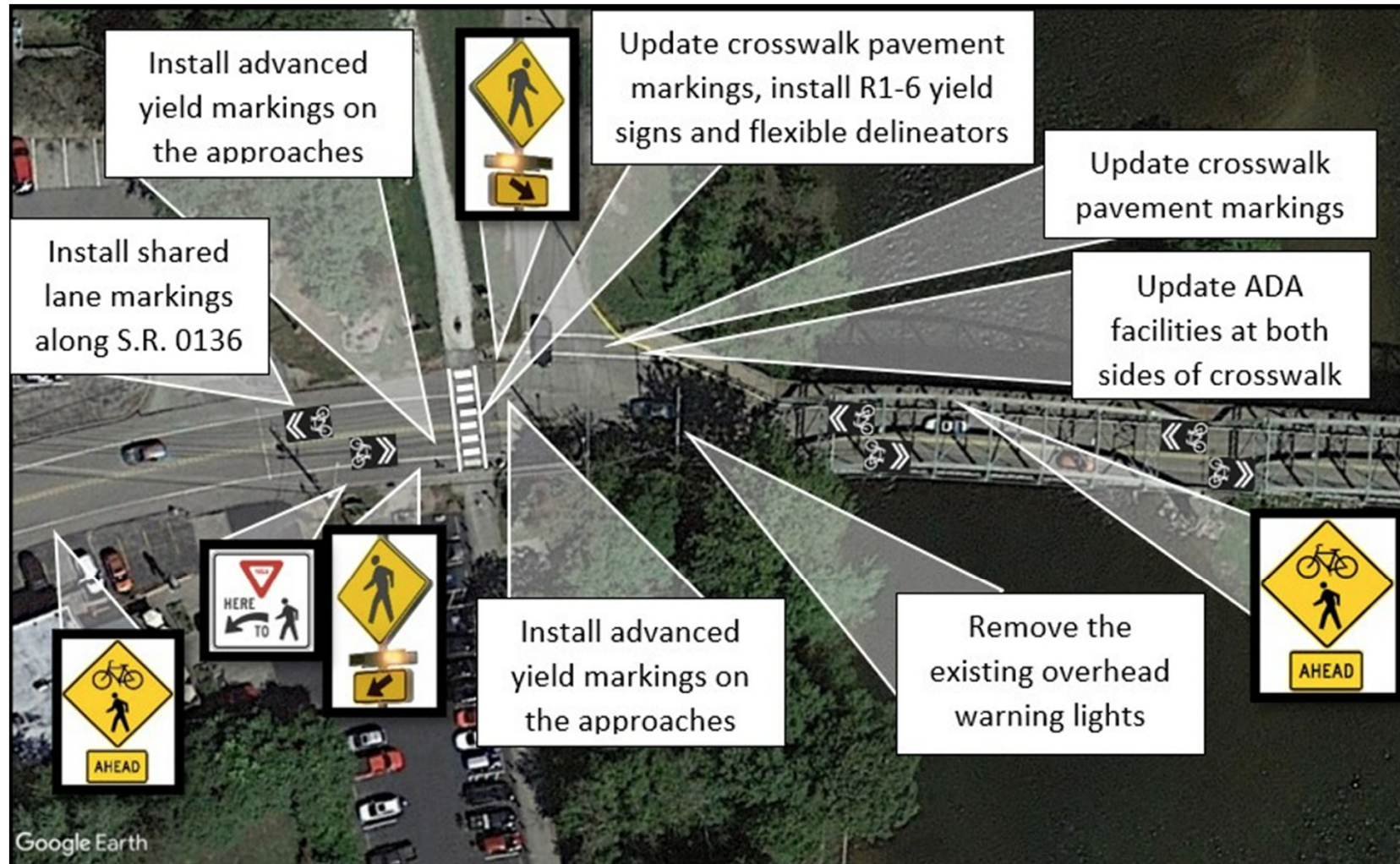


## GAP TRAIL CROSSING

- Advanced bicycle signage and shared lane markings
- Advanced yield markings / yield signs
- Rectangular Rapid Flashing Beacons (RRFBs) on each shoulder
- Updated crosswalk pavement markings and ADA facilities
- Gateway Treatments (RI-6 yield signs)
- Flexible Delineator Posts between travel lanes



# GAP TRAIL CROSSING





# WATER STREET INTERSECTION



(LOOKING NORTH)



(LOOKING SOUTH)



# SIMERAL SQUARE



## UTILITIES

- First Energy (Electric) – Relocation
- Comcast (Cable) – Relocation
- West Newton Borough (Bridge Lighting) – Relocation
- Verizon (Communication) – Potential Impacts and Relocation
- Columbia Gas (Gas)
- Lumen (Communication)
- DQE Communications (Communication)
- Crown Castle (Communication)
- Westmoreland County Municipal Authority (Sewage)
- **Utility Field Meeting Anticipated for fall 2022**