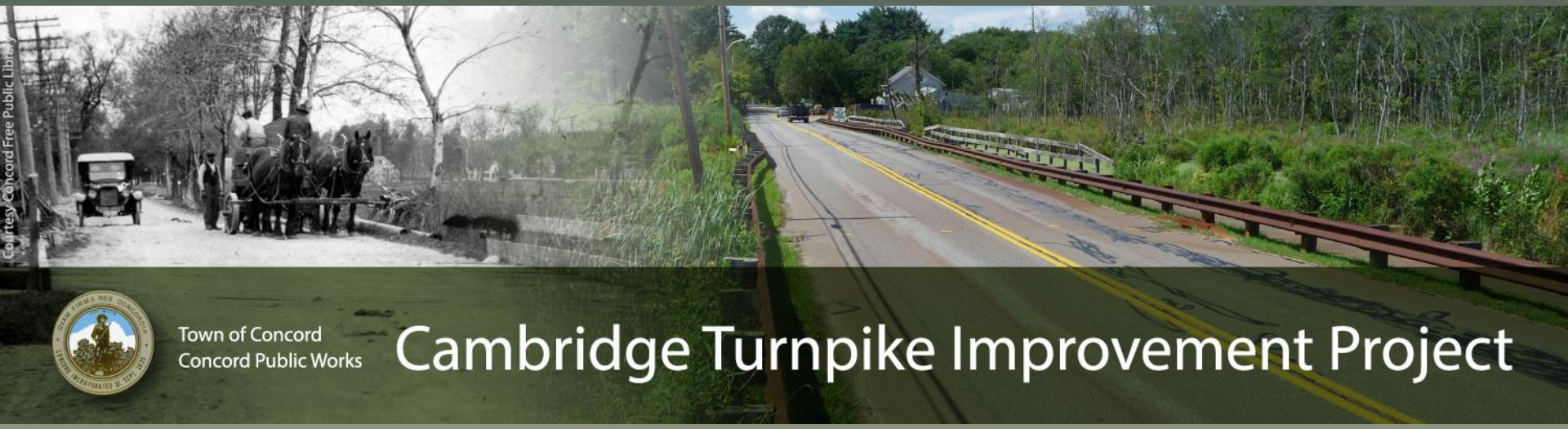
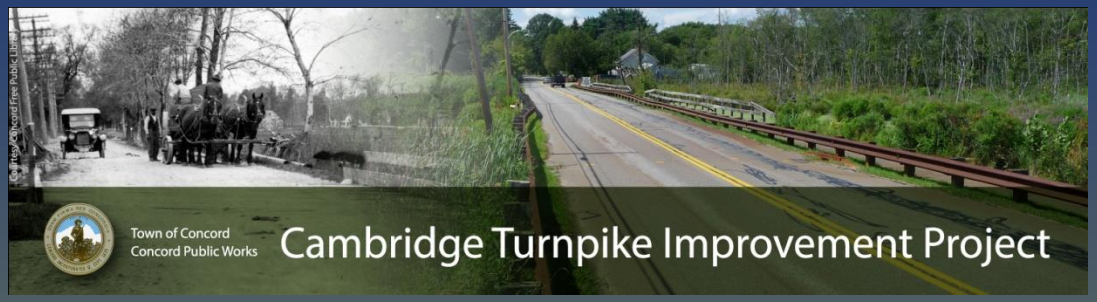
PUBLIC WORKS COMMISSION

NOVEMBER 9, 2016



PUBLIC INFORMATIONAL MEETING



INTRODUCTIONS

Town of Concord Public Works:

Richard K. Reine, PWLF – Director, Public Works

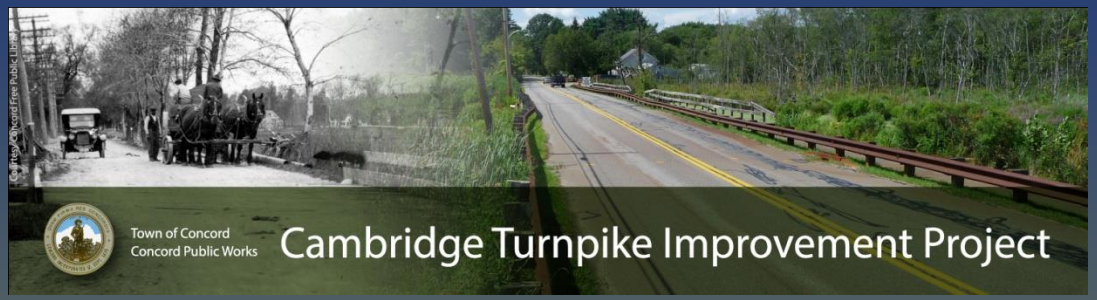
Bill Renault, P.E. – Town Engineer

CMA Engineers , Inc :

Bill Straub, P.E. – Principal/Project Manager

Jason Gallant, P.E. – Design Manager

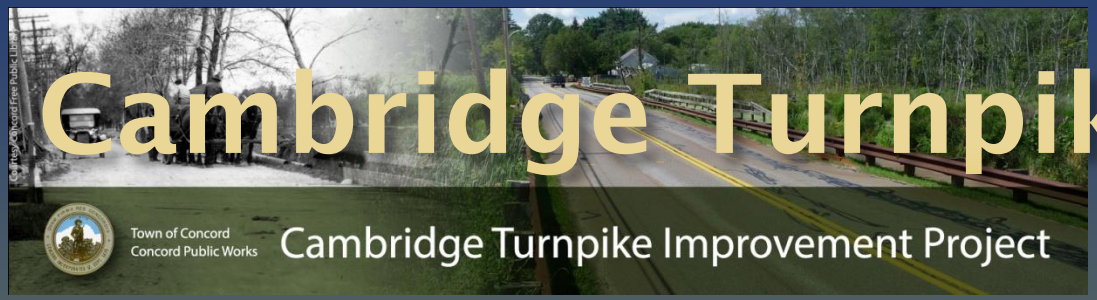
Phil Corbett, P.E. – Lead Civil Engineer



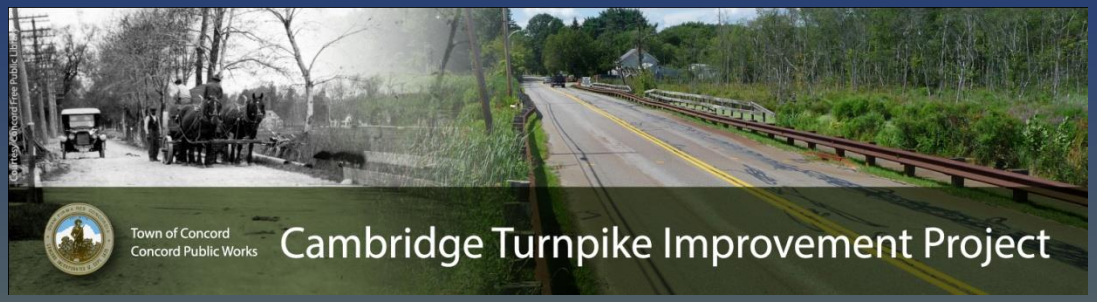
Topics this evening

- Background of project
- Design and development process
- Community issues of concern
- Flooding issue
- Geotechnical challenges and resulting structural solutions
- Roadway design- Typical and at specific locations
- Traffic management during construction
- Next steps

Cambridge Turnpike Corridor

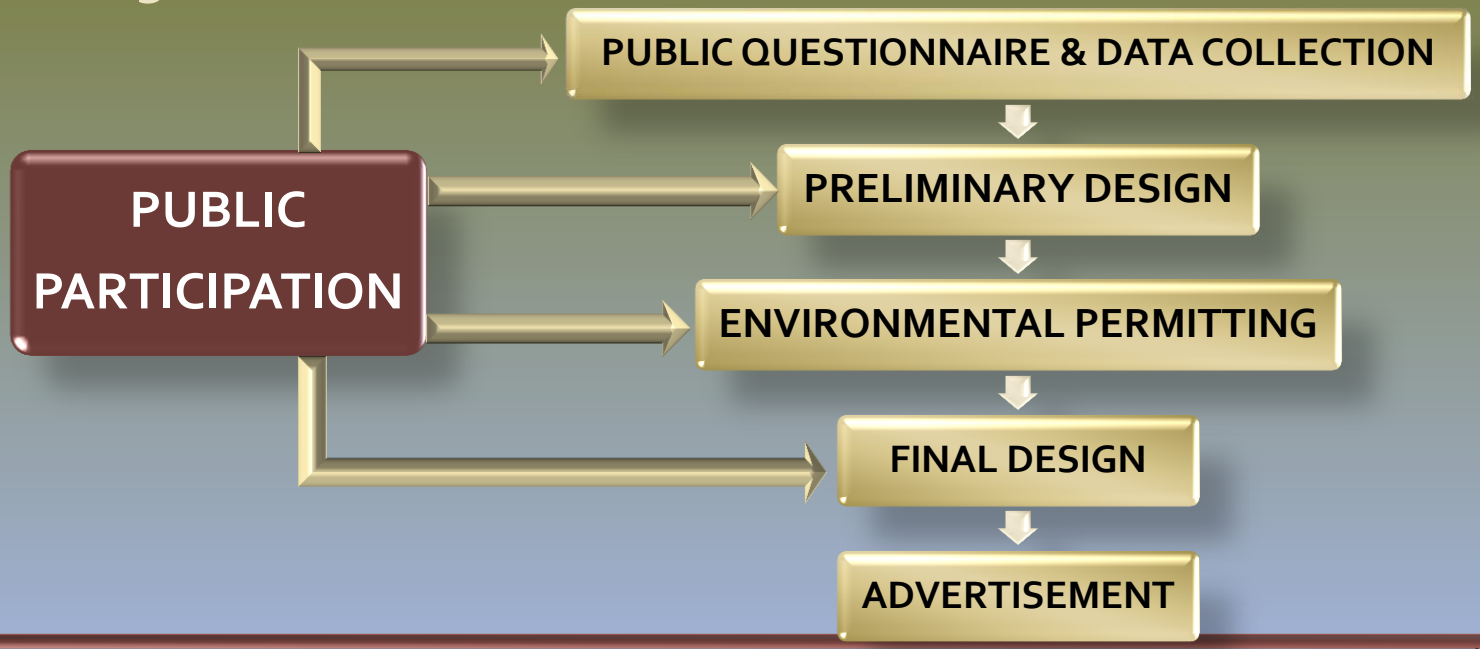


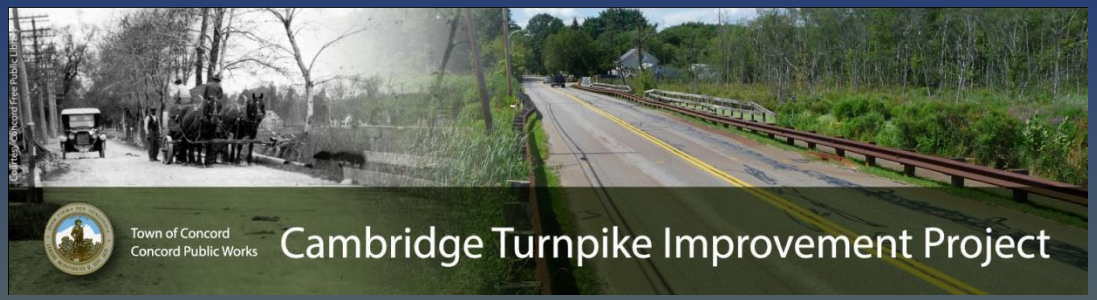
6,600 feet from Lexington Road to Crosby's Corner (Rtes 2 and 2A)



DESIGN PROCESS

- Public Input
- Design Considerations
- Project Design Process



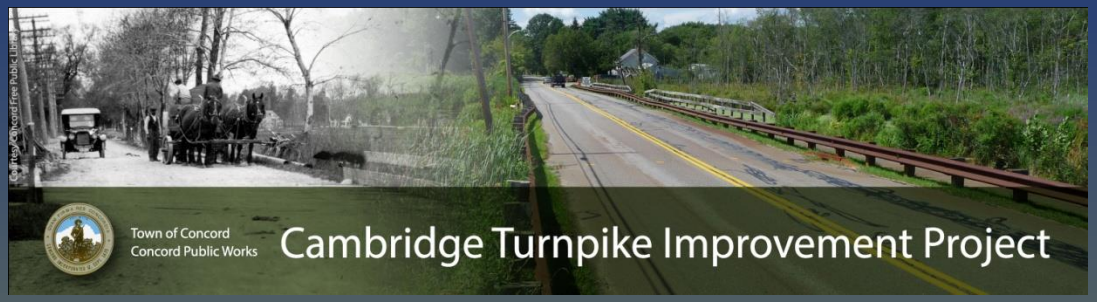


REVIEW OF COMMUNITY QUESTIONNAIRE RESULTS CARRIED INTO DESIGN PROCESS:

- All issues rated above 6 (10 = extremely important)

Ratings:

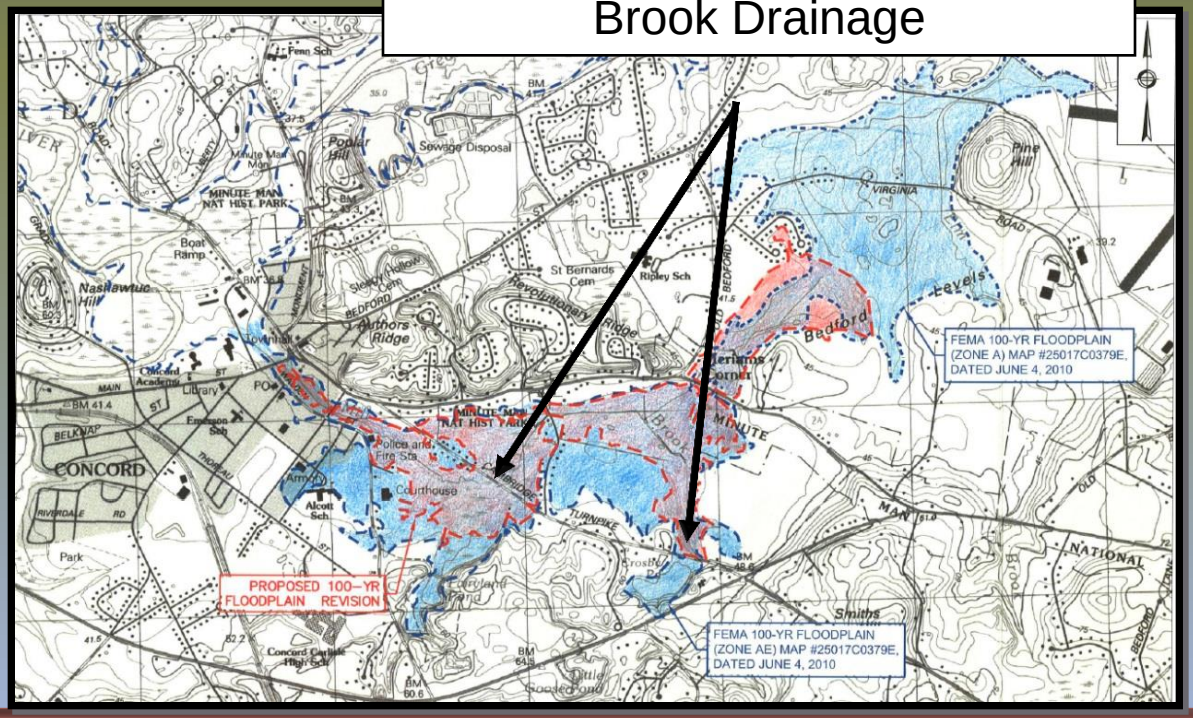
- Flooding
- Traffic congestion (intersections)
- Traffic safety & speed
- Pedestrian accommodations
- Sustainable infrastructure
- Project Aesthetics
- Wetlands & wildlife protection
- Community character
- Existing roadway width
- Historic resources
- Bike accommodations

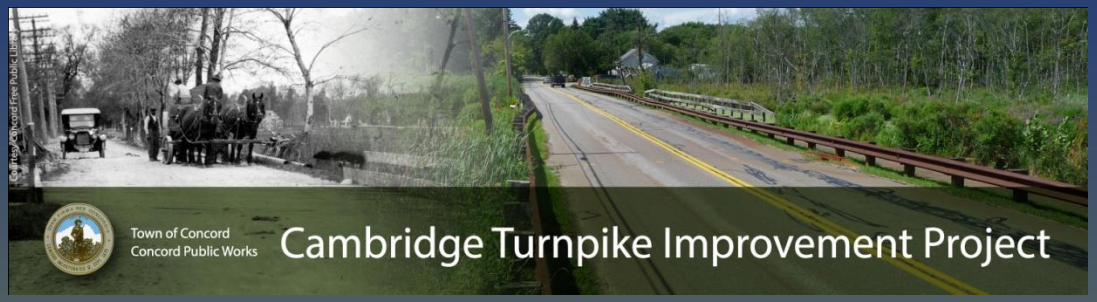


- # Flooding is central issue

FEMA modified 100-yr Flood Levels in 2015
Raise roadway profile
Increase waterway openings

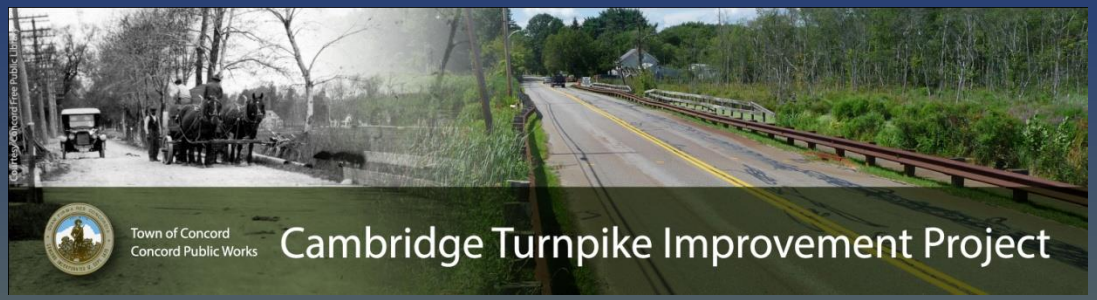
Cambridge Turnpike crosses Mill Brook Drainage





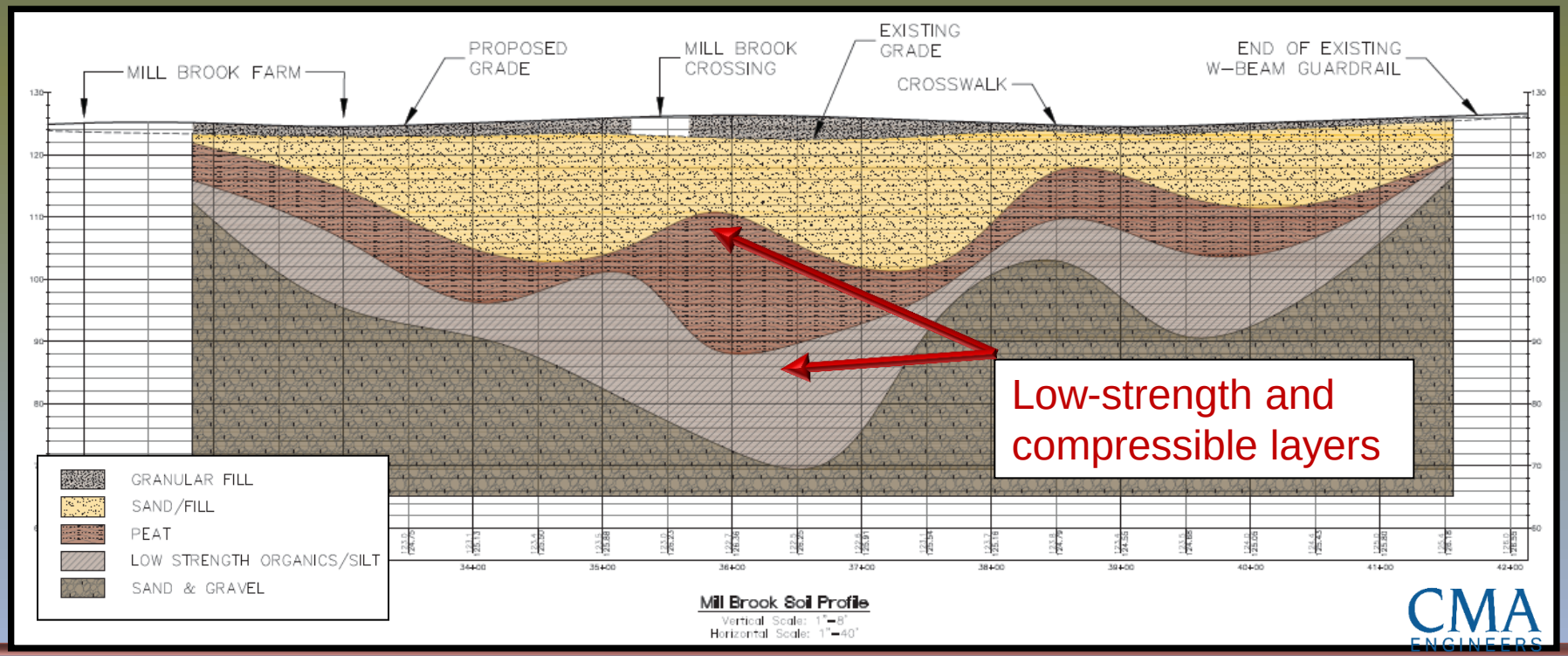
Marsh Crossings and Bridges

- **Geotechnical challenges at marsh crossings**
  - At both west and east ends of the project – 1,400 linear feet
  - Large thicknesses of low-strength materials
  - Compressible peat and organics/silts
  - Engineered systems necessary to support structures and manage settlement

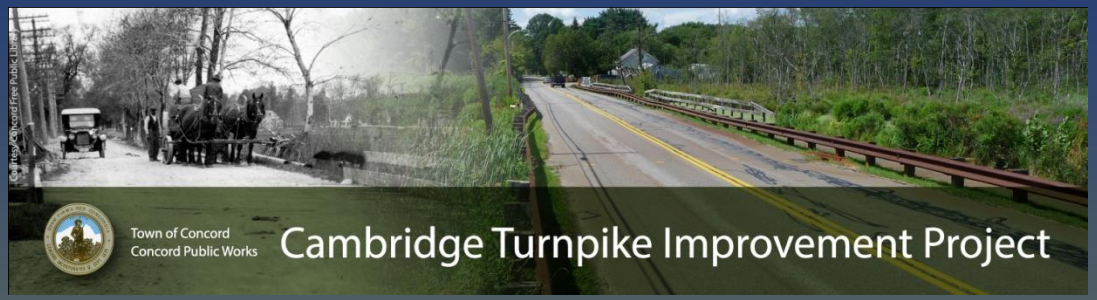


Marsh Crossings and Bridges

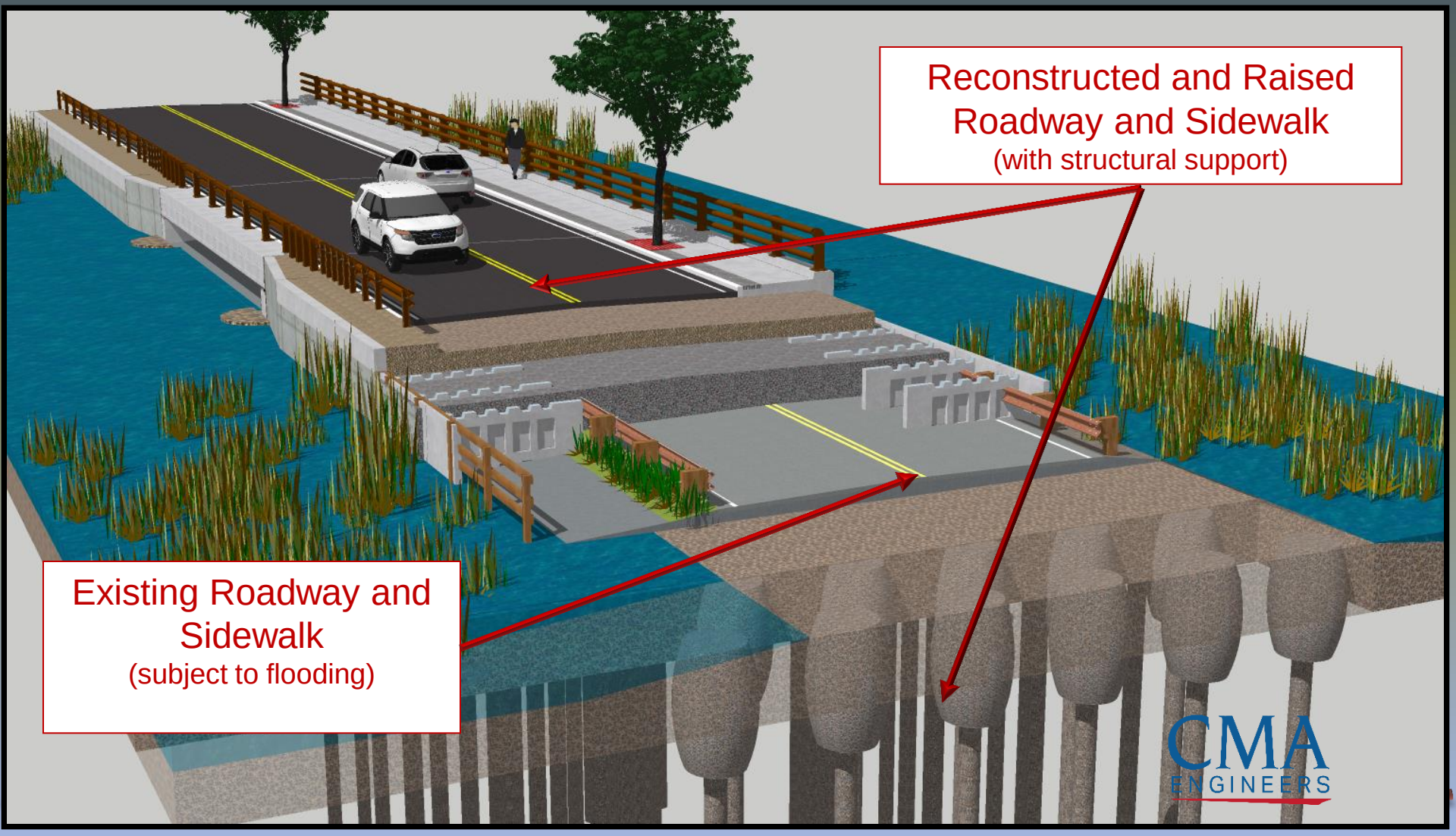
Geotechnical challenges

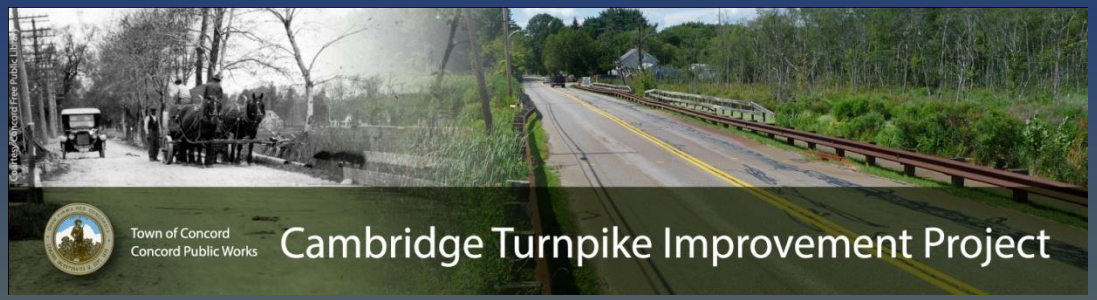


CMA ENGINEERS



Marsh Crossings and Bridges

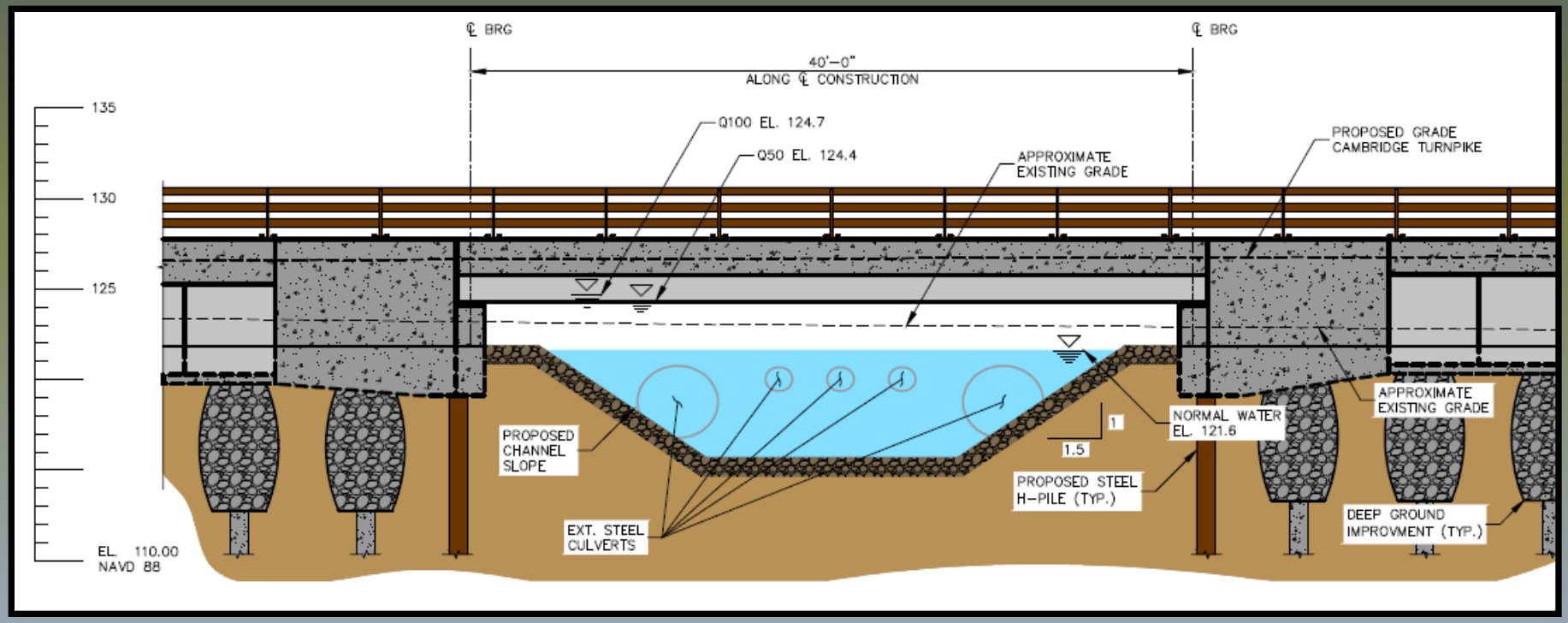




Marsh Crossings and Bridges

Supported over compressible soils

Preferred System - Bridge at West end



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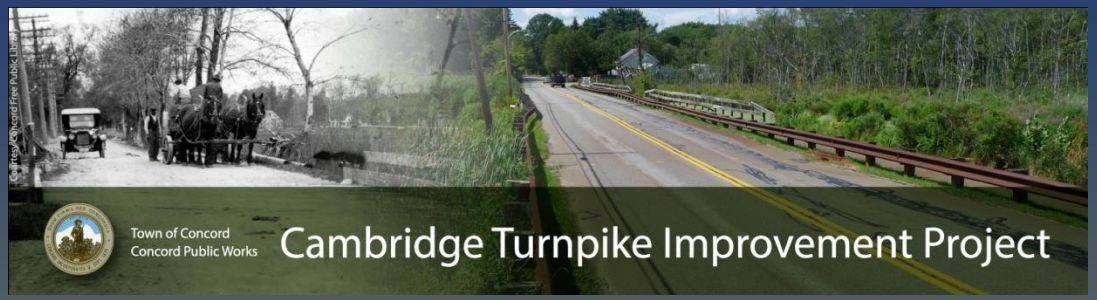
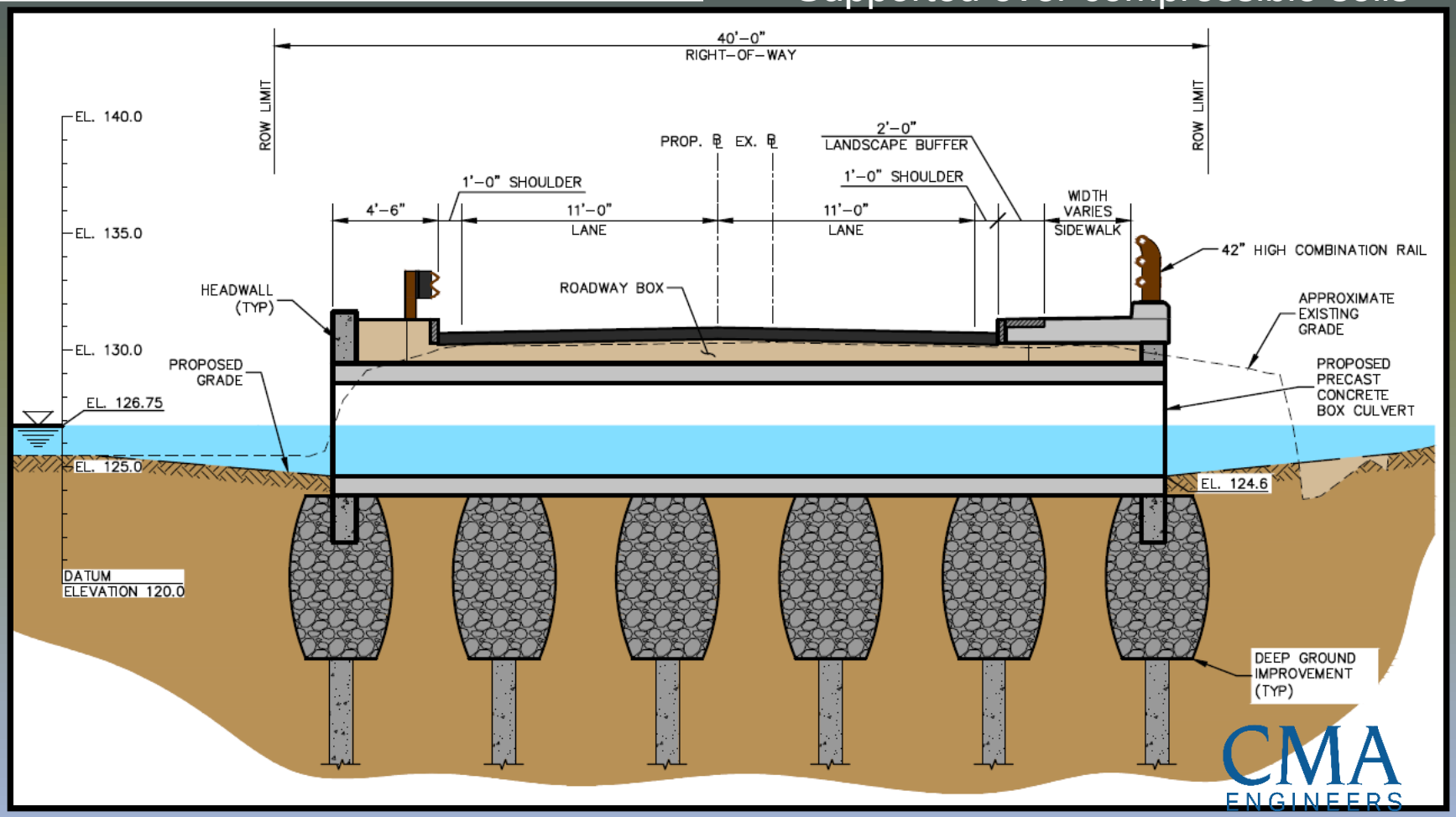


Marsh Crossings and Bridges

Preferred System - Culverts at East end

Supported over compressible soils



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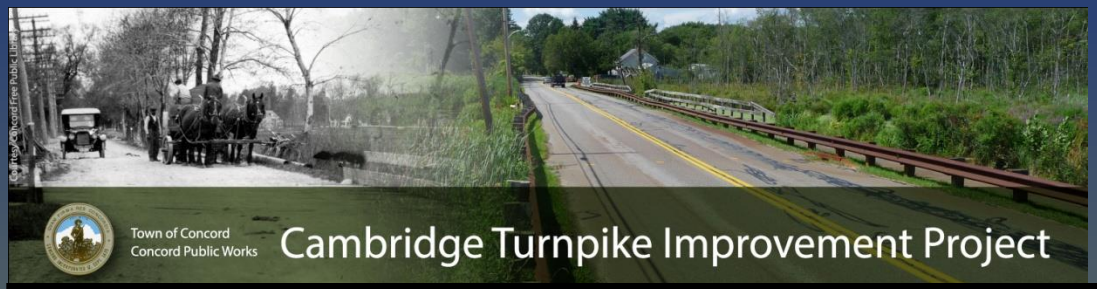
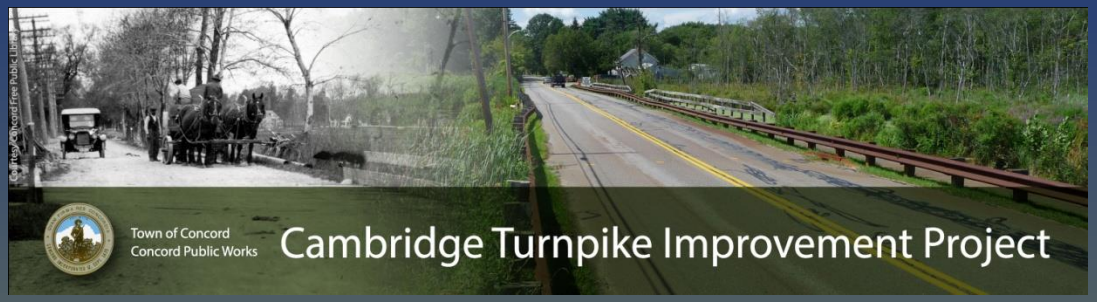


Marsh Crossings and Bridges

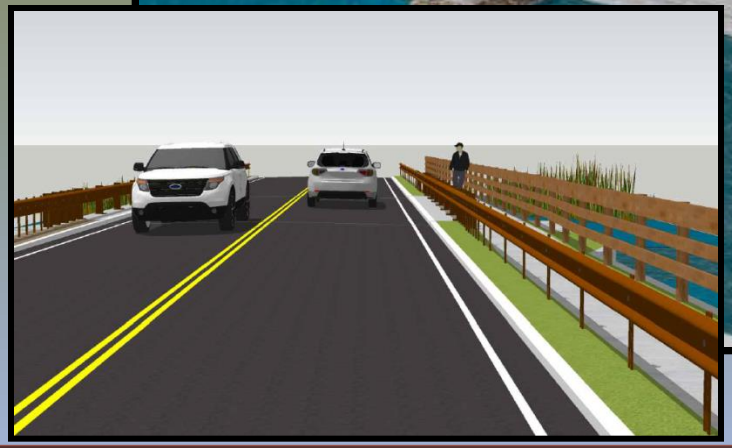
Preferred Alternative

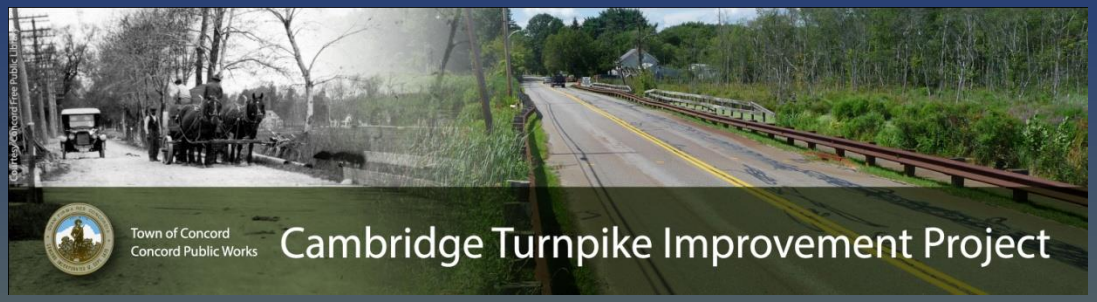
Preferred Bridge Rail at Monument Street



Marsh Crossings and Bridges

Value Engineered System- if required

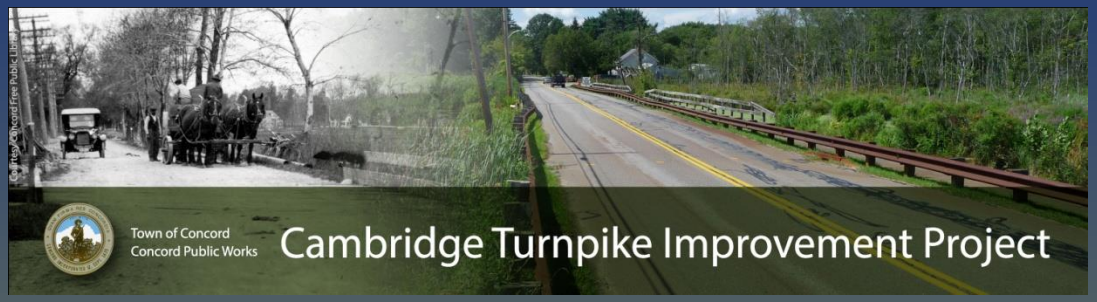




Roadway Design

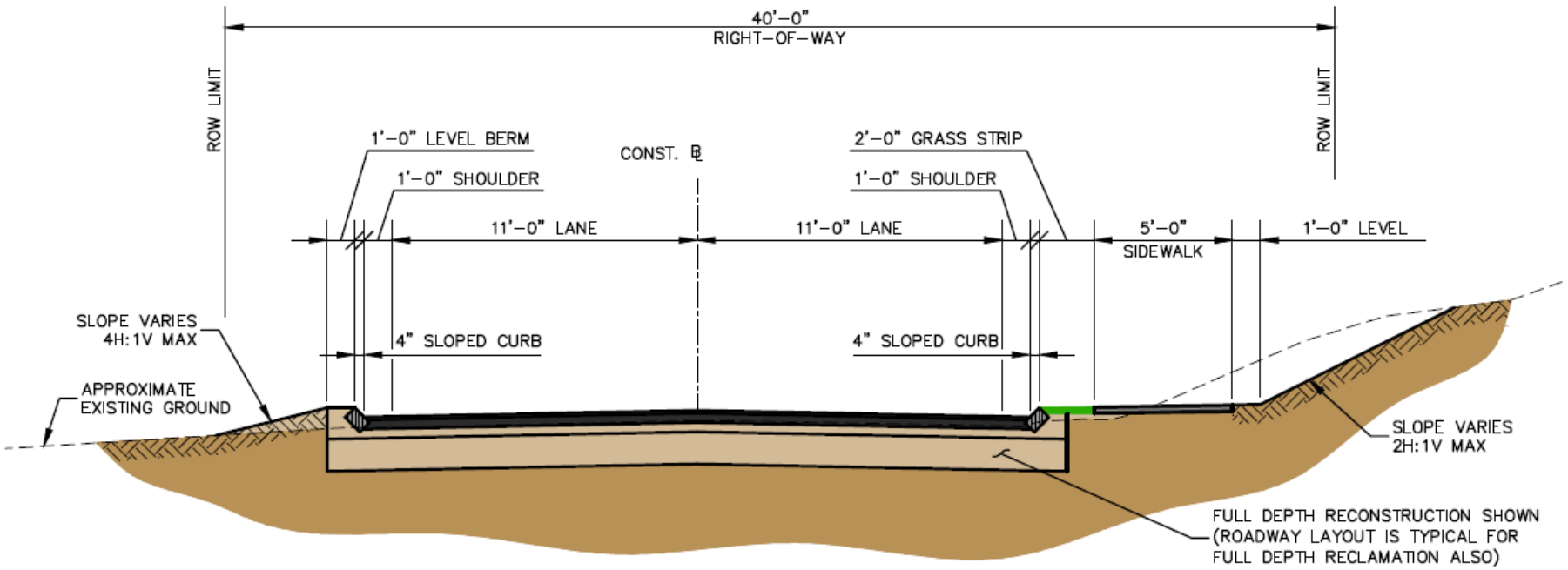
Traffic Congestion, Safety and Speed

- Typical roadway section
- Sidewalks entire corridor on South Side
- Cambridge Turnpike/Lexington Road intersection
- Area by Farm Stand
- Hawthorne/ Mildred Intersection
- Sandy Pond Intersection



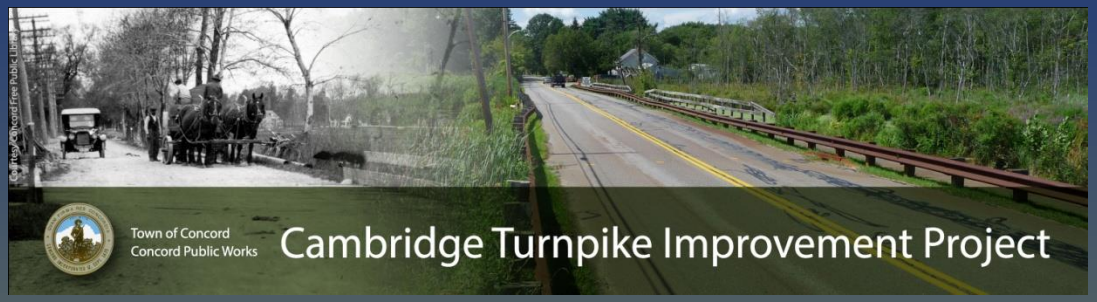
Roadway Design

Typical roadway section

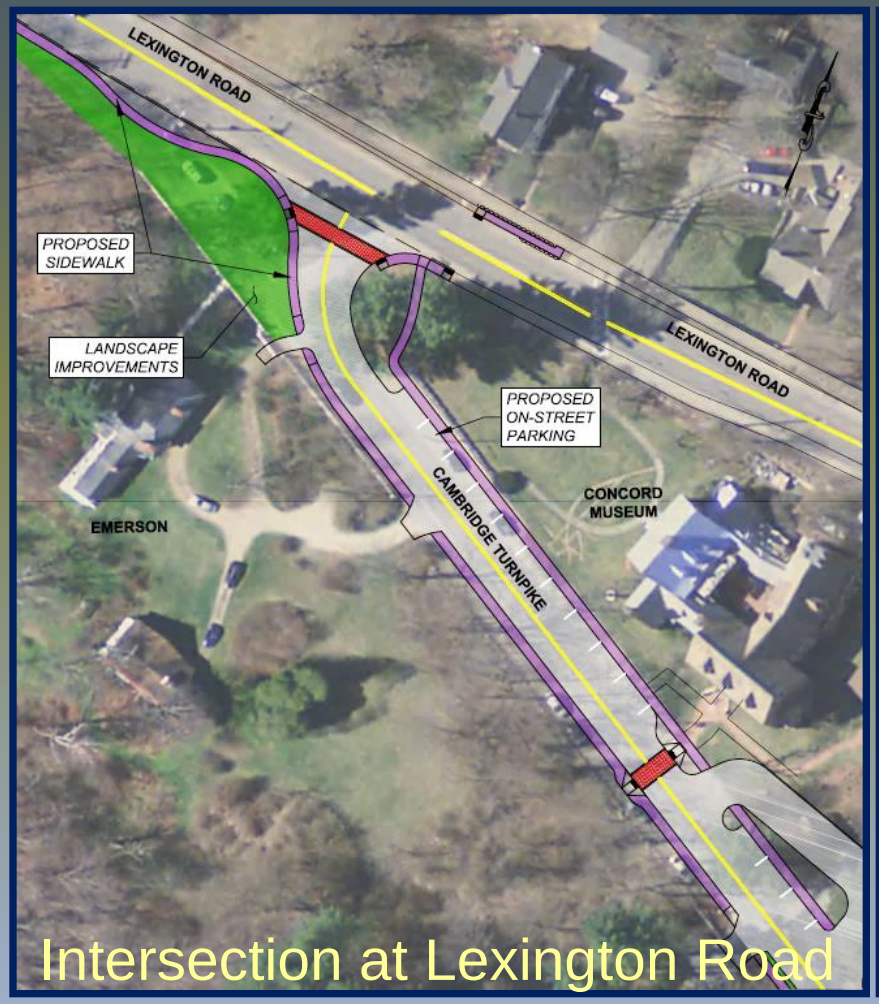


Typical Roadway Section

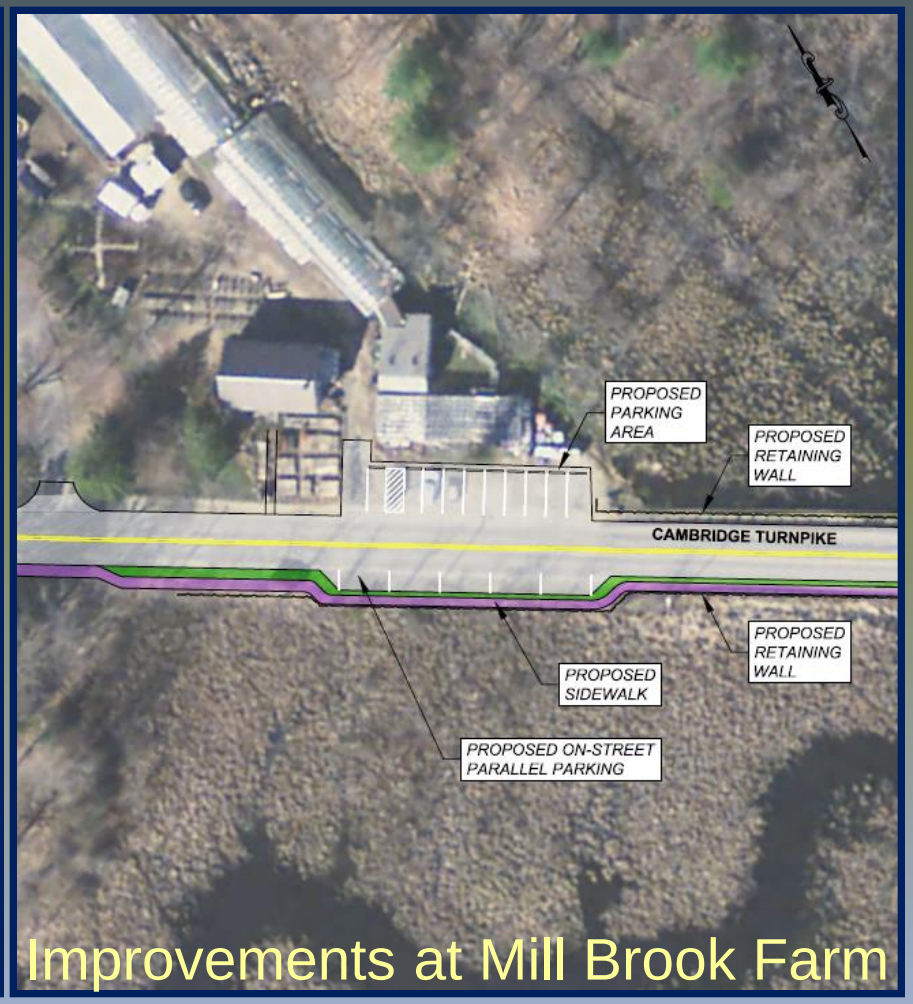
CMA ENGINEERS



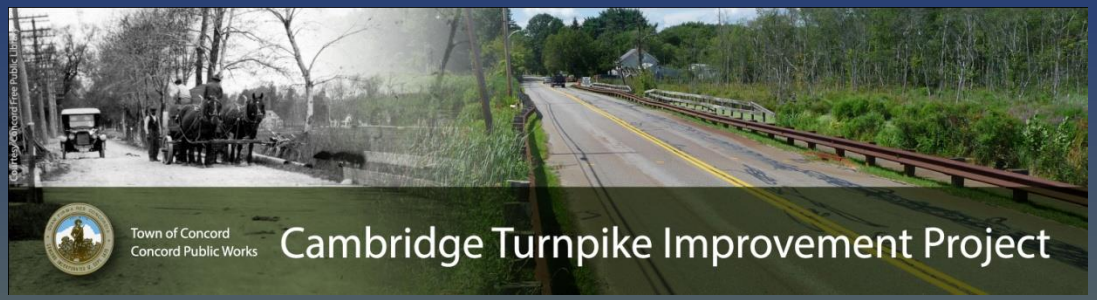
Roadway Design



Intersection at Lexington Road

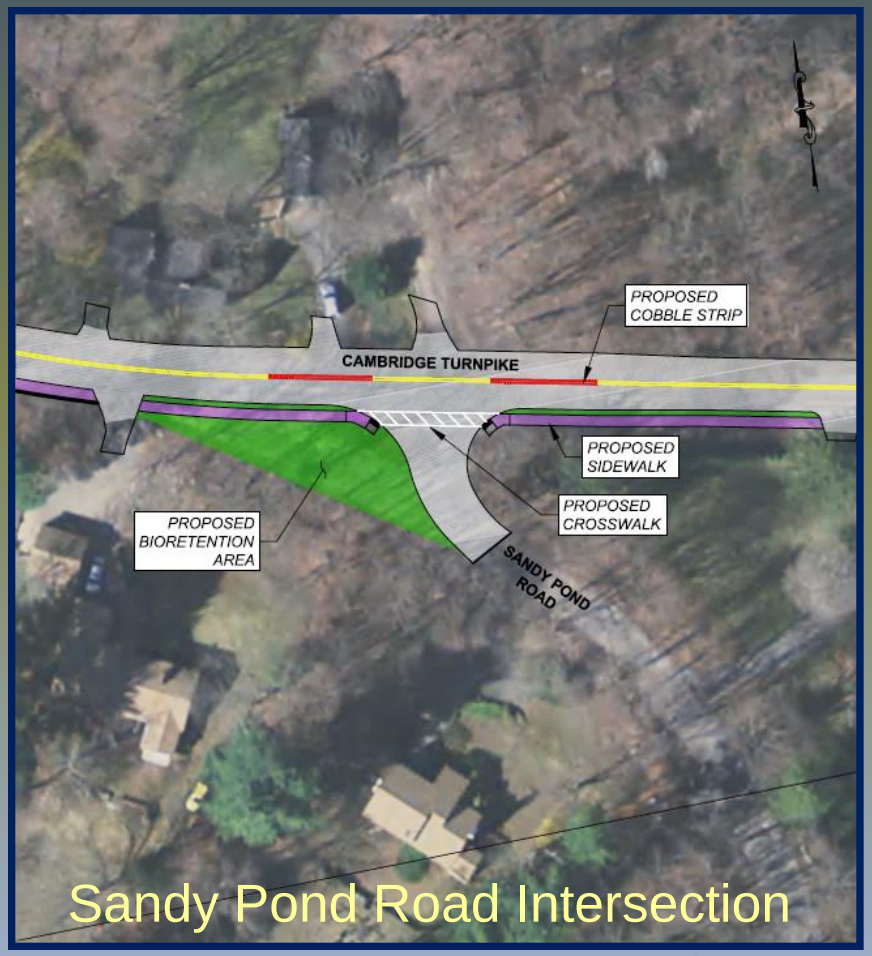


Improvements at Mill Brook Farm



Roadway Design

Intersection at Hawthorne/Mildred



Sandy Pond Road Intersection

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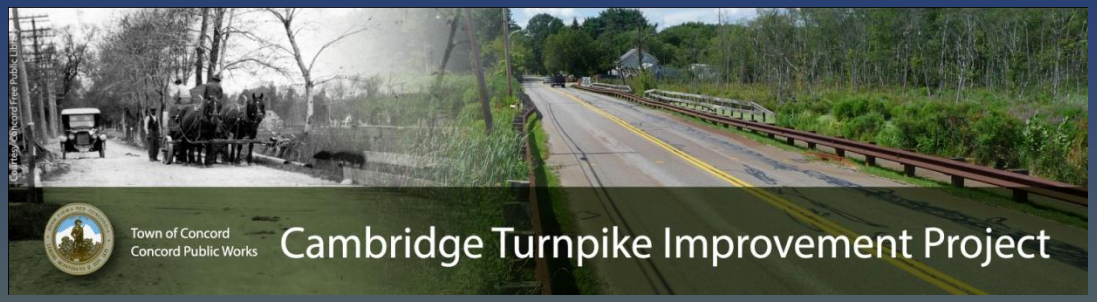
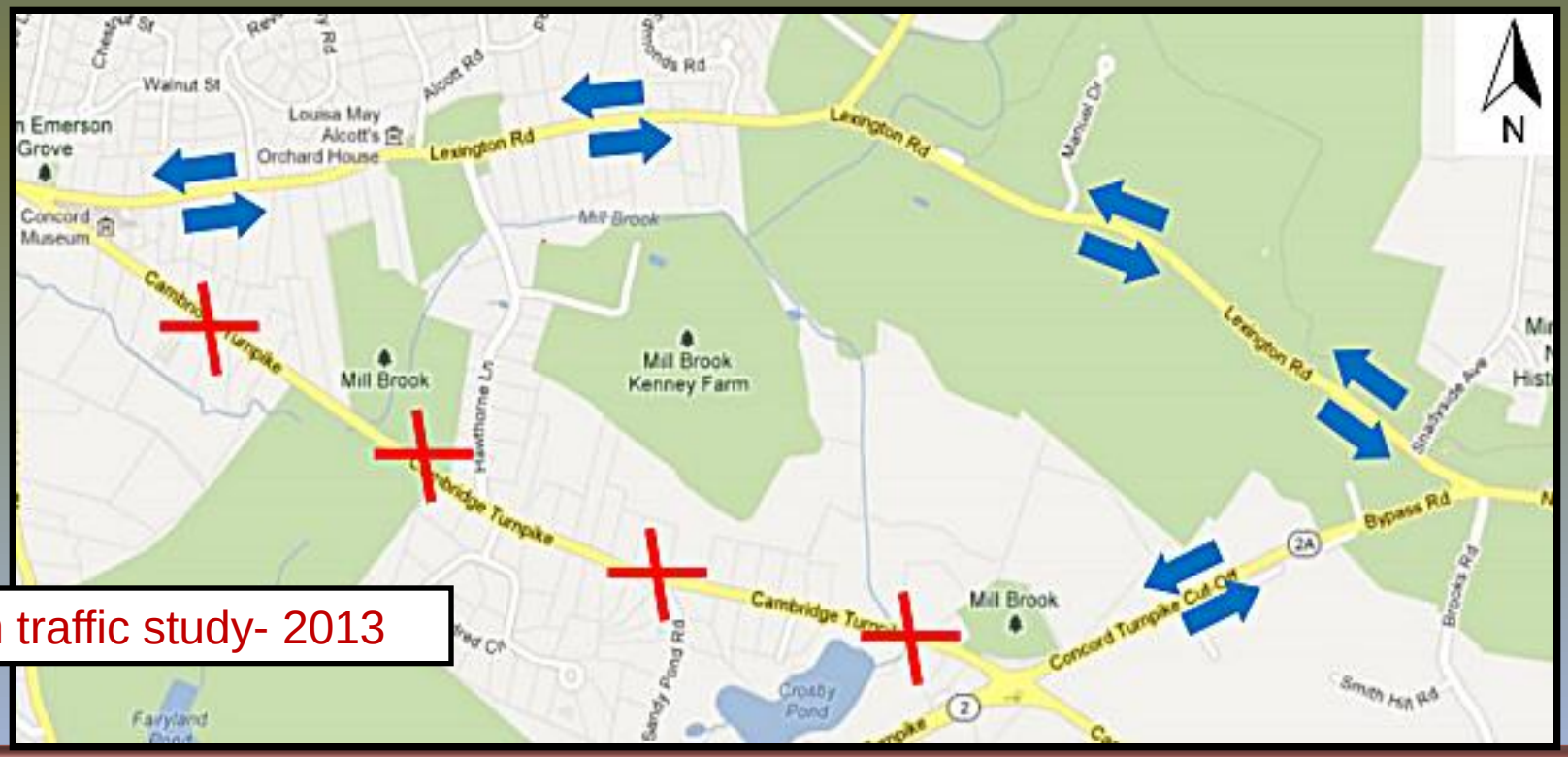
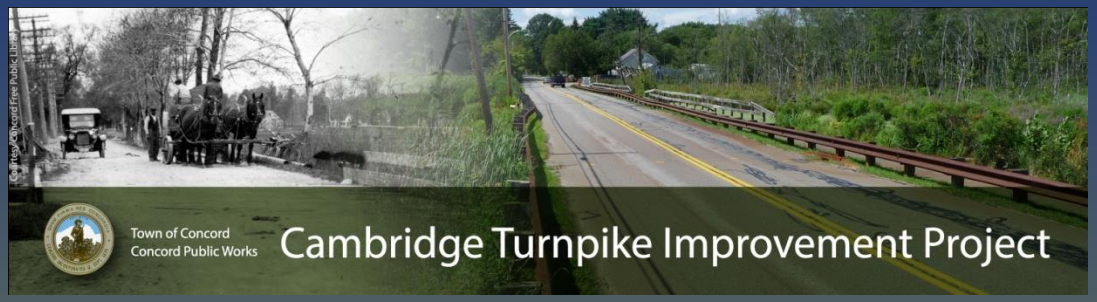


Roadway Design

- Construction will require temporary road closures
- Temporary, to be sequenced
- Detours to avoid Hawthorne for through traffic
- Will require further definition and development in Final Design

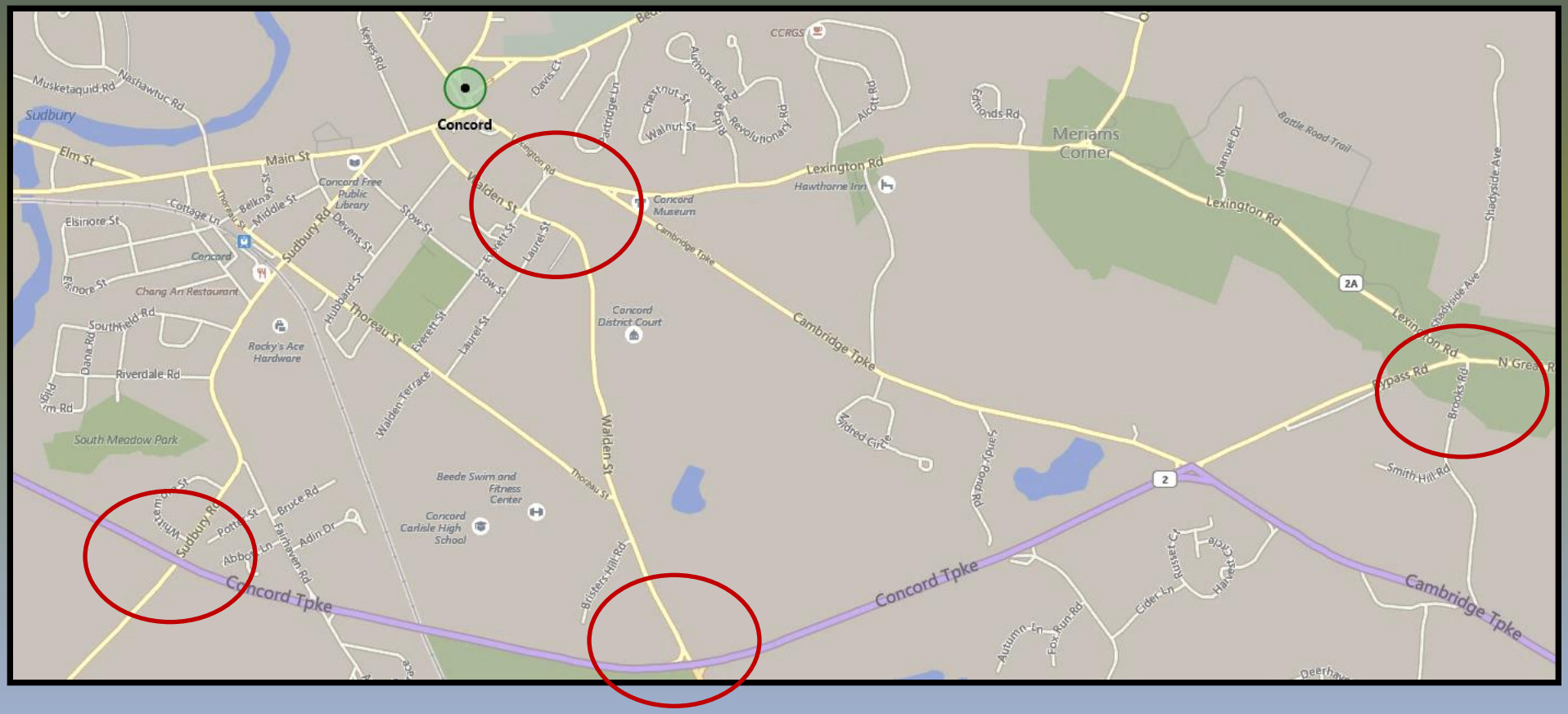


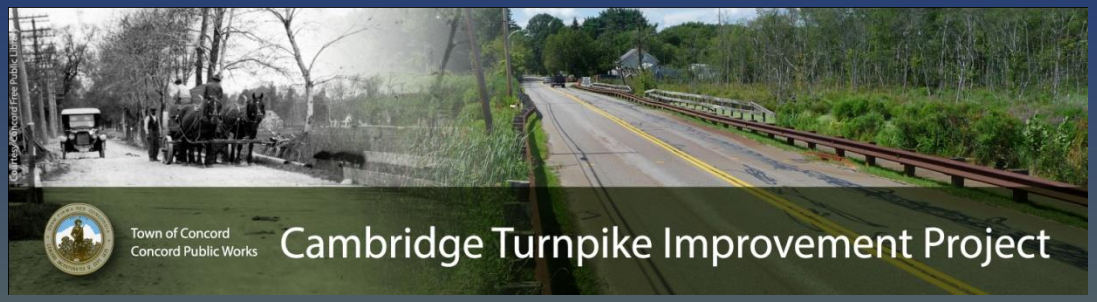
From traffic study- 2013



Roadway Design

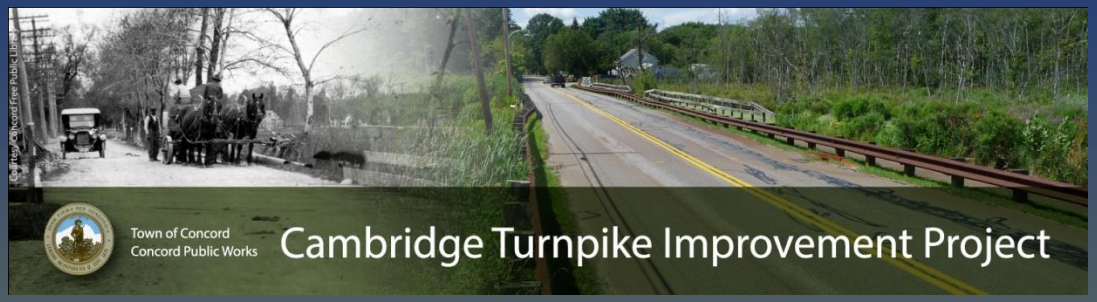
Other detour routes being evaluated





WHAT'S NEXT ?

- *Permitting – Commenced*
- *Final design - Commencing*
- *Contracts for bidding*
- *Bidding Late-winter/Spring 2017*
- *Construction - Targeted mid-2017 into 2018*



Closing

- Email distribution list for project information
- Sign-in sheet

Questions / Comments?

Contact Information

- CTIPcomments@concordma.gov
- www.concordma.gov
- Telephone: 978-318-3206

Cambridge Turnpike over Mill Brook