

5-17-2017

018637.00 Westbrook: Cumberland Mill Rotary Signalization

Vanasse Hangen Brustlin, Inc.

Mileone & MacBroom

State of Maine. Department of Transportation

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018637.00 Westbrook
Cumberland Mill Rotary Signalization

Public Hearing

May 17, 2017



Presentation Talking Points

- Project Team
- Project Purpose and Need
- Project Area
- Project Timeline
- Existing Conditions
- Project Objectives – Operations and Design
- Key Design Elements and Anticipated Results
- Project Schedule
- Questions and Comments

Project Team

- MaineDOT and PACTS
 - Project Management
- VHB and Milone & MacBroom, Inc.
 - Project Designers and Engineers
- Westbrook Public Works, Police, & Fire
 - Review, Comment, and Coordination
- Contractor and Supplier/Integrator (TBD)

Purpose and Need

- Improve Traffic and Pedestrian Operations and Increase Mobility (Multimodal)
- Address a High Crash Location (HCL)
- Satisfy Recommendations from Cumberland Mills Long-Range Traffic Improvements Study (2005)

Project Area

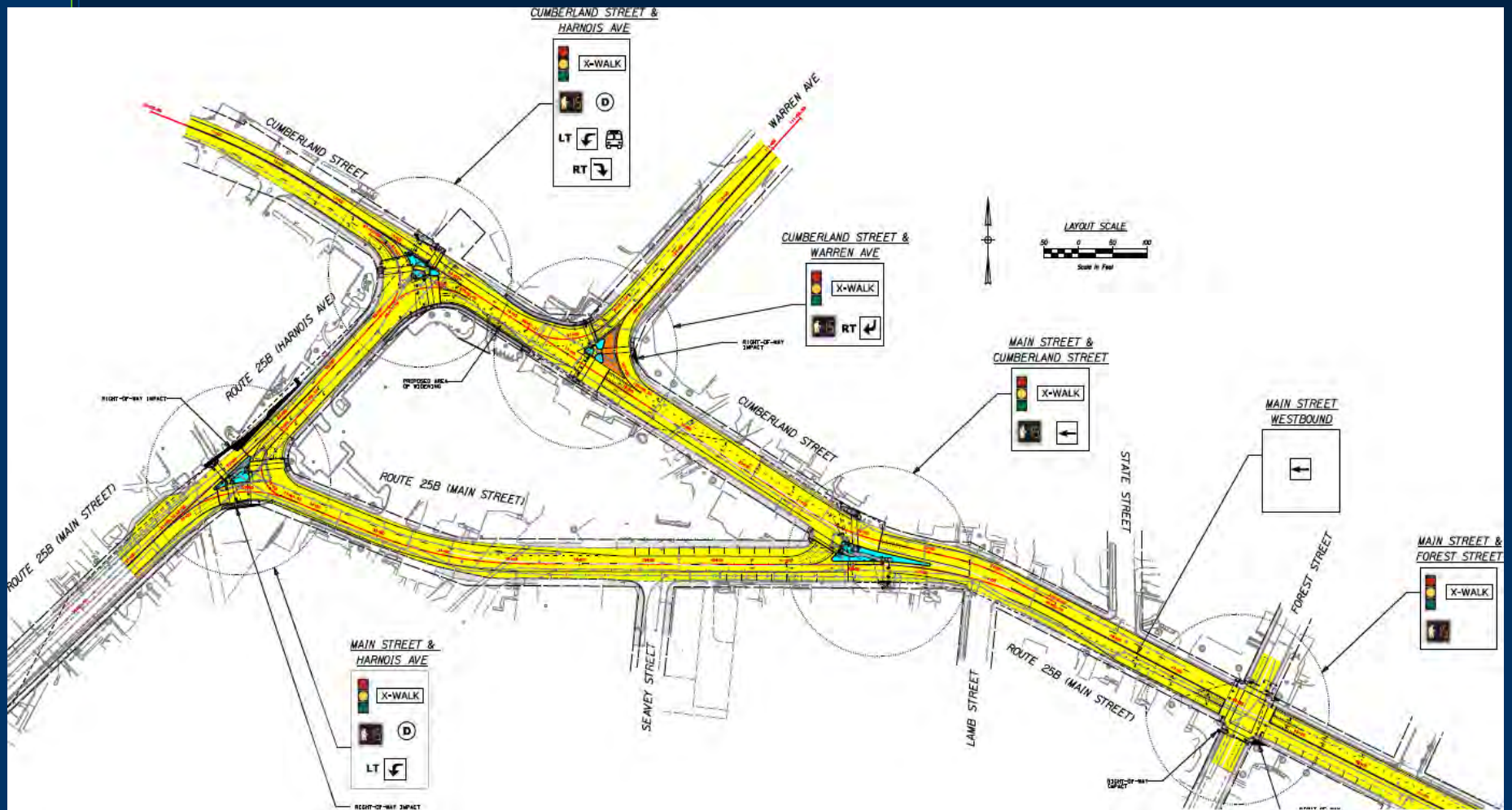


Conceptual Project



Source: "Cumberland Mills Long-Range Traffic Improvements" Sebago Technics, August 2005.

Proposed Project



Project Timeline

- 2004: MaineDOT looks at safety project for intersection of Cumberland/Warren, City requests consideration for area improvements (fatality May 2004 Main/Rite Aid)
- Aug 2005: Cumberland Mills Long-Range Traffic Improvement Study (Sebago Technics for MaineDOT, Westbrook, and PACTS)
- Feb 2014: Milone & MacBroom, Inc. and City apply for project to PACTS

Project Timeline

- July 2014: Traffic Signal Warrant Study (Sebago Technics for Westbrook)
- August 2014: City endorsement of Cumberland Mills Improvement Project.
- October 2014: MPO Project Identification Form (PACTS for MaineDOT)
- March 2016: MaineDOT, PACTS, Westbrook, VHB and MMI design scoping meeting

Project Timeline

- October 2016: MaineDOT, PACTS, Westbrook, VHB and MMI project meeting / site walk
- November 2016: Field data collection (supplemental traffic and survey) completed
- January 2017: VHB and MMI team meeting on Preliminary Design (initial layout based on 2005 Preferred Alternative discussed, result was need for Coach Point Meeting)

Project Timeline

- February 2017: Coach Point Meeting
- March 2017: MaineDOT, PACTS, Westbrook, VHB and MMI Preliminary Design project meeting
- April 2017: Preliminary Design Report submitted to MaineDOT (copy to PACTS and City)
- May 17, 2017: Public Hearing

Existing Conditions

TRAFFIC CONTROL

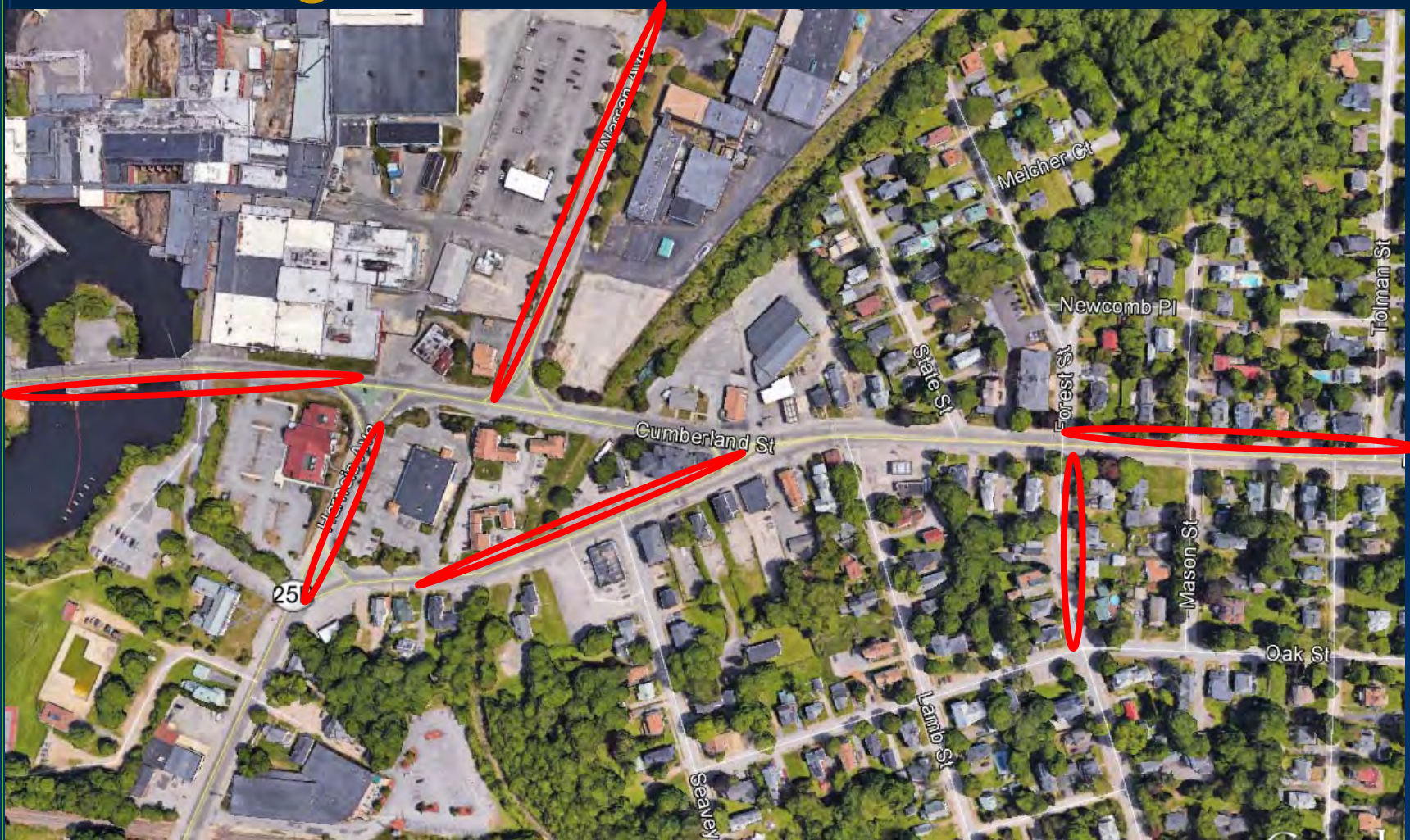
- STOP/Yield traffic control throughout “Rotary” / Yield to Pedestrian in the Crosswalk
- One existing intersection provides traffic signals (Main Street at Forest Street)
 - Very old “legacy” equipment with limited capabilities.
 - Hand/Person pedestrian signal indications with mechanical type pushbuttons.

Existing Conditions

OPERATIONS

- Free/”on-demand” signal operations at Main/Forest.
- Levels of Service (LOS) “F” operations along many approaches during peak conditions.

Existing Conditions



Existing Conditions

SAFETY

- 93 crashes (31/year average) over most recent 3-year period, 56 crashes (60%) at Cumberland/Warren intersection (High Crash Location).
- 88 crashes (95%, ~29/year average) rear-end type.
- 17 crashes (18%, ~6/year average) had injuries.

Project Objectives – Operations and Design

- Analytical Results (continue) to Support Project

- Alternatives:
 - Do Nothing (but does not address Purpose & Need)
 - Full (2005) Preferred Alternative
 - **Reduced Geometric Impact Alternative**

Project Objectives – Operations

- Signals + controller/cabinet at each intersection.
 - Free operations feasible (“coordination” for peaks to be tested / late night flash)
 - Good LOS (C or better) at all project intersections
 - No Right-Turn on Red throughout Rotary
- The “reduced” geometry alternative is shown to be feasible, higher b/c ratio.
 - Single eastbound approach lane (Main/Harnois)
 - 2-Lane Section (Main/Seavey thru Main/Cumberland)
 - 3-Lane Section (Main/Cumberland to Main/State)

Project Objectives – Operations

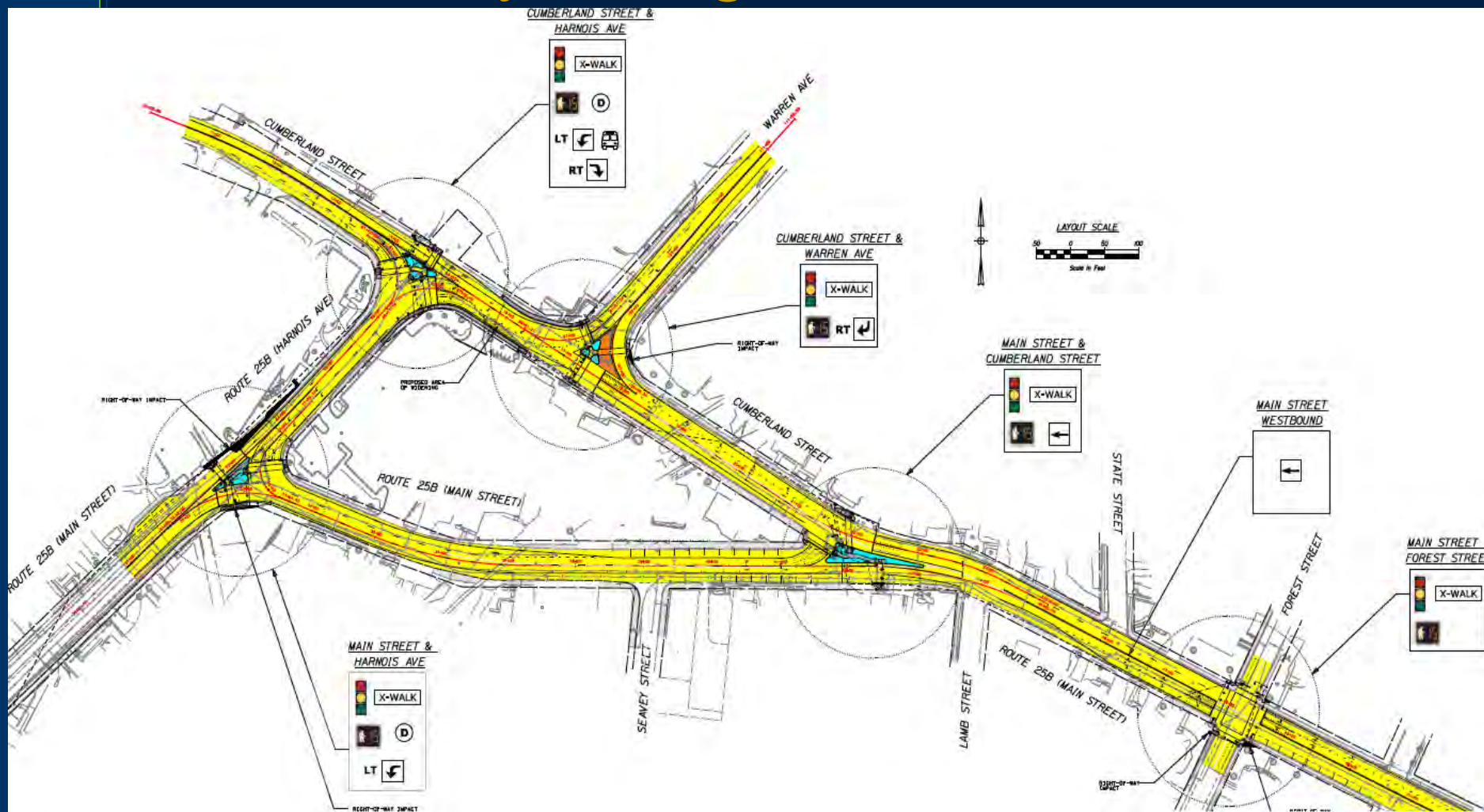
- Note: much greater right-of-way impacts with full (2005) preferred alternative
- Note: greater number (up to 30) of on-street parking opportunities could be removed under full (2005) preferred alternative
- Note: both design alternatives close Rite Aid Drive to Cumberland Street



Project Objectives – Operations

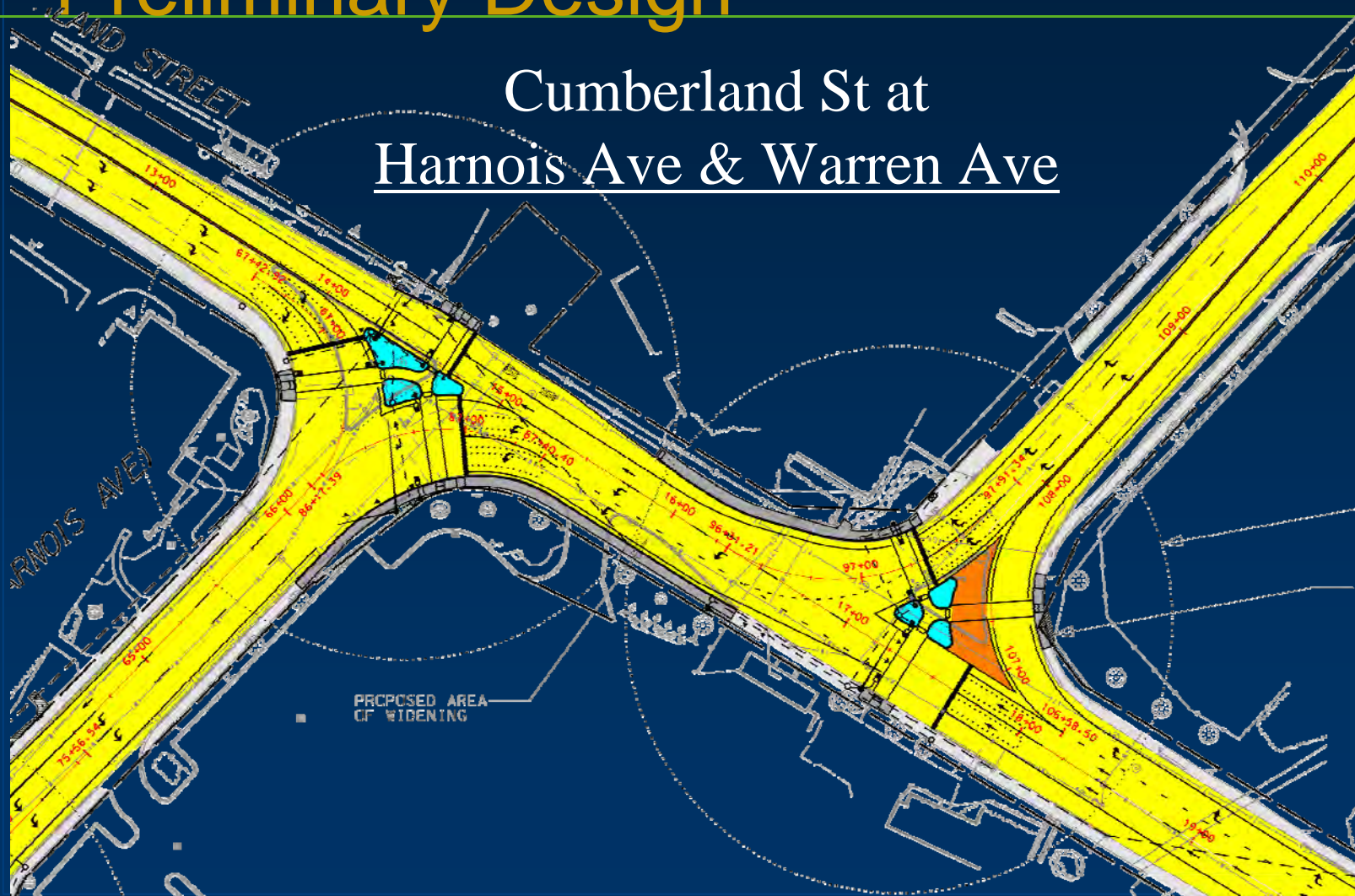


Preliminary Design

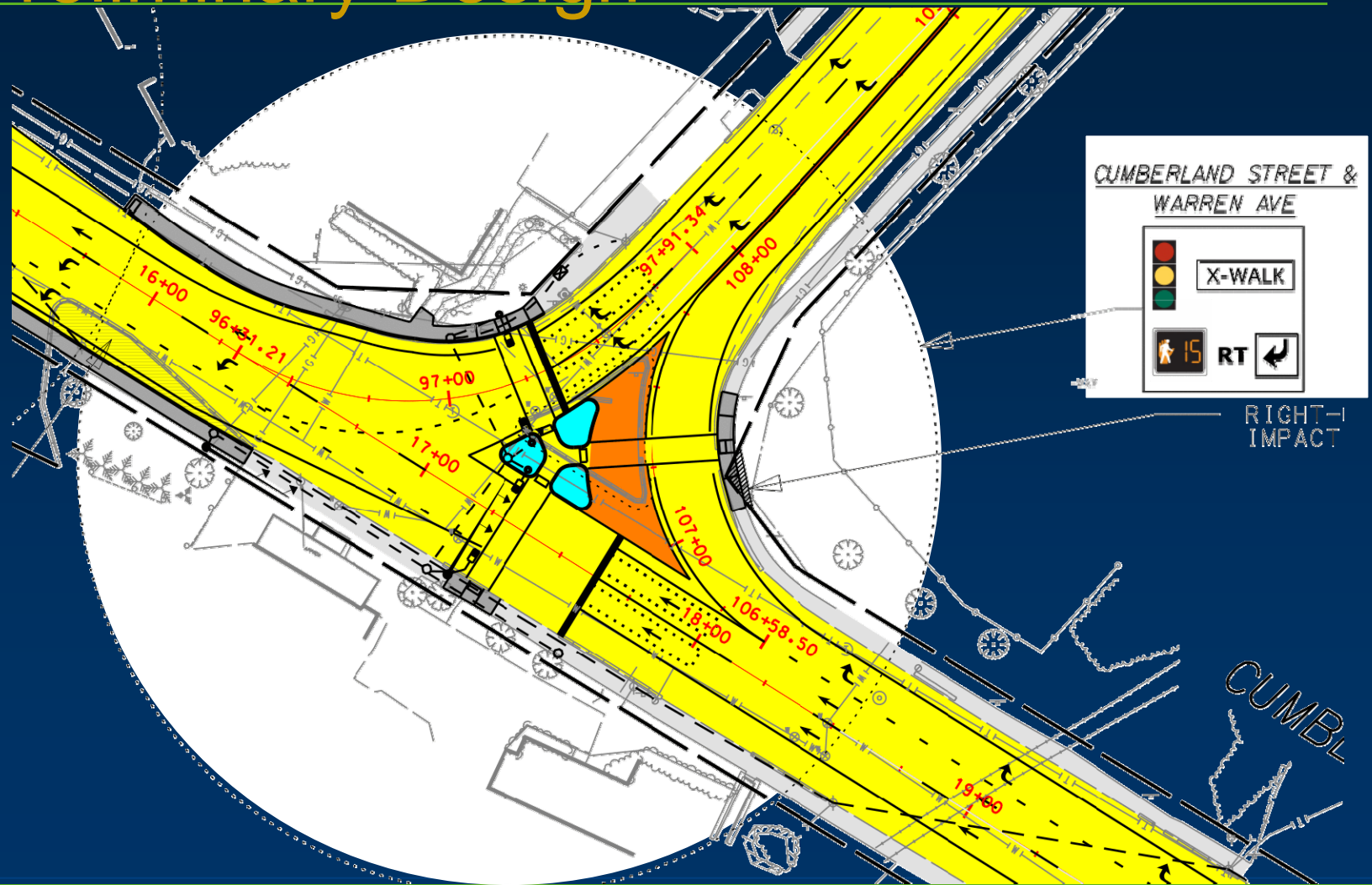


Preliminary Design

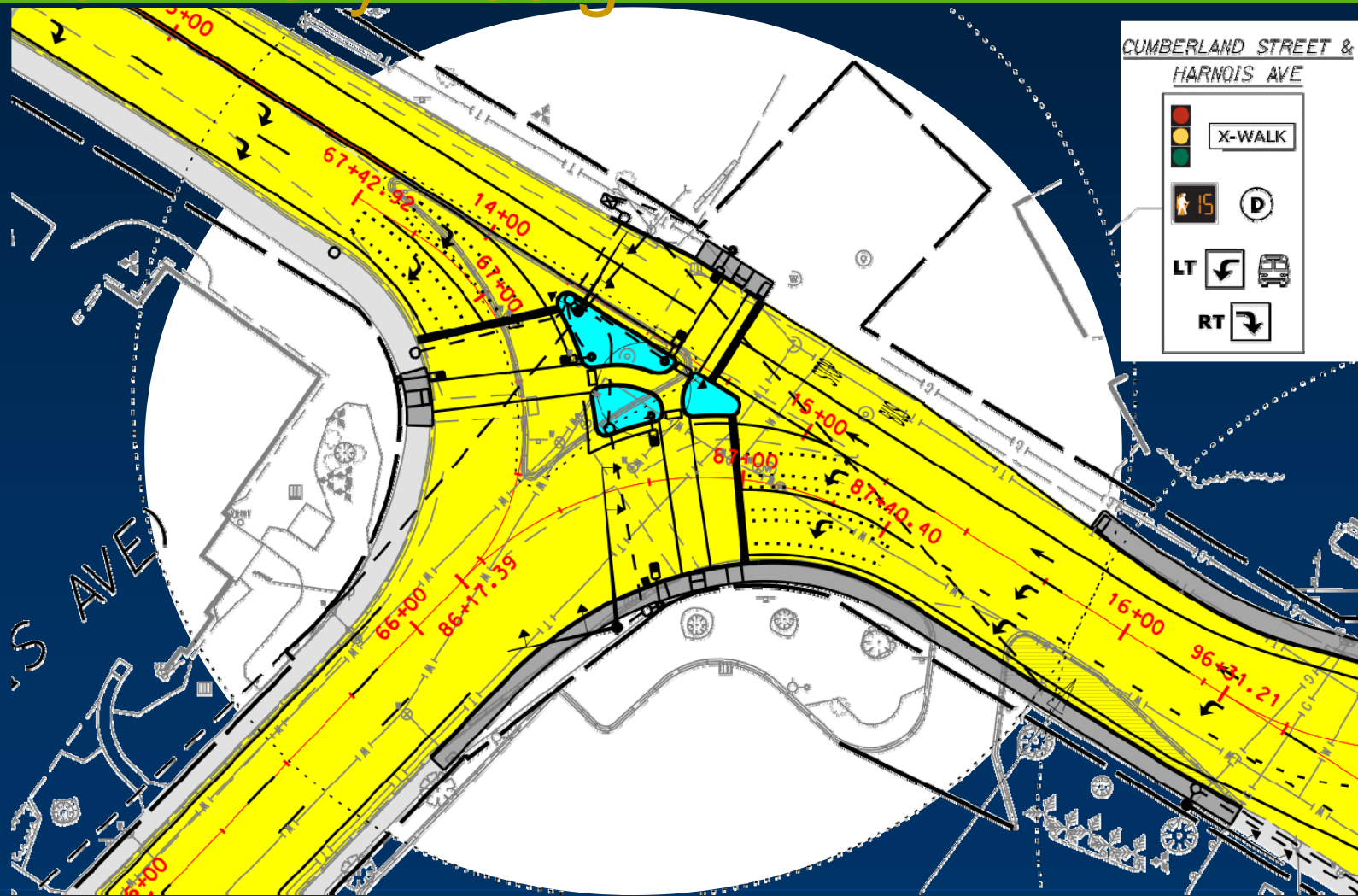
Cumberland St at Harnois Ave & Warren Ave



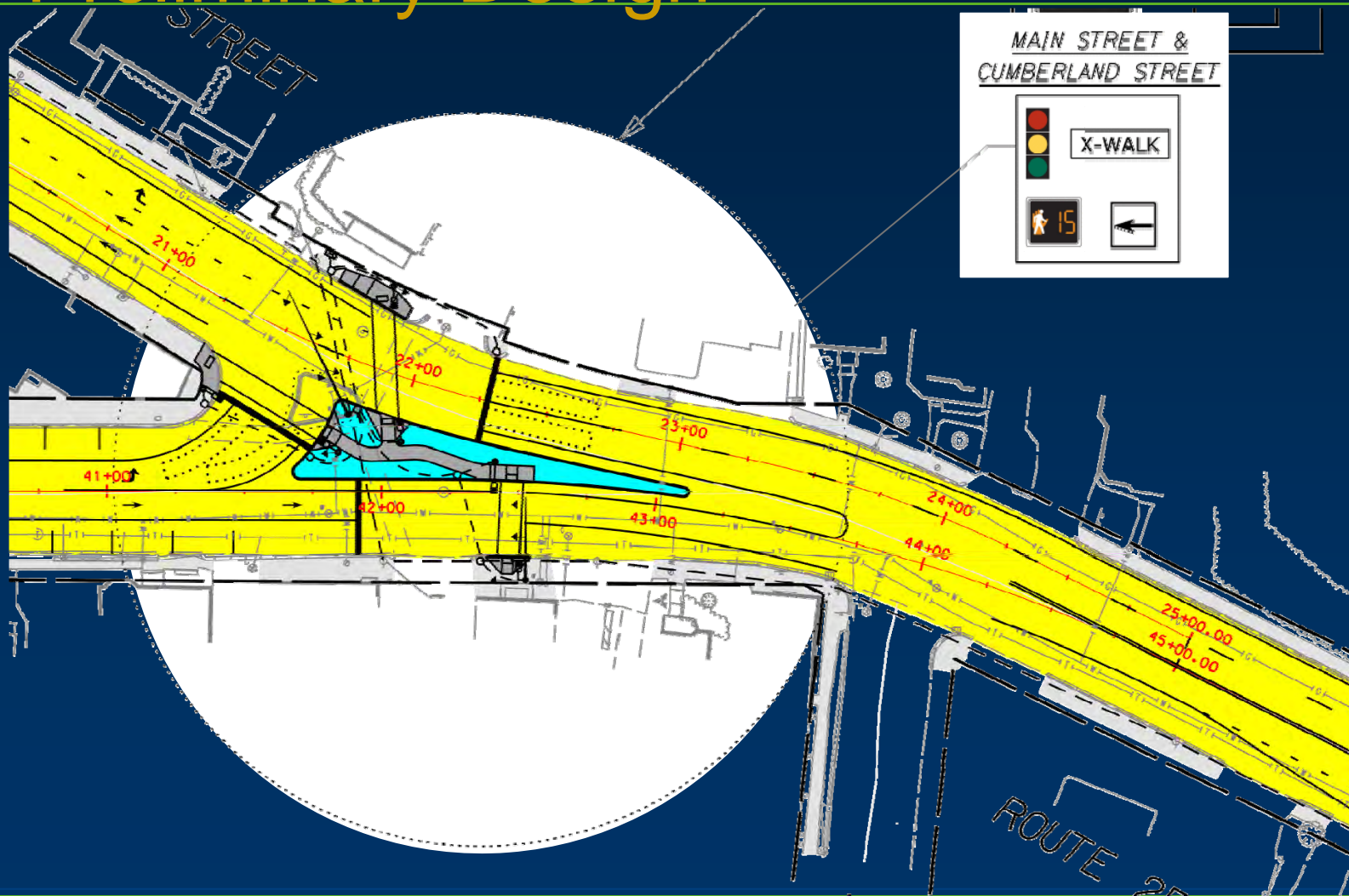
Preliminary Design



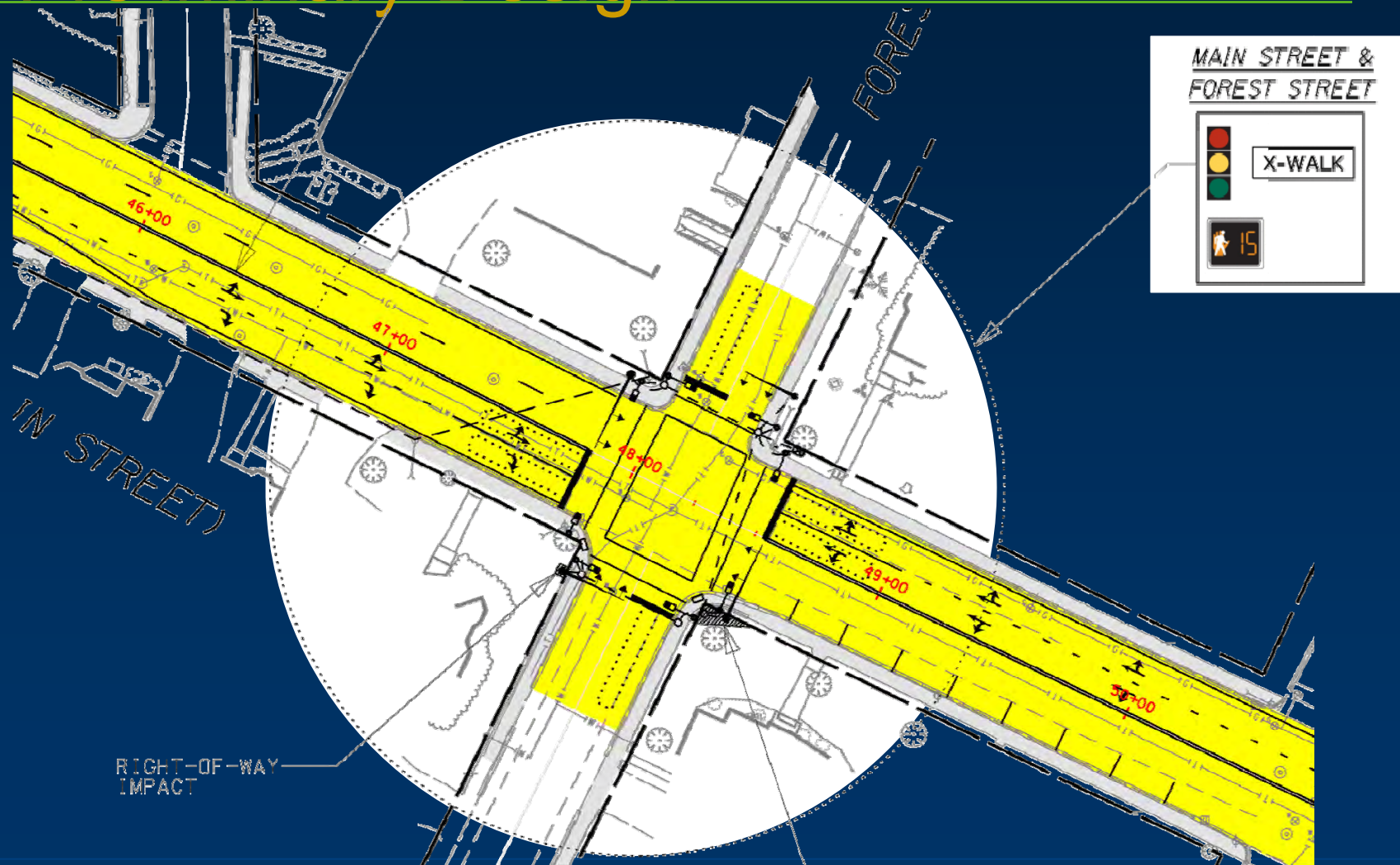
Preliminary Design



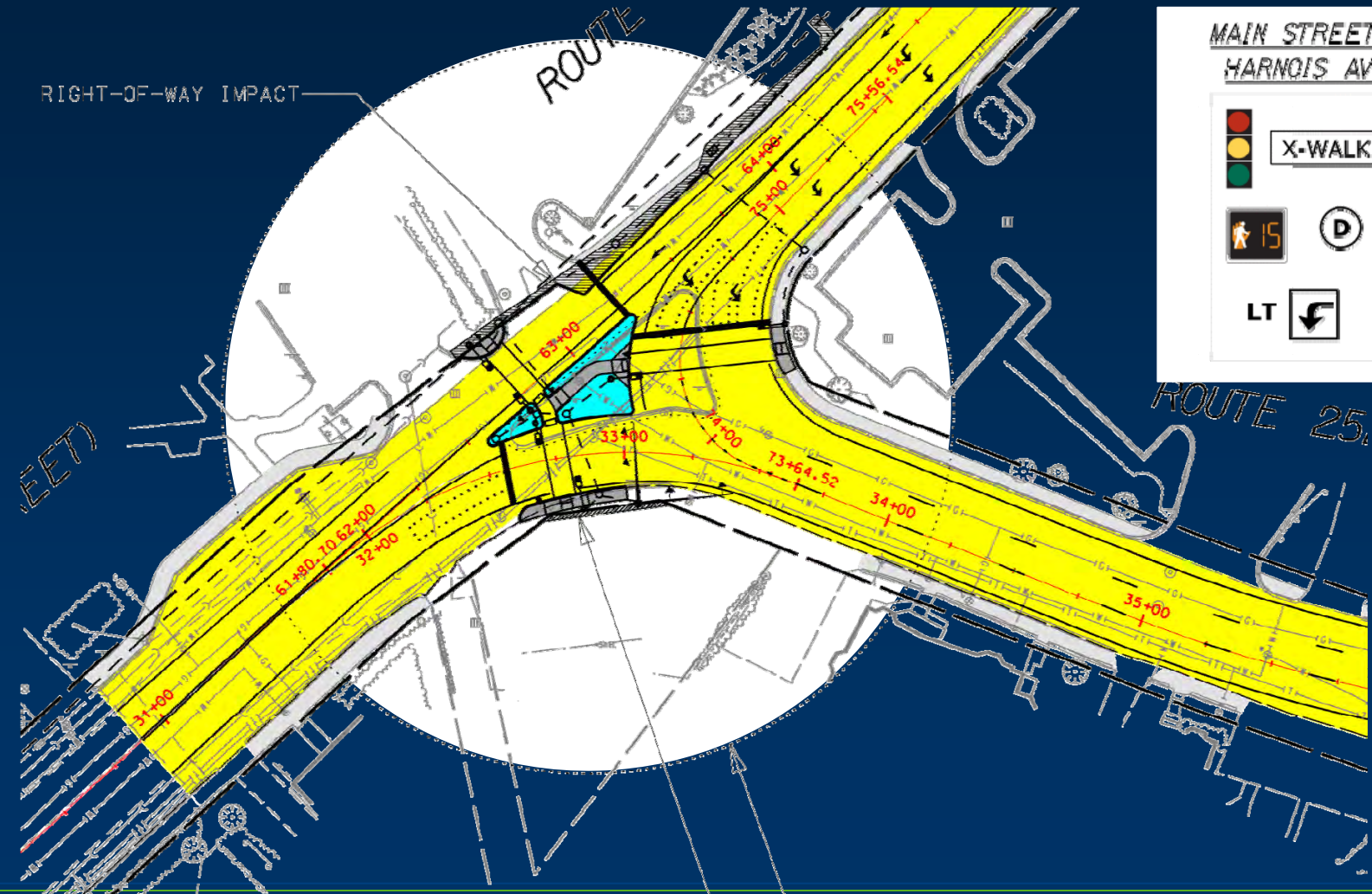
Preliminary Design



Preliminary Design



Preliminary Design



Preliminary Design – Key Highlights

- Design provides 4 new signalized intersections and upgrades 1 existing intersection. All signals will be interconnected into PACTS Advanced Traffic Management System.
- Design provides additional travel/turning lanes:
 - Westbound Main St. from Forest St. thru Cumberland St.
 - Westbound Cumberland St; Warren Ave. to Harnois Ave.
 - Southbound Harnois Avenue (1 through and 2 left-turns)
 - Eastbound Cumberland St. at Harnois St. (2 rights)
 - Southbound Warren Ave. at Cumberland St. (2 rights)
 - Eastbound Main St. from Harnois Ave. to Seavey St.

Preliminary Design – Key Highlights

- Design does not allow for on-street parking along the north side of Main Street between Cumberland Street and Forest Street.
- Design will provide ADA curb ramps and detectable warning fields but will not upgrade all the sidewalks within the project area.
- Design proposes to formalize bus stop at Cumberland Street and Harnois Avenue.

Preliminary Design – Key Highlights

- Design impacts existing right-of-way, presently:
 - Southeast and southwest corners of Main St. at Forest St.
 - Northeast corner of Cumberland St. at Warren Ave.
 - Northwest and southeast corners of Main St. at Harnois.
- Design closes Rite Aid access to Cumberland St.
- Design may remove existing tree on southeast corner of Main St. at Forest St.



Preliminary Design – Key Highlights

- Design removes existing midblock pedestrian crossing at Main St. and Lamb St.
- Design does not propose to provide formal striping for on-street parking.
- Design does not presently coincide with a paving project through the area.



Preliminary Design – Key Highlights

- Design may coordinate with other planned City projects to minimize traffic impact to Cumberland Mills area.
- Design proposes to provide signing for how bicycles are to travel through the area but does not provide formal bicycle lanes or bicycle detection at the signalized intersections.

Anticipated Results

- Improved traffic flow throughout project area.
- Improved transit (bus) accommodations.
- Improved pedestrian serviceability.
- Signing for bicyclist on how to navigate through area (and motorists be alert).
- Cumberland/Warren Avenue to no longer fall within the High Crash listing.
- ~15+/- less crashes per year.

Project Schedule

- May 17, 2017 – Public Hearing
- June 2017 – Preliminary Design Completed
- July 2017 – PIC Submission (~2+/- months)
- Begin 8-12 month Right-of-Way process
+ Utility Coordination
- Fall 2018 – Final Design Completed
- 8 -12 month Construction Schedule

THANK YOU
FOR
YOUR INTEREST

Questions?

