Public Information Meeting

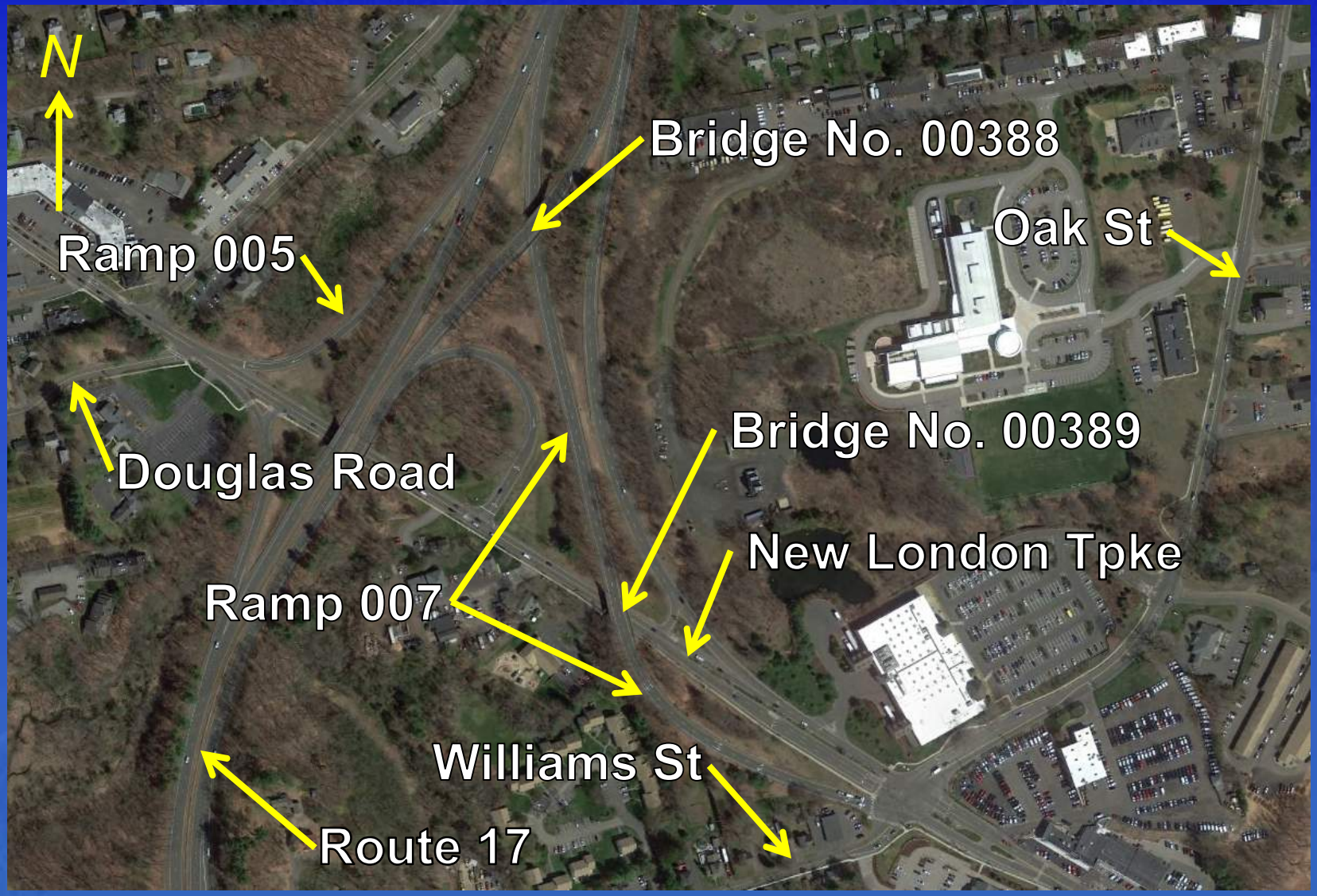
State Project No. 53-189
Removal of Route 17 SB Off-Ramp to East Glastonbury/New London Turnpike
(Including Bridge Nos. 00388 and 00389)

Glastonbury, Connecticut

Thursday, June 7, 2018 at 7:00 pm
Council Chambers at Town Hall
2155 Main Street
Glastonbury, CT

Connecticut Department of Transportation

Project Location Map



Introductions

- Connecticut Department of Transportation
  - Theodore Nezames – Transportation Division Chief
  - Rabih Barakat – Transportation Principal Engineer
  - Andrew Cardinali – Transportation Supervising Engineer
  - Dobieslawa Kania – Transportation Project Engineer
  - Colin Baummer – Transportation Supervising Engineer

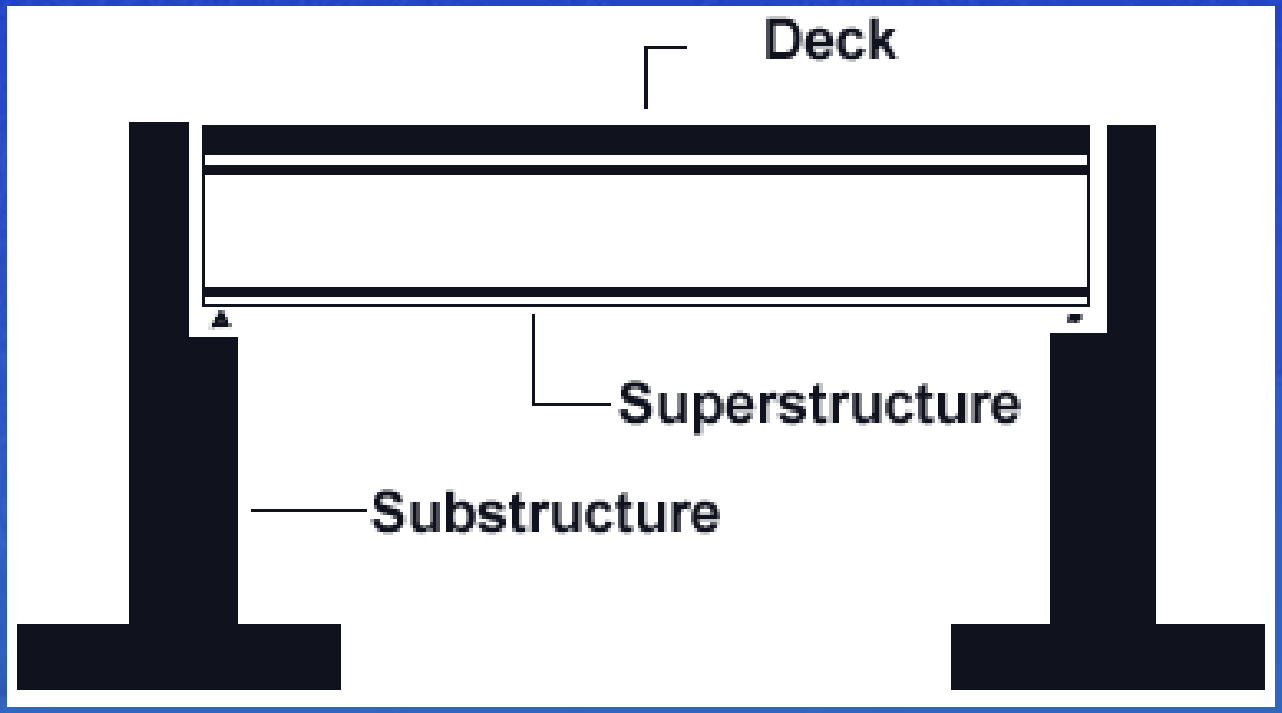
- CME Associates, Inc.
  - Donald Wurst – Department Manager
  - Tracey Brais – Project Engineer
  - Aaron Foster – Project Engineer

CTDOT Bridge Program Goals

- Provide a safe crossing for the traveling public.
- Rehabilitate and/or replace bridges on State transportation network to a state of good repair.
- Efficient use of Federal and State funds.
- Design solution beneficial to all.

Typical Bridge Components

- Deck
- Superstructure
- Substructure



Purpose and Need

- Bridge No. 00388 needs to be rehabilitated
  - Structurally deficient bridge with an inspection rating of "4" – Deck is in poor condition, per October 2016 inspection
  - Functionally obsolete structure due to substandard vertical underclearance
- Investigate the area for additional rehabilitation needs or improvements
  - Bridge No. 00389 was included in the study area
  - Undesirable intersection geometry at New London Turnpike/Oak Street/Williams Street E/Route 17 Off-Ramp intersection
  - Crash data in the region of the project
  - Long term fiscal responsibility – cost benefit analysis
  - Pedestrian improvements

Project Overview

- Project is in the preliminary design stage
  - We are looking for your input
- Will provide overview of project and key details tonight, including:
  - Existing Site, Traffic and Collision Information
  - Potential Solutions
  - Proposed Plans and Detour
  - Intersection Wait Times, and Travel Times
  - Schedule

Bridge No. 00388
Rte 17 NB over Route 17 SB Ramp 007

General Information

- Built in 1952
- Single-span steel girder bridge supported by reinforced concrete abutments
- Beyond its estimated service life of 50-years

Existing Condition

- Deck: “4” Poor
- Horizontal and Vertical Underclearance: “3”
- Structure is structurally deficient and functionally obsolete

Bridge No. 00388
Rte 17 NB over Route 17 SB Ramp 007

Underside of Bridge and
West Abutment

Typical Deterioration Seen on
Underside of Deck

Bridge No. 00389
Rte 17 SB Ramp 007 over New London Tpke

General Information

- Built in 1952 (same year as 00388)
- Single-span steel girder bridge supported by reinforced concrete abutments

Existing Condition

- Previous repair of deteriorated concrete deck

Route 17 SB Ramp 007

-Approx. Length of Ramp: 2100 ft

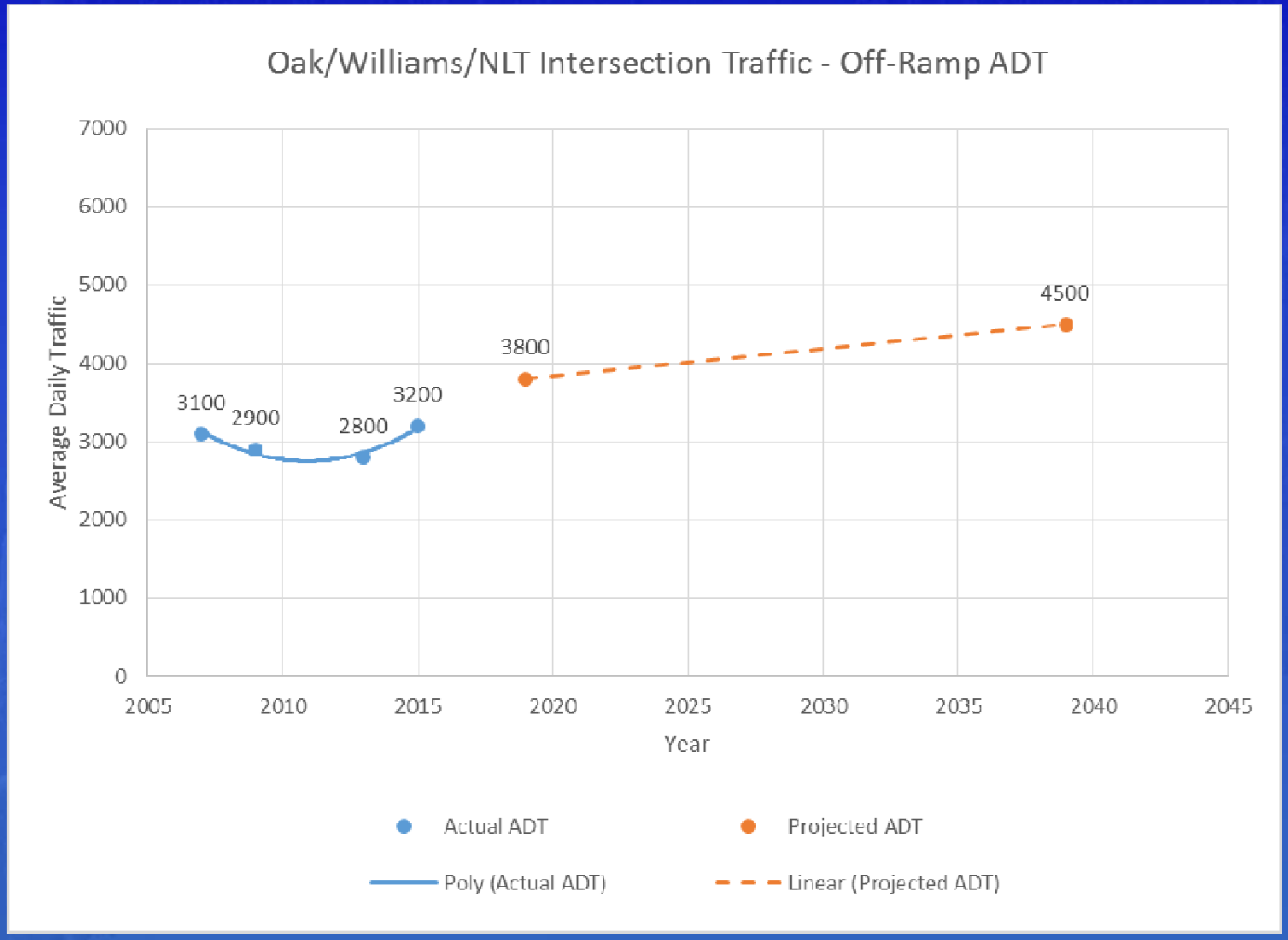
-Avg. Daily Traffic (2015):
3200 vehicles

-AM Peak Hourly Traffic Count:
200 vehicles

-PM Peak Hourly Traffic Count:
380 vehicles

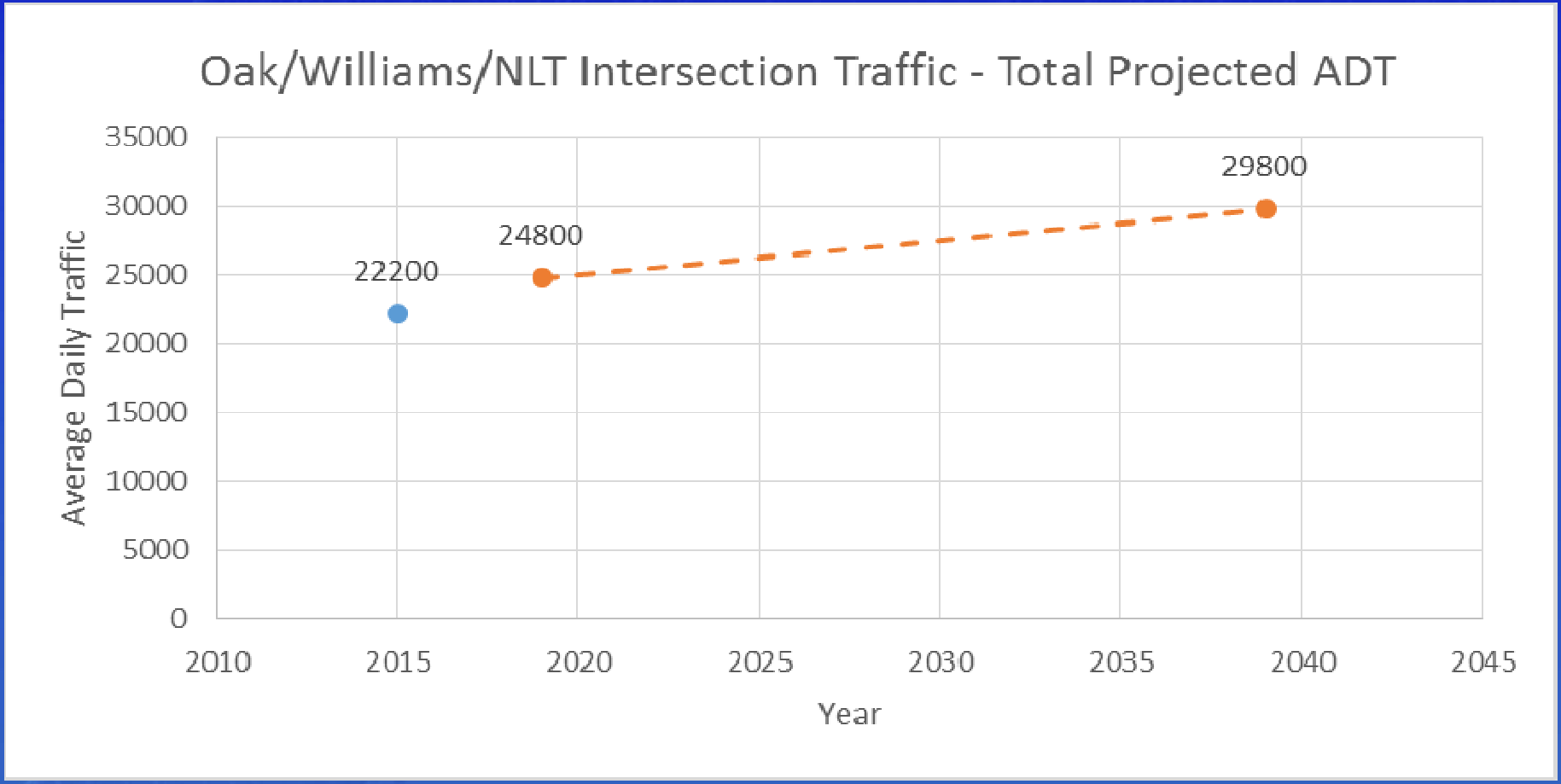
-Projected Avg. Daily Traffic (2039):
4500 vehicles

Off Ramp 007 ADT – Actual and Projection (No-Build)



Note: Estimate incorporates "The Tannery" traffic increase

Oak/Williams/NLT Intersection Traffic – Total Projected ADT (All Options)



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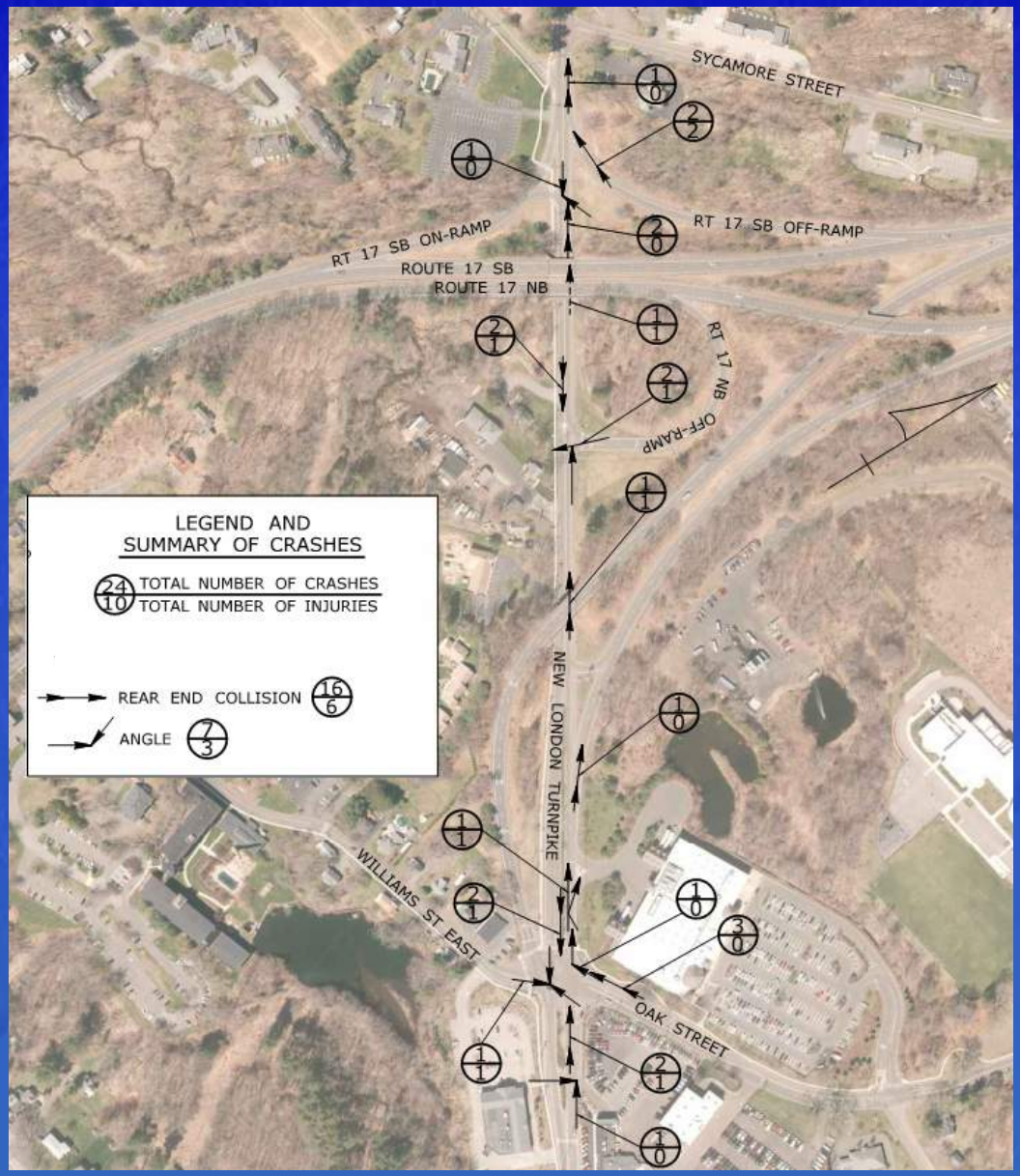
Project No. 53-189: Collison Diagram



Potential Solutions

- Reconfiguring traffic movement from Route 17 SB onto New London Turnpike by modifying Ramp 005 to accommodate left-turning traffic
  - Allows for free flow of traffic and improves safety
- Reconfiguring existing five-leg intersection of Ramp 007, New London Turnpike, Oak Street and Williams Street into a four-leg intersection
  - Decreases average traffic wait-time
- Removal of two bridges from service
  - Saves CTDOT on capital costs over long term

Potential Solutions (cont.)

- Sidewalks will be installed along the New London Turnpike
  - Improves pedestrian access
- Previously presented "Build Option 1" – minimal work along New London Turnpike
- Tonight will also present "Build Option 2" – additional EB lane along New London Turnpike
  - Improves travel time from Rt. 17 SB

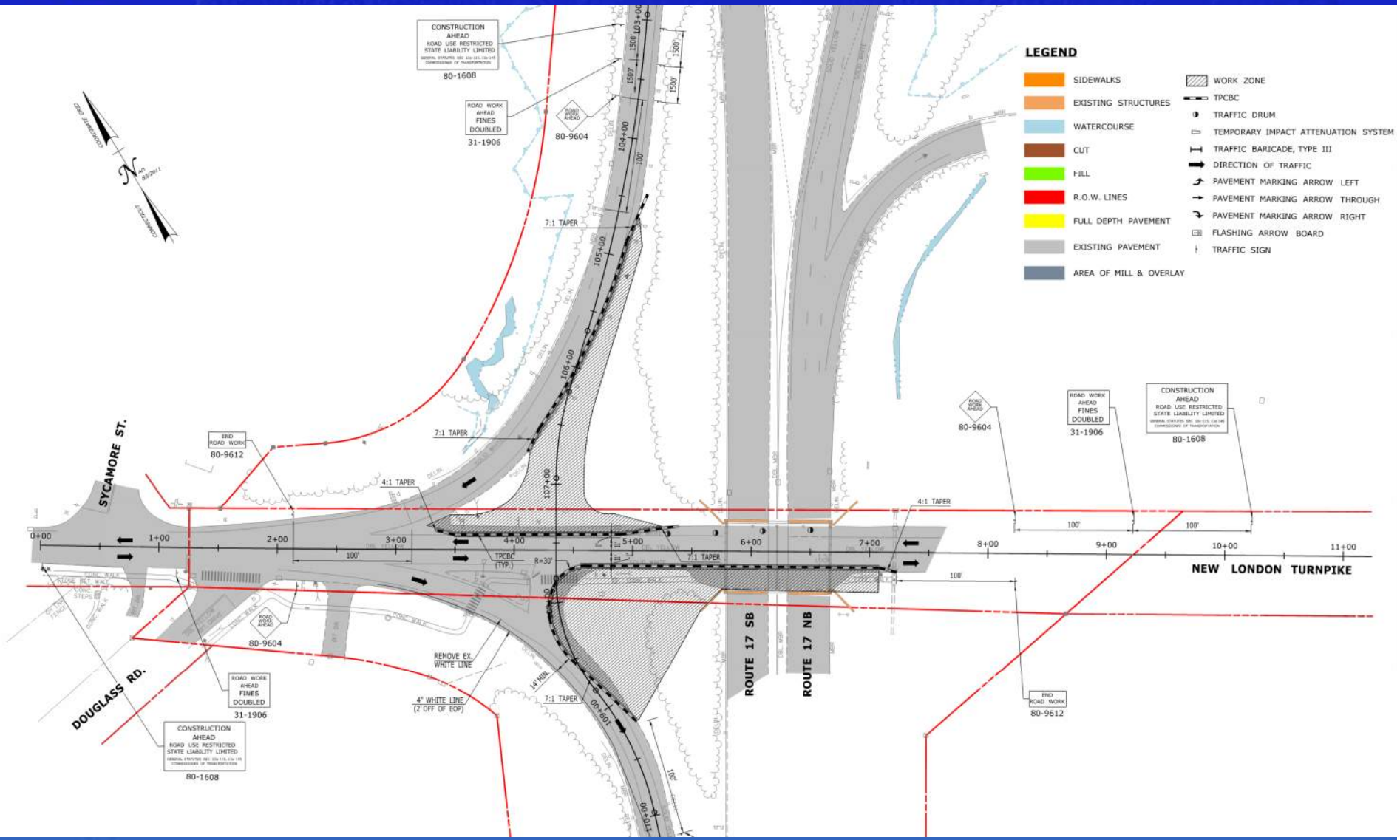
Proposed Limits of Project No. 53-189
Build Option 1

Proposed Limits of Project No. 53-189
Build Option 2

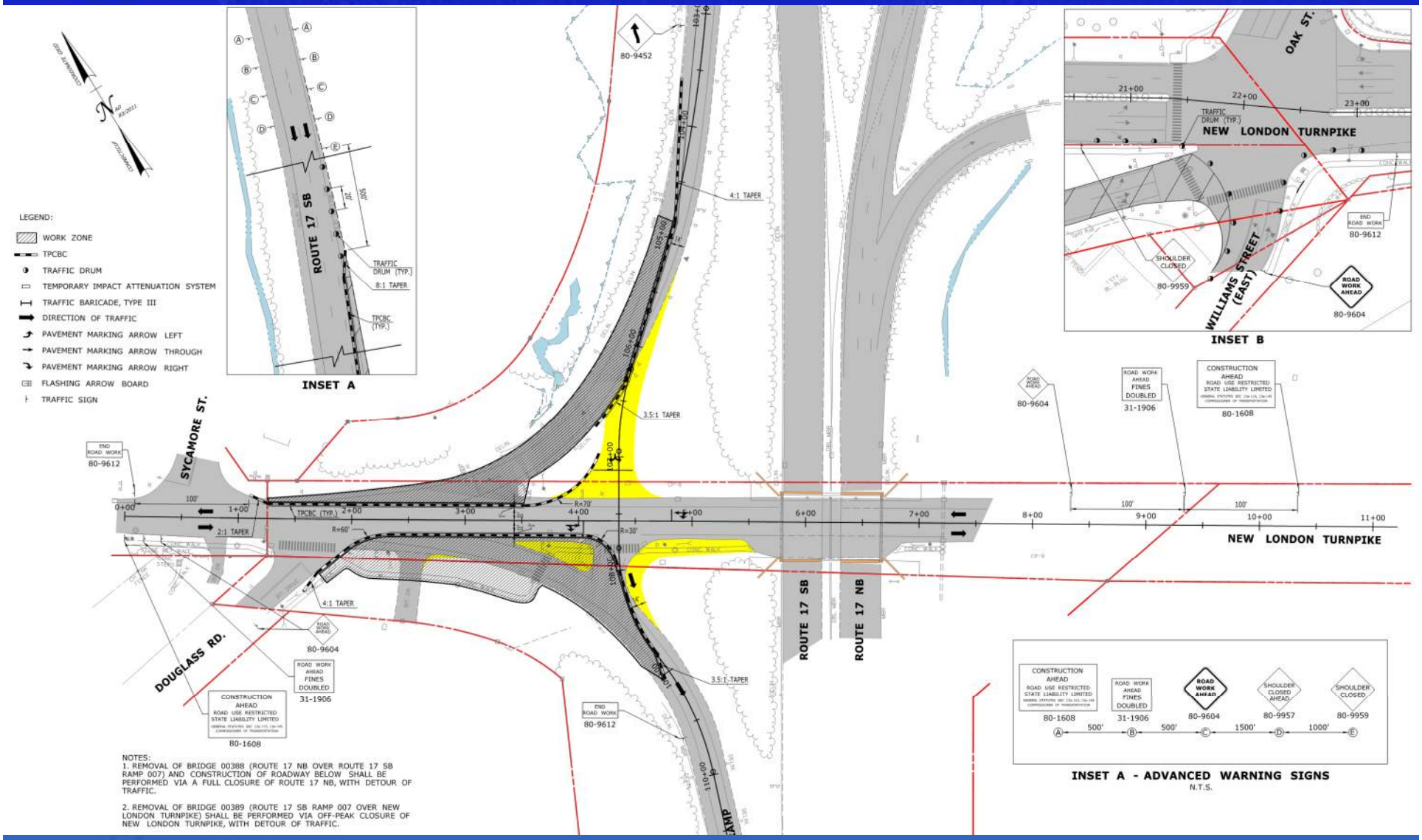
Project No. 53-189: Construction Stage 1

Project No. 53-189: Construction Stage 2

Project No. 53-189: Construction Stage 1



Project No. 53-189: Construction Stage 2



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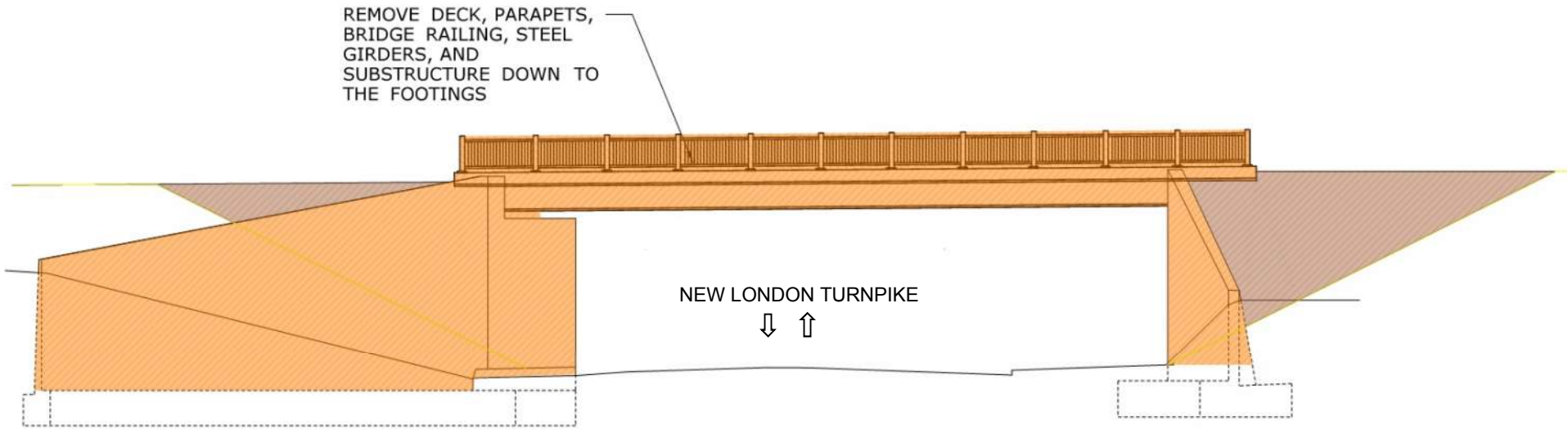
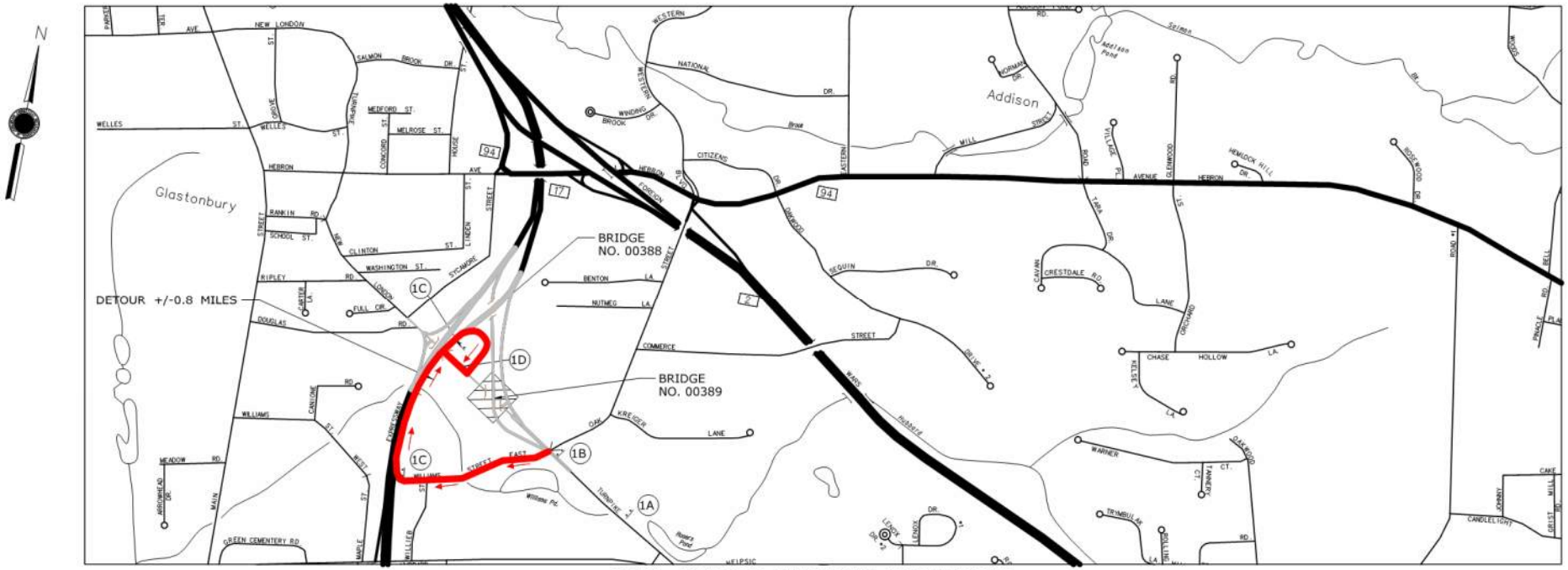


BRIDGE NO. 00389 ELEVATION

LEGEND

- PORTION OF STRUCTURE TO BE REMOVED
- EXISTING GROUND ABOVE GRADE LINE
- FINISHED GRADE LINE

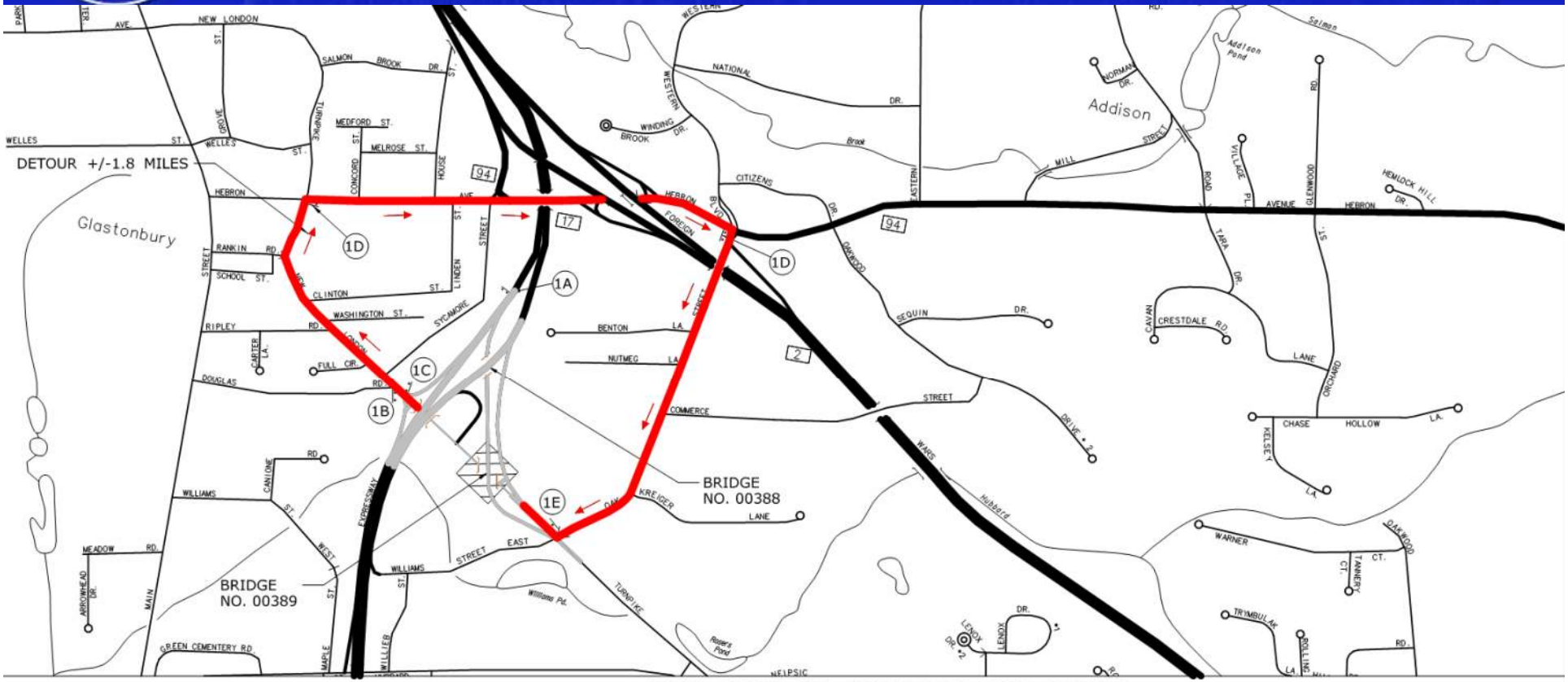
Project No. 53-189: Construction Stage 2



NLT WB Detour #1:

During Off-Peak Hours while Br. 00389 is Removed

Project No. 53-189: Construction Stage 2



NEW LONDON TURNPIKE WESTBOUND
DETOUR MAP - OPTION 2
N.T.S.

NLT WB Detour #2:

During Off-Peak Hours while Br. 00389 is Removed

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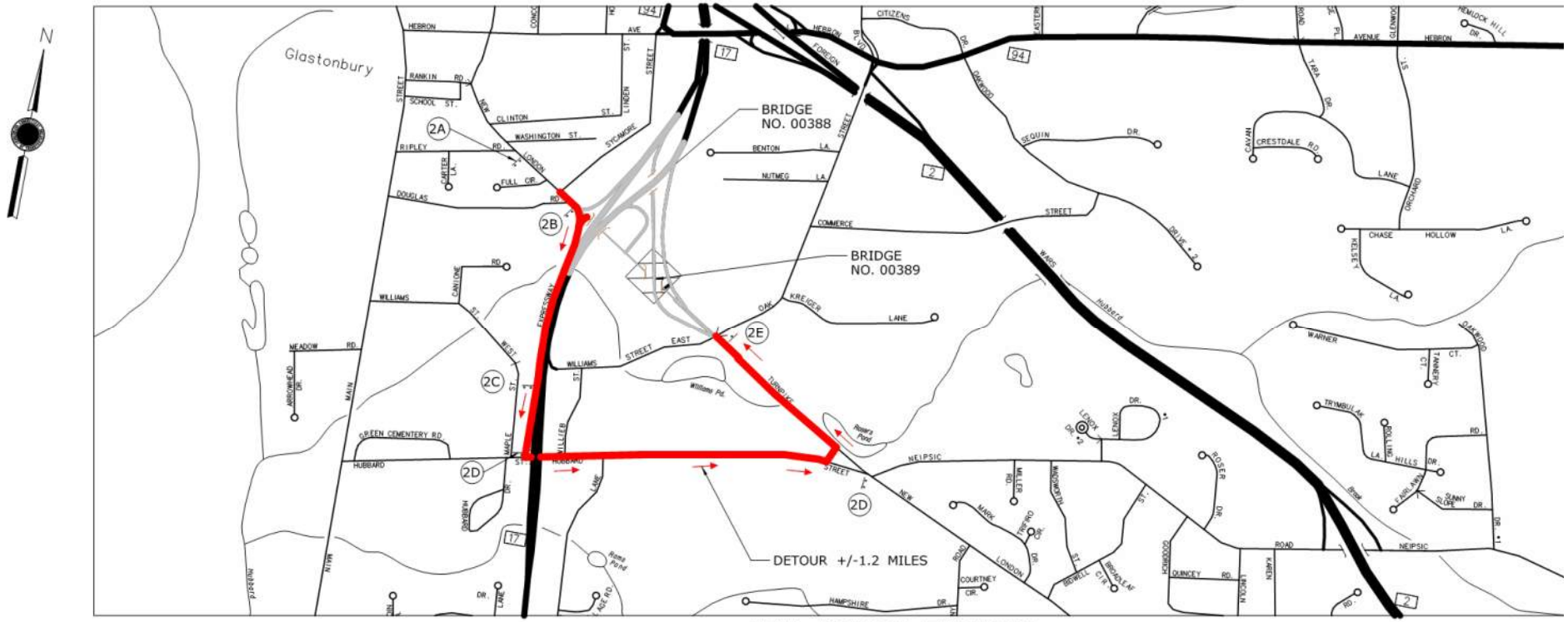

NLT EB Detour:

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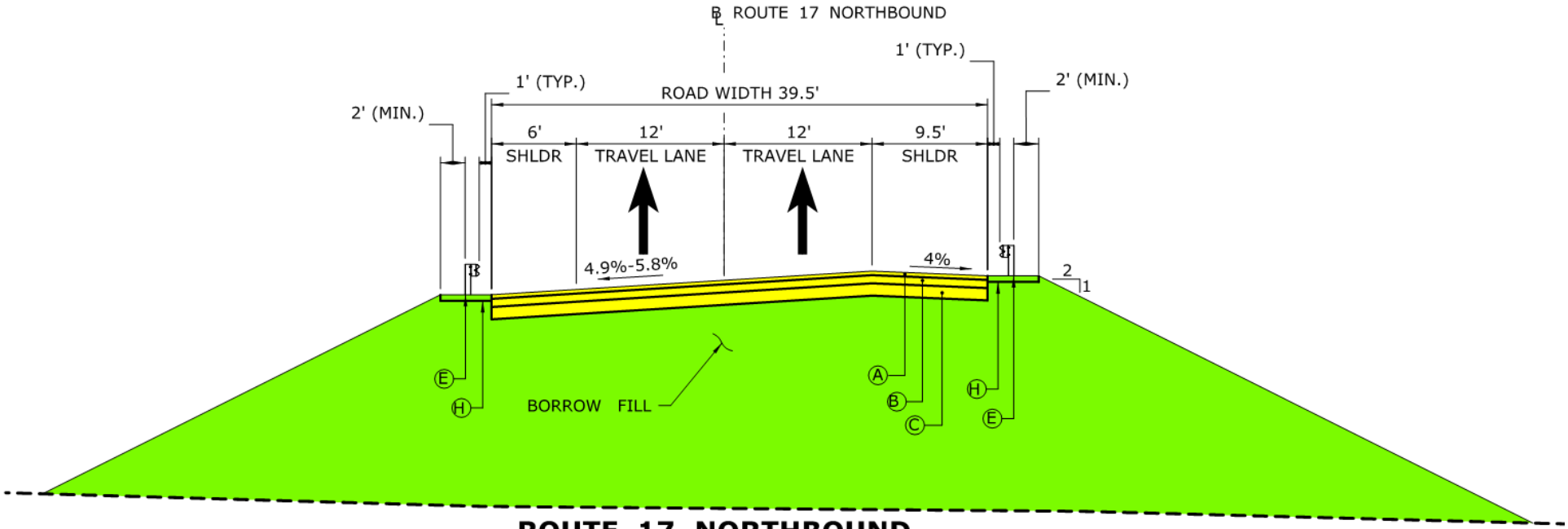
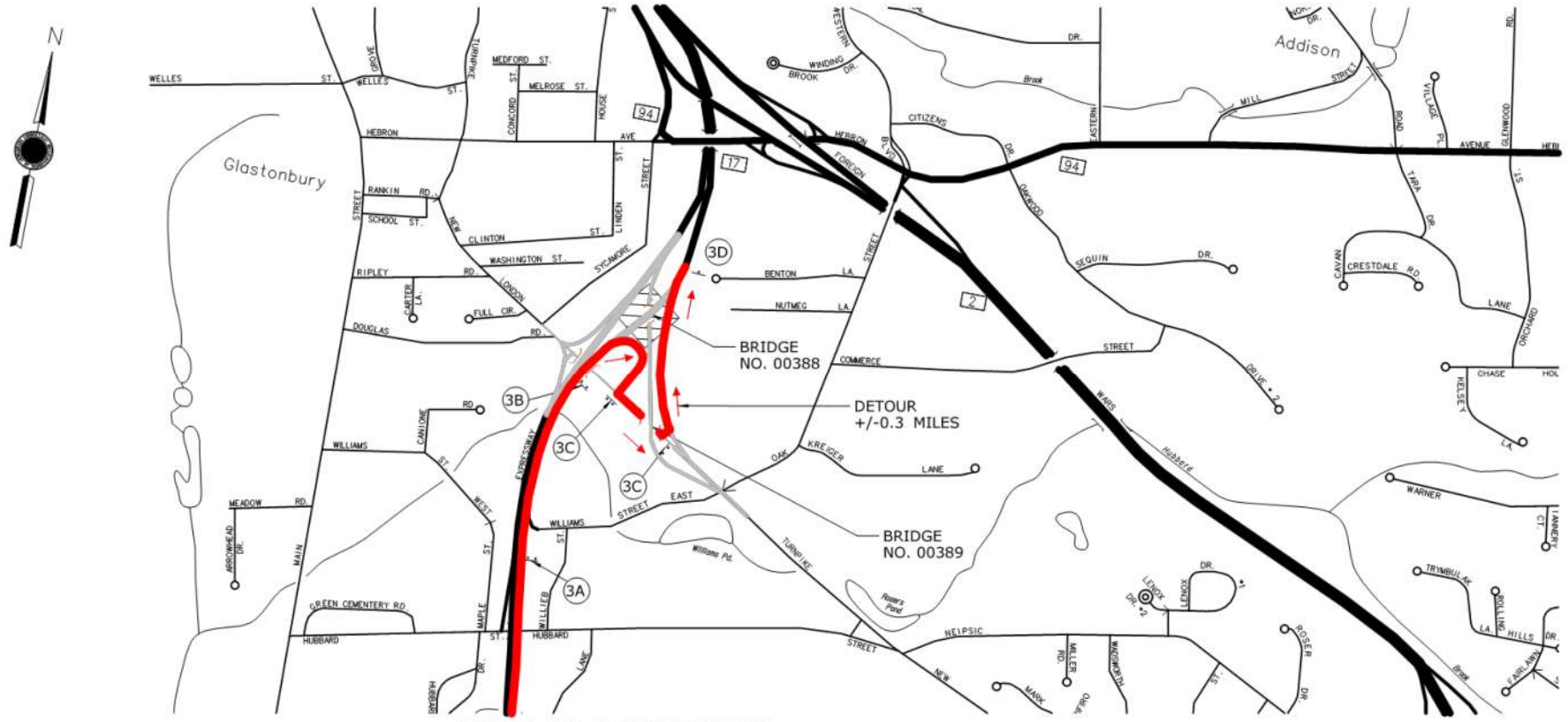


ROUTE 17 NORTHBOUND

(FILL IN OF REMOVED BRIDGE NO. 00388)

N.T.S.

Project No. 53-189: Construction Stage 2



ROUTE 17 NORTHBOUND
DETOUR MAP
N.T.S.

Duration of Detour: 55 Hours Period (1 Weekend)

Route 17 SB Ramp 007

-Approx. Length of Ramp: 2100 ft

-Avg. Daily Traffic (2015):
3200 vehicles

-AM Peak Hourly Traffic Count:
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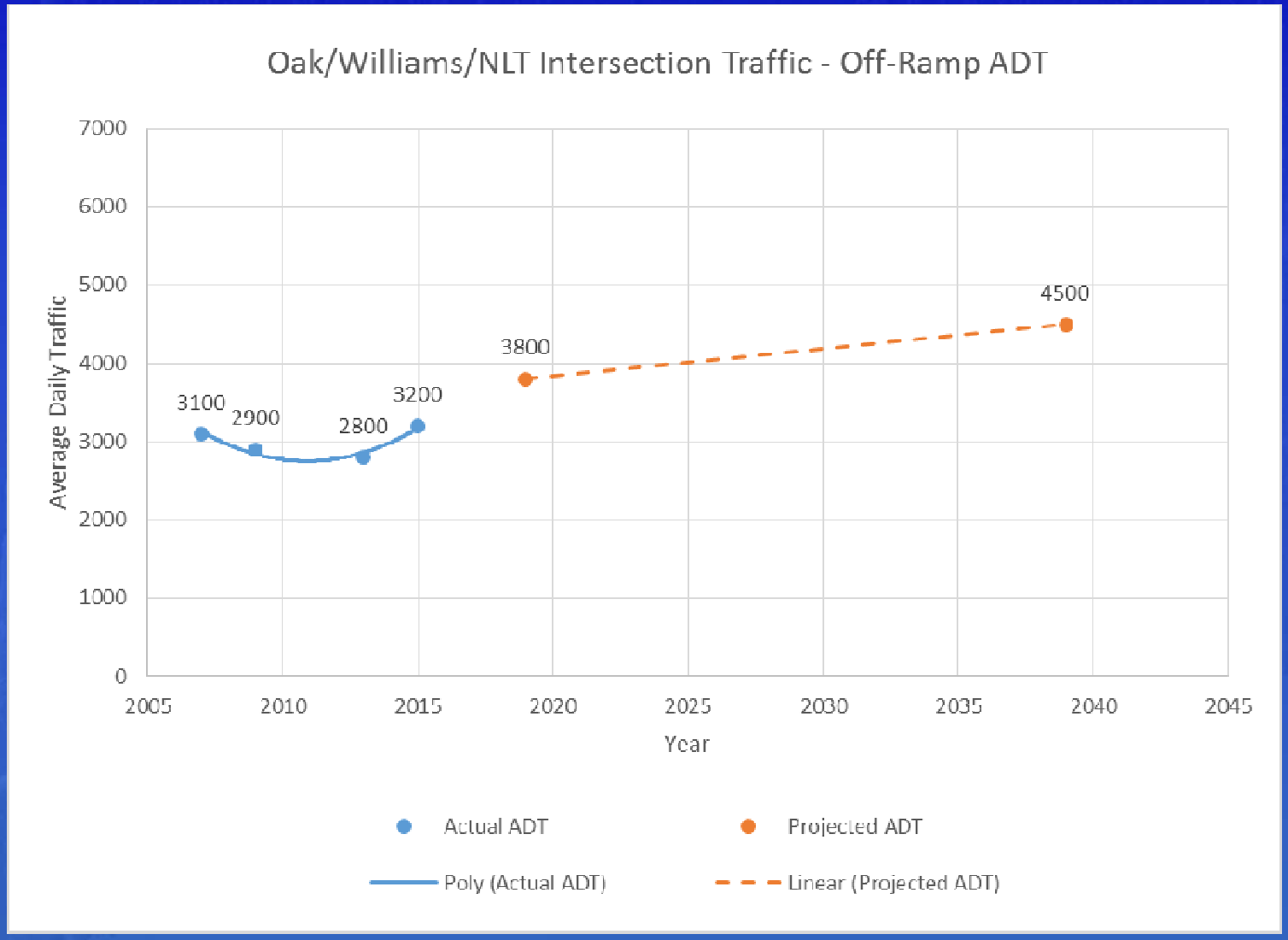

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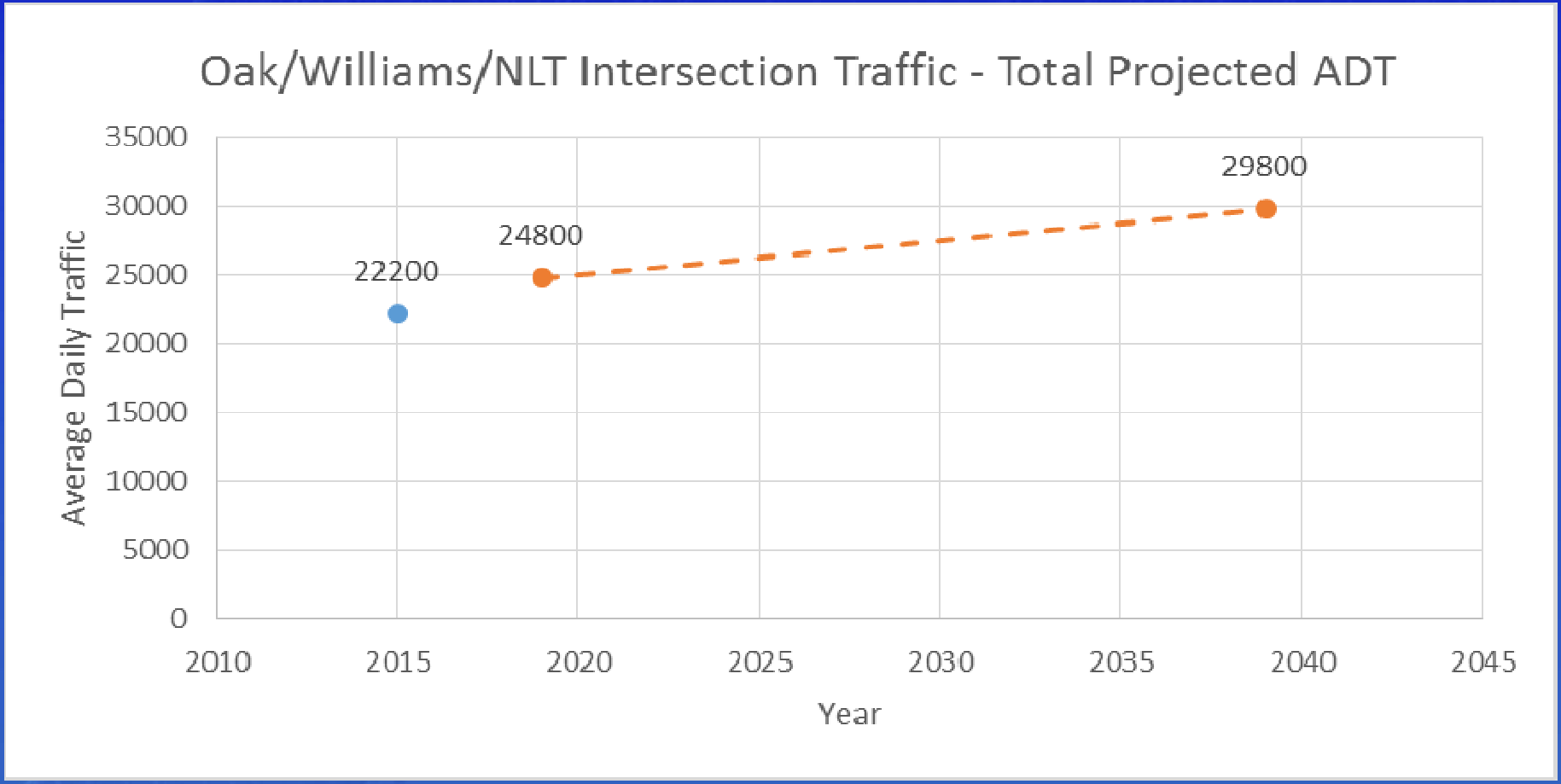
Oak/Williams/NLT Intersection Traffic – Total Projected ADT (All Options)



Note: Estimate incorporates "The Tannery" traffic increase

Project No. 53-189: Preliminary Intersection Traffic Analysis – 2019 Peak PM

No Build

Approach	Approach Delay (sec)
New London Tpke EB	27
New London Tpke WB	42
Williams St. East	45
Oak Street	78
Route 17 SB Off-Ramp	56
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 53
Intersection Level of Service	**D**

*All are an average of all traffic movements on the specified intersection leg

Build Option 1

Approach	Approach Delay (sec)
New London Tpke EB	21
New London Tpke WB	26
Williams St. East	39
Oak Street	16
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 21
Intersection Level of Service	**C**

*All are an average of all traffic movements on the specified intersection leg

Build Option 2

Approach	Approach Delay (sec)
New London Tpke EB	15
New London Tpke WB	26
Williams St. East	31
Oak Street	16
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 19
Intersection Level of Service	**B**

*All are an average of all traffic movements on the specified intersection leg

Project No. 53-189: Preliminary Intersection Traffic Analysis - 2039 Peak PM

No Build

Approach	Approach Delay (sec)
New London Tpke EB	28
New London Tpke WB	43
Williams St. East	49
Oak Street	148
Route 17 SB Off-Ramp	83
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 83
Intersection Level of Service	**F**

*All are an average of all traffic movements on the specified intersection leg

Build Option 1

Approach	Approach Delay (sec)
New London Tpke EB	23
New London Tpke WB	33
Williams St. East	46
Oak Street	20
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 25
Intersection Level of Service	**C**

*All are an average of all traffic movements on the specified intersection leg

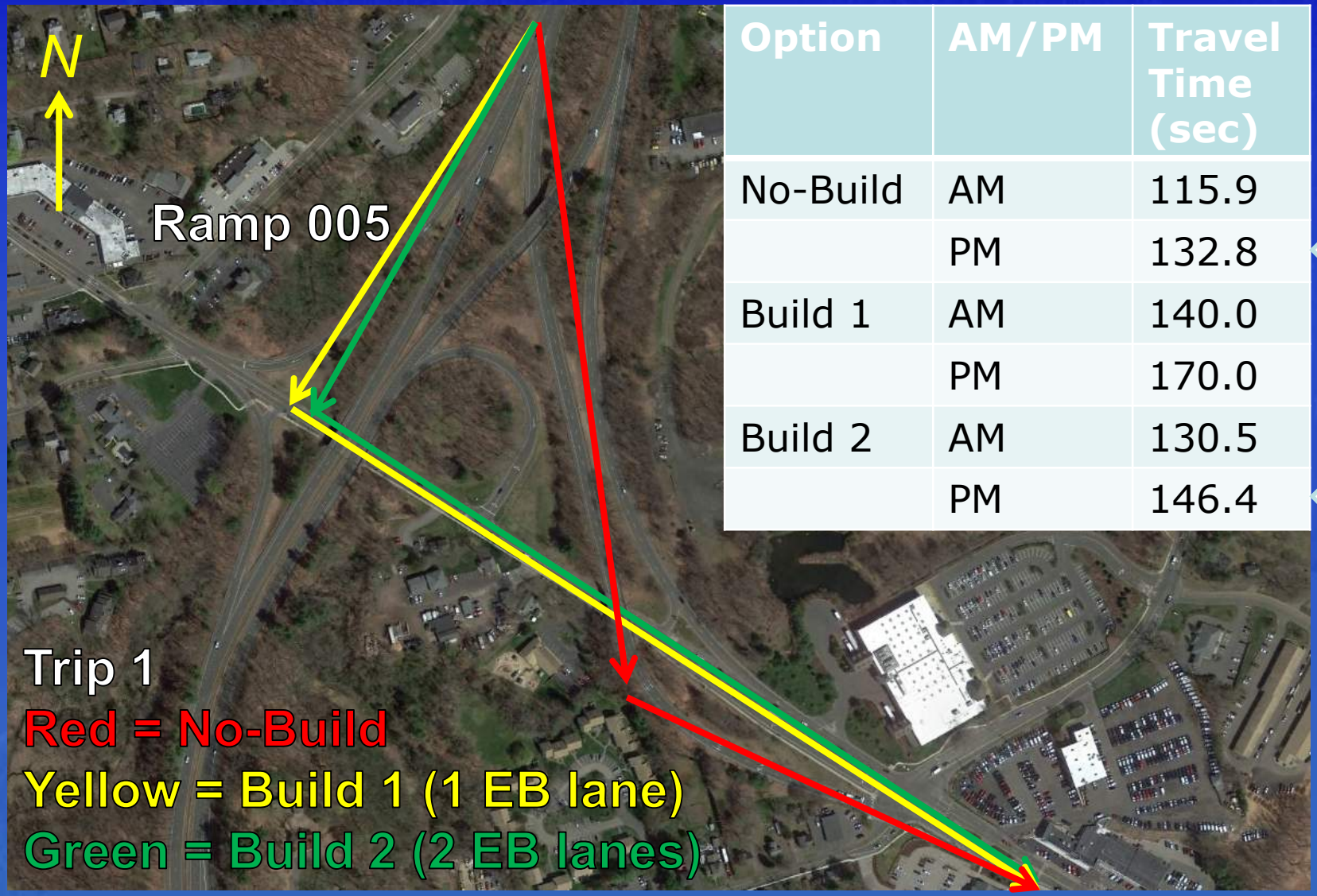
Build Option 2

Approach	Approach Delay (sec)
New London Tpke EB	18
New London Tpke WB	34
Williams St. East	44
Oak Street	19
New London Turnpike at Oak St. and Williams St. East	**Avg. Delay (sec)** 23
Intersection Level of Service	**C**

*All are an average of all traffic movements on the specified intersection leg

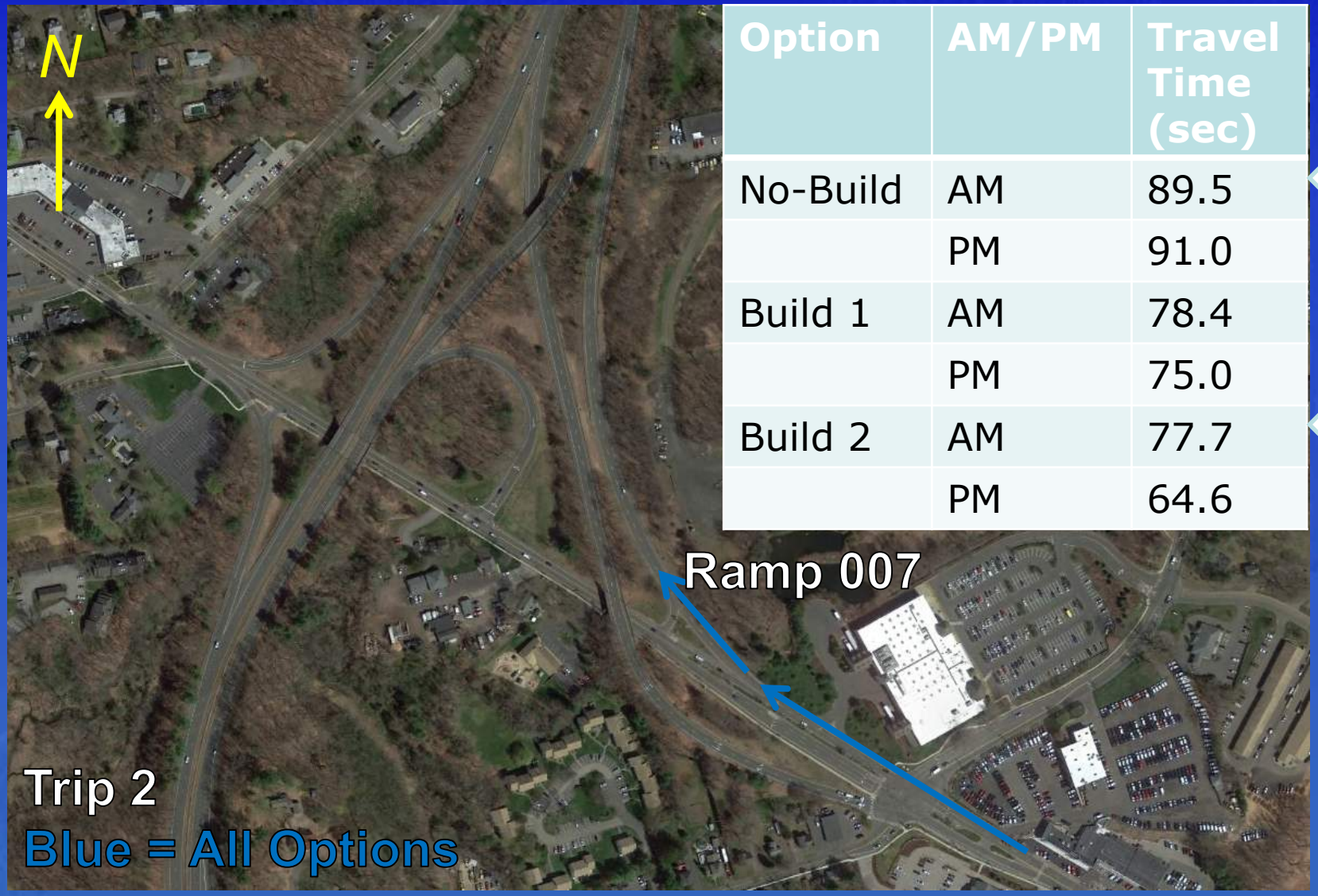
Estimated Growth Rate = 2% Annually

Rt. 17 SB – Off-Ramp - 2019



Option	AM/PM	Travel Time (sec)
No-Build	AM	115.9
	PM	132.8
Build 1	AM	140.0
	PM	170.0
Build 2	AM	130.5
	PM	146.4

Rt. 17 NB – On-Ramp - 2019



Option	AM/PM	Travel Time (sec)
No-Build	AM	89.5
	PM	91.0
Build 1	AM	78.4
	PM	75.0
Build 2	AM	77.7
	PM	64.6

Project No. 53-189: Utility Impacts

Anticipated Impacts to Utilities

- Utility poles along New London Turnpike will need to be relocated.
- Communications lines on Bridge No. 00389 need to be protected in place or relocated.
- A fire hydrant adjacent to New London Turnpike and near the existing Route 17 SB Ramp 005 will need to be relocated.

Project No. 53-189: Drainage, Right-of-Way & Environmental Impacts

- Drainage system modifications may be needed
  - Relocation of catch basins near Route 17 SB Ramp 005, on north and south sides of New London Turnpike
- No Anticipated Impacts to Wetlands
- Construction work to be done within State and Town Rights-of-Way

Project Funding and Cost

Funding

- Construction will be undertaken using State Funds under the "Fix it First Transportation Initiative"
- If Federal Funds are available, then they will be applied for
  - Project funding will become an 80% Fed/20% State split
- The cost and schedule are preliminary, and are subject to change

Cost

- Total construction cost for the project is currently estimated at $4,000,000

Project Schedule and Construction

Schedule

- Construction Start: Spring 2020
- Completion: Summer 2021
- Construction anticipated to last 1½ to 2 construction seasons
  - some construction activities have minimal to no impact to the traveling public

Construction Impacts to Traffic

- Detours will only be during the weekends in order to minimize impacts
  - Only two weekends anticipated for detours

Contact Information

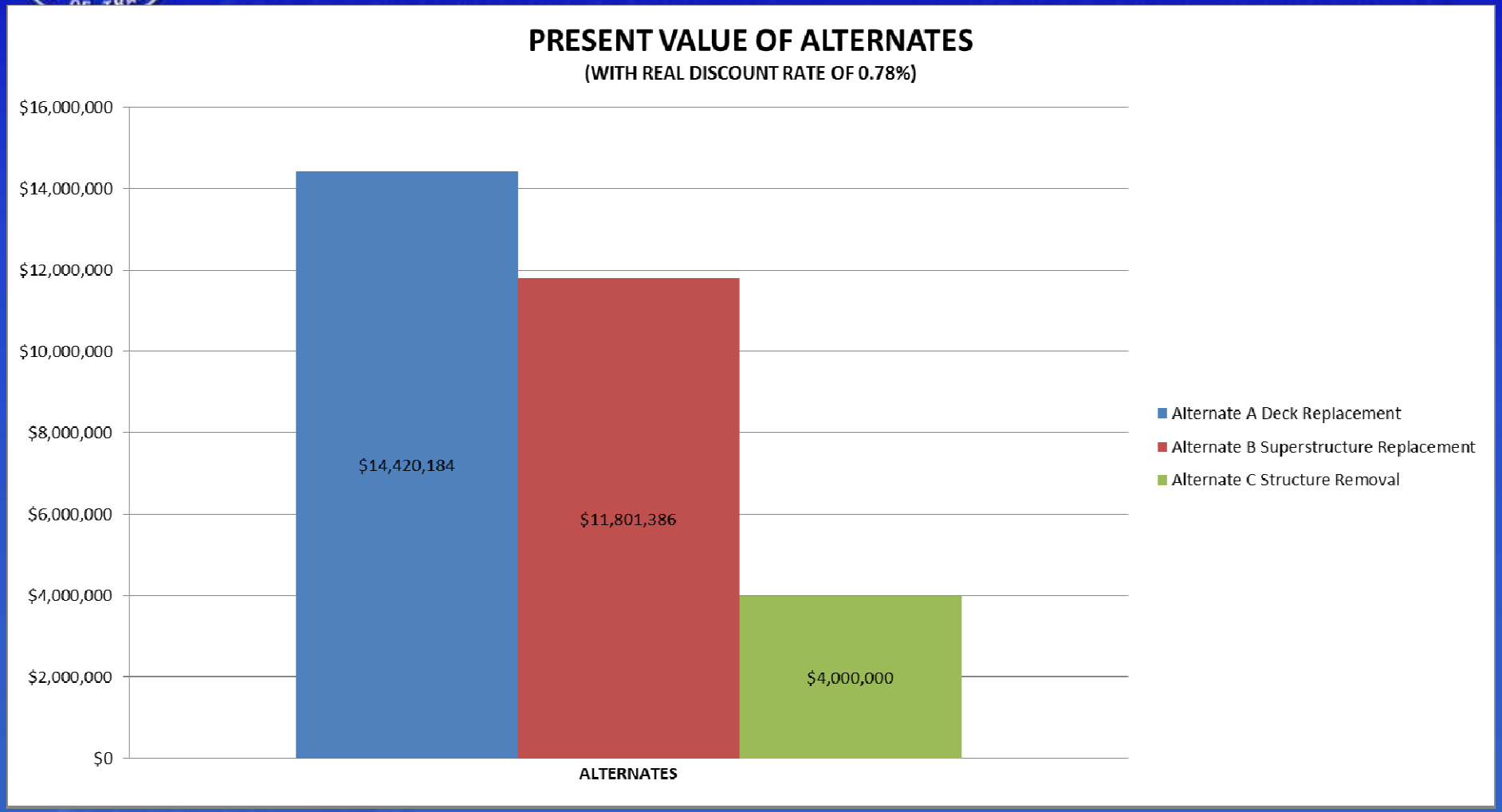
Thank You
Questions and Comments

Dobieslawa Kania – Transportation Engineer 3
Connecticut DOT
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131

Email: Dobieslawa.Kania@ct.gov
Phone: 860-594-3389

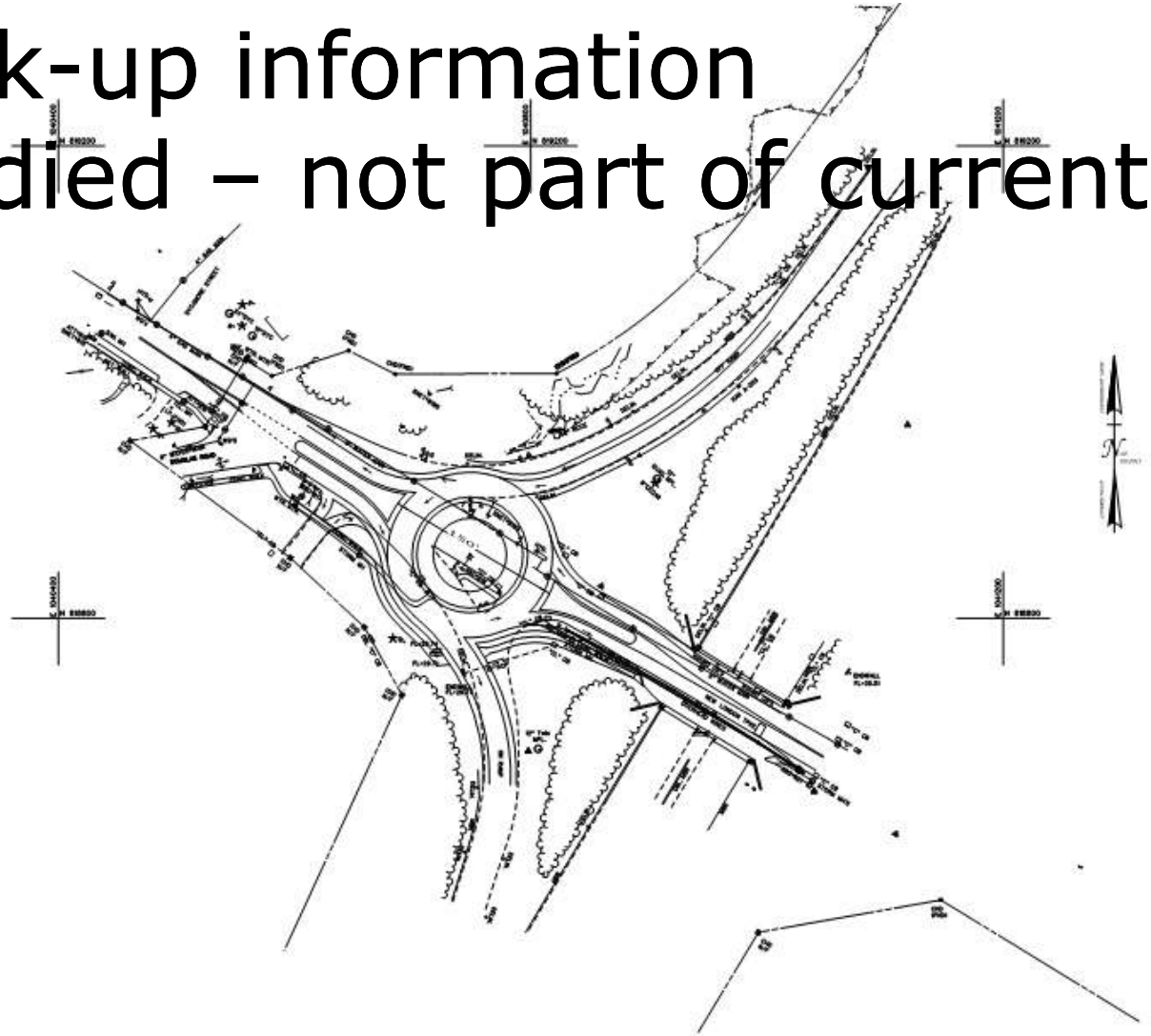
Back-up information

Back-up information
Life Cycle Cost Analysis



- Cost Benefit Analysis over a 75-year period
- Cost for today based on evaluation of repairs and rehabilitation

Back-up information
Studied – not part of current design



PRELIMINARY

NOTES:

1.) SURVEY BY District-1

2.) FIELD BOOKS 170-3384 Glastonbury

3.) 400 FOOT GRID BASED ON CONNECTICUT COORDINATE SYSTEM N. A. D. 1983/2011

4.) VERTICAL DATUM BASED ON NAVD 1988

5.) THE PROPERTY AND STREET LINES DEPICTED HAVE BEEN COMPILED FROM VARIOUS SOURCES AND ARE NOT TO BE CONSTRUED AS NECESSARILY BEING OBTAINED AS THE RESULT OF A FIELD SURVEY, NOR DO THEY REPRESENT A PROPERTY BOUNDARY OPINION

6.) UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, LIMITED FIELD LOCATIONS AND OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTANCE OF WHICH ARE UNKNOWN. THE SIZE, LOCATION AND EXISTANCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

7.) UTILITIES ARE SUPPLIED BY THE FOLLOWING COMPANIES: NDC, CNG

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Route 17 SB Ramp
AT New London Turnpike
IN THE TOWN OF
GLASTONBURY

PROJECT NO. 170-3250

SURVEYED BY: Way
PLOTTED BY:
CHECKED BY: Sokolowski
FILE: 170_3384_Glastonbury_Bridge_00308.dgn
May 2016