

**STATE OF NEW HAMPSHIRE  
INTER-DEPARTMENT COMMUNICATION**

**DATE:** April 1, 2021

**FROM:** Ronald J. Grandmaison, P.E. **AT (OFFICE):** Bureau of Highway Design  
Pavement Section Chief

**SUBJECT:** Lincoln-Franconia 41052  
I-93 Franconia Notch Parkway  
Pavement Preservation

*WAO  
4/21/21*

**TO:** William Oldenburg, P.E. - Chairman, Traffic Control Committee  
Assistant Director of Project Development

**MEMORANDUM**

In support of the Level of Significance-Level II classification determined by the Traffic Control Committee on December 17, 2020, the following efforts have been undertaken to maintain conformance with the Guidelines for Implementation of the Work Zone Safety and Mobility Policy, NHDOT Policy #601.01.

**Project Description**

The purpose of this project is to resurface I-93 through Franconia Notch from the south end of Bridge No. 133/109 (NB) and Bridge No. 132/108 (SB) (approximately MM 105.9) over the Pemigewasset River in Lincoln extending northerly 5.7 miles to the north end of Bridge No. 132/086 over Lafayette Brook (approximately MM 111.6) in Franconia. This work includes the interchange ramps at Exit 34B with Tramway Drive & 34C and various acceleration/deceleration lanes to attractions in Franconia Notch State Park. The treatment for the mainline consists of a full width 1.5" inlay utilizing polymer modified asphalt binder. The inlay will include the ramp acceleration and deceleration lanes. The treatment for the Exit 34B with Tramway Drive and 34C ramps is a full width 2" inlay. Selected sections of median guardrail where both barrels are immediately adjacent to each other will be removed and replaced in kind to facilitate greater flexibility of traffic patterns. Rumble strips and pavement markings will be replaced.

This project will also repair the curb line along the right and left shoulders in both barrels (MM 104.4 to MM 105.9).

The project is being advertised on May 4, 2021 and will be constructed during the Summer 2021 and 2022 with an anticipated completion date in the Fall of 2022.

**Work Zone Management Strategies**

Work Zone Management Strategies are tools and procedures established to improve

mobility and safety through the work zone. The strategies are grouped into three categories: Temporary Traffic Control (TTC), Transportation Operations (TO), and Public Outreach (PO). These are outlined in the NHDOT Policy #601.01 entitled "Guidelines for Implementation of the Work Zone Safety and Mobility Policy".

The Policy references Appendix B of the FHWA document entitled "Developing and Implementing Transportation Management Plans for Work Zones". Appendix B contains the Transportation Management Plan (TMP) Strategy Matrix where the strategies are described. The following sections use the reference format from the matrix (e.g. IA2).

### **Temporary Traffic Control (TTC)**

#### **A. Construction Phasing:**

The work shall be prosecuted in a manner to minimize the number and extents of specific lane closures to the extents practicable. Details associated with this element shall be outlined in the Contractor's work plan, and approved by the Engineer.

The project will be constructed utilizing temporary one barrel, alternating two-way traffic. When oversized loads cannot be accommodated work will be at night. The traffic pattern will be provided to the Contractor in the proposal to ensure that access to all attractions is maintained (besides Boise Rock for a few nights). Ramps at Exit 34B and 34C are included in this project and will be closed periodically with traffic diverted to maintain access to all exits.

The temporary traffic plan for this project has five (5) phases with the first four (4) phases having two (2) sub-phases and the final phase having four (4) sub-phases. These phases and sub-phases are shown in more detail in the attached detail and outline. Phase A starts at the southern limit of the project and ends just north of the end of the first grassy median. Phase B starts at the northern limit of Phase A and continues north to roughly 0.4 miles south of the Lafayette Campground. Phase C starts at the northern limit of Phase B and continues north to the On ramp of the Boise Rock attraction. Phase D starts at the northern limit of the Boise Rock attraction and continues north to the northern ramp nose of Exit 34B. Phase E starts at the northern ramp nose of Exit 34B and continues north to northern limit of the project.

Minor short term traffic pattern modifications may be necessary. Details associated with this element shall be outlined in the Contractor's work plan, and approved by the Engineer.

#### **B. Control Strategies**

1. Lane closures (IA3)
  - a. Daytime lane closures for curb patch repair
2. One-Lane, Two-Way Operations (IA4)
  - a. Only way to complete the project without taking out the median guardrail completely
3. Night work (IA9)
  - a. Work will be completed at night when oversize vehicles cannot be

accommodated, when attractions must be closed, and from Memorial Day to Labor Day due to high traffic volumes.

4. Work hour restrictions for peak travel (IA11)
  - a. Work hour restrictions are described in Section 108.04 of the NHDOT Standard Specifications, including Sundays and legal holidays.

### **C. Traffic Control Devices**

1. Temporary signs (IB1)
  - a. Temporary signs and warning devices will be used to alert motorists to construction activities and to guide them through the work zone.
2. Changeable message signs (IB2)
  - a. The contract includes Item 619.25 – Portable Changeable Message Signs (CMS) to provide motorists with real time information during construction. These will be moved daily in conjunction with the work progress. These will also be used for any ramp closures.
  - b. CMS will also be used for advance warning of upcoming attraction closures.
3. Arrow Panels (IB3)
  - a. Arrow panels will be a part of the lane closures for any work involving lane closures per the MUTCD and standard layouts.
4. Channelizing devices (IB4)
  - a. Channelizing devices (e.g. drums or tubular markers) will be used when changes to the road configuration or potential hazards necessitate their use.
  - b. This contract includes Item 606.9523 Temporary Impact Attenuation Device (Non-Redirective) Test Level 3 to be used during operations in conjunction with the paving operations.
  - c. Uniformed officers with vehicle will be used as pilot vehicles.
5. Temporary pavement markings (IB5)
  - a. Temporary flexible raised pavement markers (RPMs) will be utilized to delineate gore areas once the exiting markings have been removed.
6. Uniformed traffic control officers (IB6)
  - a. Uniformed Officers will be used for Traffic Control Operations (TCO) to assist trucks and equipment operating in the work zone and for traffic control setup/breakdown.
  - b. Considering the high traffic volumes and operating speeds entering the Notch, officers will also be used for Presence Operations (PO).
7. Temporary traffic signals (IB7)
  - a. Will be used to control traffic in the one-lane, alternating two-way configuration and will be operated by uniformed officers
8. Lighting Devices (IB8)
  - a. Temporary lighting devices will be used during night work to guide the traveling public through the work area and promote worker safety.

**D. Project Coordination, Contracting and Innovative Construction Strategies**

- 1. Project Coordination (IC1)
  - a. The Contractor will be required to coordinate with concurrent projects that may affect traffic control operations.

<b>Project Name and Number</b>	<b>Anticipated Beginning</b>	<b>Anticipated Completion</b>	<b>Description</b>
Statewide Guardrail Repair (N) 43005	Spring 2020	Fall 2021	Guardrail Repair North - I-93 Exit 20 to VT border
District 1 16161J	Spring 2021	Fall 2021	Resurfacing various roadways

**Public Outreach (PO) / Public Information (PI)**

**A. Public Awareness Strategies**

The following public awareness strategies will be considered:

- 1. Press Release/Media Alerts (IIA2)
  - a. Construction Press Releases will be issued to the media for distribution for major changes in traffic patterns.
- 2. Website (IIA7)
  - a. Information will be posted on the NHDOT web site.
  - b. Information will be posted on the NHDNCR web site regarding impacts to State Park access.
  - c. Information will be posted on the United States Forest Service (USFS) White Mountain National Forest web site regarding impacts to trailhead parking and access.
- 3. Coordination with media/schools/businesses/emergency services (IIA10)
  - a. The Contractor will be required to notify and provide information regarding traffic control operations to the emergency service contacts for the Towns of Lincoln and Franconia. This includes instances that may result in temporary lane closures or blocked traffic flow through the work zone.
- 4. Work zone safety highway signs (IIA12)
  - a. The contract includes NH Law Work Zone Speed signs that will be utilized during this multi-year construction project. The signs notify motorists of increased penalties for a violation of speeding in a highway construction zone.

**B. Motorist Information Strategies**

- 1. Changeable message signs (IIB2)
  - a. The Contract includes Item 619.25 – Portable Changeable Message Signs to provide motorists with real time information during construction. These

will be moved daily in conjunction with the work to provide motorists with real time information during construction.

2. Temporary motorist information signs (IIB3)
3. The project includes temporary, ground-mounted signs to provide traveler information and to guide motorists through the work zone.

### **Transportation Operations (TO)**

#### **A. Demand Management Strategies**

There are no Demand Management Strategies proposed for this project.

#### **B. Corridor/Network Management Strategies**

1. Ramp Closures (IIIB13)
  - a. See *Temporary Traffic Control* Section B2a above
2. Coordination with adjacent construction sites (IIIB15)
  - a. This strategy can minimize the combined impacts on road users and reduce motorist delay (see also Project Coordination, Contracting and Innovative Construction Strategies/Project Coordination IC1)
3. Temporary traffic signals (IIIB2)
  - a. Will be used to control traffic in the one-lane, alternating two-way configuration and will be operated by uniformed officers

#### **C. Work Zone Safety Management Strategies**

1. Temporary traffic signals (IIIC2)
  - a. Will be used to control traffic in the one-lane, alternating two-way configuration and will be operated by uniformed officers
2. Crash cushions (IIIC5)
  - a. Temporary impact attenuation devices are required to protect motorists from the vehicles in the work area.
3. Temporary rumble strips (IIIC6)
  - a. Attract drivers' attention to the upcoming stop condition
4. Windshield Surveys (IIIC17)
  - a. Conduct windshield surveys to periodically monitor the work area for safety and overall traffic flow improvements.

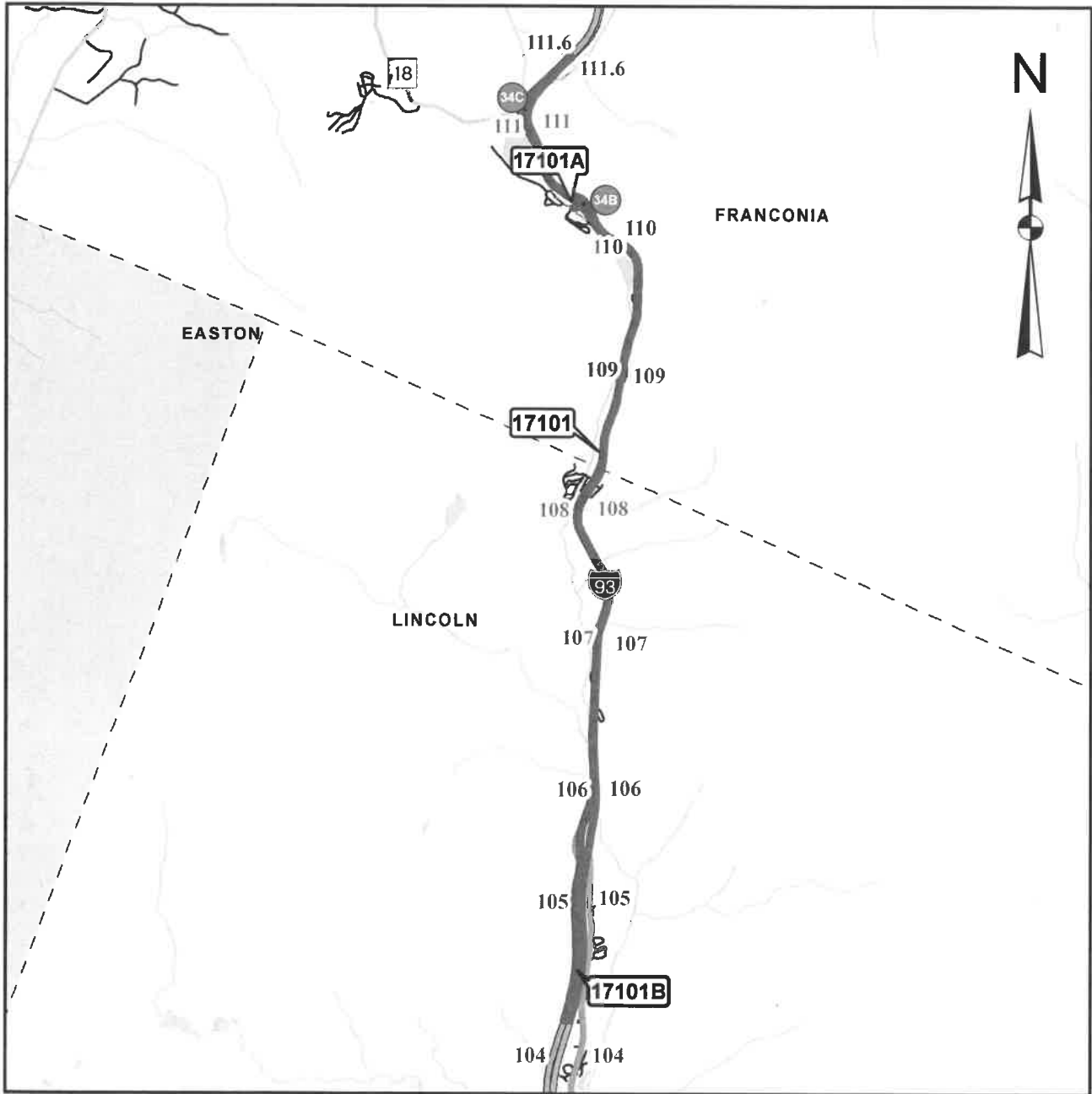
#### **D. Traffic/Incident Management and Enforcement Strategies**

1. Transportation Management Center (IIID2)
  - a. Proposed changes in traffic control will be communicated to the TMC through the Department's Contract Administrator. The TMC can provide centralized coordination and management of incidents along this segment of I-93.
2. Tow/freeway service patrol (IIID8)

- a. Courtesy tow vehicle to provide assistance during work operations
- 3. Incident/emergency response plan (IID15)
  - a. Advance communication prior to work starting and direct communication during construction with local emergency services.
- 4. Increased Penalties for Work Zone Violations (IID19)

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# LINCOLN-FRANCONIA - 41052



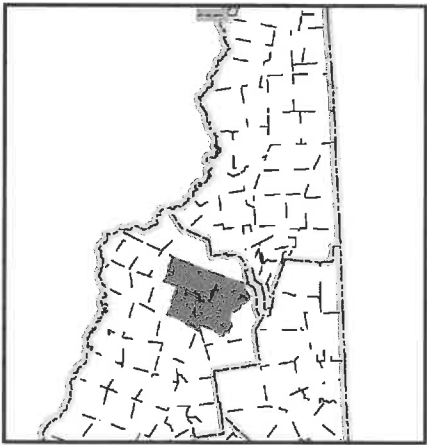
**LEGEND**

- 41052
- Interstates
- US Routes
- State Routes
- Unnumbered Routes
- Local Roads

*New Hampshire*  
**DOT**  
 Department of Transportation

**State #: 41052**  
**Federal #: X-A004(544)**

**LOCATION MAP**



**Lincoln-Franconia  
41052**

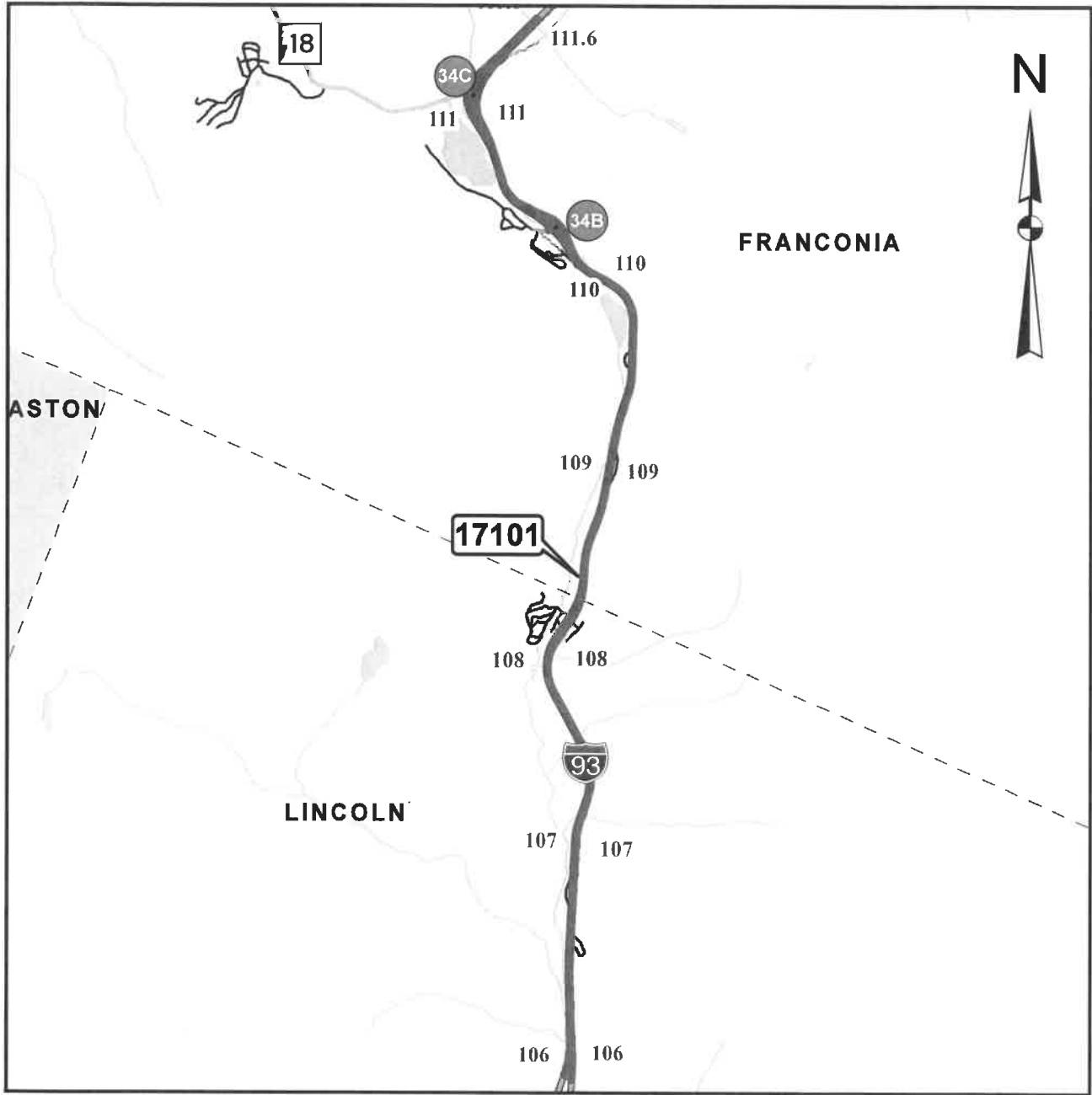
March 29, 2021

**Description of Sections**

- 17101 Lincoln-Franconia, I-93 NB/SB Mainline w/ ramps, 13.7 miles  
Tier 1, Preservation, 1 ½"-2" FW Inlay**  
From the southern end of Br. 133/109 (NB) & 132/108 (SB) over the Pemigewasset River (MP 105.9) in Lincoln northerly 5.7 miles to the north end of Br. (132/086 over Lafayette Brook (MP: 111.6) in Franconia. Also included are the interchange ramps at Exit 34B & Exit 34C and various ramps to attractions including The Basin, Falling Waters Trail Head, Boise Rock, and the Old Man Viewing Area in the northbound barrel. The southbound barrel ramps include Trail Head Parking, Lafayette Campground, and The Basin.
- 1 ½" FW inlay (Item 403.11841) polymer modified (PG 70-34) high performance binder.
- The interchange ramps at Exit 34B & Exit 34C
- 2" FW inlay (Item 403.11842)
- 17101A Franconia, Tramway Drive, 0.1 miles, Tier 4, Minor Rehab, 2" FW Inlay**  
From the ends of the Exit 34B NB ramps west to the entrance of the Old Man of the Mountain Viewing area.
- 2" FW inlay (Item 403.11842)
- 17101B Lincoln, I-93, 5.8 miles of curb line, Tier 1, Minor Rehab, 2-foot x 2" Curb Line-Inlays**  
Northbound and southbound mainline curbing from approximately MM 104.4 northerly to the start of section 17101 (MM 105.8). Specific locations as follows:
- NB: Nose of Exit 34A Off Ramp to Br. 133/109
    - Skip Br. 141/104
  - SB: Br. 132/108 to end of sloped granite curb
    - Skip Br. 140/102
- Inlay the inside and outside curb lines 2-feet x 2 inches deep (Item 403.11043)



# LINCOLN-FRANCONIA - 41052



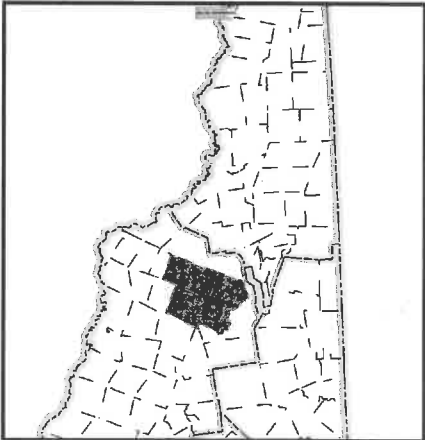
**LEGEND**

- 17101
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- US Routes
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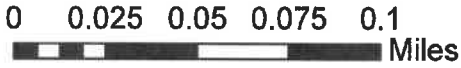
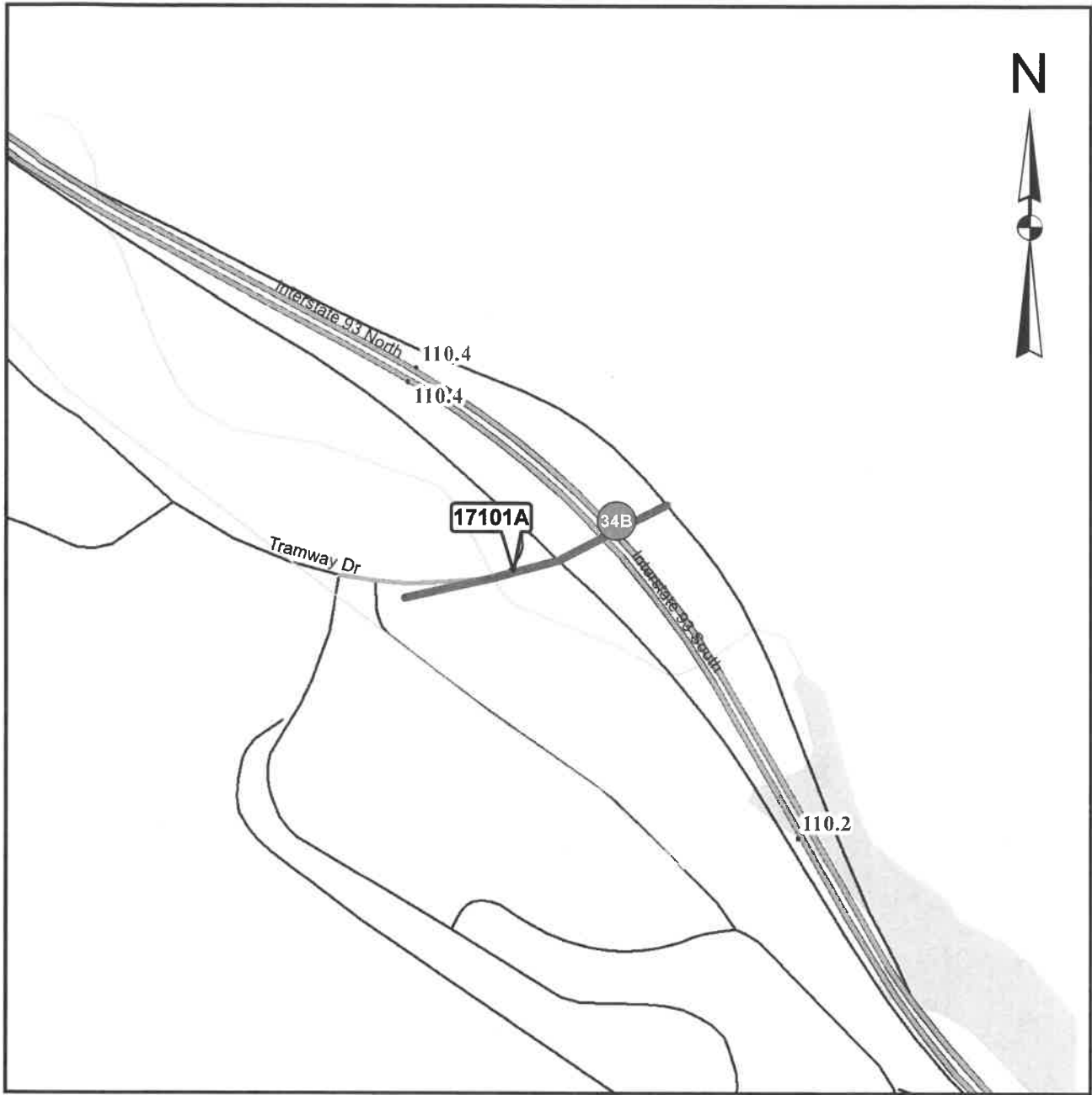
*New Hampshire*  
**DOT**  
 Department of Transportation

**State #: 41052**  
**Federal #: X-A004(544)**

**LOCATION MAP**



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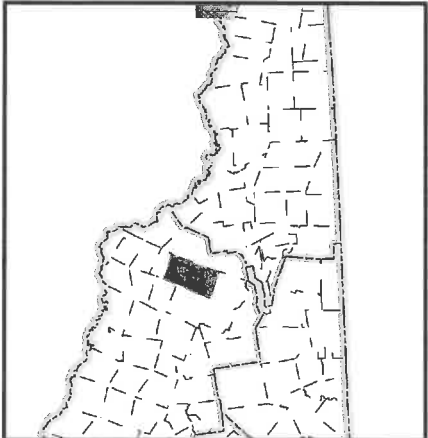
**LEGEND**

- 17101A
- Interstates
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- Unnumbered Routes
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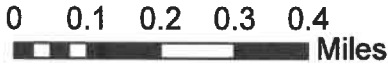
*New Hampshire*  
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**LOCATION MAP**



# LINCOLN-FRANCONIA - 41052



**LEGEND**

- 17101B
- Interstates
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**LOCATION MAP**

