SNHPC FY 2021-2045 Metropolitan Transportation Plan

Regional Travel Demand Model and Transportation Improvement Projects

SNHPC MPO Meeting
December 22, 2020

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Update of the Regional Travel Demand Model

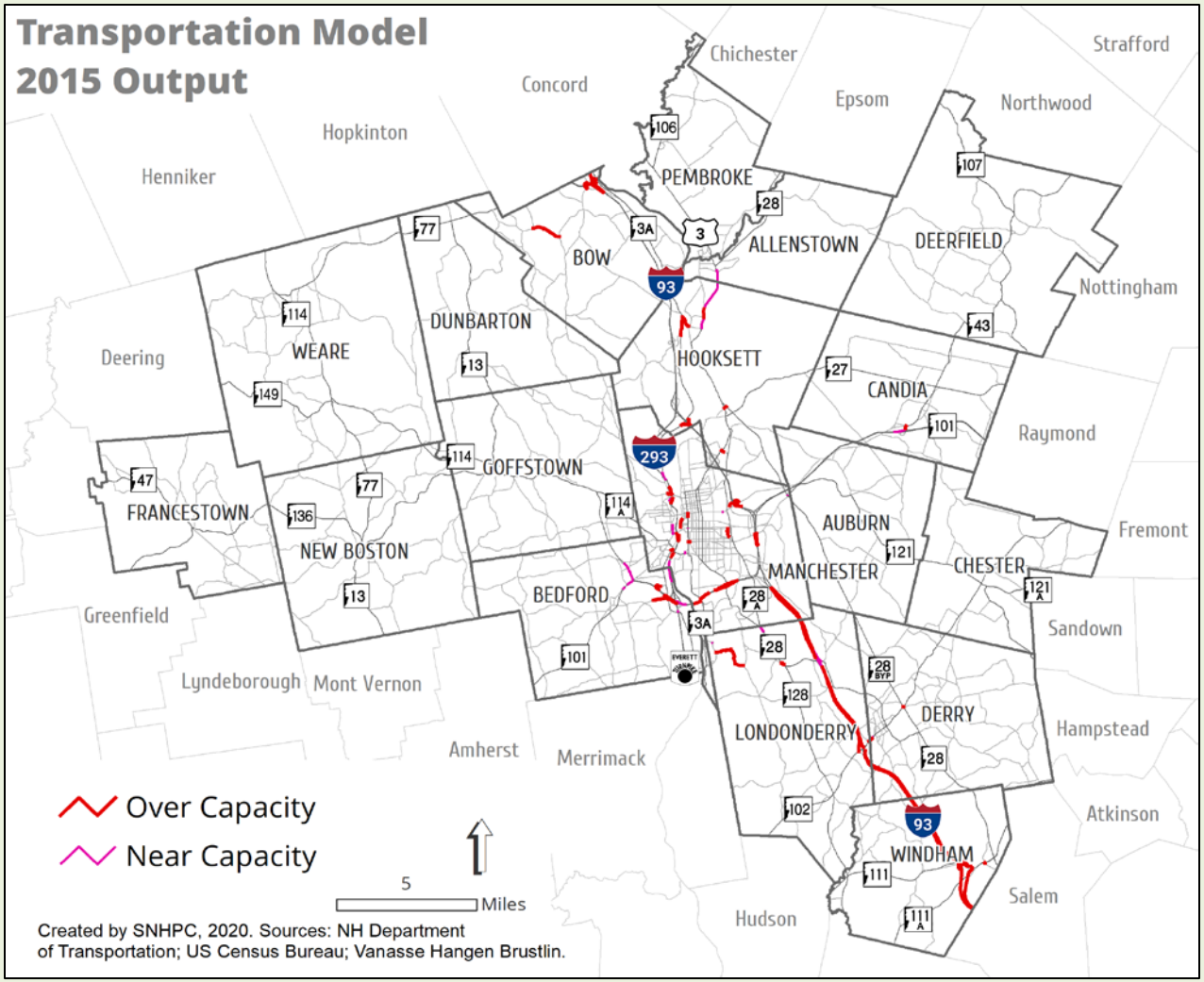
- SNHPC staff coordinated with VHB to update the Regional Travel Demand Model as part of the Metropolitan Transportation Plan update.

- The SNHPC model has been updated to 2015 base year and 2045 horizon year.

- **The towns of Allenstown, Bow, Dunbarton, and Pembroke have been added to the model.**

- Demographic data projections have been updated at the Traffic Analysis Zone Level for population, households, employment, and school enrollment.

2015 Base Year Model Results



- The model results underscore existing capacity issues on key arterial roads including:
  - I-93
  - I-293
  - NH Route 101
  - U.S. Route 3
  - NH Route 28

Identification of Transportation Improvement Projects

- The heart of the Metropolitan Transportation Plan is the identification of improvement projects needed for the SNHPC's regional transportation network between FY 2021 and FY 2045.

- The program of projects identified in the Metropolitan Transportation Plan is **fiscally constrained** against the transportation revenues expected to be available in the region.

- Projects include all surface transportation modes, including road/bridge, freight, transit, bicycle and pedestrian.
    - *Projects affecting the airport are not considered to be surface transportation and are not part of the scope of the SNHPC Metropolitan Transportation Plan.*

Identification of Transportation Improvement Projects

- The source for all projects identified in **FY 2021-2030** is the New Hampshire Ten-Year Transportation Improvement Plan.

- The sources for the projects identified for **FY 2031-2045** in the Metropolitan Transportation plan include:
  - SNHPC Base Year Travel Demand Model Results
  - Regionally-Identified Projects (CMP, ITS Architecture, etc.)
  - Local Master Plan Project Priorities
  - Local and Regional Corridor Studies
  - Previous TAP/CMAQ/BUILD/TYP Applications
  - Statewide Plans (e.g. Statewide Strategic Transit Assessment)
  - Other Special Plans/Studies (e.g. TOD, Road Safety Audits)

Identification of Transportation Improvement Projects

There are more than 125 projects in the draft Metropolitan Transportation Plan.

This presentation is not intended to walk through the details of every project, but rather to cover some of the highlights.

Metropolitan Transportation Plan Projects – FY 2021-2030

Bedford	Rehabilitation or Replacement of Bridge #090/065 Carrying NH Route 101 Over Pulpit Brook
Bedford	U.S. Route 3 Widening from Hawthorne Drive North to Manchester Airport Access Road
Bedford	Rehabilitate 90" Structural Plate Pipe Under NH Route 101/Boynton Street
Bedford-Goffstown	Corridor Study of NH Route 114 from NH Route 101 in Bedford to Henry Bridge Road in Goffstown
Bow	NH Route 3A Corridor Safety Improvements
Candia	Safety and Operational Improvements on NH Route 27/NH Route 43/Raymond Road
Chester	NH Route 102/NH Route 121 Intersection Safety Improvements
Deerfield	NH Route 107 Over Freese's Pond - Replace Bridge #137/116
Derry-Londonderry	I-93 Exit 4A - Preliminary Design, Final Design, ROW, and Construction of New Interchange and Connecting Roadway
District 5	Resurfacing Various Tier2, 3, and 4 Roadways in NHDOT District 5
Hooksett	Reconstruction and Widening of U.S. Route 3 from NH Route 27/Whitehall Road/Martin's Ferry Road to West Alice Ave./Alice Ave.
Londonderry	Safety and Operational Improvements at the Intersection of NH Route 28/NH Route 128

Metropolitan Transportation Plan Projects – FY 2021-2030

Londonderry	Operational and Capacity Improvements at the Intersection of NH Route 28/Stonehenge Road
Londonderry	Construct a 1 Mile Multi-use Path Along the Side of Harvey Road, Webster Road, and Grenier Field Road
Manchester	Bridge Rehabilitation - Salmon Street WB Over RD, BMRR, and Merrimack River (Bridge #106/072)
Manchester	Bridge Rehabilitation - Salmon Street EB Over RD, BMRR, and Merrimack River and Adjacent Ramp "E" (Bridge #107/072 and Bridge #107/071)
Manchester	Construct Multi-use Path Along Baker St, Brown Ave, Dubisz St, and Sundial Ave.
Manchester	Rehabilitate Red List Bridge Carrying Huse Road Over I-293 and NH Route 101
Manchester	Operational Improvements at the I-293 Exit 1 Interchange
Manchester	Implement an Adaptive Signal Control System on Granite Street and Upgrade South Willow Street Signal Performance
Manchester	Construct ADA Compliant Pedestrian and Bicycle Trail Along Perimeter Rd, South Willow St, and Harvey Rd.
Manchester	Construct a NB Right Turn Lane and Modify Lane Utilization at South Willow St/Weston Rd Intersection
Manchester	Construct a Roundabout at Entrance of Derryfield School at River Rd/Bicentennial Rd Intersection
New Boston	Culvert Replacement for Red List Bridge Carrying NH Route 13 Over Cochrane Brook (Bridge #122/120)

Metropolitan Transportation Plan Projects – FY 2021-2030

Salem to Manchester	Final Design and ROW for I-93 Salem to Manchester Corridor Post September 4, 2014
Salem to Manchester	I-93 Exit 5 Interchange Reconstruction - Debt Service for Project 14633F
Salem to Manchester	Exit 3 Area, Project Initiated to Track GARVEE Bond Debt Service Attributable to the 13933N Project
Salem to Manchester	I-93 Exit 3 Area- NB ML Connections, NB Ramps, and NH 111 Relocation - Debt Service Project for 13933H
Weare	Address Bridge Carrying NH 77 Over Canal 2 Choate Brook in the Town of Weare
Wilton-Bedford	Traffic and Safety Improvements Consistent with the Intent of the 2002 Corridor Study
Windham	Intersection Improvements, Roulston Road and NH Route 28
Bedford-Merrimack	Improvement to Bedford Main Line Toll Plaza to Institute All Electronic Tolling
Central Turnpike	Turnpike Drainage Rehabilitation Along the F.E. Everett Turnpike
Central Turnpike	Paving on the F.E. Everett Turnpike
Manchester	Preliminary Engineering and ROW for Reconstruction of the F.E. Everett Turnpike at Exits 6 and 7
Manchester	Reconstruction and Widening of F.E. Everett Turnpike Exit 6 in Manchester
Manchester	Reconstruction of F.E. Everett Turnpike Exit 7 in Manchester
Nashua-Merrimack-Bedford	F.E. Everett Turnpike Widening of 2-Lane Sections from Exit 8 in Nashua to I-293 in Bedford.

Metropolitan Transportation Plan Projects – FY 2031-2045

Auburn	Construction of Multi-use Path Along NH Route 121 from Eaton Hill Road to Shore Drive
Auburn	Construction of Noise Barrier on NH Route 101 Eastbound between MP 61.6 and 62.0
Bedford	Supplemental Construction Funding for U.S. Route 3 Widening from Hawthorne Drive to Manchester Airport Access Road
Bedford	Construction of Noise Barrier on NH Route 101 Eastbound between MP 53.2 and 53.8
Bedford	Construct Left Turn Lanes and Add Signals on NH Route 101 Between Joppa Hill Road and Elk Drive Consistent with the Intent of the NH Route 101 Corridor Study
Bedford	Construct Bicycle/Pedestrian Bridge across NH Route 101 at the Intersection of Bell Hill Road/Nashua Road/NH Route 101
Bedford	Widening of NH Route 101 from Wallace Road to the Amherst Town Line
Bedford	Construct a 10' Multi-use Path Along NH Route 101 from Wayside Drive to the Amherst Town Line
Bedford	Engineering Study of Grade Separated Design Alternatives at the Intersection of NH Route 101/NH Route 114/Boynton Street
Bedford	Implement Adaptive Signal Control or Signal Performance Measures on U.S. Route 3 (River Road)
Bedford	Construct a Bicycle Lane on U.S. Route 3 in the Town of Bedford from the Merrimack Town Line to the Manchester City Line
Bedford	Construct a Bicycle Lane on New Boston Road from NH Route 114 to the New Boston Town Line

Metropolitan Transportation Plan Projects – FY 2031-2045

Candia	Construction of Park-and-Ride Facility at NH Route 101 Exit 3
Candia	Construct Sidewalks and Improve Drainage Along NH Route 27 and NH Route 43 in the Candia Four Corners Village Area
Candia	Intersection Improvements at NH Route 27/Healey Road/South Road
Chester	Intersection Safety Improvements at NH Route 102/North Pond Road
Chester	Intersection Improvements at NH Route 102/Webster Lane
Chester	Intersection Improvements at NH Route 121/Pulpit Rock Road
Deerfield	Roundabout Conversion at Intersection of NH Route 107, Church Street, and Candia Road
Deerfield	Traffic Calming and Bicycle/Pedestrian Improvements on NH Route 107 in Deerfield Town Center
Deerfield	Intersection Improvements at NH Route 107/NH Route 43
Deerfield	Intersection Improvements at NH Route 43/South Road
Deerfield	Pavement Rehabilitation on NH Route 43 from NH Route 107 to the Candia Town Line
Deerfield	Pavement Rehabilitation on NH Route 107 from NH Route 43 to the Epsom Town Line
Derry	Extension of Derry Rail Trail from Madden Road to Londonderry Town Line
Derry	Intersection Safety Improvements at NH Route 28/Lawrence Road/South Range Road
Derry	Shoulder and Drainage Improvements on NH Route 28 in the Town of Derry
Derry	Implement Adaptive Signal Control or Signal Performance Measures on NH Route 28 (Crystal Ave)

Metropolitan Transportation Plan Projects – FY 2031-2045

Derry	Engineering Study of the Intersection of NH Route 102/NH Route 28B in Derry to Identify Potential Operational Improvements
Francestown	Pavement Rehabilitation on NH Route 136 from NH Route 47 to the Greenfield Town Line
Francestown	Pavement Rehabilitation on NH Route 136 from NH Route 47 to the New Boston Town Line
Francestown	Traffic Calming and Pedestrian Improvements in Francestown Village Center
Goffstown	Operational and Capacity Improvements on NH Route 114 from Goffstown/Bedford Town Line to Henry Bridge Road
Goffstown	Completion of the Goffstown Rail Trail from the Piscataquog River to the Manchester City Line
Goffstown	Construction of Sidewalk Improvements on South Mast Street, Church Street, Warren Avenue, Eden Street, Daniel Plummer Road, and St. Anselm Drive.
Hooksett	Engineering Study of NH Route 3A from Hackett Hill Road to Main Street
Hooksett	Construction of Noise Barrier on I-93 Southbound between MP 8.2 and 8.6
Hooksett	Widening of U.S. Route 3/NH Route 28 from Legends Drive to Hunt Street in Hooksett
Hooksett	Implement Adaptive Signal Control or Signal Performance Measures on U.S. Route 3 (Hooksett Rd)
Hooksett	Completion of the Hooksett Riverwalk Trail
Hooksett	Construct a Bicycle Lane on NH Route 3A from Main Street to the Manchester City Line
Hooksett	Intersection Improvements at NH Route 28A/Alice Avenue and NH Route 28A/Zapora Drive

Metropolitan Transportation Plan Projects – FY 2031-2045

Londonderry	Supplemental Funding for Safety and Operational Improvements at the Intersection of NH Route 28/NH Route 128
Londonderry	Increase Capacity on NH Route 28 from Symmes Drive/Vista Ridge Drive to the Intersection of NH Route 128.
Londonderry	Expand Capacity of NH Route 102 from I-93 Exit 4 to NH Route 128
Londonderry	Construction of 4,300 LF of Sidewalk along Pillsbury Road from Ash Street to Gilcreast Road
Londonderry	Construction of Phase 7 of the Londonderry Rail Trail from NH Route 28 to the Derry Town Line
Manchester	Engineering Study of Second Street and I-293 Corridor from Exit 5 to NH Route 101
Manchester	Improvements to the Intersections of Hooksett Road/Campbell Street and Hamel Drive/Campbell Street
Manchester	Operational and Capacity Improvements on Wellington Road/I-93 Exit 8 Interchange
Manchester	Construction of Noise Barrier on NH Route 101 Westbound between MP 0.4 and 0.9
Manchester	Construction of Noise Barrier on I-93 Northbound between MP 22.1 and 22.9
Manchester	Construction of Noise Barriers on I-93 Southbound between MP 107.0 and 107.8, 108.4 and 108.8, and 108.9 and 109.7.
Manchester	Construction of Noise Barrier on F.E. Everett Turnpike Southbound between MP 18.9 and 19.2
Manchester	Reconstruction of the I-293 Exit 4 Interchange
Manchester	Expansion of the I-293 Mainline to Three Lanes in Each Direction from Exit 5 to the NH Route 101 Interchange

Metropolitan Transportation Plan Projects – FY 2031-2045

Manchester	Implement Adaptive Signal Control or Signal Performance Measures on U.S. Route 3 (Second Street, Elm Street, and Hooksett Road)
Manchester	Implement Adaptive Signal Control or Signal Performance Measures on NH Route 28 (Beech and Maple Street)
Manchester	Convert the Queen City Avenue/Cilley Road/South Willow Street Interchange to a Dual Roundabout System
Manchester	Convert the Former Manchester-Lawrence RR Corridor into a Vehicular Roadway with Multi-Use Path from South Commercial St. to Queen City Ave.
Manchester	Construct Pedestrian Bridge at the Intersection of Granite and Commercial Street
Manchester	Establish a New North-South Roadway from South Commercial Street to Sundial Avenue as Proposed in the Manchester Transit-Oriented Development Plan
Manchester	Construct Multimodal Transportation Center in Downtown Manchester as Identified in the Manchester Transit-Oriented Development Plan
Manchester	Engineering Study of to Identify Design Alternatives to Improve Operations at the Intersection of U.S. Route 3/NH Route 28/Webster Street
Manchester	Supplemental Funding for Multi-use Path Connecting Sundial Avenue to the South Manchester Rail Trail
Manchester	Construction of Second Street Bicycle/Pedestrian Improvements as Proposed in the 2015 Second Street Corridor Study
Manchester	Expansion of the Manchester Riverwalk from the Piscataquoq Trail to North Commercial Street
Manchester-Auburn-Candia	ITS Improvements on NH Route 101 East of I-93, Including Dynamic Message signs, Closed Circuit Cameras, Roadway Detectors, and Wireless Communication Improvements.

Metropolitan Transportation Plan Projects – FY 2031-2045

New Boston	Construct Village Center Improvements as Envisioned in New Boston Context Sensitive Solutions Analysis
New Boston	Pavement Rehabilitation on NH Route 136 from NH Route 13 to Francestown Town Line
New Boston	Shoulder and Drainage Improvements on NH Route 13 from New Boston Village Center to the Goffstown Town Line
New Boston-Goffstown	Construct Connection Between the New Boston Rail Trail and the Goffstown Rail Trail
Region	Rehabilitation and/or Replacement of Non-Federal Aid Eligible Municipal Bridges in the SNHPC Region via the NHDOT State Aid Bridge Program
Weare	Pavement Rehabilitation on NH Route 77 from NH Route 114 to the Dunbarton Town Line
Weare	Traffic Calming and Pedestrian Improvements in Weare Village Center
Weare-Goffstown	Engineering Study of NH Route 114 from Weare Village Center to Goffstown Village Center
Windham	Expansion of NH Route 111 to a 4-lane Divided Road Between Wall St. and Hardwood Rd. and Constructing 2-lane Roundabouts at Four Intersections.
Windham	Construction of the Windham Greenway Trail from North Lowell Road to Old Mill Road

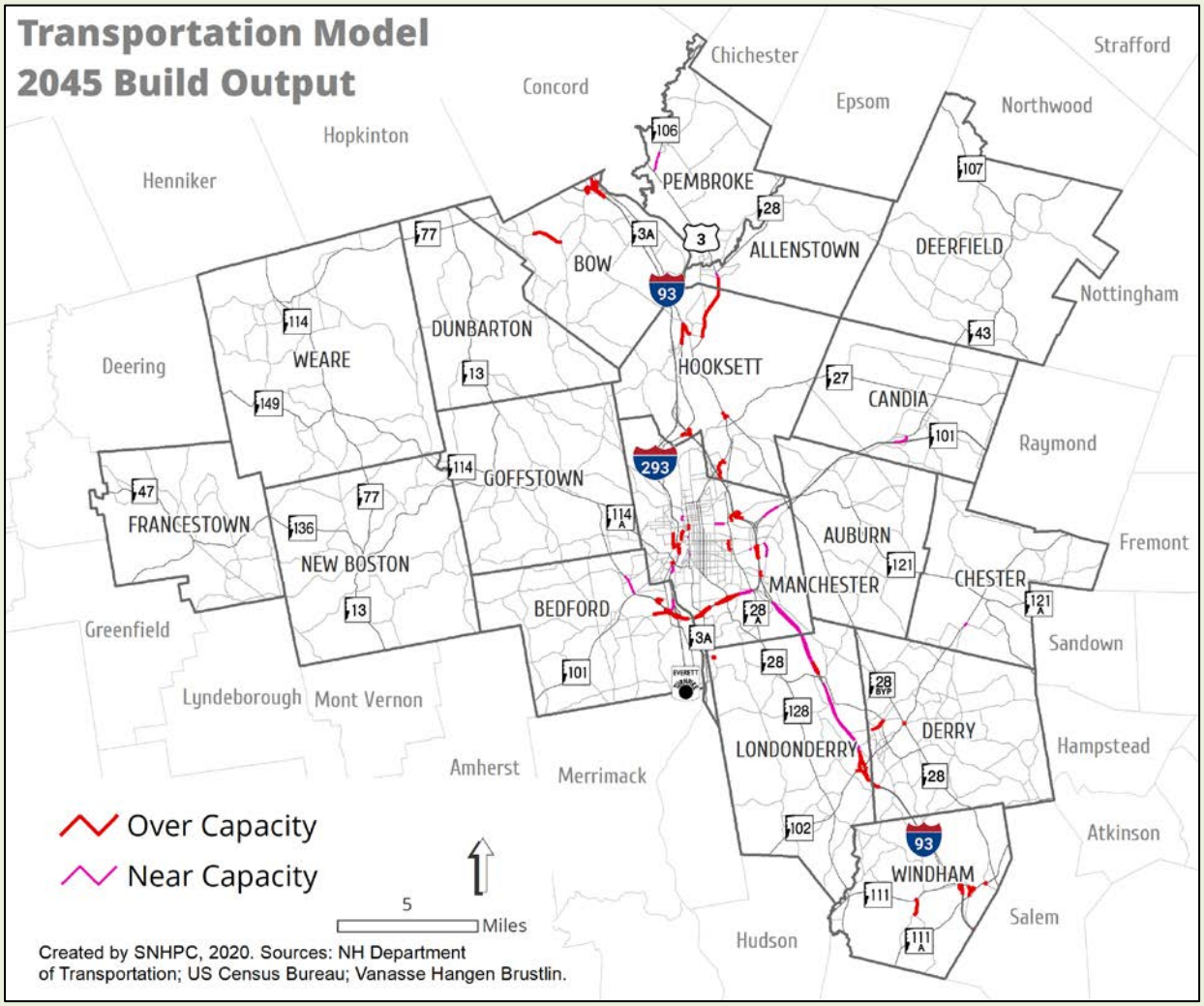
Metropolitan Transportation Plan Projects – Transit

Boston-Manchester	Boston Express - Operating Expenses for F.E. Everett Turnpike Commuter Service
Boston-Manchester	Boston Express - Operating Expenses for I-93 Commuter Service
Nashua-Manchester-Concord	Design, Environmental Review, and Financial Plan for Commuter Rail Extension from Mass. to New Hampshire
Region	MTA/CART Operating, ADA, Capital Preventative Maintenance, and Planning Activities Utilizing FTA Section 5307 Funding
Region	Transit Services for Seniors and Individuals with Disabilities in CART Service Area Utilizing FTA Section 5310 Funding
Region	Capital Vehicle and Equipment for CART Service Area Utilizing Section 5339 Funding
Region	Transit Services for Seniors and Individuals with Disabilities in Greater Manchester and Greater Derry-Salem Area as Determined by the Region 8/9 Coordinating Council for Community Transportation
Region	Regional Mobility Management Services in the Greater Manchester and Greater Derry-Salem Area
Region	Capital Vehicle and Equipment for MTA Supported by NHDOT Section 5339 Program Allocation for Small Urban Providers
Region	Operating, Capital Preventative Maintenance, and Planning Activities for the Implementation of Transit Services Recommended in the SNHPC CMP and NHDOT SSTA Utilizing FTA Section 5307 Funding

Transportation Improvement Projects – Fiscal Constraint

- The draft MTP will present detailed fiscal constraint analyses for both infrastructure and transit projects.
  - Revenues to support infrastructure (e.g. Highway, Bridge, Pedestrian/Bicycle) projects in the SNHPC region are expected to total **$1.53 Billion** between FY 2021-2045.
  - Revenues to support transit projects in the SNHPC are expected to total **$204 Million** between FY 2021-2045.
- The draft MTP is fully programmed in accordance with anticipated revenues and is fiscally constrained for each year of the plan.

2045 Build Model Results



- The 2045 Build Model shows that the SNHPC's program of projects would improve conditions throughout the network.
- Areas of continued concern include:
  - I-293 south of NH Route 101
  - I-93 Exit 4
  - U.S. Route 3 in Hooksett

SNHPC Metropolitan Transportation Plan – Next Steps

- The draft MTP will be released tomorrow (December 23rd) for a 30-day public comment period, which will run through January 22, 2021.
  - The plan will be posted online at www.snhpc.org. Hard copies will be made available upon request.
- The January 26, 2021 MPO meeting will include a public hearing to review any comments received and consider adoption of the MTP.

Questions?