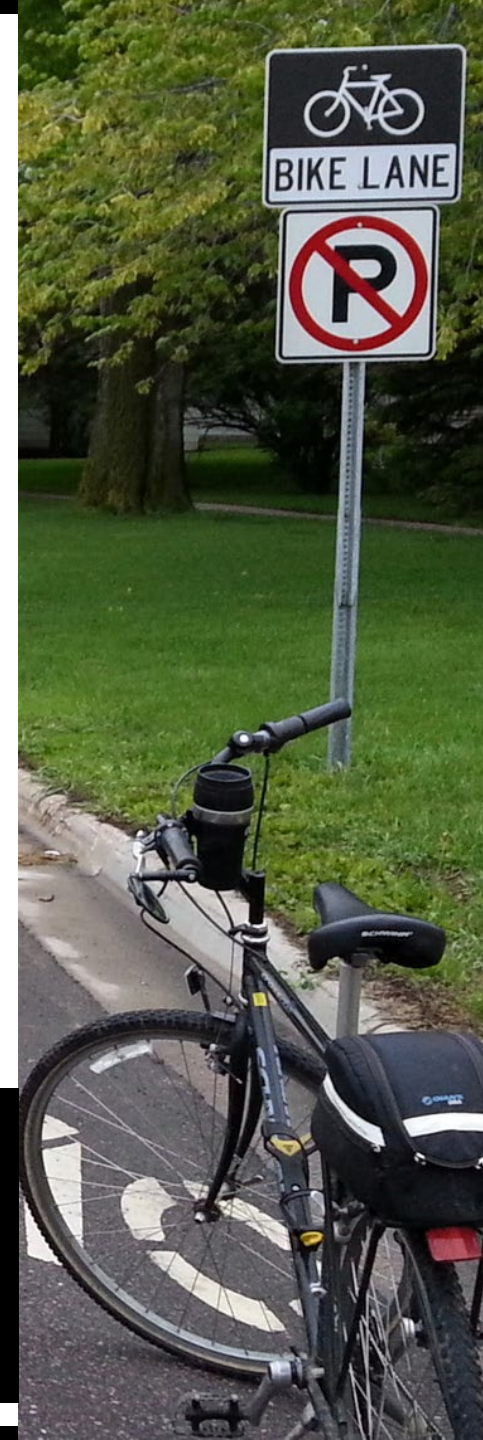


# TRANSPORTATION ADVISORY COMMITTEE





*JULY 30<sup>th</sup> 2020*

*1:00PM-3:00PM*



# CALL TO MEETING & ROLL CALL

# AGENDA

1. REVIEW AND VOTE ON MINUTES 
2. REGULAR UPDATES
  - Ten Year Plan
  - NH Statewide Bike-Ped Plan
  - NCC Projects
  - Scenic Byways
  - Updates From Communities 
3. REGIONAL TRANSPORTATION PLAN 
4. FINAL THOUGHTS/COMMENTS 
5. ADJOURN

# REGULAR UPDATES

## TEN YEAR PLAN

- Criteria finalization
- Criteria weighting
  - » Vote on weighting
- Project Solicitation

Criteria	Weight
Economic Development	11%
Local & Regional	7%
Freight Movement	5%
Equity, Environmental Justice, and Accessibility	11%
Equity & Environmental Justice	6%
Accessibility	6%
Mobility	13%
Mobility Need & Performance	7%
Mobility Intervention	6%
Natural Hazard Resiliency	16%
Hazard Risk	9%
Hazard Mitigation	7%
Network Significance	12%
Traffic Volume	4%
Facility Importance	8%
Safety	16%
Safety Performance	8%
Safety Measures	8%
State of Repair	13%
State of Repair	9%
Maintenance	4%
Support	10%
Support	10%

### NH TEN YEAR PLAN: *Regional Project Review*

**NEW HAMPSHIRE'S "TEN YEAR PLAN"**  
 The New Hampshire 10-Year Transportation Improvement Plan ("Ten Year Plan") is a fiscally-constrained program of state- and federal-funded transportation projects. The Ten Year Plan is updated biennially, pursuant to the requirements of New Hampshire RSA 240. The Ten Year Plan includes projects related to roadway improvements, bicycle and pedestrian travel, public transportation, aviation, and natural hazard resiliency.

**REGIONAL PROJECT REVIEW PROCESS**  
 As part of the biennial update of the Ten Year Plan, each of the nine New Hampshire Regional Planning Commissions (RPCs) leads a process to identify and prioritize transportation projects in their respective regions for inclusion in the Plan.

Projects eligible for consideration through the regional review process:

- ⇒ **Asset management projects** (e.g., bridge rehabilitation, bridge replacement, pavement/base/subbase repair/replacement);
- ⇒ **Bicycle and pedestrian improvements** (e.g., sidewalks, bike trails, multi-use paths; traffic calming improvements);
- ⇒ **Infrastructure-related travel demand management projects** (e.g., park and ride lots, transit or HOV lanes, priority signalization, bus shelters, intermodal transportation centers);
- ⇒ **Planning studies** assessing the need for future projects;
- ⇒ **Roadway improvements** (e.g., operational improvements, access management, intelligent transportation systems, widening, technology operation improvements).



**FEDERAL HIGHWAY SYSTEM PERFORMANCE MEASURES**

Under the Fixing America's Surface Transportation Act (FAST Act), state DOTs and Metropolitan Planning Organizations (MPOs) are required to use performance measures to work toward specific targets in support of national goals for transportation management in all federally-funded projects and programs.

The Ten-Year Plan Criteria detailed in this packet reflect these federal performance measures. Relevant federal performance measures are noted with each criterion.

PROJECT REVIEW CRITERIA	CRITERION	SUB-CRITERIA
The criteria included in this packet are intended to help RPCs prioritize projects in their respective regions. A list of criteria is provided in the table to the right.  Each RPC may assign weights to different criteria to reflect regional priorities. Weights should be assigned to criteria prior to scoring projects.  For each project, a score should be assigned for each criterion in order to develop an overall project score. Detailed scoring procedures are provided on page 2 of this packet.  Each RPC should clearly define the specific scoring process that will be used prior to scoring projects.	Economic Development	Local & Regional; Freight Movement
	Equity, Environmental Justice, & Accessibility	Equity & Environmental Justice; Accessibility
	Mobility	Mobility Need & Performance; Mobility Intervention
	Natural Hazard Resiliency	Hazard Risk; Hazard Mitigation
	Network Significance	Traffic Volume; Facility Importance
	Safety	Safety Performance; Safety Measures
	State of Repair	State of Repair; Maintenance
	Support	n/a

For each criterion, the following reference table is provided in order to standardize & guide project reviews:

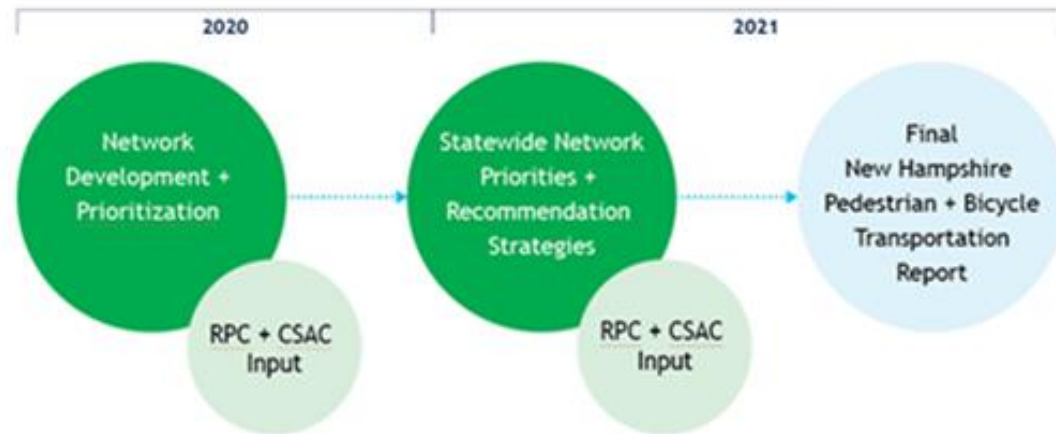
REGIONAL EVALUATION CONSIDERATIONS	POTENTIAL RESOURCES & DATA SOURCES
This column includes the factors that should be considered in order to evaluate and rank proposed Ten Year Plan projects. Depending on data availability, some considerations may not be evaluated for all projects.	This column includes data and established resources for best practices that can be used to justify project rankings. Not all sources of data will be available for each project. It is left to the discretion of each RPC as to which sources to consult.

*Note: project review criteria and associated scores are intended to inform the regional project prioritization process. RPCs may consider other factors, such as project costs and timelines, when deciding final regional priorities.*

# REGULAR UPDATES

## NH STATEWIDE BIKE-PED PLAN

- New completion timeline of end of 2021



# REGULAR UPDATES

## NCC PROJECTS

- **Gorham Parking Study**
  - » Purpose of study
  - » Work done so far
  - » Remaining work
- **Hart's Location Culvert Assessments**
  - » Purpose of study
  - » Work plan



# REGULAR UPDATES

## NEW SOCIAL MEDIAS

facebook

Email or phone  Password  [Log In](#)

[Forgotten account?](#)

**NORTH COUNTRY COUNCIL**  
COMMUNITY PLANNING AND DEVELOPMENT

Like Share Suggest Edits ...

Send Message

northcountrycouncil [Edit Profile](#)

4 posts 63 followers 65 following

**North Country Council**  
We are the Regional Planning Commission for the northern third of NH.  
Want to get involved? [linktr.ee/NorthCountryRPC](#)

POSTS IGTV SAVED TAGGED

Participation Opportur

Posts

**North Country Council**  
13 July at 13:23 · 🌐

**Participation Opportunity**

WE WANT YOU INPUT ON TRANSPORTATION ISSUES, NEEDS, AND OPPORTUNITIES AROUND THE NORTH COUNTRY!  
To access the survey, please visit: [bit.ly/NCtransportationsurvey](https://bit.ly/NCtransportationsurvey)

No rating yet

**Community** [See all](#)

10 people like this

12 people follow this

**About** [See all](#)

# REGULAR UPDATES

## SCENIC BYWAYS

- Update from Carl Martland

## UPDATES FROM COMMUNITIES

- Updates, questions, comments



# REGIONAL TRANSPORTATION PLAN

**UPDATE ON PLAN**

**TIMELINE FOR DRAFT**

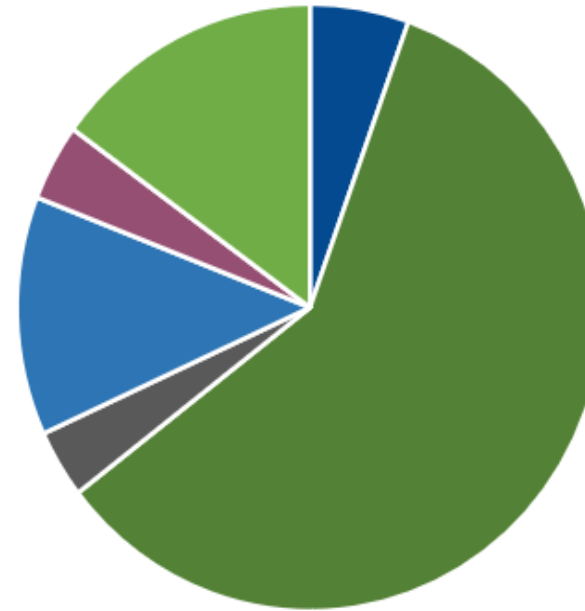


# REGIONAL TRANSPORTATION PLAN

## SURVEY

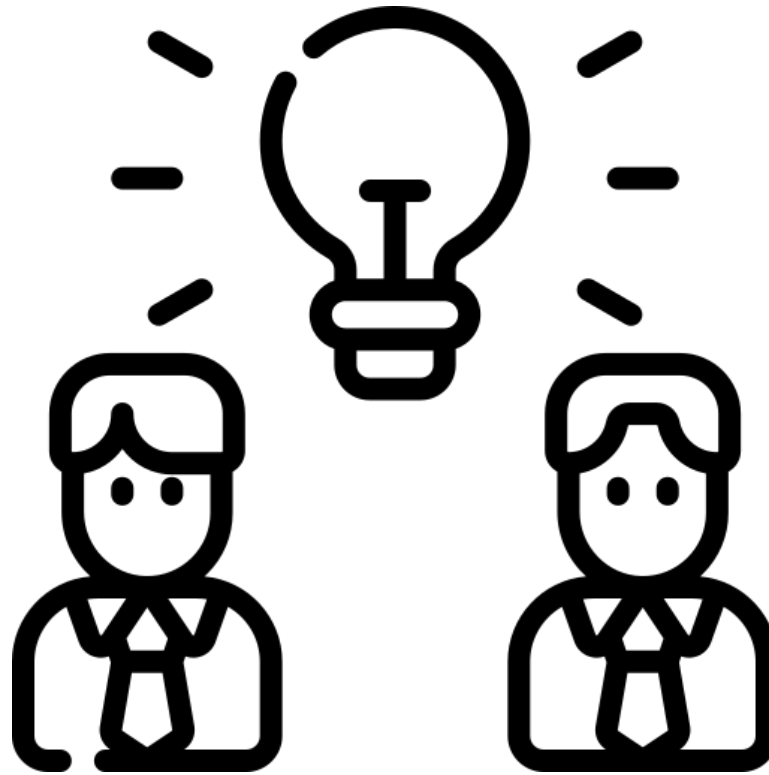
- Preliminary findings
- Continued outreach

In what ways has your travel behavior changed due to COVID-19?  
(select all that apply)



- I get the bulk of my groceries and shopping delivered now.
- I make a conscious effort to group together my errands/make less trips overall.
- I am using walking or cycling as a means of transportation where I would've used a private car or public transportation before.
- I am not commuting to work due to remote working.
- I am not commuting to work due to my job being discontinued, cut, or temporarily suspended.
- Other

# FINAL THOUGHTS/COMMENTS



# NH TEN YEAR PLAN: *Regional Project Review*

## NEW HAMPSHIRE'S "TEN YEAR PLAN"

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Under the *Fixing America's Surface Transportation Act* (FAST Act), state DOTs and Metropolitan Planning Organizations (MPOs) are required to use **performance measures** to work toward specific targets in support of **national goals for transportation management** in all federally-funded projects and programs.

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CRITERION	SUB-CRITERIA
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<b>Natural Hazard Resiliency</b>	Hazard Risk; Hazard Mitigation
<b>Network Significance</b>	Traffic Volume; Facility Importance
<b>Safety</b>	Safety Performance; Safety Measures
<b>State of Repair</b>	State of Repair; Maintenance
<b>Support</b>	n/a

For each criterion, the following reference table is provided in order to standardize & guide project reviews:

### REGIONAL EVALUATION CONSIDERATIONS

This column includes the factors that should be considered in order to evaluate and rank proposed Ten Year Plan projects. *Depending on data availability, some considerations may not be evaluated for all projects.*

### POTENTIAL RESOURCES & DATA SOURCES

This column includes data and established resources for best practices that can be used to justify project rankings. *Not all sources of data will be available for each project. It is left to the discretion of each RPC as to which sources to consult.*

**Note: project review criteria and associated scores are intended to inform the regional project prioritization process. RPCs may consider other factors, such as project costs and timelines, when deciding final regional priorities.**

# NH TEN YEAR PLAN: *Regional Project Review*

## PROJECT SCORING PROCEDURES

A score shall be assigned for each criterion. Criteria scores should then be multiplied by criteria weights. The weighted criteria scores should then be summed to develop the final project score.

RPCs should make reasonable attempts to assign a defensible score to each project for each criterion. *Criteria shall not be skipped when scoring a project.* If a defensible score cannot be developed for a particular criterion due to data/information limitations, RPCs should 1) use their best judgement to assign a score; and 2) record any relevant data/information limitations.

If a criterion is irrelevant to the project, a score of 1 out of 10 should be assigned for that criterion.

## EVALUATING PROJECT NEED & PROJECT IMPACT

There are two types of project evaluation criteria: 1) criteria that assess the need for a project; and 2) criteria that assess the impact of a project. For example, looking at the history of crashes at an intersection can help evaluate the need for a safety improvement project, while looking at Crash Modification Factors for the proposed improvements can help evaluate the impact that the project will have on safety.

The table below presents the project scoring scales for evaluating project need and project impact. Additionally, each criterion in this packet is labeled to indicate if it is evaluating need or impact.

## PROJECT SCORING SCALES

SCORE	PROJECT <u>NEED</u> CRITERION		PROJECT <u>IMPACT</u> CRITERION		CRITERION RELEVANCY
10	There is a <b>very high need</b> for the project under this criterion.	OR	The proposed project would deliver a <b>significant improvement</b> under this criterion.	-	---
5	There is a <b>moderate need</b> for the project under this criterion.	OR	The proposed project would deliver a <b>moderate improvement</b> under this criterion.	-	---
1	There is <b>minimal/no need</b> for the project under this criterion.	OR	The proposed project would deliver <b>minimal/no improvement</b> under this criterion.	OR	The proposed project is <b>not relevant</b> to this criterion.
0	---	-	The proposed project would result in a <b>negative impact</b> under this criterion.	-	---



**Definition:** the degree to which a project supports economic development needs and opportunities at the 1) **local** and 2) **regional** level; and 3) the degree to which the project impacts the movement of goods (**freight**).

## REGIONAL EVALUATION CONSIDERATIONS

### Local & Regional Economic Development **IMPACT**

- Does the project directly relate to a documented community revitalization or economic development effort?
- Does the project improve mobility and/or accessibility to and from a regional employment hub?
- Does the project improve mobility and/or accessibility to and from a regional tourism destination?
- Does the project support the implementation of a regional economic development plan?

### Freight Movement **IMPACT**

- Does the project implement a high priority freight improvement project as identified in the NH State Freight Plan or an adopted Regional Transportation Plan?
- Does the project improve a freight bottleneck location as identified in the NH State Freight Plan or an adopted Regional Transportation Plan?
- Would the project improve freight transportation on a Critical Urban Freight Corridor (CUFC) or Critical Rural Freight Corridor (CRFC) candidate location as identified in the NH State Freight Plan (or as previously recommended by a MPO/RPC for future inclusion in the NH State Freight Plan)?
- Would the project improve Truck Travel Time Reliability on the Interstate system or other National Highway Freight Network Route?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

- Local, regional and statewide economic development plans and documents
- Transit system maps
- Bicycle network/route maps
- Sidewalk network maps
- Online isochrone tools
- Regional *Comprehensive Economic Development Strategies*
- Economic-related chapters and goals of *Regional Plans*

### Resources:

- State Freight Plan
- Regional Long-Range Transportation Plans
- Critical Urban Freight Corridor (CUFC) Candidate Location List
- Critical Rural Freight Corridor (CRFC) Candidate Location List
- Truck Travel Time Reliability (TTTR) Index Data from the National Performance Management Research Data Set (NPMRDS)

### **Federal Performance Measures Addressed**

Federal Highway Administration System Performance Measures: 1) truck time travel reliability on the Interstate System.

**Definition:** the degree to which 1) a project benefits traditionally-underserved populations (**equity & environmental justice**); and 2) ensures **accessibility** by all potential users.

## REGIONAL EVALUATION CONSIDERATIONS

### Equity & Environmental Justice

#### IMPACT

- Would the project provide transportation infrastructure benefits to an identified concentration area for minority population, low-income population, limited English proficiency population, disabled population, or other traditionally-underserved population group as identified in a local, regional, or statewide Title VI or Environmental Justice Program?
- Would the project expand transportation choices or enhance alternative modes of transportation in an identified concentration area for minority population, low-income population, limited English proficiency population, disabled population, or other traditionally-underserved population group?
- Does the project implement transportation-related recommendations resulting from a local, regional, or statewide Community Health Improvement Plan (CHIP) or other comprehensive public health analysis?
- What is the impact of the project on air quality? Are air quality impacts disproportionately affecting traditionally underserved populations?

### Accessibility

#### IMPACT

- Does the project incorporate Universal Design considerations to ensure that all users, including those with mobility impairments, visual impairments, hearing impairments or other disabilities can fully access and utilize the facility?
- Does the project incorporate accessibility upgrades or remove barriers to access?
- Does the project improve coordination between transportation service providers or between modes of transportation to improve access to essential services, particularly for elderly and disabled populations?"

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

- Regional and Statewide Title VI and Environmental Justice Programs
- Community Health Improvement Programs
- Region-specific Demographic Analyses
- US 13 CFR Part 301.3 Economic Distress Criteria (<https://www.govinfo.gov/content/pkg/CFR-2018-title13-vol1/xml/CFR-2018-title13-vol1-part301.xml#seqnum301.3>)
- Northern Border Regional Commission annual distress criteria reports
- CMAQ air quality analysis tools
- MPO regional emissions analyses
- RPC review of project scope

### Resources:

- Conceptual Designs for Proposed Projects
- Local, Regional, or Statewide ADA Transition Plans
- Public Transit-Human Service Transportation Coordination Plans

### Federal Performance Measures Addressed

Federal Highway Administration System Performance Measures: 1) on-road mobile source emissions reduction.

**Definition:** 1) an historical analysis of the mobility **need** and **performance** of a location for all modes, and 2) a forward-looking analysis of how **interventions** proposed as part of a project would improve the mobility performance for all modes.

## REGIONAL EVALUATION CONSIDERATIONS

### Mobility Need & Performance

**NEED**

#### Facility Purpose

- What is the federal functional classification of the project area (i.e., is high mobility an underlying function of the facility)?
- Is the facility a local, regional, or statewide connection?

#### Planning

- Are the mobility needs in the project area defined in a local, regional, or state plan?

#### Motor Vehicles

- For projects addressing mobility need for vehicle travel, what is the project area's performance relative to congestion or delay, and if available, what is person throughput for a defined time period?

#### Rail and Transit

- For projects addressing mobility need for rail and transit, what is transit's performance relative to congestion or delay, and if available, what is ridership for a defined time period (throughput)?

#### Bicycle and Pedestrian

- For projects addressing mobility need for bicycle and pedestrian travel, what is project area's performance relative to delay, and if available, what is traffic for defined time period (throughput)?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Functional Classification

- Federal Functional Classification (NHDOT GIS Roads Layer)
- FHWA Highway Functional Classification Guidance: [https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\\_functional\\_classification/section00.cfm](https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classification/section00.cfm)

#### Planning

- Master Plans, Corridor Studies, Long Range Transportation Plans, MPO Congestion Management Process, etc.

#### Motor Vehicles

- Level of Travel Time Reliability (LOTRR) based on FHWA's National Performance Management Research Data Set (NPMRDS).
- Level of Service (LOS) related measures such as volume to capacity ratio, average travel speeds, average vehicle spacing, average delay at signal, field observation of traffic flow characteristics based on Highway Capacity Manual guidance.
- Throughput analyses based on local average vehicle occupancy data, regional model vehicle occupancy data or National Highway Travel Survey vehicle occupancy data multiplied by traffic data for defined time period.
- Regional and Statewide ITS architectures

#### Rail and Transit

- For projects addressing rail & transit mobility: Rail or transit operator report regarding on-time performance, ridership data, passenger surveys.

#### Bicycle and Pedestrian

- For projects addressing bicycle & pedestrian mobility: pedestrian/bicyclist intercept surveys, pedestrian signal timing data, pedestrian/bicyclist activity through project area for defined time period; bicyclist level of traffic stress.

### Federal Performance Measures Addressed

Federal Highway Administration (FHWA) System Performance Measures: 1) reliable person-miles traveled on the Interstate System; 2) reliable person-miles traveled on the non-Interstate National Highway System.



**Definition:** 1) an historical analysis of the mobility **need** and **performance** of a location for all modes, and 2) a forward-looking analysis of how **interventions** proposed as part of a project would improve the mobility performance for all modes.

## REGIONAL EVALUATION CONSIDERATIONS

### Mobility Intervention

#### Motor Vehicles

#### IMPACT

- For projects addressing motor vehicle mobility, to what extent will the project provide congestion relief or mobility benefits?

#### Rail and Transit

- For projects addressing transit mobility, to what extent will the project impact a transit service's on time performance and/or improve transit user throughput (ie. the number of transit users moving through the project area in a given time period)?

#### Bicycle and Pedestrian

- For projects addressing bicycle or pedestrian mobility, to what extent will the project reduce bicyclist/pedestrian delay and/or improve bicyclist/pedestrian throughput (ie. the number of bicyclists/pedestrians moving through the project area in a given time period)?

### Federal Performance Measures Addressed

Federal Highway Administration (FHWA) System Performance Measures: 1) reliable person-miles traveled on the Interstate System; 2) reliable person-miles traveled on the non-Interstate National Highway System.

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

RPC/MPO, NHDOT or independent evaluation of mobility interventions expressed in scope of work and project purpose. Including but not limited to the interventions listed below.

Motor Vehicles. Including but not limited to:

- *Intersection improvements:* signal optimization, roundabouts, addition of turning lanes, etc.
- *Road improvements:* HOV lanes, addition of breakdown lanes or shoulder widening, add lanes in merge areas, widen ramps, add exit lanes, ITS speed harmonization, ramp metering, etc.
- *Mode shift measures:* transit, park and ride lots, bike lanes, etc.
- *Capacity improvements:* adding lanes, access management measures [curb cut consolidation, left turn lanes, two way left turn lanes, medians, etc.]

Rail & Transit. Including but not limited to:

- Transit signal priority; dedicated transit lanes; improvement to sidewalk or bicycle connectivity to transit stops; transit stop improvements.

Bicycle and Pedestrian. Including but not limited to:

- *Bicycling interventions:*
  - ◆ New/improved bike lane
  - ◆ Widening of outside lane/shoulder
  - ◆ New off-street or parallel facility
  - ◆ Access management improvements (medians, elimination/consolidation of curb cuts)
  - ◆ Sight distance improvements
  - ◆ Intersection improvements for bicyclist
  - ◆ Improvements to speed differential between on street bicyclists and vehicles
  - ◆ Signage and road markings
- *Pedestrian interventions:*
  - ◆ New/improved sidewalk
  - ◆ New/improved off-street or parallel facility
  - ◆ Intersection improvements for pedestrians (new or improved crosswalks, medians/pedestrian refuges, new or improved pedestrian signals)
  - ◆ Access management (medians, limitation of curb cuts)
  - ◆ Removal of pedestrian conflicts (utility poles, etc.)
  - ◆ New or improved buffer between road and pedestrian facility (green buffer, on-street parking, trees, etc.)

**Definition:** 1) an analysis of the **natural hazard risks** (i.e. flood history) to a transportation facility, and; 2) a forward-looking analysis of how the **natural hazard mitigation** measures proposed as part of a project would reduce hazard risks.

## REGIONAL EVALUATION CONSIDERATIONS

### Natural Hazard Risk

**NEED**

#### Hazard Risk

- Are natural hazards in the project area documented in a plan, study, or database?
- Have natural hazards previously impacted transportation infrastructure and/or mobility in the project area? How frequently?
- Are natural hazard risks anticipated to increase in severity/impact (for example, due to anticipated impacts of climate change)?

### Natural Hazard Mitigation

**IMPACT**

#### Hazard Mitigation - All Projects

To what extent does the project mitigate or adapt to known natural hazards in the project area? Does the project propose in-kind replacement of hazard-prone infrastructure?

- Mitigate (highest score): project eliminates or substantially reduces risk from known natural hazard (e.g., relocates infrastructure away from flood hazard area).
- Adapt (moderate score): project addresses known natural hazard but does not entirely mitigate risk (e.g., reinforces infrastructure in place).
- In-kind (lower score): project simply replaces hazard-prone with same/similar infrastructure (e.g., replace stream culvert with culvert of same dimensions).

#### Hazard Mitigation - Additional Stream Culvert & Bridge Project Considerations

- Is the project responsive to stream characteristics, such as flood propensity, slope, bankfull width, and orientation to roadway?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Hazard Risk

- Local plans: Hazard Mitigation Plans, Master Plans, Capital Improvement Plans, Emergency Operations Plans, etc.
- Regional plans: Regional Transportation Plan, Corridor Studies, River Corridor Management Plans, Watershed-Based Plans, Regional Plan, Comprehensive Economic Development Strategy, etc.
- Local and Regional Vulnerability Assessments
- Results of studies or assessments, such as geotechnical studies, fluvial geomorphology studies, SADES-based assessments, etc
- Hydraulic capacity modeling results/reports
- FEMA Flood Hazard Maps
- Regional studies on anticipated impacts of climate change on natural hazard risk

### Resources:

#### Hazard Mitigation - All Projects

- RPC review of project scope
- Section 6.4 of FHWA's *HEC 17: Highways in the River Environment - Floodplains, Extreme Events, Risk, and Resilience, 2nd Edition* <https://www.fhwa.dot.gov/engineering/hydraulics/pubs/hif16018.pdf>
- Section 3.4 FHWA's *HEC 25: Highways in the Coastal Environment: Assessing Extreme Events: Volume 2 - 1st Edition* <https://www.fhwa.dot.gov/engineering/hydraulics/pubs/nhi14006/nhi14006.pdf>

#### Hazard Mitigation - Stream Culvert & Bridge Projects

- NH SADES stream crossing assessment data
- Hydraulic capacity modeling results/reports
- North Country Council *Stream Crossings for Flood Resiliency & Ecological Health*: [http://www.nccouncil.org/wp-content/uploads/2019/08/NCC-Stream-Crossing-Guide\\_FINAL.pdf](http://www.nccouncil.org/wp-content/uploads/2019/08/NCC-Stream-Crossing-Guide_FINAL.pdf)

**Definition:** the extent to which the project area is regionally-significant based on 1) **traffic volume**; and 2) the **importance of the facility** to the local and the regional transportation system.

## REGIONAL EVALUATION CONSIDERATIONS

### Traffic Volume

**NEED**

#### Vehicular volume

- What is the present-day traffic volume in or near the project area?
- How does the traffic volume in the project area compare to other traffic volumes in the region?
- Have traffic volumes increased, decreased, or stayed about the same over time?

#### Bicycle & pedestrian volume

- What is the measured or estimated present-day bicycle and pedestrian volume on or near the impacted facility?
- What is the relative demand for pedestrian and bicycle trips based on development density, presence/lack of current ped-bike facilities, etc.?

### Facility Importance

**NEED**

#### Origins and Destinations

- Does the facility move people or goods between major locations/destinations?
- Is the project area proximate to key transportation facilities, such as airports or transit/intermodal facilities?

#### Network Centrality

- To what degree is the project area "central" to the local and regional transportation network?
- Would traffic increase on other areas of the transportation network if the project is not implemented (e.g., would more drivers use alternate routes)?

#### Alternate Routes

- What would be the increase in travel time if travelers were detoured around the project area?
- Is the proposed project located on a defined or obvious evacuation route?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Vehicular volume

- NHDOT Transportation Data Management System <https://nhdot.ms2soft.com/tcds/tsearch.asp?loc=nhdot>
- Regional Planning Commission traffic count databases

#### Bicycle & pedestrian volume

- Regional Planning Commission bicycle & pedestrian count databases
- Pedestrian & Bicycle Information Center; Counting & Estimating Volumes <http://www.pedbikeinfo.org/topics/countingestimating.cfm>
- Congestion Mitigation & Air Quality (CMAQ) analysis tools
- Strava data

### Resources:

#### Origins and Destinations

- Local, regional and statewide transportation planning documents
- Priority pedestrian and bicycle transportation corridors identified in the *Statewide Pedestrian and Bicycle Transportation Plan*
- Transit system maps
- Bicycle network/route maps
- Sidewalk network maps
- Online isochrone tools

#### Network Centrality

- Regional Planning Commission transportation model (if available)
- RPC review of road networks
- GIS database with "Network Analyst" license/module

#### Alternate Routes

- Google Maps Travel Time calculator
- RPC travel time analysis (if available)
- Documentation of evacuation route designation or other connectivity-related metric in statewide, local or municipal plans

**Definition:** 1) a historical analysis of the **safety performance** (i.e. crash history) of a location over the past five (5) year period for all modes, and; 2) a forward-looking analysis of how the **countermeasures** proposed as part of a project would improve safety performance for all modes.

## REGIONAL EVALUATION CONSIDERATIONS

### Safety Performance

**NEED**

#### Crash data considerations (past 5 years):

- What is the number of passenger vehicle crashes at the location?
- What is the severity of passenger vehicle crashes at the location?
- What is the crash rate at the location?
- What is the number of non-motorized (pedestrian and bicycle) crashes at the location?
- What is the severity of non-motorized (pedestrian and bicycle) crashes at the location?
- What is the number of transit vehicle crashes at the location?
- What is the severity of transit vehicle crashes at the location?

#### Additional safety performance considerations:

- Was the location identified through local, regional, or statewide network screening?
- Was the location the subject of a previous Road Safety Audit due to crash history?
- Was the project referred to the TYP from the HSIP program due to scope/cost?
- Were improvements implemented over the past five-year period that have changed (or could change) the safety performance of the location?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Crash data

- State (NHDOS) Crash Database
- Fatality Analysis Reporting System (FARS) Database
- Crash Reports from Local Police Departments
- Crash Data from Local Transit Agencies

#### Additional safety considerations

- Network Screening Summaries from the NHDOT Bureau of Highway Design
- Completed and Pending Road Safety Audit (RSA) Reports
- HSIP Program Summaries from the NHDOT Bureau of Highway Design

### Federal Performance Measures Addressed

Federal Highway Administration (FHWA) Safety Performance Measures: 1) number of fatalities; 2) rate of fatalities; 3) number of serious injuries; 4) rate of serious injuries; 5) number of non-motorized fatalities and serious injuries.

Federal Transit Administration (FTA) Performance Measures: 1) number of reportable public transportation fatalities and public transportation fatality rate per total vehicle revenue miles by mode; 2) number of reportable public transportation injuries and public transportation injury rate per total vehicle revenue miles by mode; 3) number of reportable public transportation events and public transportation event rate per total vehicle revenue miles by mode; 4) mean distance between major public transportation mechanical failures by mode.

**Definition:** 1) a historical analysis of the **safety performance** (i.e. crash history) of a location over the past five (5) year period for all modes, and; 2) a forward-looking analysis of how the **countermeasures** proposed as part of a project would improve safety performance for all modes.

## REGIONAL EVALUATION CONSIDERATIONS

### Safety Measures

**IMPACT**

#### Highway and Bridge Safety Measures:

- How significant/effective are the Crash Modification Factors (CMFs) for key project design elements?
- Has a Benefit-Cost analysis been developed as part of a Road Safety Audit or other special study? If so, how compelling is the Benefit-Cost ratio?
- Are Proven Safety Countermeasures (as sanctioned by the FHWA Office of Safety) included in the project's design?

#### Rail & Transit Safety Measures:

- Does the project involve safety improvements to an existing at-grade Railway-Highway crossing?
- Does the project eliminate an existing at-grade Railway-Highway crossing?
- Does the project implement improvements identified in a local or statewide Public Transit Agency Safety Plan (PTASP)?

#### Pedestrian Safety Measures:

- Are Safe Transportation for Every Pedestrian (STEP) countermeasures (as sanctioned by the FHWA Office of Safety) included in the project's design?
- How significant/effective are the pedestrian-related Crash Modification Factors (CMFs) for key project design elements?

#### Bicycle Safety Measures

- Would the project improve Bicycle Level of Traffic Stress (LTS) from a Level 3 or 4 to at least Level 2?
- How significant/effective are the bicycle-related Crash Modification Factors (CMFs) for key project design elements?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Highway and Bridge Safety Measures:

- Crash Modification Factor Clearinghouse ([www.cmfclearinghouse.org/](http://www.cmfclearinghouse.org/))
- AASHTO Highway Safety Manual ([www.highwaysafetymanual.org/](http://www.highwaysafetymanual.org/))
- Completed or pending Road Safety Audits
- FHWA Proven Safety Countermeasures ([www.safety.fhwa.dot.gov/provencountermeasures/](http://www.safety.fhwa.dot.gov/provencountermeasures/))

#### Rail & Transit Safety Measures:

- NHDOT Bureau of Highway Design Railway-Highway Crossing Improvement Priorities
- Local or Statewide Public Transit Agency Safety Plans (PTASPs)

#### Pedestrian Safety Measures:

- FHWA Safe Transportation for Every Pedestrian (STEP) Countermeasures ([https://safety.fhwa.dot.gov/ped\\_bike/step/resources/](https://safety.fhwa.dot.gov/ped_bike/step/resources/))
- Crash Modification Factor Clearinghouse ([www.cmfclearinghouse.org/](http://www.cmfclearinghouse.org/))

#### Bicycle Safety Measures

- Bicycle LTS Model Data (as developed by MPOs or as developed for rural areas in the NH Statewide Pedestrian and Bicycle Transportation Plan).
- Crash Modification Factor Clearinghouse ([www.cmfclearinghouse.org/](http://www.cmfclearinghouse.org/))

### Federal Performance Measures Addressed

**Federal Highway Administration Safety Measures:** 1) number of fatalities; 2) rate of fatalities; 3) number of serious injuries; 4) rate of serious injuries; 5) number of non-motorized fatalities & serious injuries.

**Federal Transit Administration Safety Measures:** 1) number of reportable public transportation fatalities and public transportation fatality rate per total vehicle revenue miles by mode; 2) number of reportable public transportation injuries and public transportation injury rate per total vehicle revenue miles by mode; 3) number of reportable public transportation events and public transportation event rate per total vehicle revenue miles by mode; 4) mean distance between major public transportation mechanical failures by mode.

**Definition:** 1) the degree to which the project improves infrastructure condition in the project area (**state of repair**); and 2) the degree to which the project impacts NHDOT and/or municipal **maintenance**.

## REGIONAL EVALUATION CONSIDERATIONS

## POTENTIAL RESOURCES & DATA SOURCES

### State of Repair

#### NEED

- What is the condition of the infrastructure that is being addressed? For roadways, this includes pavement, sub-base, and base materials.
- Does the project address the underlying causes of current infrastructure conditions?

### Resources:

- NHDOT Pavement Condition Index (if current)
- SADES assessment data
- Geotechnical studies/reports
- Information requests from NHDOT offices: District Engineers, Bridge Maintenance Bureau, etc
- *NHDOT Transportation Asset Management Plan*

### Maintenance Considerations

#### IMPACT

- Does the project address an infrastructure issue that currently requires increased maintenance activity/costs due to poor or dangerous infrastructure conditions?
- Does the project propose significant new/expanded transportation assets that will add significant new/additional maintenance liabilities for NHDOT (e.g., new roadway/bridge construction)?
- Are there buried utilities (water, sewer, drainage) in the project area? If so, are any needed upgrades/maintenance incorporated into the overall project scope? *Note: buried utility improvements are typically not Ten Year Plan-eligible (funded locally).*

### Resources:

- NHDOT Pavement Condition Index (if current)
- SADES assessment data
- Geotechnical studies/reports
- Information requests from NHDOT offices: District Engineers, Bridge Maintenance Bureau, etc.
- Narrative from applicant
- Utility capacity/condition studies
- Capital Improvements Plans

### Federal Performance Measures Addressed

Federal Highway Administration State of Repair Measures: 1) percentage of pavement on the Interstate System in good condition; 2) percentage of pavement on the Interstate System in poor condition; 3) percentage of pavement on the non-Interstate National Highway System (NHS) in good condition; 4) percentage of pavement on the non-Interstate National Highway System (NHS) in poor condition; 5) percentage of bridges on the National Highway System (NHS) in good condition; 6) percentage of bridges on the National Highway System (NHS) in poor condition.

Federal Transit Administration Transit Asset Management Measures: 1) percentage of rolling stock revenue vehicles meeting or exceeding their useful life benchmark; 2) percentage of non-revenue service vehicles meeting or exceeding their useful life benchmark; 3) percentage of facilities rated below 3.0 on the Transit Economic Requirements Model (TERM) scale; 4) percentage of track segments with performance restrictions.

**Definition:** the degree of **support** for the project at the local, regional, and statewide level.

## REGIONAL EVALUATION CONSIDERATIONS

### Support

**NEED**

#### Local Support

- Does the project support goal(s) of locally-adopted plan? Higher scores given to projects that are specifically defined in plans, and/or address specific plan goals/needs/issues.

#### Regional Support

- Does the project support goal(s) of a regional plan? Higher scores given to projects that are specifically defined in plans, or address specific plan goals/needs/issues.

#### Statewide Support

- Does the project support goal(s) of a statewide plan? Higher scores given to projects that are specifically defined in plans, or address specific plan goals/needs/issues.

#### Emergent Needs

- Does the project address an emergent need(s) (*identified after the previous TYP project solicitation*) that could have significant regional impacts if not addressed?

#### Public Involvement

- Has there been recent public discussion or input opportunities regarding this project?
- Do recent public input/discussions show support for the project?

## POTENTIAL RESOURCES & DATA SOURCES

### Resources:

#### Local Support

- Master Plan
- Capital Improvements Plan
- Hazard Mitigation Plan
- Other local plan (Bike-Ped Plan, Sub-Area Plan, etc)
- NHDOT Road Safety Audit reports

#### Regional Support

- Long Range Transportation Plan/Regional Transportation Plan
- Corridor Study
- Coordinated Public Transit and Human Services Transportation Plan
- Regional Plan
- Scenic Byway Corridor Management Plan
- Transit Operations Plan
- River Corridor Management Plan
- MPO Congestion Management Process Plans

#### Statewide Support

- *Statewide Long-Range Transportation Plan*
- *Statewide Strategic Transit Assessment*
- *Statewide Pedestrian and Bicycle Transportation Plan*
- *Strategic Highway Safety Plan*
- *Statewide Freight Plan*
- *Statewide Rail Trail Plan*
- *NHDOT Transportation Asset Management Plan*

#### Emergent Needs

Emergent issue/need is documented by one or more of the following:

- Letter from NHDOT District Engineer
- Letters from municipal boards or committees
- Letters from subject-area experts
- Results of studies and assessments

#### Public Involvement

- Minutes and meeting summaries from local board meetings and/or community outreach events
- Other documentation of public involvement

<b>Criteria</b>	<b>Weight</b>
Economic Development	11%
Local & Regional	7%
Freight Movement	5%
Equity, Environmental Justice, and Accessibility	11%
Equity & Environmental Justice	6%
Accessibility	6%
Mobility	13%
Mobility Need & Performance	7%
Mobility Intervention	6%
Natural Hazard Resiliency	16%
Hazard Risk	9%
Hazard Mitigation	7%
Network Significance	12%
Traffic Volume	4%
Facility Importance	8%
Safety	16%
Safety Performance	8%
Safety Measures	8%
State of Repair	13%
State of Repair	9%
Maintenance	4%
Support	10%
Support	10%