DATE: Tuesday October 2, 2018
TIME: 9:00 a.m.
PLACE: CCRPC Office, 110 West Canal St. Winooski

DELIBERATIVE AGENDA:

1. Action on Consent agenda – 9:00 – 9:05
   See attached memo on TIP amendments.

2. Minutes of August 7, 2018 – (Action Item) 9:05 - 9:10
   See attached.

3. Public Comment Period (Information item) 9:10 - 9:15
   Members of the public are invited to raise issues of interest or concern to the TAC on items not on the agenda.

4. Transportation Performance Management (Action Item) 9:15 – 9:35
   The TAC previously received an update on safety performance measures in February and made a
   recommendation to the Board to accept statewide targets already adopted by VTrans. There are deadlines for
   other targets coming up this month that the TAC is asked to make recommendations on as well. See attached
   memo and the draft CCRPC Performance Management Report for more information.

5. Winooski River Bridge Scoping Update (Information Item) 9:35 – 10:00
   Staff will present the alternatives analyzed, the likely preference recommendation of the project advisory
   committee, and the next steps to bring the project to conclusion.

6. Bicycle Parking Bylaws (Information Item) 10:00 – 10:15
   Staff will present model bylaws for short and long-term bicycle parking facilities and will include local examples
   as reference.

7. Status of Projects and Subcommittee Reports (Information Item) 10:15 – 10:20
   See bulleted list on the reverse for current CCRPC projects. TAC members are encouraged to ask staff for
   more information on the status of any of these on-going or recently completed projects.

8. CCRPC September Board Meeting Report (Information Item) 10:20 – 10:25
   The Board met on 9/19 hearing a presentation, and taking action, on the proposed National Highway System
   (NHS). They also received an update on transportation performance management and upcoming deadlines for
   target setting. The meeting began with a 45-minute presentation on Board responsibilities as an MPO.

9. Chairman’s/Members’ Items (Information Item) 10:25 – 10:30

Next Meeting: Tuesday, November 6, 2018 DON’T FORGET TO VOTE

In accordance with provisions of the Americans with Disabilities Act (ADA) of 1990, the CCRPC will ensure public
meeting sites are accessible to all people. Requests for free interpretive or translation services, assistive devices, or other
requested accommodations, should be made to Emma Vaughn, CCRPC Title VI Coordinator, at 802-846-4490 ext. *21 or
evaughn@ccrpcvt.org, no later than 3 business days prior to the meeting for which services are requested.
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Project list:

- Title VI program participation and Public Participation Plan implementation
- Participation in the Vermont Highway Safety Alliance
- Participation in the State's Rail Council
- Coordination with United Way on the Neighbor Rides Program
- 2018 Regional Transportation Survey
- Advanced Traffic Monitoring System through FHWA AID grant – Pilot Corridor Implementation
- LPM services for Underhill sidewalk construction on VT 15 – Right of Way Plans and CE
- LPM services for Hinesburg – Village South Area Sidewalk on VT 116 – Conceptual Design
- VT 117 and Skunk Hollow Road Intersection Scoping Study, Jericho
- Allen Brook Watershed Culverts Assessment Study, Williston
- Shelburne Street Signal System Assessment Study, Burlington - *Completed*
- Countywide NHS Review and Update
- Winooski Avenue Corridor Study (Burlington)
- Amtrak Train Overnight Storage Study (Greater Burlington Area)
- Coordination with GMT on ADA, NextGEN and Elders & Disabled advisory committees
- Railyard Enterprise Supplemental Scoping of Alternative 1B (Burlington)
- Winooski River Bridge Scoping Study (Burlington/Winooski)
- South Burlington Bike Ped Gaps scoping
- South Burlington Ped. Crossing and Bike Access
- Intervale Ave. Scoping (Burlington)
- Essex Junction Design 5 Corners/Village Transportation Plan update
- Essex Junction Parking Study
- Colchester Ave/Riverside Ave/Barrett St Intersection Scoping (Burlington)
- North Williston Road Scoping Study (Williston)
- So. Burlington VT116-Kimball-Tilley Land Use and Transportation Plan
- Williston Exit 12 Transportation Improvement District (TID) Pilot Project
- Williston Transportation Impact Fees
- Williston Shared Use and Multi-Modal Parking Requirements
- I-89 Exit 14 Bike/Pedestrian Crossing Study (South Burlington)
- Shelburne Phase 2 of Form Based Zoning to Improve Walkability – *Completed*
- Overhaul of South Burlington’s Traffic Overlay District
- Update to South Burlington’s Transportation Impact Fee Ordinance
- Regional Transportation Energy Planning
- Transportation Hazard Mitigation Planning
- Municipal Road General Permit (MRGP) Work
- Grants-In-Aid Coordination with Municipalities.
- VT15 Sidewalk/Path Scoping Study – Athens Drive to VT 289
- VT15 Bicycle/Pedestrian Improvements Scoping Study – Ethan Allen Avenue to West Street Extension
- Winooski Main Street Revitalization Project – Streetscape Scoping - *Completed*
- 2018/2019 Way to Go! to School
- Greenride Bikeshare
CCRPC Transportation Advisory Committee
October 2, 2018
Agenda Item 1a: Consent Item

FY2019 Transportation Improvement Program Amendments

Issues
Add the following 2018 VTrans Bicycle & Pedestrian Program awards to the FY2019-2022 TIP:

Federally Funded Projects

**Village South Sidewalk Additional Funds, Hinesburg** (Project BP098, Amendment FY19-01).
- Add $114,400 in federal funds in FY20 for construction of a sidewalk on VT116 from the Community School to Friendship Lane. This project was also awarded a Bicycle & Pedestrian Program award in 2016 of $120,500. Additional funds are needed to address stormwater issues.

**Cherry Street Sidewalk Additional Funds, Milton** (Project BP105, Amendment FY19-02).
- Add $28,000 in federal funds in FY20 for construction of a sidewalk on Cherry Street between Turner Avenue and the railroad. This project was also awarded a $52,800 CCRPC Sidewalk award in FY14.

**Irish Hill Road Pedestrian Bridge and Sidewalk, Shelburne** (Project BP107, Amendment FY19-03).
- Shelburne was awarded $579,200 in federal funds for installation of a prefabricated pedestrian bridge and construction of new sidewalk along Irish Hill Road. Add $124,108 in federal funds for PE in FY19 and $455,064 for construction in FY20.

State Funded Projects – this information is provided for reference. These projects do not need to be listed in the TIP

- North Avenue Raised Intersection, Burlington - $65,850 (state funds - 50% local match)
- Village of Essex Junction Rectangular Rapid Flash Beacon Installations, Essex Junction - $8,600 (state funds - 50% local match)
- VT Route 2A Crosswalk and Sidewalk, St. George - $20,500 (state funds - 50% local match)
- Expanding Greenride Bikeshare, Phase 2 Stations, South Burlington - $24,000 (state funds - 50% local match)

**Staff Recommendation:** Recommend that the TAC approve the proposed TIP amendment.

**For more information, contact:** Christine Forde
cforde@ccrpcvt.org or 846-4490 ext. *13
FY2019 Transportation Improvement Program Amendment

Issues
Make the following project substitution in the FY2019-2022 TIP:

Substitute **Bayside Intersection Roundabout and Stormwater Improvements, Colchester** (Project HP139, Amendment FY19-01) for **Severance Road Path and Intersection Improvements, Colchester** (Project HP117)

- **The Severance Road Path and Intersection Improvements** project is a Phase III CIRC Alternative project and was developed as part of the Colchester-Essex Network Transportation Study completed in 2014. The project was added to the TIP in FY2015 and was added to the VTrans Transportation Capital Project as a Bicycle & Pedestrian Program Candidate project in 2016.

- The **Bayside Intersection Roundabout and Stormwater Improvements** project was developed in the Malletts Bay Transportation and Stormwater Scoping Study completed in 2017. A roundabout was selected as the preferred alternative.

- VTrans allows project substitutions for candidate projects in the Transportation Capital Program according to procedures detailed in Attachment II of the Legislative Report *Project Prioritization and Addition of New Projects for the State Transportation Program, December 1, 2008*.

- Colchester has determined that the Bayside Intersection project is a higher priority for the town at this time and requests to advance this project.

- Approval of this TIP amendment signifies CCRPC support for the substitution.

- The funding schedule for this project is to be determined.

Additional Information:
For reference the full list of FY19 Chittenden County projects on the Candidate list is provided below.

**Paving**
- Richmond-Bolton US2

**Interstate Bridge**
- Colchester BR75
- Richmond BR55S
- Richmond BR53N

**Park and Ride**
- Williston North of I-89

**Town Highway Bridge**
- Charlotte BR31 on Dorset Street
- Huntington BR10 on Main Road
- Jericho BR15 on Browns Trace
- Underhill BR7 on Pleasant Valley Road
<table>
<thead>
<tr>
<th>Staff Recommendation:</th>
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<tbody>
<tr>
<td>Recommend that the TAC approve the proposed TIP amendment.</td>
</tr>
<tr>
<td>For more information, contact: Christine Forde</td>
</tr>
<tr>
<td><a href="mailto:cforde@ccrpcvt.org">cforde@ccrpcvt.org</a> or 846-4490 ext. *13</td>
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<tr>
<th>Roadway</th>
<th>Bike and Pedestrian Facilities</th>
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<tr>
<td>‣ Burlington Railyard Enterprise</td>
<td>‣ Burlington Waterfront North (grant)</td>
</tr>
<tr>
<td>‣ Essex VT117 - Safety/Armoring (CIRC Alternative)</td>
<td>‣ Colchester - Mill Pond/Severance Road (to be substituted)</td>
</tr>
<tr>
<td>‣ Circ Williston (old CIRC project)</td>
<td>‣ Essex VT15 Path - Old Stage Rd to Essex Way (CIRC Alternative)</td>
</tr>
<tr>
<td>‣ South Burlington Exit 12B</td>
<td>‣ Williston US2 - Taft Corners to Village (CIRC Alternative)</td>
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<tr>
<td>‣ South Burlington Airport Drive</td>
<td>‣ Williston VT2A Taft Corners Area (CIRC Alternative)</td>
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<tr>
<td>‣ Underhill Pleasant Valley Road</td>
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<tr>
<td>‣ Williston Mountain View Road (CIRC Alternative)</td>
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<tr>
<td>‣ South Burlington Exit 13</td>
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<tr>
<td>‣ Williston-Essex-Colchester (old CIRC project)</td>
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DATE: Tuesday, August 7, 2018
TIME: 9:00 a.m.
PLACE: CCRPC Offices, 110 West Canal St. Winooski, VT

Members Present
Dean Pierce, Shelburne
Dean Bloch, Charlotte
Brian Bigelow, Underhill
Jon Rauscher, Winooski
Luke Valentine, St. George
Amy Bell, VTrans
Sandy Thibault, CATMA
Nicole Losch, Burlington
Barbara Elliot, Huntington
Annie Costandi, Essex
Allegra Williams, Local Motion
Rachel Kennedy, GMT

Staff Present
Regina Mahony, Planning Program Manager
Christine Forde, Senior Transportation Planner
Eleni Churchill, Transportation Project Manager
Sai Sarepalli, Transportation Planning Engineer
Bryan Davis, Senior Transportation Planner
Peter Keating, Senior Transportation Planner
Marshall Distel, Transportation Planner
Jason Charest, Senior Transportation Planning Engineer
Chris Dubin, Transportation Planner
Pam Brangan, GIS, Data & IT Manager
Charlie Baker, Executive Director

Others
Dave Pelletier, VTrans

Peter Keating called the meeting to order at 9:00AM and asked for a round of introductions.

1. Consent Agenda
No items this month.

2. Approval of Minutes
AMY BELL MADE A MOTION, SECONDED BY DEAN PIERCE, TO APPROVE THE MINUTES OF THE JUNE 5, 2018 TAC MEETING. THE MOTION CARRIED WITH BARBARA ELLIOT ABSTAINING.

3. Public Comments
None.

4. VTrans Long Range Transportation Plan
Dave Pelletier of VTrans began his presentation describing project background and the work that has been completed to date. He explained plan purpose and context, described the plan vision statement, and distributed a handout that identified the plan’s six goals with corresponding objectives and strategies. The plan’s six goal areas are:
- Improve safety and security across all modes,
- Preserve Vermont’s multimodal transportation system and optimize its performance,
- Provide mobility options and accessibility for all users of the system,
- Leverage transportation investments to increase Vermont’s economic vitality,
- Practice environmental stewardship, and
- Support livable, healthy communities.

For each of the goal statements Dave provided a sampling of objectives and strategies. He concluded with a list of the plan implementation partners (including RPCs) and identified the next steps:
- Summer 2018 RPC Transportation Advisory Committee presentations
- Final edits to Draft Plan
In the follow up discussion the following items came up:

- Defining what “security” means in the plan context,
- Include local emergency services in the strategies related to coordinated disaster response,
- Note the desire for railroads to cooperate with other parties on issues related to crossings and sidings,
- Note the inclusion of school buses for public transportation,
- Encourage investment in transit services as well as capital/facilities, and
- What actions VTrans takes to adopt the final document.

5. VT Culverts

Pam Brangan accessed this project website to illustrate recent updates. She first inquired about the level of use/familiarity TAC members had of this resource. She noted that the site is essentially a database of town-maintained structures: bridges and culverts, and is intended to help towns prioritize infrastructure investments and their overall capital planning for municipal facilities. Pam reported that VTrans structures have recently been added to the database. Also, a new feature is the statistics function and work is underway to link VT Culverts to the Agency of Natural Resources geomorphic data for sites that overlap. The RPCs are partnering with VTrans, Local Roads, and VLCT on a webinar that will lead to more help links to the website.

6. Water Quality Updates

Chris Dubin discussed the results of both a DEC and VTrans grant program for water quality related roadway improvements, and also talked about next years’ programs. He discussed the RPC’s efforts in managing and updating the ever-changing Road Erosion Inventory and how CCRPC intends to continue to make the database more complete, correct, and usable. Chris also discussed current planning/scoping grants and how they may change for this current fiscal year. TAC members were asked for reasons the most recent request for planning assistance drew no interest. A sentiment to implement rather than continuing with planning work was expressed. CCRPC will keep the offer open all year should interest come back up. Barbara Elliot asked if road segments can be linked to VT Culverts. Pam responded that she can do this for the town.

7. Status of Projects and Subcommittee Reports

Peter referred members to the project list on the reverse side of the meeting agenda.

8. CCRPC July Board Meeting Report

Peter mentioned the Board held a public hearing and approved the FY 19–22 TIP.

9. Chairman’s/Members’ Items

No items.

The meeting adjourned at 10:30 a.m.

Respectfully submitted, Peter Keating
CCRPC Transportation Advisory Committee
October 2, 2018
Agenda Item 4: Transportation Performance Management (Action Item)

Chittenden County Performance Targets for NHS Pavement & Bridges, NHS
Travel Time Reliability, and Freight Movements

Background: The most recent federal transportation bills, Moving Ahead for Progress in the 21st Century (MAP-21) Act and Fixing America’s Transportation System (FAST) Act, place considerable emphasis on system performance and direct State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs) and Public Transit Providers to evaluate how well the transportation system is performing. At the national level, performance management has become part of the Federal Highway Administration’s (FHWA) and Federal Transit Administration’s (FTA) Transportation Performance Management (TPM) program. The TPM program is a strategic initiative that uses system information to direct investments and implement policies to help achieve national performance goals. The intent is to measure progress towards the national goals through a reliable data-driven process.

FHWA has established measures in the following areas:
- Safety
- Infrastructure Condition (Pavement & Bridges)
- Congestion
- System Reliability (NHS Performance)
- Freight Movements (Interstate)
- Environmental Sustainability
- Reduced Project Delivery Delay

Once the performance measures were established at the federal level, it is up to state DOTs and MPOs to set quantifiable targets to gauge progress towards state and national goals. The schedule to establish targets, varies by measure. Federal regulations generally have state DOTs set performance targets in the various categories and then give MPOs another 180 days to either agree to the State targets or establish their own.

VTrans, in collaboration with the CCRPC, developed the statewide targets for NHS bridge and pavement performance; NHS travel time reliability for passenger vehicles; and Interstate travel reliability for freight movements. Statewide targets for performance measures for all relevant Vermont categories are listed below:

Infrastructure Condition - Pavement
- Percentage of pavement on the Interstate in good condition: 35%
- Percentage of pavement on the Interstate in poor condition: 4.9%
- Percentage of pavement on the non-Interstate NHS in good condition: 30%
- Percentage of pavement on the non-Interstate NHS in poor condition: 9.9%
Infrastructure Condition - *Bridges*
- Percentage of NHS bridges in good condition: **35% min**
- Percentage of NHS bridges in poor condition: **6.0%**

**National Highway System Reliability**
- Percent of Interstate System person-miles traveled that are reliable: **90%**
- Percent of non-Interstate NHS person-miles traveled that are reliable: **80%**

**Freight Movements and Economic Vitality**
- Interstate System Truck Travel Time Index: **Less than 1.75**

For more information on performance measures and targets and the reasons for the staff recommendation please see the draft CCRPC Performance Management Report in your packet.

**Staff Recommendation:** The TAC accepts the statewide targets for NHS Pavements and Bridge condition, NHS Time Travel Reliability, and Interstate Freight Movements and recommends that the CCRPC Board agrees to the statewide targets for all performance measures under these categories.

**Staff contacts:**
- Eleni Churchill, echurchill@ccrpcvt.org
- Peter Keating, pkeating@ccrpcvt.org
Introduction

The most recent federal transportation bills, Moving Ahead for Progress in the 21st Century (MAP-21) Act and Fixing America’s Transportation System (FAST) Act, place considerable emphasis on system performance and direct State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs) and Public Transit Providers to evaluate how well the transportation system is performing. At the national level, performance management has become part of the Federal Highway Administration’s (FHWA) and Federal Transit Administration’s (FTA) Transportation Performance Management (TPM) program (https://www.fhwa.dot.gov/tpm/ & https://www.transit.dot.gov/PerformanceManagement). The TPM program is a strategic initiative that uses system information to direct investments and implement polices to help achieve national performance goals. The intent is to measure progress towards the national goals through a reliable data-driven process.

COORDINATION

In establishing targets for all performance measures, state DOTs are required to coordinate with all MPOs in the state as well as Public Transit Providers (where applicable). The schedule to establish targets varies by measure. Federal regulations generally have state DOTs set performance targets in the various categories and then give MPOs another 180 days to either adopt the State targets or establish their own.

The CCRPC has an agreement with VTrans and Green Mountain Transit (GMT – transit provider in the MPO area) dated May 18, 2016 that describes our intent to work collaboratively in carrying out the performance based planning as outlined in federal rules. The agreement can be accessed at: https://www.ccrpcvt.org/wp-content/uploads/2016/02/CCTA-CCRPC-VTrans-Agreement-May-2016.pdf.

On May 27, 2016, the final rule for statewide and metropolitan transportation planning was published. As part of this final rule, 23 CFR 450.314 (h) was amended to state:

The MPO(s), State(s), and the providers of public transportation shall jointly agree upon and develop specific written provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO (see §450.306(d)) … These provisions shall be documented either as part of the metropolitan planning agreements required under paragraphs (a), (e), and (g) of this section, or documented in some other means outside of the metropolitan planning agreements as determined cooperatively by the MPO(s), State(s), and providers of public transportation.

The Vermont Agency of Transportation (VTrans) has coordinated with the Chittenden County Regional Planning Commission (CCRPC), which serves as the only MPO that operates within Vermont, on all statewide targets developed for the following areas: Safety, Infrastructure Condition, NHS Reliability, and Freight Movements.
DEVELOPING AND SHARING OF DATA

VTrans is the agency primarily responsible for developing statewide data for all established measures to track progress towards meeting the approved targets under each category. VTrans has in the past and we anticipate will continue in the future to provide data for the MPO area so that the CCRPC can track progress towards various transportation goals under the 2018 ECOS/Metropolitan Transportation Plan (MTP). Relevant data will be shared with GMT to facilitate their transit planning and tracking their established targets.

National Transportation Goals and FHWA Performance Measures

MEASURES AND TARGETS

FHWA has established or will be establishing measures for the following National Goal areas:

- **Safety**: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition (Pavement & Bridges)**: To maintain the highway infrastructure asset system in a state of good repair.
- **System Reliability (NHS Performance)**: To improve the efficiency of the surface transportation system.
- **Freight Movements and Economic Vitality**: To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Congestion Reduction**: To achieve a significant reduction in congestion on the National Highway System.
- **Environmental Sustainability**: To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced project delivery delays**: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The established performance measures under each of these categories are:

- **Safety**
  1. Number of Fatalities
  2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
  3. Number of Serious Injuries
  4. Rate of Serious Injuries per 100 million VMT
  5. Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries

- **Infrastructure Condition**

  *Pavement*
  1. Percentage of pavement on the Interstate in good condition
  2. Percentage of pavement on the Interstate 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

**Bridges**
1. Percentage of NHS bridges in good condition
2. Percentage of NHS bridges in poor condition

- **National Highway System Reliability**
  1. Percent of Interstate System person-miles traveled that are reliable
  2. Percent of non-Interstate NHS person-miles traveled that are reliable

- **Freight Movements and Economic Vitality**
  1. Percent of Interstate System providing reliable truck travel times

- **Congestion Reduction** - *Not required in Vermont because we are not a designated nonattainment area*
  1. Annual Hours of National Highway System Peak-Hour Excessive Delay Per Capita
  2. Percent of National Highway System Peak-Hour Non-SOV travel
  3. Total CMAQ project emissions

- **Environmental Sustainability** – *No Rulemaking on this measure*
  1. Percent change in tailpipe carbon dioxide (CO2) emissions on the National Highway System

- **Reduced Project Delivery Delays** – *No measures?*

### Safety Performance Targets

#### STATEWIDE AND CCRPC TARGETS

The Vermont Agency of Transportation (VTrans) and the CCRPC have closely collaborated through the winter and spring of 2017 to develop statewide targets for the five performance measures that were established under the Safety category in support of the Highway Safety Improvement Program (HSIP). These targets are set by DOTs and MPOs to evaluate performance on reducing fatalities and serious injuries on our highways. State HSIP targets are reported by August 31 each year and MPOs must establish targets within 180 days of the State reporting their targets or by February 27 of each year.

#### COORDINATION – CCRPC/VTRANS

On January 10, 2017 VTrans and CCRPC staff attended an FHWA sponsored workshop on safety performance target setting. Following the workshop VTrans established a multi-disciplinary task force to evaluate crash data and propose the 2017 safety targets for Vermont’s public roads. The task force met in February 2017 and discussed data for each of the five performance measures from 2005 to the most recent year that data was available and developed proposed targets for the established measures that were vetted by the VTrans’
Executive Staff and the Vermont Highway Safety Alliance Board of Directors throughout the spring of 2017. VTrans Task force participants are listed below:

**VTrans and CCRPC/MPO Attendees:**

Bruce Nyquist, Director, VTrans OHS  
Scott Davidson, Chief, VTrans GHSP  
Mario Dupigny-Giroux, VTrans HSIP  
Evelyn McFarlane, VHSA  
Costa Pappis, VTrans Planning Coordinator  
Jon Kaplan, VTrans, Bike & Ped Coordinator  
Eleni Churchill, CCRPC/MPO Transportation Program Manager

**VTRANS AND MPO SAFETY TARGETS**

Table 1 presents VTrans’ statewide safety targets as reported in the 2017 Highway Safety Improvement Program (HSIP) report (https://safety.fhwa.dot.gov/hsip/reports/pdf/2017/vt.pdf). Figures 1 through 5 illustrate the crash data tracked to help establish statewide safety targets for Vermont’s public roads.

The CCRPC Board adopted the VTrans statewide safety targets for the MPO area at their meeting on February 21, 2018.

**Table 1 – 2018 VTrans and CCRPC Adopted Safety Performance Targets**

<table>
<thead>
<tr>
<th>VTrans Safety Performance Management Targets (5-Year Averages)</th>
<th>2018 Target</th>
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<tbody>
<tr>
<td>Number of Fatalities</td>
<td>57.0</td>
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<tr>
<td>Number of Fatalities per 100M VMT</td>
<td>0.830</td>
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<tr>
<td>Number of Serious Injuries</td>
<td>280.0</td>
</tr>
<tr>
<td>Number of Serious Injuries per 100M VMT</td>
<td>4.0</td>
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<tr>
<td>Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries</td>
<td>39.4</td>
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Figure 1: Statewide and Chittenden County: Annual and 5-Year Average Fatalities

Figure 2: Statewide and Chittenden County: Annual and 5-Year Average Serious Injuries
Figure 3: Statewide and Chittenden County 5-year Average Fatality Rate

Figure 4: Statewide and Chittenden County 5-year Average Serious Injury Rate
NHS Pavement and Bridge Performance Targets

BACKGROUND

The final FHWA rule on establishing performance measures for State DOTs to use in managing pavement and bridge performance on the NHS was published in the Federal Register on May 20, 2017. DOTs had one year from the effective date to establish statewide performance targets and MPOs have an additional 180 days to either accept the statewide targets or adopt their own. This final rule also establishes the process for DOTs and MPOs to report targets and the process that FHWA will use to assess progress towards achieving the targets. The established NHS pavement and bridge performance measures are:

- Percentage of pavements on the Interstate System in Good condition;
- Percentage of pavements on the Interstate System in Poor condition;
- Percentage of pavements on the NHS (excluding the Interstate System) in Good condition;
- Percentage of pavements on the NHS (excluding the Interstate System) in Poor condition;
- Percentage of deck area of NHS bridges classified as in Good condition; and
- Percentage of deck area of NHS bridges classified as in Poor condition.

VTrans collects NHS pavement condition data in 0.1 mile segments. Pavement condition is computed using the following metrics: International Roughness Index, Cracking Percent, Rutting, and Faulting. If two or more
metrics are rated poor for a specific segment then the pavement for that segment is rated “Poor.” All metrics must be good in order for pavement of a specific roadway segment to be considered “Good.” Pavement segments not meeting any of the criteria above are considered to be in “Fair” condition.

VTrans collects NHS bridge data and computes the percent of deck area classified as “Good” and “Poor” using National Bridge Inventory (NBI) condition ratings for Deck, Superstructure, Substructure. The condition of a specific bridge is determined by the lowest rating of these components. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if any component is less than or equal to 4, the bridge is classified as poor (structurally deficient). Deck area not meeting any of these criteria is considered to be “Fair.”

COORDINATION MEETING

As required by federal rules, VTrans, CCRPC and FHWA staff met on January 24, 2018 to review and discuss potential targets for the NHS bridge and pavement performance measure targets. Participating staff are listed below:

VTrans Attendees:

Chad Allen, Asset Management & Performance (AMP) Bureau Director
Amy Bell, Transportation Planner & VTrans’ MPO Coordinator
Reid Kiniry, Pavement Subject Matter Expert
Kevin Marshia, AMP Budget & Programming Manager
Zoe Neaderland, Transportation Planner and Lead Writer on VTrans’ TAMP
Costa Pappis, VTrans Transportation Planning Coordinator
Dave Pelletier, Transportation Planner & Long Range Transportation Plan Lead
Jason Tremblay, Risk Management Engineer

MPO: Chittenden County Regional Planning Commission (CCRPC)

Charlie Baker, CCRPC Executive Director
Eleni Churchill, CCRPC Transportation Program Manager

FHWA:

Chris Jolly, Planning & Programming Engineer
Tod Kimball, Structures/Bridge Engineer
Paul Maloney, Program Analyst
Larkin Wellborn, Field Operations Engineer

STATEWIDE PERFORMANCE TARGETS

VTrans, in collaboration with the CCRPC, developed the statewide targets for the NHS pavement and bridge measures and these targets were submitted to FHWA on April 30, 2018. The CCRPC has until October 27, 2018 to either accept the statewide targets or adopt targets for the MPO area. Statewide targets for NHS pavements and bridges are presented in Tables 2 and 3, respectively.
Table 2 – Vermont NHS Pavement Condition and Targets

<table>
<thead>
<tr>
<th>VTrans</th>
<th>Interstate System</th>
<th>Non-Interstate NHS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>640.35 miles</td>
<td>457.69 miles</td>
</tr>
<tr>
<td>Pavement</td>
<td>Percentage of pavements of the Interstate in <strong>Good</strong> Condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>173.3 miles</td>
<td>27.1%</td>
</tr>
<tr>
<td></td>
<td>Target:</td>
<td>35.0%</td>
</tr>
<tr>
<td>Pavement</td>
<td>Percentage of pavements of the Interstate in <strong>Poor</strong> Condition¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13.27 miles</td>
<td>2.1%</td>
</tr>
<tr>
<td></td>
<td>Target:</td>
<td>4.9%</td>
</tr>
<tr>
<td>Federal Maximum:</td>
<td>5.0%</td>
<td>Federal Maximum:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CCRPC</th>
<th>Interstate System</th>
<th>Non-Interstate NHS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>77.2 miles²</td>
<td>71.87 miles²</td>
</tr>
<tr>
<td>Pavement</td>
<td>Percentage of pavements of the Interstate in <strong>Good</strong> Condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.0 miles²</td>
<td>10.3%</td>
</tr>
<tr>
<td></td>
<td>Target:</td>
<td><strong>35.0%</strong></td>
</tr>
<tr>
<td>Pavement</td>
<td>Percentage of pavements of the Interstate in <strong>Poor</strong> Condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 miles²</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Target:</td>
<td><strong>4.9%</strong></td>
</tr>
</tbody>
</table>

Notes:
¹ - Indicates the enforcement of a possible penalty! If for 3 consecutive years the minimum Interstate condition level is not met then the State must obligate and set aside NHPP funds for eligible pavement projects on the NHS.
² - These values could change significantly as the NHS within the MPO is currently being evaluated and significant changes are expected.

*Proposed CCRPC Target
### Table 3 – Vermont NHS Bridge Condition and Targets

<table>
<thead>
<tr>
<th>Bridges</th>
<th>NHS Bridge Condition by Deck Area as of 12/31/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VTrans</strong></td>
<td>All NHS Bridges</td>
</tr>
<tr>
<td>Percentage of NHS Bridges classified as in <strong>Good</strong> Condition:</td>
<td></td>
</tr>
<tr>
<td>Current:</td>
<td>47.1%</td>
</tr>
<tr>
<td>Target:</td>
<td>35.0%</td>
</tr>
<tr>
<td>Percentage of NHS Bridges classified as in <strong>Poor</strong> Condition</td>
<td></td>
</tr>
<tr>
<td>Current:</td>
<td>2.5%</td>
</tr>
<tr>
<td>Target:</td>
<td>6.0%</td>
</tr>
<tr>
<td><strong>Federal Maximum:</strong></td>
<td>10%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

| **MPO** | All NHS Bridges |
| Percentage of NHS Bridges classified as in **Good** Condition: | |
| Current: | 37%<sup>2</sup> |
| Target: | 35.0%<sup>*</sup> |
| Percentage of NHS Bridges classified as in **Poor** Condition | |
| Current: | 1.1%<sup>2</sup> |
| Target: | 6.0%<sup>*</sup> |

**Notes:**
1 - Indicates the enforcement of a possible penalty! If for 3 consecutive years the minimum condition level of NHS bridges is not met then the State must obligate and set aside NHPP funds for eligible bridge projects on the NHS.

2 - These values could change significantly as the NHS within the MPO is currently being evaluated and significant changes are expected.

*Proposed CCRPC Target

## RECOMMENDED CCRPC PERFORMANCE TARGETS

Preliminary staff recommendation: Board should adopt the VTrans statewide targets for the NHS pavement and bridge measures as presented in Tables 2 and 3. Reasons for this recommendation include:

- There are no practical policy or funding benefits or negative implications for the CCRPC to adopt separate targets.
- Extra work and coordination would be required to set separate CCRPC targets with no clear benefits.
- Currently, there is no historic data for pavement conditions on municipally owned NHS highways in the state, including Chittenden County – VTrans began collecting pavement condition data for these NHS...
segments in 2017. Furthermore, the CCRPC is recommending changes to the NHS system that might render the initial 2017 NHS data not fully useable.

- As we collect and monitor data under this category, the Board will have the opportunity to set targets for the MPO area in the future.

**NHS System Reliability & Freight Movement Performance Targets**

**BACKGROUND**

The final FHWA rule on establishing performance measures for State DOTs to use in managing operational performance on the National Highway System (NHS) was published in the Federal Register on May 20, 2017. DOTs had one year from the effective date to establish statewide performance targets and MPOS have an additional 180 days to either accept the statewide targets or adopt their own. This final rule also establishes the process for DOTs and MPOs to report targets and the process that FHWA will use to assess progress towards achieving the targets. The three performance measures for assessing NHS and Freight Performance which are applicable to Vermont are:

- Interstate NHS Travel Time Reliability Measure;
- Non-Interstate NHS Travel Time Reliability Measure; and
- Interstate NHS Truck Travel Time Reliability Index.

*Travel time reliability* is a measure of how reliable, or predictable, travel times are on the NHS over the course of a calendar year and is presented as the percent of person-miles traveled on the Interstate and non-Interstate NHS that are reliable.


*Truck time travel reliability* index is a measure of how reliable is truck travel on the Interstate.


**COORDINATION MEETING**

As required by federal rules, VTrans, CCRPC and FHWA staff met on March 13, 2018 to review and discuss potential targets for the NHS operations and freight performance targets. Participating staff are listed below:

**VTrans:**
- Josh Schultz, TSMO Manager
- Amy Bell, Transportation Planner & VTrans’ MPO Coordinator
- Zoe Neaderland, Transportation Planner
- Joe Segale, Policy, Planning and Research Bureau Director
- Kevin Viani, Chief of Performance
- Mike Pologruto, Chief of Quality Assurance
- Ian Degutis, Traffic Mobility Engineer
MPO: Chittenden County Regional Planning Commission (CCRPC)
Charlie Baker, CCRPC Executive Director
Eleni Churchill, CCRPC Transportation Program Manager

FHWA:
Chris Jolly, Planning & Programming Engineer
Matt DiGiovanni, Field Operations Engineer

STATEWIDE PERFORMANCE TARGETS

VTrans, in collaboration with the CCRPC, developed the statewide targets for NHS travel time reliability for passenger vehicles and freight movements and these targets were submitted to FHWA on May 14, 2018. The CCRPC has until November 10, 2018 to either accept the statewide targets or adopt targets for the MPO area.

VTrans used FHWA’s National Performance Management Research Data Set (NPMRDS v2) to monitor travel time performance for passenger vehicles and trucks on the National Highway System. Vermont’s statewide data and performance targets are presented in Figures 6 through 8.

Figure 6 – Statewide Interstate Travel Time Reliability
Figure 7 – Statewide Non-Interstate NHS Travel Time Reliability

![Statewide Non-Interstate NHS Travel Time Reliability](image)

2017 Non-interstate NHS Travel Time Reliability for Vermont

Vermont
MAP-21 Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable (the Non-Interstate NHS Travel Time Reliability measure)

2017 Target
at least
80.0%

Year-to-Date
2017

Target: At least 80% of the system should have a LOTTR less than 1.50

Calculated using 100.00% of miles in Vermont
Data source: NPMRDS INRIX

Figure 8 – Statewide Interstate Truck Travel Time Reliability Index

![Statewide Interstate Truck Travel Time Reliability Index](image)

2017 Truck Travel Time Reliability Index for Vermont

Vermont
MAP-21 Truck Travel Time Reliability Index

2017 Target
less than
1.75

Year-to-Date
2017

Target: The system should have a TTTR less than 1.75

Calculated using 100.00% of miles in Vermont
Data source: NPMRDS INRIX
CHITTENDEN COUNTY TRAVEL TIME RELIABILITY DATA

Travel time reliability data for the MPO region are presented in Figures 9 through 11. Target values shown are VTrans’ statewide target values; The CCRPC has 180 days following the VTrans submittal of the NHS Performance targets to determine targets for their region.

Figure 9 – Chittenden County Interstate Travel Time Reliability

Figure 10 – Chittenden County Non-Interstate NHS Travel Time Reliability
RECOMMENDED CCRPC PERFORMANCE TARGETS

Preliminary staff recommendation: Board should adopt the VTrans statewide targets as presented in Figures 6, through 8 for the NHS time travel reliability and truck travel reliability index for the MPO area. Reasons for this recommendation include:

- There are no practical policy or funding benefits or negative implications for the CCRPC to adopt separate targets.
- Extra work and coordination would be required to set separate CCRPC targets with no clear benefits.
- Generally, there is limited historic data (2 years) from which to set statewide or regional targets and furthermore the available data for the non-Interstate NHS routes in Chittenden County is unreliable.
- As we collect and monitor data under this category, the Board will have the opportunity to set targets for the MPO area in the future.