

**Transportation Improvement Program (TIP)
Guidance Document**

Appendix A: TIP Project Evaluation Criteria

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TIP Category Evaluation Methodology

Transportation Council staff has worked closely with the TIP Task force to develop six (6) project categories that will be used to group candidate projects. Each project category has its own unique evaluation criteria that will be used to score and rank projects in each category. It is important to understand what type of project you will be applying for before submitting a project application, as each online application is designed for a specific project type. Please review the project types below for descriptions, examples and general scoring methodology for each project category.

Pavement Only

Eligible projects include all pavement preservation, rehabilitation, and construction / reconstruction activities that **do not incorporate** bicycle and pedestrian elements. Example projects include pavement overlay, mill and fill, in-place recycling, and reconstruction techniques.

Candidate projects will be scored based on the following methodology.

- **75-point Benefit Cost Score;** taking into account facility benefits, safety benefits, pavement condition, service life extension, and cost of repair. The calculated benefit-cost ratio will be doubled and capped at 75 points (i.e., a project with a benefit-cost ratio of 15 will receive 30 points)
- **20-point Merit Score;** up to five points for each merit category:
 - Freight Impact
 - Project Readiness
 - Security/Resiliency
 - Regional Benefit & Economic Impact
- **95 points total**

Projects in the Pavement Only category support the federal Pavement and Bridge Condition Performance Measure (PM2) and may support the federal HSIP and Safety Performance Measure (PM1).

Complete Streets

Eligible projects include all pavement preservation, rehabilitation, and construction / reconstruction activities **that incorporate** bicycle and pedestrian elements. Example projects include pavement overlay, mill and fill, in-place recycling, and reconstruction techniques that are associated with active transportation infrastructure improvements (i.e. adjacent sidewalk installation, repair or replacement, bike lane installation, repair, or replacement).

Candidate projects will be scored based on the following methodology.

- **50-point Benefit Cost Score;** taking into account facility value, safety benefits, pavement condition, service life extension, and cost of repair.
- **50-point Merit Score:**
 - Land Use, Smart Growth, and Access Management (5 points)
 - Complete Streets & Connectivity (15 points)
 - Regional Benefit & Economic Impact (5 points)

- ITS, Operations, and Innovation (5 points)
- Security/Resiliency (5 points)
- Freight Impact (5 points)
- Project Readiness (5 points)
- **95 points total**

Projects in the Complete Streets category support the federal Pavement and Bridge Condition Performance Measure (PM2) and may support the federal HSIP and Safety Performance Measure (PM1).

Bridge

Eligible projects include bridge preservation and or reconstruction work. Example projects include element specific bridge repairs, bridge rehabilitations, and bridge replacements and combinations of bridge improvements and active transportation infrastructure improvements (i.e. adjacent sidewalk installation, repair or replacement, bike lane installation, repair, or replacement).

Candidate projects will be scored based on the following methodology.

- **70-point Benefit-Cost Score**; taking into account the facility value, bridge condition, service life extension, and cost of repair. The calculated benefit-cost ratio will be doubled and capped at 70 points (i.e., a project with a benefit-cost ratio of 15 will receive 30 points).
- **30-point Merit Score**; up to five points for each merit category:
 - Bridge Bicycle & Pedestrian Facilities
 - Freight Impact
 - Project Readiness
 - Security/Resiliency
 - Regional Benefit & Economic Impact
- **95 points total**

Projects in the Bridge category support the federal Pavement and Bridge Condition Performance Measure (PM2) and may support the federal HSIP and Safety Performance Measure (PM1).

Bike and Ped Only

Eligible projects include on-road and off-road facilities for pedestrians, bicyclists, and non-motorized transportation users. Example projects include the installation, repair, or replacement of sidewalks, bike lanes, and multi-use paths. **Only use this category if the proposed project does not include improvements to adjacent pavement infrastructure.**

Candidate projects will be scored based on the following methodology.

- **50-point Project Benefits Score**:
 - Assigning an A-B-C score for Cost effectiveness
 - Assigning an A-B-C score for Market Potential
 - Assigning an A-B-C score for Safety

- Convert these to numerical scores, sum, and scale to 50 points
- **50-point Merit Score**; for the merit scores worth 10 points, the 5-point scoring criteria will be used and doubled:
 - Land Use, Smart Growth, and Access Management (10 points)
 - Trails & Sidewalks (10 points)
 - ADA Accessibility (5 points)
 - Security/Resiliency (5 points)
 - Project Readiness (10 points)
- **90 points total**

Projects in the Bike and Ped Only category support the federal System Performance / Freight / CMAQ (PM3) measures and may support the federal HSIP and Safety Performance Measure (PM1).

Congestion, Freight, and Air Quality

Eligible projects must support strategies identified in the Transportation Council Congestion Management Process (CMP) (i.e. ITS, TSMO, Access Management, Roadway Capacity), on-road freight and air quality improvement, and Alternative Fuel Vehicle Infrastructure. Example projects include intersection improvements (including dedicated turn lanes and roundabouts), ITS projects, traffic signal upgrades or optimization, access management improvements, demand management projects, intermodal freight projects, electric vehicle charging, and more.

Candidate projects will be scored based on the following methodology.

- **30-point Project Benefits score**: Project consistency with plan goals, objectives, and strategy recommendations. Up to 30 points available based on qualitative staff assessment consistent with the following criteria:
 - Project is consistent with the goals and objectives detailed in a State or Transportation Council Congestion, Freight, or Air Quality plan (Capital Region Congestion Management Process, NY State Freight Transportation Plan, Regional Freight Plan, Regional Truck Parking Study, NY State Carbon Reduction Strategy Plan, etc.), CDRPC Capital Region Priority Climate Action Plan, or other state, regional, or local plan endorsed by the Transportation Council, and/or will substantially contribute to applicable performance management targets.
 - Project implements one or more strategies, actions, or recommended projects identified in a State or Transportation Council Congestion, Freight, or Air Quality plan. The strategy, action, or project proposed will be effective in addressing the specific identified transportation problem/need.
 - For Congestion projects:
 - Project is implementing an appropriate Congestion Management Strategy at one or more of the locations identified as top congested locations in the CMP that is expected to treat the type of congestion observed at that location.
 - Project is proposing a cost-effective solution, such as an ITS or TSMO Strategy, before more costly projects are attempted/ruled out.

- For ITS projects:
 - documented coordination with partner agencies to assure consistency and interoperability of ITS hardware, software, and processes.
- For Freight projects:
 - The project substantially improves a Transportation Council or NYSDOT identified freight movement issue.
 - The project significantly enhances access to any intermodal freight movement (Ex: air to truck/rail, rail to truck/water, water to rail/truck/air, etc.) and/or a key freight generator (Ex: Airport, Ports, Major Distribution Centers, Industrial Park/cluster of industrial land uses).
- For Air Quality projects:
 - Project is expected to cost-effectively reduce harmful criteria pollutant emissions and/or greenhouse gas emissions. Resources including the FHWA CMAQ Cost-Effectiveness Report (2020) will be used to evaluate relative impact of different project types.
- **30-point cost effectiveness score**; as funding in this category is expected to be limited, lower-cost projects will be prioritized. Projects expected to be highly effective relative to their cost will receive more points. Resources including the FHWA CMAQ Cost-Effectiveness Report (2020) will be used to assist in scoring this criterion.
- **30-point merit score**:
 - Safety Benefits (10 points)
 - Project Readiness (20 points)
- **90 points total**

Projects in the Congestion, Freight, and Air Quality category support the federal System Performance / Freight / CMAQ (PM3) measures and may support the federal HSIP and Safety Performance Measure (PM1).

Other

Example projects include PEL (Planning-Environmental Linkage) studies and all other projects that may not fit within the previous categories.

Candidate projects will be scored based on the following methodology.

Projects in this category will not receive a numerical score. They will be presented to the Planning Committee after a review is conducted by Transportation Council staff consistent with the criteria below. Transportation Council staff will provide a relative ranking and programming recommendations.

- Consistency with regional goals and objectives detailed in the Metropolitan Transportation Plan or other applicable Transportation Council, State, or other regional/local, plan.
- Eligibility for one or more funding sources being programmed in the TIP update.
- Project will effectively address a transportation problem/need and has a clearly defined scope, schedule, and cost estimate as determined by Transportation Council staff review.
- Project has documented support from stakeholders and community (i.e. project support letters, survey data, previous studies, resolutions, etc.).

- Project has prior planning, conceptual design, environmental review, or other preliminary work that demonstrates project feasibility, identifies barriers to implementation, and supports the proposed project scope.
- (Optional) Project will prepare a future project for competitiveness for discretionary grant funds to be brought to the region (such as a PEL study)

TIP Benefit-Cost Score

Quantitative benefit-to-cost ratios are calculated for each Pavement, Complete Streets, and Bridge project. The Transportation Council STEP (Systematic Transportation Evaluation and Planning) Model is used to estimate the annual transportation benefits provided by each proposed roadway and bridge investment. The STEP model is a regional transportation network model maintained by the Transportation Council and used for transportation planning and forecasting. The model runs in the industry standard PTV Visum software suite and is calibrated to recent real-world traffic data.

The model takes into account facility usage and all available detours. To estimate the annual benefits of a road or bridge investment, the STEP model is run with the facility open to traffic and run again with the facility closed to traffic or with greatly reduced capacity (to simulate the effect of the facility not being maintained). These two scenarios are compared to calculate the annual benefits of the facility to the traveling public, measured in millions of dollars per year. The benefits of transportation investments are typically found to far outweigh the costs, demonstrating the importance of investing in our region's infrastructure.

For bridge preservation projects, the benefits are pro-rated based on the expected improvement in bridge condition. For full bridge replacements and for pavement projects, the project is expected to return the facility to the highest condition score and are assigned the full benefits. Projects with proposed mobility improvements such as roundabouts are modeled using the STEP model, and these additional mobility benefits are included.

For projects with proposed safety countermeasures, the annual crash reduction benefit is estimated using the NYSDOT CLEAR (Crash Location & Engineering Analysis & Reporting) system and added to the project benefits. The project cost is annualized over the anticipated service life of the project. The benefit-to-cost ratio is then calculated by dividing the total annual project benefits by the annualized cost.

TIP Merit Evaluation Criteria

Freight Impact

(Up to 5 Points)

One point awarded for each freight criteria met by project:

- Improves a Transportation Council or NYSDOT identified freight movement issue.
- Removes/substantially improves a freight related land-use compatibility, noise, or safety issue. An example of a land use compatibility issue is a substantial increase to freight traffic load in residential area, introduction of significant freight traffic, noise, or other significant freight related nuisance.
- Located on, or provides access to, the Transportation Council's Freight Priority Network, and provides travel reliability benefit(s).
- Enhances access to a key freight generator (including, but not limited to: Airport, Ports, Major Distribution Centers, Industrial Park/cluster of industrial land uses, mining, logging, Technology Parks, etc).
- Enhances access to any intermodal freight movement (Ex: air to truck/rail, rail to truck/water, water to rail/truck/air, etc.).

Project Readiness

(up to 5 points)

- **5 points** – Proposed project has progressed preliminary design to the point of identifying specific project impacts, mitigations that are anticipated to satisfy regulatory agencies, and a cost estimate. Preliminary design must still be current, implementable, and at most 3 years old.
- **2.5 points** – A design consultant has been hired by the project sponsor and they have begun preliminary design assistance such as scoping and cost estimation, OR project was the subject of a PEL study. Design assistance or PEL study must still be current and at most 3 years old.
- **0 points** otherwise.

Security/Resiliency

(up to 5 points)

- **5 points** – project implements location-specific security or resiliency initiative identified in a county, state, or other hazard, security, emergency management, or resiliency plan.
- **4 points** – project provides redundancy for, or improves resilience of, facility located in a 100-year or 500-year flood plain, OR on a facility defined in a risk analysis or vulnerability assessment as sensitive, high-exposure, or high consequence to natural or human-caused disaster.
- **3 points** – project improves resiliency of bridge or culvert with waterway in accordance with NYSDOT Bridge Manual requirements (by increasing waterway opening, increasing freeboard, improving scour resistance, etc.)
- **0 points** – project not expected to impact security or resiliency.

Complete Streets & Connectivity

(up to 15 points)

- **9 points** – project preserves or implements treatments from four or more of the following categories over a majority of the project limits, and the implementation is consistent with guidance from the Capital District Complete Streets Design Guide or the Capital Region Bus and Bike Priority Toolbox:
 - Separated and protected bicycle facility, such as protected bike lanes or sidepath
 - Dedicated transit facility, such as bus lane or queue jump
 - Dedicated pedestrian facility, such as sidewalks or sidepath
 - Intersection or curbside treatments, such as curb extensions or leading pedestrian intervals
 - Traffic calming treatments, such as neckdowns, median islands, or road diet
- **6 points** – project preserves or implements treatments from three or more of the following categories over a majority of the project limits:
 - On-street bicycle facility, such as bike lanes
 - Transit accommodations or amenities, such as shelters at stops
 - Dedicated pedestrian facility, such as sidewalks or sidepath
 - Intersection or curbside treatments, such as curb extensions or leading pedestrian intervals
 - Traffic calming treatments, such as neckdowns, median islands, or road diet
- **4 points** – project preserves or implements treatments from two or more of the categories listed above for the 6-point criterion.
- **2 points** – project preserves or upgrades existing sidewalks or bike facilities
- **0 points** otherwise
- **+3 bonus points** – project upgrades accessible features, introduces new accessible features, or removes barriers to universal access and is a medium or high priority in an ADA Transition Plan.
- **+3 bonus points** – project provides two (2) publicly accessible Level 2 or DC Fast (Level 3) EV charging ports¹

Bridge Bicycle & Pedestrian Facilities

(up to 5 points)

This category applies to the Bridge project category only

- **5 points** – project adds new bicycle, pedestrian, or multi-use facility (sidewalk or trail) to the bridge.
- **3 points** – project preserves existing sidewalk or trail on the bridge.
- **0 points** otherwise

Trails & Sidewalks

(up to 10 points)

¹ EV Charging Port: An EV charging port provides power to charge only one vehicle at a time even though it may have multiple connectors. The unit that houses EV charging ports is sometimes called a charging post, which can have one or more EV charging ports. EV charging ports are also sometimes referred to as electric vehicle supply equipment (EVSE) ports

This category applies to the Bicycle & Pedestrian project category only

- **3 points – Crossings and Trailheads:** implements or preserves two or more pedestrian crossing safety treatments such as high-visibility crosswalks, advance signage, pedestrian signals, RRFBs or hybrid beacons, or lighting consistent with guidance from the Capital District Complete Streets Design Guide; or implements or preserves trailhead treatments such as parking or transit stops.
- **3 points – Facility Width:** installs or preserves facility at the recommended width or greater.
 - Sidewalk: 6ft or greater; per NACTO guidance
 - Multi-Use Path / Trail: 12ft or greater; per Empire State Trail Design Guide guidance.
- **2 points – Connectivity:** project connects to existing sidewalks/trails
- **2 points – Proximity to School:** project installs or preserves a facility within ½ mile of a school

Land Use, Smart Growth, and Access Management

(up to 5 points)

Up to a maximum of five points available from the following criteria:

- **2 points – Plan Implementation:** project implements a recommendation from a Transportation Council Community and Transportation Linkage Planning Study, Capital Region Trails Plan, town center plan, or similar plan and aligns transportation system with existing or desired land uses.
- **1 point – Access Management:** project implements access management strategies identified in the Capital Region Congestion Management Process, including: reducing driveway density, limiting allowable movements, providing adequate turning lanes, shared access, cross-parcel connections, and more.
- **1 point – Mitigation Cost:** project includes, utilizes, introduces, or implements local mitigation fees, such as by means of a Municipal GEIS, or other significant developer or business contributions for any potential degradation from increased facility utilization or from conflicts between transportation and development.
- **1 point – Infill and Mixed Use:** project improves transportation in areas designated for concentrated infill development, mixed-use development, compact development, downtown revitalization, brownfield redevelopment, diverse & affordable housing in proximity to places of employment, OR project enhances streetscaping or other elements of beauty in public spaces in developed areas.

Regional Benefit & Economic Impact

(up to 5 points)

- **5 points –** project contributes toward Federal National Highway System (NHS) Pavement and Bridge Condition Performance Measures
- **3 points –** project implements a portion of one or more of the New Visions 2050 “Big Initiatives”:
 - Capital District Trails Plan (formerly Regional Greenway Program)
 - Riverfront Access and Urban Development Program
 - Street Reconstruction and Reconfiguration

- Suburban Town Center Development
- Enhanced BRT with Transit Oriented Development
- Integrated Corridor Management Program
- Demand Management Program
- VMT, Carbon Tax, or Carbon Cap, Reduce & Invest
- Ridesharing system for all users
- Regional electric vehicle charging system
- **2 points** – project provides multimodal access to an existing or planned employment center where at least 100 workers are employed.
- **0 points** otherwise.

ITS, Operations, and Innovation

(up to 5 points)

- **5 points** – project implements one or more Intelligent Transportation Systems (ITS) or Transportation Systems Management & Operations (TSMO) strategy as identified in the Capital Region Congestion Management Process. Examples include corridor-level traffic signal coordination, advanced or adaptive traffic signal control, Variable Message Signs (VMS), modern interchange geometrics, and advanced vehicle detection systems.
- **4 points** – project implements one more strategies as identified in the Capital Region Congestion Management Process other than ITS or TSMO strategies and not represented in other merit scores – including strategies relating to Transportation Demand Management, parking management, and certain roadway capacity strategies.
- **3 points** – project applies one or more innovative technologies or innovative construction techniques that brings national best practices that are new to the region including, but not limited to, those identified in the FHWA Every Day Counts² program. Examples may include Adaptive Traffic Signal Control, Automated Traffic Signal Performance Measures, Next-Generation Traffic Incident Management, innovative STEP (Safe Transportation for Every Pedestrian) treatments, and more.
- **0 points** otherwise.

ADA Accessibility

(up to 5 points)

- **5 points** – the project’s primary purpose is to upgrade accessible features, introduce new accessible features, or remove barriers to universal access and is a high priority in an ADA Transition Plan.
- **2.5 points** – project implements elements included in an ADA Transition Plan.
- **0 points** – project has neutral effect (no known impact, positive or negative) on accessibility and/or provides required accessibility features.

² FHWA Every Day Counts Web Page: <https://www.fhwa.dot.gov/innovation/everydaycounts/>

Safety Benefits

(up to 5 points)

- **5 points** – project includes three or more safety features identified by FHWA as Proven Safety Countermeasures³ intended to treat the observed crash history at the location, or to treat systemic emphasis areas identified in the Local Road Safety Action Plan⁴ or NY State Strategic Highway Safety Plan⁵.
- **3 points** – project includes one or two safety features identified by FHWA as Proven Safety Countermeasures intended to treat the observed crash history at the location, or to treat systemic emphasis areas identified in the Local Road Safety Action Plan or NY State Strategic Highway Safety Plan.
- **0 points** otherwise.

Proposed ‘yellow flags’:

Evaluation staff will note the concern during the evaluation process and the project sponsor will be contacted to discuss. A note will be placed on the project fact sheet and on summary tables to prompt discussion during programming process.

- Incomplete application – one or more requirements missing
- Project pre-design concept unclear or not yet finalized
- Project cost estimate not consistent with recent projects of similar scope
- Project involves State Highway but does not have letter of support from NYSDOT, or involves a County highway but does not have a letter of support from the County.
- Project expected to have negative impact to one or more merit score categories or to the safety benefits score
- Environment/Sensitive Area: project expected to have a negative impact on an environmentally sensitive feature and is not fully mitigated. Environmentally sensitive features include:
 - aquifers, including sole source aquifers & primary aquifers
 - reservoirs
 - water features (streams, lakes, rivers)
 - wetlands
 - watersheds
 - 100 year flood plains
 - rare animal populations/habitats
 - rare plant populations/habitats
 - significant ecological sites/significant ecological communities
 - national & state historic sites
 - national historic register districts & properties

³ FHWA Proven Safety Counter Measures Web Page: <https://highways.dot.gov/safety/proven-safety-countermeasures>

⁴ Transportation Council Local Road Safety Action Plan: https://www.capitalmpo.org/images/safety/Final_Report_October_2019_web

⁵ NYS Strategic Highway Safety Plan: <https://www.dot.ny.gov/divisions/operating/osss/highway/strategic-plan>

- federal parks and lands
- state parks and forests
- state unique areas
- state wildlife management areas
- county forests and preserves
- municipal parks and lands
- land trust sites
- NYS DEC lands
- Adirondack Park
- agricultural districts
- NY Protected Lands
- natural community habitats
- Class I & II soils