

NEW VISIONS AND THE TIP

The New Visions Regional Plan

The CDTC New Visions 2040 Plan includes a set of principles to guide transportation planning and investment in the region for coming years. It also articulates a series of short-range and long-range recommendations and actions to help achieve broad regional goals, and provided an innovative budget approach to ensure implementation of the plan.

Today, it is widely accepted across the Capital District that transportation investments can add significantly to community quality of life; that transit, bike, pedestrian, goods movement and aesthetic features are equally as important as motor vehicle accommodation in highway design; that technology can be used to assist the traveler; and that ensuring economic and environmental health is an important objective of the transportation system

New Visions reflects a regional consensus of residents, businesses, state and local government representatives and transportation providers to use transportation and public policy to:

- Promote sustainable economic growth with good-paying jobs
- Revitalize urban areas
- Help build community structure in growing suburbs
- Preserve open space and agricultural land
- Make communities more walkable and livable
- Provide meaningful transit options
- Connect all residents with job opportunities
- Manage increasing traffic congestion and maintain reasonable mobility on the highway system
- Encourage land use and transportation planning

Full implementation of the New Visions 2040 Plan means steady progress with physical and technological improvements to the region's transportation system, coupled with significant land use and demand management actions that dampen the rate of travel growth. The plan focuses on managing and redesigning existing facilities, services and ways of doing business more than on physically expanding the system.

CDTC and its members have worked hard over many years to implement the New Visions plan. To a greater degree than typical for MPOs, CDTC has linked the plan to implementation. Progress has been and continues to be made across all project categories. Continued dialogue and discussion of transportation and land use policy has reaffirmed the basic New Visions plan and budgetary priorities. New Visions program recommendations ranging from a spot improvement program to significant funding for integrated transportation and land use planning have been successfully instituted by CDTC.

Programming Principles

The New Visions plan includes programming principles and a budget that calls for "comparable progress" across multiple project types is stated.

New Visions principles follow four themes:

- Preserve and manage the existing investment in the region's transportation system.
- Develop the region's potential to grow into a uniquely attractive, vibrant, and diverse metropolitan area.
- Link transportation and land use planning to meet the Plan's goals for urban investment, concentrated development patterns, and smart economic growth.
- Plan and build for all modes of transportation, including pedestrian, bicycle, public transit, cars, and trucks.

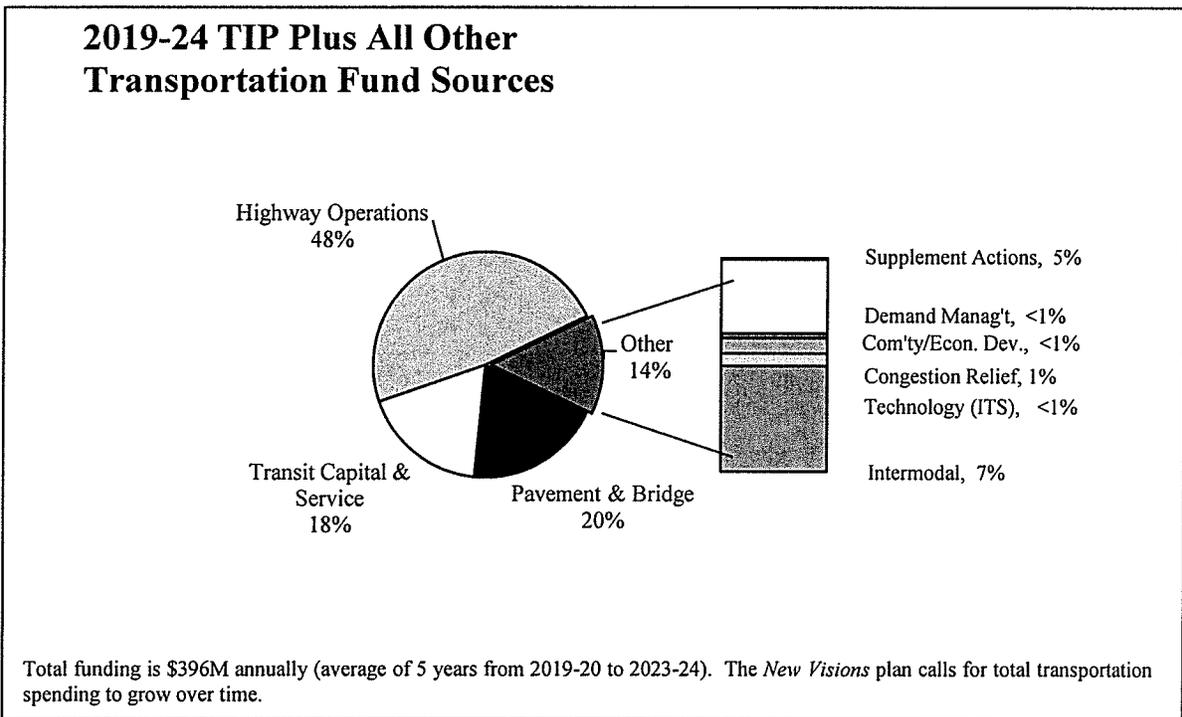
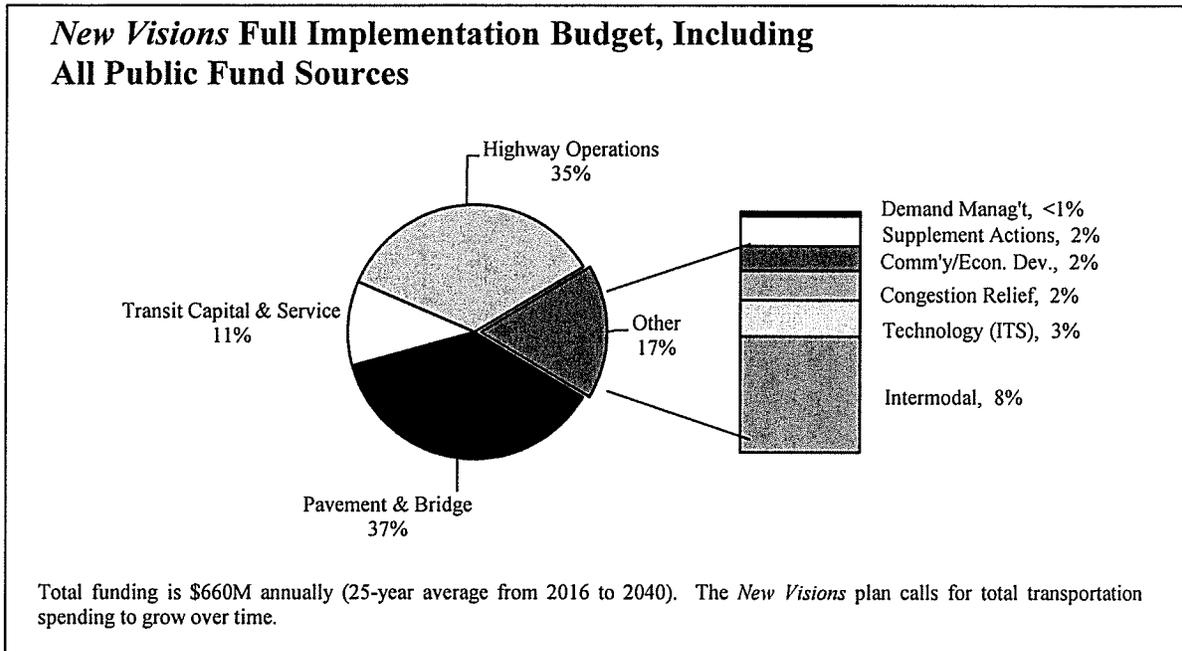
In addition to the direct budgetary link between the New Visions plan and the TIP, there are a number of policy linkages as well. Integration of the planning and investment principles adopted in New Visions influenced every aspect of TIP development, from the types of projects solicited from sponsors to the evaluation criteria used. Implementation of the projects in the TIP will continue to rely heavily on a multimodal performance-based approach to project development that takes into account community compatibility and economic development concerns.

New Visions budgets include all fund sources (federal, state and local) over twenty years. The two pie charts on the next page compare annualized New Vision budget targets by project type with the overall transportation-funding picture for the 2019-24 period. The contribution of the federal-aid program to meeting important regional goals in transportation is highlighted. While federal-aid provides for less than 30% of the total expenditures, it provides for significantly larger share of system improvements.

The budget is overwhelmingly dominated by system preservation – "state of good repair" categories. Highway and bridge operations, maintenance, rehabilitation and reconstruction categories alone account for 73% of the annual budget requirement. However, work in these categories includes corrective and preventive work on transit, bicycle and pedestrian accommodations, and in some cases new accommodations where none existed before. It also often includes replacement of some or all of existing water lines and sewer systems and can include other utility work.

"Supplemental Actions" includes stand-alone bicycle and pedestrian accommodations, safety improvements, and goods movement actions, beyond those improvements incorporated into other projects. Using the federal-aid program to fund these types of projects is a major factor in the achievement of a high degree of correlation between the long range budget targets and the short-range capital program.

FIGURE 1: COMPARISON OF NEW VISIONS BUDGET TO TIP



PROJECT SELECTION FROM, AND AMENDING, THE TIP

Federal law requires that all projects in a given TIP be given a rank, which determines the order in which they may be obligated. CDTC has assigned the year of the element as the rank. So, all elements in the first year of the TIP are given top priority, and the projects in the second year are given second priority, etc. This, and the need for updates to project costs and scopes, as well as the addition and deletions of projects and project elements, necessitates that procedures be in place to make changes to TIP projects in between TIP Updates. Therefore, responsibility to make changes to the TIP is shown in the chart below.

There are a few procedures or principles that are not explicitly stated in the table of guidelines, but are just as much a part of those guidelines:

- A) Changes from 1) any federal fund source to NHPP and 2) any STP fund source to any other STP fund source are covered in sections 3a and 3b, respectively. Section 3c, “Change between any other Title I federal fund sources” requires additional clarification too large for a footnote to the table. A change between any other Title I fund sources would be require Planning Committee approval. In such cases, in order to approximate equity with other candidate projects, the Planning Committee should consider the priority of the subject project relative to other candidates that did or will compete for those funds. This could necessitate that the project be evaluated and compared to projects in the previous solicitation.
- B) Any action explicitly taken by the Planning Committee cannot be overridden by anything less than a Planning Committee action.
- C) For a project that is both non-CDTA and non-state but the responsibility for a change lies with CDTA or NYSDOT, consent is also required of the project implementer and (if different) also the owner of the facility or whoever is responsible for the local match.
- D) If the same action can fit more than one description in the table, the one requiring the highest action is used. For example, a project consisting of \$0.600M in matched federal-aid could have the fund source switched to local. This is a fund source switch (3)(d) requiring only NYSDOT or CDTA approval, and it is also a deletion of a project from the federal-aid program (1)(c), since all federal funds are being removed, requiring Policy Board action. Therefore, the change requires Policy Board action as the deletion of a project from the federal-aid program (1)(c).
- E) An amendment normally requiring Planning Committee approval, linked to another amendment requiring Policy Board approval, also requires Policy Board approval.
- F) In the guidelines table, 1(h), “Combining a non-preservation project with any other(s)” requires Planning Committee approval because it is not necessarily desirable to combine any two specific projects. The reasons for that can vary and need to be considered on a case-by-case basis.

**TABLE 2
GUIDELINES FOR TIP CHANGES**

Type of Change	Responsibility		
	¹ CDTA or NYSDOT	² Planning Committee	Policy Board ³
(1) Addition or Deletion			
(a) Addition of project(s) from regional set-asides			
(i) From placeholder set-asides	---	Approve	---
(ii) As part of a project solicitation	---	Recommend	Approve
(b) Addition/deletion of project under or equal to \$0.500M	---	Approve	---
(c) Addition/deletion of project over \$0.500M	---	Recommend	Approve
(d) Addition/deletion of project element less than or equal to \$0.250M ⁴	Approve	---	---
(e) Addition/deletion of project element over \$0.250M ⁴	---	Approve	---
(f) Addition of Transportation Alternatives project after approval by state advisory committee	---	Approve	---
(g) Combining two or more existing preservation projects ⁵	Approve	---	---
(h) Combining a non-preservation project with any other(s)	---	Approve	---
(i) Other	---	Recommend	Approve
(2) Scope and/or Cost (Increase or Decrease)			
(a) Over 25% (minimum \$250 k) or over \$500 k ⁶	---	Approve	---
(b) Over 50% (minimum \$1M) or over \$3M ⁶	---	Recommend	Approve
(c) Scope change necessitating recalculation of system-level air quality conformity of non-exempt project	---	Recommend	Approve
(d) Other significant scope change ⁷	---	Approve	---
(e) Other	---	Recommend	Approve
(3) Fund Source Change (a thru e refer to CDTC funds)			
(a) Change from any federal fund source to NHPP	Approve	---	---
(b) Change from one STP fund source to another	Approve	---	---
(c) Change between any other Title I federal fund sources ⁸	---	Approve	---
(d) Change from federal to non-federal fund source	Approve	---	---
(e) Change from non-federal to federal fund source	---	Recommend	Approve
(f) Change between Title III federal fund sources	---	Approve	---
(g) Any other federal fund source change	---	Recommend	Approve
(4) Schedule Change			
(a) All affected project elements are contained in the first four years of the TIP before and after the schedule change ⁹	Approve	---	---
(b) Any other schedule change	---	Approve	---

¹ CDTA has authority for transit fund sources and NYSDOT for highway fund sources.

² Changes requiring Planning Committee action are minor TIP amendments. The Planning Committee may defer approval to Policy Board, if desired.

³ Changes requiring Policy Board action are major TIP amendments.

⁴ A project element is a phase of the project (such as right-of-way acquisition), in one FFY funded by one fund source.

⁵ Proper documentation still needs to be provided to CDTC Staff. Also, for a scope change to, or removal of, one of the original projects, a scope change would be required.

⁶ Percentages are of total project five-year plus committed column federal cost. Use of toll credits increases the percentage.

⁷ A significant scope change is a significant change to the project limits, type or scope.

⁸ Change from a capital fund source to Metropolitan Planning Funds (PL) requires UPWP action by CDTC.

⁹ This includes funds programmed in the "Committed" column of the TIP that are not obligated by September 30 of the Committed fiscal year. Advancing construction funding to the current FFY without Planning Committee action requires all design phases to be complete.

PLANNING AND PROGRAMMING FOR HUMAN SERVICES TRANSPORTATION

Section 5310 Program: Enhanced Mobility of Seniors and Individuals with Disabilities

The 5310 program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in all areas. It provides funds for capital projects such as human service agency vehicles, related equipment and mobility management as well as non-capital or operating projects.

FTA apportions 60 percent of the funds to large urbanized areas, 20 percent to States for areas under 200,000 in population (small urbanized areas) and 20 percent to States for areas under 50,000 in population. CDTC forms a rating and ranking committee to select projects. NYSDOT is the designated recipient for large urbanized areas in New York State. NYSDOT assumes administrative responsibility for the overall program and selected projects, which must be listed in the MPO's Coordinated Plan and Transportation Improvement Program (TIP) and in NYSDOT's Statewide Transportation Improvement Program.

At least 55% of the available funding awards must be programmed for traditional Section 5310 capital projects. The remaining 45% of funds allocated to an area may support public transportation projects that exceed the requirements of the ADA, projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit, and alternatives to public transportation that assist seniors and individuals with disabilities. This includes projects that would have been eligible under the discontinued New Freedom program. Use of Section 5310 funds may be for the capital and/or operating expense of transportation services to seniors and/or individuals with disabilities. See http://www.fta.dot.gov/documents/C9070_1G_FINAL_circular.pdf for a list of eligible projects under the two categories: 1) Eligible Capital Expenses that Meet the 55% Requirement; 2) Other Eligible Capital and Operating Expenses pages III-1- to III-15.

Section 5310 Program Project Solicitation Process and Results

NYSDOT held solicitations in 2016 and again in 2017. In 2016, the funding allocations were \$633,407 for the Albany-Schenectady urbanized area and \$98,995 for the Saratoga Springs urbanized area. In 2017, the funding allocations were \$979,025 for Albany-Schenectady and \$226,593 for the Saratoga Springs urbanized area.

The 2016 solicitation for projects opened in early June 2016 and applications were due July 1, 2016. NYSDOT established an electronic grant application and project tracking process that all applicants were required to use. The 2017 solicitation opened at the end of June 2017 and applications were due August 21, 2017.

In both years, CDTC established a Rating and Ranking Committee to evaluate and select projects based on priorities and requirements set forth in the Coordinated Public Transit-Human Services Transportation Plan in effect at the time of the solicitation, which was the plan adopted by CDTC in 2015. CDTC's Rating and Ranking Committee included representatives from the: NYS Office for the Aging, NYS Department of Health (DOH) Disability and Health Program, NYSDOT Region 1 Planning and CDTC Staff. NYSDOT provided an electronic score sheet used by the evaluators. Each member of the CDTC Rating and Ranking Committee completed their reviews and submitted their scorecards. CDTC staff then averaged the reviewer's individual scores for each of the seven eligible projects.

2016 Solicitation Awards

In 2016, eight applications were submitted: seven within the Albany-Schenectady urbanized area and one within the Saratoga Springs urbanized area. Seven proposed projects were for human service agency vehicles and there was one mobility management project. One application in the Albany-Schenectady urbanized area was deemed ineligible. Eligible applications exceeded available federal funds for both urbanized areas within the CDTC planning area.

The results of the Rating and Ranking Committee evaluations, amount requested, and balance among proposals, were submitted to CDTC's Planning Committee for their funding consideration at the September 1, 2016 meeting. The Planning Committee voted to approve the seven projects, with some partial awards. These projects were placed on CDTC's TIP and the STIP.

Table 3 below includes details on each project. All are considered "traditional Section 5310 projects," therefore the 55% threshold for use of funds for these types of projects within each urbanized area has been met.

TABLE 3

2016 SECTION 5310 AWARDS SUMMARY

Albany - Schenectady Urbanized Area:

Applicant	Project Type	Project Description	Federal Share (80%)	Total Project Cost
Schenectady ARC	Vehicle(s)	Two vehicles	\$204,709	\$255,866
Eddy SeniorCare	Vehicle(s)	Four passenger vans	\$98,421	\$123,026
CDTA	Mobility Management	Two travel trainers	\$172,304	\$215,380
Independent Living Center of the Hudson Valley	Vehicle(s)	Two vans	\$67,160	\$83,950
Colonie Senior Services	Vehicle(s)	Two vans	\$49,210	\$61,513
Sunnyview Rehab Hospital	Vehicle(s)	One vehicle w/adaptive driving devices	\$26,809	\$33,511

Saratoga Springs Urbanized Area:

Saratoga ARC	Vehicle(s)	Two vehicles	\$98,995	\$123,744
--------------	------------	--------------	----------	-----------

Source: NYSDOT and CDTC

2017 Solicitation Awards

In 2017, fourteen applications were submitted: thirteen in the Albany-Schenectady urbanized area and one in the Saratoga Springs urbanized area. Thirteen proposed projects were for human service agency vehicles and there was one mobility management project. Eligible applications exceeded available federal funds in the Albany-Schenectady urbanized area.

Different for this solicitation and as requested by NYSDOT, the results of the Rating and Ranking Committee evaluations were submitted to NYSDOT in October 2017 for their funding consideration. In the summer of 2018, NYSDOT approved the following eleven projects for funding, and the Planning Committee voted to approve them to the TIP, with some partial awards. These projects were placed on CDTC's TIP and the STIP.

Table 4 below includes details on each project. All are considered "traditional Section 5310 projects," therefore the 55% threshold for use of funds for these types of projects within each urbanized area has been met.

TABLE 4

2017 SECTION 5310 AWARDS SUMMARY

Albany - Schenectady Urbanized Area:

Applicant	Project Type	Project Description	Federal Share (80%)	Total Project Cost
Bethlehem Senior Projects, Inc.	Vehicle(s)	One vehicle	\$49,654	\$62,068
Sunnyview Hospital and Rehabilitation Center Foundation, Inc.	Vehicle(s)	One vehicle w/adaptive driving devices	\$24,000	\$30,000
Northeast Health Foundation, on behalf of Senior Care Connections	Vehicle(s)	Two vehicles	\$99,307	124,134
Capital District Transportation Authority	Mobility Management	CDTA Travel Trainers	\$155,074	193,842
Senior Service Centers of the Albany Area, Inc	Vehicle(s)	One vehicle	\$46,379	57,974
Colonie Senior Service Centers, Inc	Vehicle(s)	Two vehicles	\$99,308	124,135
Visiting Nurse Association of Central New York	Vehicle(s)	One vehicle	\$33,882	42,353
Center For Disability Services, Inc.	Vehicle(s)	Three vehicles	\$219,526	274,408
Schenectady County Chapter, NYSARC, Inc.	Vehicle(s)	Three vehicles	\$155,944	194,930
NYSARC Inc, Warren Washington and Albany Counties Chapter	Vehicle(s)	Two vehicles	\$104,436	130,545

Saratoga Springs Urbanized Area:

NYSARC, Inc. Saratoga County Chapter	Vehicle(s)	Three vehicles	\$208,961	261,201
Capital District Transportation Authority	Mobility Management	CDTA Travel Trainers	\$17,231	21,539

Source: NYSDOT and CDTC

STAR - Special Transit Available by Request

The Americans with Disabilities Act (ADA) of 1990 prohibits discrimination and establishes equal opportunity and access for persons with disabilities. Transit service providers are required to comply with ADA regulations by making public transportation safe and accessible for all individuals. Among the established design principles that ensure access to transportation, ADA paratransit services are mandated for trips beginning and ending within three-quarters of a mile on each side of each regular fixed-route system during the hours the fixed route system operates.

As required by the ADA, CDTA's STAR (Special Transit Available by Request) operates within 3/4 of a mile of CDTA's fixed route system on the same days and times of the specific

bus route. To become eligible to use STAR, an individual must submit a completed pre-evaluation form and be certified eligible.

Paratransit is unique in that it provides a curb-to-curb service for those unable to reach a fixed-route transit stop or station. ADA paratransit fares cannot exceed more than twice the full fare for regular fixed-route services. Additionally, paratransit allows for the option for a Personal Care Attendant (PCA) to travel with an ADA paratransit eligible individual at no charge.

CDTA's STAR service began operation in the summer of 1982 and was designed for use by any Capital District resident unable to utilize CDTA's fixed route bus service because of a disability. STAR service was modified in January 1993 to comply with the guidelines set forth in the ADA. The changes affected eligibility, service area and fares. Additional changes to STAR service were instituted in January 1994 to comply with ADA milestones. "Next day" service became available in 1994 and CDTA also began to process requests for paratransit service up to 14 days in advance of the trip in 1994. In 1995, CDTA installed a state of the art computer system to better manage the STAR service requests and routing. During 1998, CDTA refined the eligibility requirements for STAR access in an attempt to curb clientele growth and to encourage use of the accessible fixed route system. In Spring 1999, CDTA installed the Windows-based version of the STAR scheduling software which allows for faster turnaround times, automated cancellation and verification of trips and is a faster system overall.

CDTA's STAR fleet consists of 31 wheelchair-accessible vehicles with the capacity to transport multiple customers using wheelchairs. A portion of STAR service is provided through contracts with local taxi companies, currently with Capitaland Taxi and A+ Meditrans. New Freedom funds were used to purchase accessible taxis, which are now beyond their useful life.

STAR ridership increased annually since 2001, with slight declines in 2017 and 2018. Almost 292,000 STAR trips were provided during the 2018 calendar year, making up almost 2 percent of CDTA's overall fixed route ridership. According to CDTA's 2012-2013 Annual Report the use of accessible taxis to help manage the increasing demand for STAR increased expenses by \$1 million in 2012. STAR trips as a percent of fixed route ridership has increased as well.

A total of \$3.751 Million was programmed over five years in the 2019-24 TIP under project T6B using Section 5307 and 5339 funds for the purchase of replacement and expansion STAR vehicles.

GREENHOUSE GAS EMISSIONS, ENERGY CONSUMPTION AND AIR QUALITY IMPACTS OF THE CDTC TIP

Status of Air Quality in the Capital District

The CDTC area was part of a non-attainment area for air quality for many years. In 2012, the Capital region's non-attainment status changed to attainment for the 2008 ozone standard.¹ This is good news for the Capital District, because it is based on data that has shown that air quality has been steadily improving, and the region now has air quality conditions that are acceptable even under the newer, stricter standards for ozone. However, court rulings have indicated that because the Capital District area is still non-attainment for the 1997 8-hour ozone standard, beginning February 16, 2019, a transportation conformity determination for the 1997 ozone NAAQS is required in 1997 ozone NAAQS nonattainment and maintenance areas, including the Albany-Schenectady-Troy, NY area. The conformity determination is documented in a separate section of the TIP. The conformity determination is documented in Appendix K of this document.

CDTC Actions to Improve Air Quality, Reduce Greenhouse Gas Emissions, and Reduce Energy Consumption

CDTC has, and is continuing to address energy and air quality concerns through the TIP and the New Visions Plan.

New Visions supports energy conservation, reduction in greenhouse gas emissions and air quality in the region by advocating sustainable development patterns and site design, urban reinvestment, and community-based land use planning, along with transit, bicycle, & pedestrian investments & strong participation in the Clean Cities program. The New Visions Plan has a strong emphasis on smart growth and fostering a safe, multi-modal and well managed system that works well for all users. The plan contributes to urban revitalization, attractive suburban and rural centers, and preservation of open space, while working to reduce vehicle miles of travel and related greenhouse gas emissions; and encouraging use of alternative fuels and advanced technology vehicles. Related beneficial environmental impacts include avoidance of disruption of natural and cultural resources and protection of environmental justice populations. Protecting the environment and creating a more

¹ On June 15, 2004, the United States Environmental Protection Agency (EPA) designated the Albany-Schenectady-Troy, NY area consisting of Saratoga, Schenectady, Albany, Rensselaer, Montgomery, Greene, and Schoharie Counties nonattainment for the 1997 8-hour ozone standard (0.08 parts per million). This designation was based on the results of ambient air monitoring data collected by the New York State Department of Environmental Conservation from calendar years 2001-2003. These data established an 8-hour ozone "design value" of 0.087 ppm for the area. The current design value for the area, based on 2016-2018 data, is 0.066 ppm.

On July 20, 2012, the USEPA designated the Albany-Schenectady-Troy, NY attainment for the 2008 ozone standard (0.075 ppm). The area was designated attainment for the 2015 ozone standard (0.070ppm) on January 16, 2018.

sustainable transportation system is an important New Visions strategy, particularly in light of global climate change.

The U.S. Department of Energy's (DOE) Clean Cities program is a voluntary, locally based government/industry partnership. Capital District Clean Communities (CDCC) was formed primarily to take advantage of the environmental, public health, energy, and economic benefits that the Clean Cities program offers. CDCC's goal is to advance the energy, economic, & environmental security of the U.S. by supporting local actions to reduce petroleum use in transportation. Alternate fuels and advanced technology vehicles can benefit the Capital Region by creating commercial opportunities and by improving the environment.

The CDTC assumed the coordinator role for the CDCC in 2001. CDTC is the only MPO within NYS that supports the coordinator position. CDTC agreed to be the "home" of the Capital District Clean Communities program because the goals of the program fit well with the planning and investment principles that CDTC adopted as part of New Visions. The Capital Region provides substantial opportunities for the expansion of the alternative fuel marketplace, particularly with the large state vehicle fleet that operates in the area. Stakeholders in CDCC recognize the need to provide greater fuel choices in the Capital Region and to reduce its dependence on imported oil.

The CDCC advances the goals of the Clean Cities program through coalition building and networking. Currently, ethanol, bio-diesel, CNG, propane, hydrogen, hybrid and all-electric technologies are all part of the alternative fuel and advanced vehicle technology mix in the Capital Region and are the alternate fuels of choice in the Capital Region. In recent years, the number of electric vehicle charging stations has grown to a network of over 100 publicly accessible charging stations, including multiple Tesla fast-charging stations. The CDCC continues to work with large fleets and even transit operators to provide information on transitioning to alternative fuels. In 2018 the CDCC helped displace more than 4.8 million gallons of petroleum and reduce greenhouse gas emissions by over 39,000 tons through alternative fuels, advanced vehicle technologies, idle reduction policies and programs, fuel economy improvements and VMT reduction programs like ridesharing, car sharing and bike sharing.

Travel demand management (TDM) refers to efforts to reduce auto travel and congestion by improving transit access, bicycle and pedestrian access, providing opportunities for carsharing, bikesharing, carpooling, vanpooling, and telecommuting, and other strategies. TDM reduces congestion, reduces the costs of driving, and it is an important way to reduce greenhouse gas emissions. CDTC strongly supports TDM by investing in transit, bicycle and pedestrian facilities, carpooling and land use planning. CDTC projects and investments that support TDM include:

1. Federal funding for transit service in the Capital District is a major part of the CDTC TIP. New Visions incorporates CDTA's Transit Development Plan, which will improve and grow a variety of transit services for the Capital District, increasing

- mobility and supporting economic development and smart regional growth. One example is CDTC's investment in the BusPlus system on the Route 5 corridor.
2. New Visions encourages development that incorporates bicycle and pedestrian accommodations into highway construction as well as city, village, and town plans and provides for recreational opportunities through creation of bike/hike trails.
 3. CDTC manages the iPool2, a web-based ridesharing program, in partnership with 511NY.
 4. CDTC maintains the Capital Coexist website, a localized education campaign geared towards encouraging people to bike and educating cyclists and motorists on safely coexisting when using the region's roadways.
 5. Capital CarShare: CDTC supported the launch of car-sharing in Albany, with eight cars currently available. Future expansion could include Troy, Schenectady and Saratoga Springs. Providing the opportunity to rent a car on an as-needed basis makes not owning a car, or only owning one car in a household, more feasible.
 6. CDTC supported the coordination and launch of the CDPHP Cycle! Bikeshare program, with dozens of hubs in Albany, Schenectady, Troy, and Saratoga Springs.
 7. Investments in Park and Ride lots have been supported by CDTC and CDTA and NYSDOT.
 8. Guaranteed Ride Home: This program provides a taxi trip home for a bus rider or carpooler when they need to.

The 2019-24 TIP continues to support a number of operations and ITS (Intelligent Transportation Systems) projects which provide significant energy savings. TIP investments in the Capital Region Transportation Management Center (RG37A, RG37B, RG37C), HELP vehicles (RG37) and traffic signal improvements provide significant support to operations and ITS in the CDTC region. Operations strategies such as incident management, signal coordination, transit signal priority result in reductions in congestion and energy consumption. CDTC is exploring further ways in which operations can provide congestion benefits through the Regional Operations and Safety Advisory Committee.

The Capital Region Transportation Management Center is a traffic monitoring and response center operated by the New York State Department of Transportation in partnership with the New York State Police. The TMC is located at the New York State Police Troop G headquarters in Latham, NY and has been in continuous operation since December, 1998. Partnering with the State Police has enhanced situation awareness of regional traffic issues and decreased incident response time. The TMC is a focal point for regional traffic incident management, utilizing traffic cameras and road sensors, and it is the originator of NYSDOT regional 511 video and message feeds. The TMC enables State Troopers, DOT HELP Trucks, and other emergency personnel to respond swiftly to crash scenes and other highway problems. When it is appropriate, DOT maintenance crews are dispatched to help restore traffic flow quickly. Since the establishment of the TMC, traffic flow has improved for all Capital Region highway users. The TMC also coordinates with the Thruway Operations Center (TSOC), CDTA, and plans for traffic management during construction and special events.

The TMC is an essential tool for providing incident management services. Reliability of and predictability of travel are important goals supported by the TMC. Quick clearance of incidents, management of traffic during construction, coordination between NYSDOT and emergency service providers are critical to minimizing delays. The TMC is an important component of the Governor's "Drivers First" initiative. Reliability and predictability of travel time on expressways benefits all users including passenger vehicles, truck freight/commodity movements and public transit such as the CDTA's Northway Express Bus Service. Planning for traffic management during construction as part of design benefits drivers.

Improving intersection operations is critically important to improving traffic flow for autos, transit vehicles and freight, and high quality access for pedestrians and cyclists. CDTC supports improvements to traffic signals that improve travel efficiency and traffic flow while reducing delay. CDTC also supports the construction of roundabouts at intersections where feasible. Examples of CDTC sponsored traffic signal and intersection improvements on the TIP are listed below.

1. Carman Road Safety Improvements
2. US NY 9W/Feura Bush Road/Glenmont Road (NYS NY 910A): Roundabout
3. City of Albany PSAP: Pedestrian safety improvements at 20 uncontrolled crosswalks & 12 signalized intersections
4. Albany Shaker Road (CR 151), Wolf Road to Everett Road: Safety Improvements: Speed limit reduction, additional pedestrian improvements at select intersections & a new traffic signal at Shaker Elementary
5. NY 4 from the Troy City Line to NY 43: Highway, Intersection, ADA, Bike/Ped and Streetscape Improvements
6. Intersection of US Route 4 and I-90: Intersection Safety Improvements
7. City of Rensselaer PSAP Pedestrian safety improvements at 6 signalized intersections
8. Sitterly Road at Woodin Road and Crossings Boulevard
9. NY 146/NY 146A Intersection: Safety Improvements
10. Clifton Park PSAP: Pedestrian safety improvements at: 3 uncontrolled crosswalks & 5 signalized intersections
11. Intersection of NY 146 and Clifton Country Road: Intersection Safety Improvements
12. Rosa Road, Wendell Avenue and Nott Street Intersection: 5-leg signal, ped accommodations, refuge islands, high visibility crosswalks, improved striping.
13. Nott Street/Balltown Road Intersection: Safety Improvements: Redesign intersection with new turn lane. Includes mill and fill of Nott Street from Balltown Road to Clifton Park Road
14. River Road/Rosendale Road Intersection: Roundabout
15. City of Schenectady PSAP: Pedestrian safety improvements at 10 signalized intersections

Transit provides travel options, increases mobility and can support economic development. In addition, transit investments result in significant energy savings by providing an alternative to automobile use. Three percent of commuting trips in the Capital District are

made by transit. Not only does this reduce gasoline usage by reducing the number of autos, but the added congestion that would occur if all transit riders were to switch to autos would result in significant increased energy consumption. The CDTC TIP continues to make a major investment in transit of \$127 million over five years.

Bicycle and pedestrian investments encourage more biking and walking and provide direct energy benefits by reducing auto usage. CDTC has made a strong commitment to improving bicycle and pedestrian facilities. This means incorporating ADA compliant sidewalks and pedestrian crossings, and bicycle lanes in highway construction projects; encouraging site design by developers that provides high quality pedestrian access; developing bike/hike trails; encouraging the incorporation of bicycle and pedestrian accommodations into city, village and town plans. Studies funded by CDTC to explore the feasibility of car and bike sharing, and additional monies committed to help implement local car share and bike share programs, further reinforce the commitment made to improving bicycle and pedestrian facilities.

CIVIL RIGHTS

Background

Title VI of the Civil Rights Act of 1964 prohibits discrimination based upon race, color, and national origin. Specifically, 42 USC 2000d states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” The use of the word “person” is important as the protections afforded under Title VI apply to anyone, regardless of whether the individual is lawfully present in the United States or a citizen of a State within the United States.

Regarding matters of nondiscrimination on the basis of disability, CDTC falls under two federal laws, the Americans with Disabilities Act (ADA) of 1990, and Section 504 of the Rehabilitation Act of 1973. Title II of the ADA requires that government entities give people with disabilities equal opportunity to benefit from all of the programs, services and activities that may be offered. Section 504 of the Rehabilitation Act states that “no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under” any program or activity that receives federal financial assistance.

Two Presidential Executive Orders place further emphasis upon the Title VI protections of race and national origin. Executive Order #12898 (Environmental Justice) directs federal agencies to develop strategies to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. Executive Order # 13166 (Limited-English-Proficiency) directs federal agencies to evaluate services provided and implement a system that ensures that Limited English Proficiency persons are able to meaningfully access the services provided consistent with and without unduly burdening the fundamental mission of each federal agency. Additionally, each federal agency shall ensure that recipients of federal financial assistance provide meaningful access to their Limited-English-Proficiency applicants and beneficiaries.

Planning and Programming Treatment

The Capital District Transportation Committee (CDTC) is committed to ensuring compliance with Civil Rights regulations. Within the context of the Transportation Improvement Program development, CDTC looks to the following to assist with full Title VI compliance:

1. All projects must comply with applicable Americans with Disabilities Act construction standards.
2. CDTC's TIP is developed with a strong relationship to local planning activities. The merit evaluation process utilized for the 2019-24 TIP includes a measure to increase scores of projects that implement a recommendation from a Linkage

Study, town center plan, or similar plan and that align the transportation system with existing or desired land uses.

3. The merit evaluation process includes a positive or negative score based on the project's primary purpose and the GIS-based identification of location in relation to minority and/or low-income areas as described in CDTC's 2014 Environmental Justice Analysis.
4. The merit evaluation process includes a positive or negative score based on the project's effect on accessibility.
5. The merit evaluation processes also considers the project's expected land use compatibility; community or economic development impacts; environmental issues; and business or housing dislocations.

As a result, the needs of people with disabilities, and minority and low income areas are reasonably well represented in the outcome of the TIP process. CDTC's Environmental Justice/Title VI Analysis Document will be updated in 2019.

FHWA AND FTA TRANSPORTATION PERFORMANCE MANAGEMENT

Background

Pursuant to MAP-21 (and carried through into the FAST Act), MPOs must employ a transportation performance management approach in carrying out their federally-required planning and programming activities. Chapter 23 part 150(b) of the *United States Code* [23USC §150(b)] includes the following seven national performance goals for the Federal-Aid Highway Program:

- Safety – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Capital Assets Condition – To maintain the highway infrastructure and transit capital asset systems in a state of good repair.
- Congestion Reduction – To achieve a significant reduction in congestion on the National Highway System.
- System Reliability – To improve the efficiency of the surface transportation system.
- Freight Movement and Economic Vitality – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- 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 practice

On the public transportation side, transportation performance management shall be utilized to advance the general policy and purposes of the public transportation program as included in 49USC §5301(a) and (b).

The CDTC TIP was developed and is managed in cooperation with the New York State Department of Transportation (NYSDOT) and the Capital District Transportation Authority (CDTA). It reflects the investment priorities established in the “Agreement Defining Roles and Responsibilities for Metropolitan Transportation Planning in the Capital District” of December 3, 2009, which incorporates comments and input from affected agencies and organizations and the public.

TIPs “shall include, to the maximum extent practicable, a description of the anticipated effects of the transportation improvement program toward achieving the performance targets established in the metropolitan transportation plan, linking investment priorities to those

performance targets” [23USC §134(j)(2)(D)]. TIPs and metropolitan transportation plans (MTPs) adopted or amended after the following dates must include performance targets for the associated measures:

- May 27, 2018 – Highway Safety Improvement Program (HSIP) and Highway Safety
- October 1, 2018 – Transit Asset Management
- May 20, 2019 – Pavement and Bridge Condition
- May 20, 2019 – System Performance/Freight/Congestion Mitigation & Air Quality Improvement Program

MPOs that do not adopt or amend their MTP prior to these dates are still required to support statewide performance targets or establish their own for the measures discussed above, and include “a description of the anticipated effects of the transportation improvement program toward achieving” said targets. This portion of the 2019-24 TIP meets these requirements of 23USC §134(j)(2)(D).

HSIP and Highway Safety

Performance Targets

On March 15, 2016, the FHWA published the final rule for the HSIP and Safety Performance Management (Safety PM) Measures in the Federal Register with an effective date of April 14, 2016.

The 2017 New York Strategic Highway Safety Plan (SHSP) is intended to reduce “the number of fatalities and serious injuries resulting from motor vehicle crashes on public roads in New York State.” The SHSP guides NYSDOT, the MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out across New York State. The NYSDOT Highway Safety Improvement Program (HSIP) annual report documents the statewide performance targets.

CDTC agreed to support the NYSDOT statewide 2019 targets for the following Safety PM measures based on five-year rolling averages per Title 23 Part 490.207 of the Code of Federal Regulations on September 6, 2018 via Resolution #18-3:

Performance Measure	NY Statewide Target 2019
Number of Fatalities	1,072
Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)	0.86
Number of Serious Injuries	10,987
Rate of Serious Injuries per 100 million VMT	8.62
Number of Nonmotorized Fatalities and Serious Injuries	2,726

Anticipated Effects

Safety is a critical component of CDTC's mission, and the projects on the TIP are consistent with the need to address safety. Safety is also a primary consideration in the selection of projects to be included in the CDTC TIP. CDTC TIP candidate project evaluation consists of a calculation of the benefit/cost ratio (a quantitative score with a maximum of 50) and a merit evaluation scoresheet (a qualitative score with maximum of 50) for a total maximum score of 100 for each project. The higher the total candidate project score, the higher the probability that the project will be awarded TIP funding.

For the calculation of each project's quantitative score (B/C ratio), CDTC uses our travel demand model. The safety benefits are calculated by the model and are significant components of the total benefit calculation for all projects. If a proposed project will improve the safety (reduce crashes), the safety benefits increase. If these benefits increase, the project's B/C ratio increases, and the probability that the project will be awarded TIP funding increases.

The safety benefits for the project benefit/cost ratio are measured in the dollar value of the projected reduction in crashes per year calculated by using the steps described in Appendix H. Established counter measures and crash reduction factors are used to estimate the safety benefit of each project. The methodology used is consistent with the methodology used by NYSDOT as contained in the NYSDOT document Highway Safety Improvement Program Procedures and Techniques and specifically in form TE 164a, Safety Benefits Evaluation Form, Method 1.

In addition to calculating a project benefit/cost ratio, CDTC completes a Merit Evaluation Scoresheet for each candidate project, which has a total project score ranging from 70 points to -29 points. The scoresheet consists of 12 categories, each with an assigned value ranging from a maximum of 10 to 2 points and a minimum of 0 to -2 points. One of the 12 categories is "Safety & Security" and one of its subcategories is "Additional Safety Benefit Beyond Crash History." The maximum score for this subcategory is 3 points and the minimum score is -1. The higher the "Additional Safety Benefit Beyond Crash History" score, the higher the probability that the project will be awarded TIP funding. For additional information regarding the merit evaluation scoresheet, see page 9 and Appendix H.

Because of the above candidate project evaluation process, the CDTC TIP includes projects programmed with HSIP funds and other fund sources that are expected to materially benefit the safety of the traveling public on roadways throughout the metropolitan planning area.

The CDTC TIP has been reviewed and the anticipated effect of the overall program is that it will contribute to progress made in addressing the safety performance targets established by the State.

Transit Asset Management

Performance Targets

On July 26, 2016, the FTA published the final Transit Asset Management rule. This rule applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term “state of good repair,” requires that public transportation providers develop and implement transit asset management (TAM) plans, and establishes state of good repair standards and performance measures for four asset categories: rolling stock, equipment, transit infrastructure, and facilities. The rule became effective on October 1, 2016.

The CDTA set the following transit asset management targets on April 13, 2018:

Rolling Stock

The performance measure for rolling stock is the percentage of revenue vehicles within an asset class that have either met or exceeded their EUL.

Asset	ULB Category	EUL (Years)	ULB (Years)
Bus - Small Bus (20-25 foot)	MB	5	10
Bus - Large Bus (40 foot)	BU	12	14
Bus - Hybrid (40 foot)	BU	12	14
Bus - Large Bus (30 foot)	BU	10	14
Bus - BRT	BU	12	14
Bus - Medium Bus (26-29 foot)	CU	7	10
Bus - Hybrid (30 foot)	BU	10	14
Bus - Articulated (60 foot)	AB	12	14
Bus - Commuter Service (40-45 foot)	BR	12	14
Trolley	TB	10	13

Equipment

The performance measure for non-revenue, support-services, and maintenance vehicles is the percentage of those vehicles that have either met or exceeded their EUL.

Asset	ULB Category	EUL (Years)	ULB (Years)
Car/Van/SUV	AO	5	8
Truck - (1) Light Duty	AO	5	8
Truck - (2) Medium Duty	AO	7	8
Truck - (3) Heavy Duty	AO	10	8
Truck - (4) Heavy Heavy Duty	AO	12	8

Facilities

The facilities are rated to FTA's Transit Economic Requirements Model (TERM) – Lite scale of 1 (poor) to 5 (excellent). The performance target represents the percentage of assets related below a 3.

CDTA owns six (6) facilities, including:

1. Albany Transportation Building (110 Watervliet Ave)
2. Albany Planning & Marketing building (85 Watervliet Ave)
3. Troy Transportation Building
4. Schenectady Transportation Building
5. Rensselaer Rail Station
6. Saratoga Rail Station

Note: "Infrastructure" is not included as a major asset class because CDTA does not own any rail fixed-guideway track, signals, or other systems.

Transit Asset Management Targets

Performance Measure	What it Evaluates	Target (EUL)
Rolling Stock: Percentage of revenue vehicles within an asset class that have either met or exceeded their EUL		
Bus - Small Bus (20-25 foot)	State of Good Repair	10%
Bus - Large Bus (40 foot)	State of Good Repair	10%
Bus - Hybrid (40 foot)	State of Good Repair	10%
Bus - Large Bus (30 foot)	State of Good Repair	10%
Bus - BRT	State of Good Repair	10%
Bus - Medium Bus (26-29 foot)	State of Good Repair	10%
Bus - Hybrid (30 foot)	State of Good Repair	10%
Bus - Articulated (60 foot)	State of Good Repair	10%
Bus - Commuter Service (40-45 foot)	State of Good Repair	10%
Trolley	State of Good Repair	10%
Equipment: Percentage of non-revenue vehicles that have either met or exceeded their EUL		
Truck - (3) Heavy Duty	State of Good Repair	20%
Car/Van/SUV	State of Good Repair	20%
Truck - (1) Light Duty	State of Good Repair	20%
Truck - (2) Medium Duty	State of Good Repair	20%
Truck - (4) Heavy Heavy Duty	State of Good Repair	20%
Facilities: Percent of facilities with a condition rating below 3.0 on the TERM Lite (1 - 5) scale		
Administration & Maintenance	Condition	15%

CDTC agreed to support these transit asset targets on June 7, 2018 via Resolution #18-2. With this action, CDTC agrees to plan and program projects in the TIP that will, once implemented, make progress toward achieving the transit asset targets.

Anticipated Effects

The CDTC TIP was developed and is managed in cooperation with CDTA. The TIP includes specific investment priorities that support the MPO’s goals, including transit asset management, using a project selection process that is anticipated to address transit state of good repair in the MPO planning area. The MPO’s goal of addressing transit asset condition is linked to the investment plan of CDTA, and the process used to prioritize the projects within the TIP is consistent with federal requirements.

The following projects are funded in this TIP and address transit state of good repair for equipment, vehicles, infrastructure, or facilities in the MPO area:

NOTE: Though much of the funding for these projects is received from FTA, CDTC continues to program a significant portion of these projects with National Highway Performance Program (NHPP) and Surface Transportation Program – Flexible (STP-Flex) funding.

TIP Number	Project Name	Project Total Cost (\$M)
T6A	Enhanced Mobility of Seniors and Individuals with Disabilities Program	2.700
T6B	STAR Buses Replacement and Expansion	3.751
T9	Facility Improvements	0.450
T11	Passenger Facility Improvements at Various Locations	0.937
T14B	Transit Operations Support for Saratoga Service: Preventive Maintenance	7.312
T16	Transit Support Vehicles	1.040
T17	Transit Bus Replacement/Expansion	13.861
T57	Preventive Maintenance	73.653
T72	Safety and Security	1.000
T77	Capital Cost of Contracting for Commuter Service in the Capital District to points North, West and South	3.000
T107	Hudson River Corridor BRT: Phase 1	3.688
T108	TDM Multimodal Implementation	0.601
T109	Washington/Western BRT Phase 1	0.500

Transit is a critical component of CDTC's mission, and the projects on the TIP are consistent with the need to address transit. Each project's transit benefits are also an important consideration in the selection of projects to be included in the CDTC TIP. CDTC TIP candidate project evaluation consists of a calculation of the benefit/cost ratio (a quantitative score with a maximum of 50) and a merit evaluation scoresheet (a qualitative score with maximum of 50) for a total maximum score of 100 for each project. The higher the total candidate project score, the higher the probability that the project will be awarded TIP funding.

For the calculation of each project's quantitative score (B/C ratio), CDTC uses our travel demand model. For each project's qualitative score, CDTC completes a Merit Evaluation Scoresheet for each candidate project, which has a total project score ranging from 70 points to -29 points. The scoresheet consists of 12 categories, each with an assigned value ranging from a maximum of 10 to 2 points and a minimum of 0 to -2 points. The project's final merit score is scaled to 50 points.

While transit is not considered in the calculation of the B/C ratio for each candidate project, a transit merit score is calculated for each candidate project. One of the 12 categories in our

Merit Evaluation Scoresheet is “Multi-Modalism” and the subcategory with the highest possible score is “Transit.” The maximum score for this subcategory is 5 points and the minimum score is -2. The higher the “Transit” score, the higher the probability that the project will be awarded TIP funding. For additional information regarding our merit evaluation scoresheet, see page 9 and Appendix H.

CDTC anticipates that the TIP, once implemented, will contribute to progress toward achieving the established transit asset management targets. Improving the state of good repair (SGR) of transit capital assets is an overarching goal of the MPO.

Pavement and Bridge Condition

Performance Targets

On January 18, 2017, the FHWA published the Pavement and Bridge Condition Performance Measures Final Rule in the Federal Register. This second FHWA performance measure rule, which has an effective date of February 17, 2017, established six performance measures to assess pavement conditions and bridge conditions for the National Highway Performance Program (NHPP).

The pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate National Highway System (NHS) that are in good or poor condition. FHWA established five pavement condition metrics¹: International Roughness Index (IRI); cracking percent; rutting; faulting; and Present Serviceability Rating (PSR). FHWA set a threshold for each metric to establish good, fair, or poor condition. A pavement section is classified as being in good condition if three or more metric ratings are good, and in poor condition if two or more metric ratings are poor. Pavement sections that are not good or poor are classified as fair.

The bridge condition measures represent the percentage of bridges, by deck area, on the NHS that are in good condition or poor condition². The condition of each bridge is evaluated by assessing four bridge components: deck, superstructure, substructure, and culverts. The Final Rule created a metric rating threshold for each component to establish good, fair, or poor condition. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

¹ Per FHWA, “To ensure consistent definitions, a distinction between ‘performance measure’ and ‘performance Metric’ was made in 23 CFR 490.101. A ‘metric’ is defined as a quantifiable indicator of performance or condition whereas a ‘measure’ is defined as an expression based on a metric that is used to establish targets and to assess progress toward meeting the established targets.” (*FHWA Computation Procedure for the Pavement Condition Measures – FHWA-HIF-18-022*, FHWA Office of Infrastructure and Office of Policy & Governmental Affairs, April 2018)

² The sum of total deck area of good or poor NHS bridges is divided by the total deck area of all bridges carrying the NHS to determine the percent of bridges in good or in poor condition. Deck area is calculated by multiplying the structure length by either the deck width or approach roadway width.

CDTC agreed to support the NYSDOT statewide targets for the following NHS pavement and bridge condition performance measures on September 6, 2018 via Resolution #18-4:

Performance Measure	NY Statewide Target 2-Year (2018-2019)	NY Statewide Target 4-Year (2018-2021)
Percentage of Interstate pavements in good condition	46.4%	47.3%
Percentage of Interstate pavements in poor condition	3.1%	4.0%
Percentage of non-Interstate NHS pavements in good condition	14.6%	14.7%
Percentage of non-Interstate NHS pavements in poor condition	12.0%	14.3%
Percentage of NHS bridges by deck area in good condition	23.0%	24.0%
Percentage of NHS bridges by deck area in poor condition	11.6%	11.7%

The two-year and four-year targets represent pavement and bridge condition at the end of calendar years 2019 and 2021.

Anticipated Effects

Maintaining (and, where possible, improving) the condition of NHS pavements and bridges is a critical component of CDTC’s mission, and the projects on the TIP are consistent with the need to address the condition of these infrastructure assets. NHS highway and bridge conditions are primary considerations in the selection of projects to be included in the TIP.

CDTC TIP candidate project evaluation consists of a calculation of the benefit/cost ratio (a quantitative score with a maximum of 50) and a merit evaluation scoresheet (a qualitative score with maximum of 50) for a total maximum score of 100 for each project. The higher the total candidate project score, the higher the probability that the project will be awarded TIP funding.

For the calculation of each project’s quantitative score (B/C ratio), CDTC uses our travel demand model. The facility life benefits and the user cost benefits are both calculated by the model and both are significant components of the total benefit calculation for both highway and bridge projects. If a proposed project will improve the highway or bridge condition, both the facility life and the user cost benefits will increase. If these benefits increase, the project’s B/C ratio increases, and the probability that the project will be awarded TIP funding increases.

In addition to calculating a project benefit/cost ratio, CDTC completes a Merit Evaluation Scoresheet for each candidate project, which has a total project score ranging from 70 points to -29 points. The scoresheet consists of 12 categories, each with an assigned value ranging from a maximum of 10 to 2 points and a minimum of 0 to -2 points. One of the most

important of the 12 categories is “Appropriate Infrastructure” and one of its subcategories is “Preservation/Renewal of Existing.” The maximum score for this subcategory is 3 points and the minimum score is -1. The higher the “Preservation/Renewal of Existing” score, the higher the probability that the project will be awarded TIP funding. For additional information regarding our merit evaluation scoresheet, see page 9 and Appendix.

This TIP includes projects programmed with NHPP funds and other fund sources. Of the 47 new projects in this TIP, 34 are highway and bridge projects whose primary objective is to improve the condition of those facilities. For these 34 projects, 86% of the total programmed funding is spent on highway and bridges on the National Highway System (NHS). See the project listings for more information about these projects.

The CDTC TIP has been reviewed and the anticipated effect of the overall program is that it will contribute to the NHS pavement and bridge condition performance targets established by the State.

System Performance, Freight, and Congestion Mitigation and Air Quality

Performance Targets

On January 18, 2017, the FHWA published the system performance, freight, and congestion mitigation and air quality (CMAQ) Performance Measures Final Rule in the Federal Register. This third and final FHWA performance measure rule, which has an effective date of February 17, 2017, established six performance measures to assess the performance of the NHS, freight movement on the Interstate System, and traffic congestion and on-road mobile source emissions for the CMAQ Program.

There are two NHS performance measures that represent the reliability of travel times for all vehicles on the Interstate and non-Interstate NHS. FHWA established the Level of Travel Time Reliability (LOTTR) metric to calculate reliability on both the Interstate and non-Interstate NHS. LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) during four time periods from the hours of 6 AM to 8 PM each day (AM peak, midday, and PM peak on Mondays through Fridays and weekends). The LOTTR ratio is calculated for each segment of applicable roadway. A segment is reliable if its LOTTR is less than 1.5 during all time periods. If one or more time periods has a LOTTR of 1.5 or above, that segment is unreliable. The measures are expressed as the percentage of person-miles traveled on the Interstate and non-Interstate NHS that are reliable.

The single freight movement performance measure represents the reliability of travel times for trucks on the Interstate system. FHWA established the Truck Travel Time Reliability (TTTR) Index, which is defined as the ratio of longer truck travel times (95th percentile) to a normal truck travel time (50th percentile). The TTTR Index is calculated for each segment of the Interstate system over five time periods from all hours of each day (AM peak, midday, and PM peak on Mondays through Fridays, overnights for all days, and weekends). The highest TTTR Index value among the five time periods is multiplied by the length of the

segment, and the sum of all length-weighted segments is then divided by the total length of Interstate to generate the TTTR Index.

CDTC agreed to support the NYSDOT statewide targets for the following system performance measures on December 6, 2018 via Resolution #18-6 and for the following freight performance measures on September 6, 2018 via Resolution #18-4:

Performance Measure	NY Statewide Target 2-Year (2018-2019)	NY Statewide Target 4-Year (2018-2021)
Percentage of person-miles on the Interstate system that are reliable (Interstate LOTTR)	73.1%	73.0%
Percentage of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	N/A	63.4%
Index of reliability of travel times for trucks on the Interstate system (TTTR Index)	2.00	2.11

There are three traffic congestion and on-road mobile source emissions performance measures that represent peak hour excessive delay per capita (PHED), non-single occupancy vehicle (SOV) travel, and total on-road mobile source emissions reductions.

The on-road mobile source emissions reductions performance measure represents the total on-road mobile source emissions reductions of applicable criteria pollutants and their precursors resulting from all CMAQ-funded projects. Total reduction is calculated by summing the cumulative two-year and four-year emission reductions of applicable pollutants resulting from CMAQ projects and is expressed in kilograms per day.

CDTC meets all current air quality standards and is not subject to establishing targets for these performance measures. Even though CDTC is not subject to this requirement, this TIP does contain CMAQ-funded projects and CDTC elected to support the NYSDOT statewide targets for the following total on-road mobile source emissions performance measures on September 6, 2018 via Resolution #18-5:

Performance Measure	NY Statewide Target 2-Year (2018-2019)	NY Statewide Target 4-Year (2018-2021)
Total on-road emission reductions, PM _{2.5}	3,920 kg	7,482 kg
Total on-road emission reductions, VOC	22,979 kg	42,765 kg
Total on-road emission reductions, NO _x	58,591 kg	107,713 kg
Total on-road emission reductions, CO	437,781 kg	839,633 kg

Anticipated Effects

Providing for the reliable movement of people and goods and cleaner air are critical components of CDTC's mission. The projects on the TIP are consistent with the need to address the reliability of travel times for vehicles, including trucks, and reduce emissions of criteria pollutants and their precursors. These are primary considerations in the selection of projects to be included in the TIP.

The CDTC TIP candidate project evaluation consists of a calculation of the benefit/cost ratio (a quantitative score with a maximum of 50) and a merit evaluation scoresheet (a qualitative score with maximum of 50) for a total maximum score of 100 for each project. The higher the total candidate project score, the higher the probability that the project will be awarded TIP funding.

For the calculation of each project's quantitative score (B/C ratio), CDTC uses our travel demand model. For each project's qualitative score, CDTC completes a Merit Evaluation Scoresheet for each candidate project, which has a total project score ranging from 70 points to -29 points. The scoresheet consists of 12 categories, each with an assigned value ranging from a maximum of 10 to 2 points and a minimum of 0 to -2 points. The project's final merit score is scaled to 50 points.

While travel time reliability, freight, and emissions reduction are not considered in our calculation of the B/C ratio for each candidate project, the following merit scores which impact each of these measures are calculated for each candidate project:

One of the 12 categories in our Merit Evaluation Scoresheet is "Operations & Technology" which consists of 2 relevant subcategories, "Traffic Operations & Reliability Improvements" and "Use of Beneficial Advanced Technologies." The maximum score for this category is 5 points and the minimum score is -2. The higher the "Traffic Operations & Reliability Improvements" and "Use of Beneficial Advanced Technologies" scores, the higher the probability that the project will be awarded TIP funding. For additional information regarding our merit evaluation scoresheet, see page 9 and Appendix H.

One of the 12 categories in our Merit Evaluation Scoresheet is "Freight." The maximum score for this subcategory is 5 points and the minimum score is -2. The higher the "Freight" score, the higher the probability that the project will be awarded TIP funding. For additional information regarding our merit evaluation scoresheet, see page 9 and Appendix H.

One of the 12 categories in our Merit Evaluation Scoresheet is "Health & Environment" which has 2 relevant subcategories, "Greenhouse Gas Emissions Reduction" and "Alternative Fuels Support." The maximum score for both of these subcategories is 2 points and the minimum score is -1. The higher the "Greenhouse Gas Emissions Reduction" and "Alternative Fuels Support" scores, the higher the probability that the project will be awarded TIP funding. For additional information regarding our merit evaluation scoresheet, see page 9 and Appendix H.

The TIP includes projects programmed with funds from various funding programs that have benefits to reliability in travel times for people and freight, and projects programmed with and without CMAQ funds that will reduce emissions of harmful pollutants.

Examples of projects which will improve system performance include pavement maintenance, resurfacing and rehabilitation on several interstate highways, corridor rehabilitations on several principal arterials, traffic signal improvements on State highways, interstate highway HELP vehicles, regional transportation management center, and interstate overhead sign replacement.

Examples of projects which will improve freight reliability and operations include several projects on our interstates which are all included on our freight priority network, and a project to improve the traffic operations at an intersection which is the main entrance and exit to a regional rail/highway intermodal facility.

Examples of projects which will improve on-road mobile source emissions include several CMAQ-funded and STP-funded projects which will construct new sidewalks, new roundabouts, multi-use paths, and a cycle track.

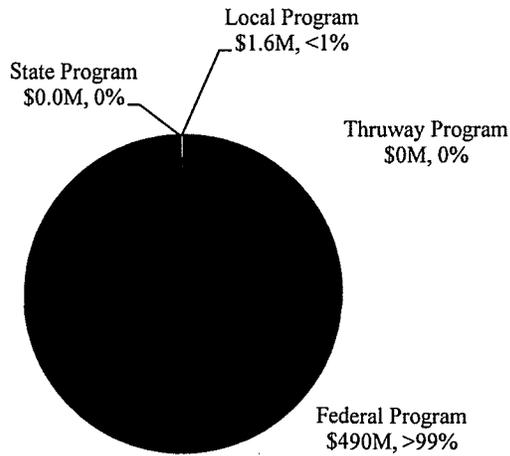
The CDTC TIP has been reviewed and the anticipated effect of the overall program is that it will contribute to the system performance, freight, and emissions reductions performance targets established by the State.

FINAL NOTE: In addition to the above Merit Evaluation Scoresheet categories and subcategories, and as the result of CDTC's emphasis on the achievement of performance measures and targets, a new category, "Performance", was recently added to the scoresheet. TIP candidate projects which will have a positive effect on an applicable performance target can receive up to 3 points and projects which have a negative effect can receive -1 point.

**SECTION II -
FINANCIAL SUMMARY TABLES**

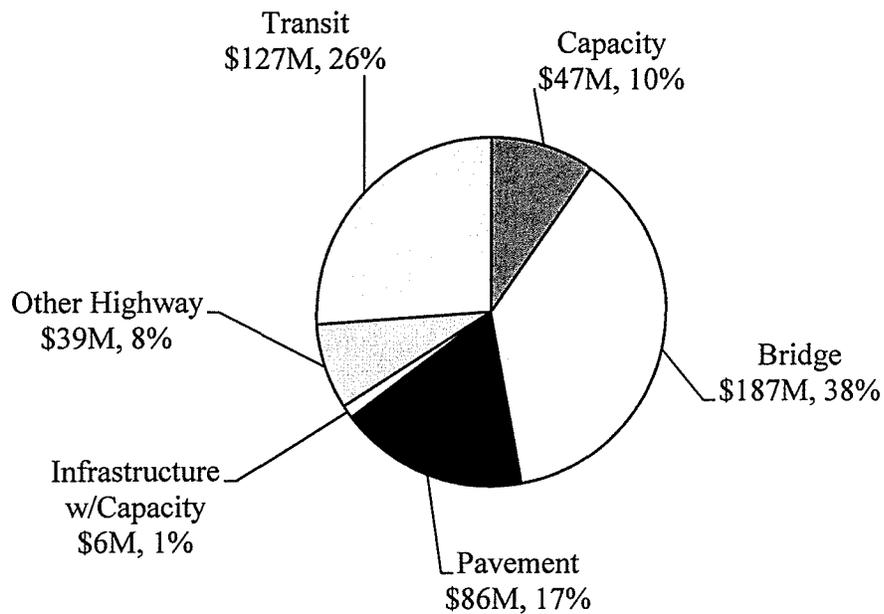
SUMMARY FIGURE 1: 2019-24 TIP REVENUES AND PROJECT EMPHASIS

REVENUES



Draft revenue in the TIP includes very little non-federal funds for information purposes. It will be added during the public review period.

PROJECT EMPHASIS



04-23-2019, 5:00 PM

Table 1
 Capital District Transportation Committee
 Transportation Improvement Program
 Obligations by Fund Source By Program Year (2019-24)
 (In Matched Millions of Dollars)

Fund Source	Estimated Available 5-Year	5-Year Total	Commit'd 2018-19	1st Year 2019-20	2nd Year 2020-21	3rd Year 2021-22	4th Year 2022-23	5th Year 2023-24	Post 2024
National Hwy Performance Program	244.797	245.270	9.290	49.571	61.163	50.018	38.736	45.782	20.904
NHPP Statewide	10.426	10.426	1.176	6.926	3.500	0	0	0	0
STP Flexible	56.414	58.722	6.635	13.577	7.910	9.246	8.462	19.527	31.143
STP Flexible Statewide	0	0	4.750	0	0	0	0	0	0
STP Flexible Statewide 20% State	0	0	1.771	0	0	0	0	0	0
STP Urban	36.698	33.903	11.370	9.853	2.046	5.268	13.035	3.701	0
HSIP Rail	3.630	3.630	1.160	3.630	0	0	0	0	0
HSIP Rail 100% Federal	0	0	0.595	0	0	0	0	0	0
HSIP Highway	16.423	16.359	4.356	1.603	1.991	7.465	4.575	0.725	5.210
HSIP Highway Statewide	1.100	1.100	1.184	1.100	0	0	0	0	0
HSIP Highway Statewide 100% Federal	2.896	2.896	3.434	2.446	0.450	0	0	0	0
STP NFA Bridges	2.480	2.455	0.746	1.080	0.199	1.176	0	0	0.721
STP NFA Bridges Statewide 95% Federal	2.261	2.261	1.444	2.261	0	0	0	0	0
Federal Demonstration	0	0	12.631	0	0	0	0	0	0
Miscellaneous Federal Aid	0	0	0.193	0	0	0	0	0	0
Miscellaneous Federal Aid 50% Federal	0	0	0.325	0	0	0	0	0	0
Congestion Mitigation/Air Quality	4.930	4.930	2.492	4.047	0	0.883	0	0	0
Transportation Alternatives Program	1.400	1.400	3.853	1.400	0	0	0	0	0
Section 5339	8.949	8.949	1.427	1.720	1.754	1.789	1.825	1.861	0
Section 5339 For Saratoga Springs	0.640	0.640	0	0.128	0.119	0.131	0.134	0.128	0
Section 5307	86.166	86.166	14.773	16.550	16.885	17.226	17.575	17.930	0
Sec. 5307 Associated Transit Imp.	0.937	0.937	0.200	0.180	0.184	0.187	0.191	0.195	0
Section 5307 For Saratoga Springs	7.312	7.312	1.328	1.405	1.433	1.462	1.491	1.521	0
Section 5310	3.150	3.150	0.630	0.630	0.630	0.630	0.630	0.630	0
Section 5310 For Saratoga Springs	0.725	0.725	0.145	0.145	0.145	0.145	0.145	0.145	0
Subtotal (Federal Including Match)	491.334	491.231	85.908	118.252	98.409	95.626	86.799	92.145	57.978

All federal-aid funds include any required non-federal share, usually 10% or 20%. The State provides the non-federal share for all projects under state jurisdiction. For projects not under state jurisdiction, the 20% match may be required from the agency of jurisdiction. However, the State has traditionally supplied 3/4 of the non-federal share for most non-state highway projects through Marchiselli funds and 1/2 of the non-federal share of most transit projects. Funding shown as 'Local' is beyond that required to match federal funds.

Table 1 (Continued)

Fund Source	Estimated Available 5-Year	5-Year Total	Commit'd 2018-19	1st Year 2019-20	2nd Year 2020-21	3rd Year 2021-22	4th Year 2022-23	5th Year 2023-24	Post 2024
State Dedicated Fund	0	0	0.635	0	0	0	0	0	0
Local Funds	1.602	1.602	0.916	0.517	0.200	0.485	0.200	0.200	2.835
Modernization and Enhancement Program	0	0	5.133	0	0	0	0	0	0
Accelerated Transit Capital Program	0	0	3.642	0	0	0	0	0	0
Subtotal (Other State and Local)	1.602	1.602	10.326	0.517	0.200	0.485	0.200	0.200	2.835
Total	492.936	492.833	96.234	118.769	98.609	96.111	86.999	92.345	60.813

All federal-aid funds include any required non-federal share, usually 10% or 20%. The State provides the non-federal share for all projects under state jurisdiction. For projects not under state jurisdiction, the 20% match may be required from the agency of jurisdiction. However, the State has traditionally supplied 3/4 of the non-federal share for most non-state highway projects through Marchiselli funds and 1/2 of the non-federal share of most transit projects. Funding shown as 'Local' is beyond that required to match federal funds.

04-23-2019, 4:33 PM

Table 2
 Capital District Transportation Committee
 Transportation Improvement Program
 Five-Year Obligations By Fund Source By Project Type (2019-24)
 (In Matched Millions of Dollars)

Fund Source	----- Highway Projects -----						----- Transit Projects -----					Grand Total
	Capacity Impr'ment	Bridge Infrastr.	Pavement Infrastr.	HWY & Cap.	Other Highway	Total Highway	Operating Assist.	Capital (Facil.)	Capital (Vehicle)	Other Transit	Total Transit	
National Hwy Performance Program	12.500	136.112	62.353	0	21.015	231.980	0	0	0	13.290	13.290	245.270
NHPP Statewide	0	9.560	0	0	0.866	10.426	0	0	0	0	0	10.426
STP Flexible	9.411	19.274	14.536	0	8.691	51.912	0	0	0	6.810	6.810	58.722
STP Urban	0	16.974	6.890	5.521	4.518	33.903	0	0	0	0	0	33.903
HSIP Rail	3.630	0	0	0	0	3.630	0	0	0	0	0	3.630
HSIP Highway	12.959	0	2.000	0	1.400	16.359	0	0	0	0	0	16.359
HSIP Highway Statewide	1.100	0	0	0	0	1.100	0	0	0	0	0	1.100
HSIP Highway Statewide 100% Federal	2.896	0	0	0	0	2.896	0	0	0	0	0	2.896
STP NFA Bridges	0	2.455	0	0	0	2.455	0	0	0	0	0	2.455
STP NFA Bridges Statewide 95% Federal	0	2.261	0	0	0	2.261	0	0	0	0	0	2.261
Congestion Mitigation/Air Quality	4.047	0	0	0	0.883	4.930	0	0	0	0	0	4.930
Local Funds	0.602	0	0	0	0	0.602	0	1.000	0	0	1.000	1.602
Transportation Alternatives Program	0	0	0	0	1.400	1.400	0	0	0	0	0	1.400
Section 5339	0	0	0	0	0	0	0	0.450	8.499	0	8.949	8.949
Section 5339 For Saratoga Springs	0	0	0	0	0	0	0	0	0.640	0	0.640	0.640
Section 5307	0	0	0	0	0	0	0	0	86.166	0	86.166	86.166
Sec. 5307 Associated Transit Imp.	0	0	0	0	0	0	0	0.937	0	0	0.937	0.937
Section 5307 For Saratoga Springs	0	0	0	0	0	0	7.312	0	0	0	7.312	7.312
Section 5310	0	0	0	0	0	0	0	0	3.150	0	3.150	3.150
Section 5310 For Saratoga Springs	0	0	0	0	0	0	0	0	0.725	0	0.725	0.725
Total	47.145	186.636	85.779	5.521	38.773	363.854	7.312	2.387	99.180	20.100	128.979	492.833

04-23-2019, 4:33 PM

Table 3
 Capital District Transportation Committee
 Transportation Improvement Program
 Cost Summaries by County (2019-24)
 (In Matched Millions of Dollars)

<u>Federally Funded Projects</u>	Commit'd 2018-19	1st Year 2019-20	2nd Year 2020-21	3rd Year 2021-22	4th Year 2022-23	5th Year 2023-24	Post 2024	Total 2019-24
Regional	3.190	20.995	32.720	28.220	23.190	33.650	0	138.775
Transit	22.809	20.758	21.150	21.570	21.991	22.410	0	107.879
Albany County	24.208	27.712	6.449	31.010	12.025	22.377	23.314	99.573
Rensselaer County	19.325	20.311	14.114	3.452	22.009	10.774	10.334	70.660
Saratoga County	11.168	10.178	6.949	6.654	5.107	2.934	18.050	31.822
Schenectady County	5.208	18.298	17.027	4.720	2.477	0	6.280	42.522
Totals	85.908	118.252	98.409	95.626	86.799	92.145	57.978	491.231

<u>All Fund Sources</u>	Commit'd 2018-19	1st Year 2019-20	2nd Year 2020-21	3rd Year 2021-22	4th Year 2022-23	5th Year 2023-24	Post 2024	Total 2019-24
Regional	3.190	20.995	32.720	28.220	23.190	33.650	0	138.775
Transit	32.067	20.958	21.350	21.770	22.191	22.610	0	108.879
Albany County	24.508	27.712	6.449	31.295	12.025	22.377	26.149	99.858
Rensselaer County	19.325	20.311	14.114	3.452	22.009	10.774	10.334	70.660
Saratoga County	11.776	10.245	6.949	6.654	5.107	2.934	18.050	31.889
Schenectady County	5.368	18.548	17.027	4.720	2.477	0	6.280	42.772
Totals	96.234	118.769	98.609	96.111	86.999	92.345	60.813	492.833

NOTE: Totals may not sum due to rounding.

04-23-2019, 4:33 PM

Table 4
 Capital District Transportation Committee
 Transportation Improvement Program
 Fiscal Constraint By Fund Source By Program Year (2019-23)
 (In Matched Millions of Dollars)

Fund Source	1st Year: 2019-20		2nd Year: 2020-21		3rd Year: 2021-22		4rd Year: 2022-23		Total: 2019-23	
	Budget Estimate	Program Capacity	Budget Estimate	Program Capacity						
National Hwy Performance Program	46.485	-3.086	49.678	-11.485	49.678	-0.340	49.678	10.942	195.519	-3.969
STP Flexible	24.346	10.769	8.067	0.157	8.067	-1.179	8.067	-0.395	48.547	9.352
STP Urban	-2.002	-11.855	9.675	7.629	9.675	4.407	9.675	-3.360	27.023	-3.179
HSIP Highway	3.951	2.348	3.268	1.277	3.268	-4.197	3.268	-1.307	13.755	-1.879
STP NFA Bridges	1.080	0	0.350	0.151	0.350	-0.826	0.350	0.350	2.130	-0.325
Total	73.860	-1.824	71.038	-2.271	71.038	-2.135	71.038	6.230	286.974	0
% Under/Over-programmed	2.5% over		3.2% over		3.0% over		8.8% under		0	

The 'Budget Estimate' is the amount of authorized federal funds (including match), including carryover funds from the period prior to 2019-20. Amounts available are based upon the historic Capital District shares of amounts allocated to NYSDOT Region 1.

'Program Capacity' is the difference between the amount available and the amount programmed. Negative numbers indicate overprogramming. The fiscal constraint data above is shown only for the years and federal fund sources for which it applies.

04-23-2019, 4:33 PM

Table 4A
 Capital District Transportation Committee
 Transportation Improvement Program
 Fiscal Constraint By Fund Source By Program Year (2023-24)
 (In Matched Millions of Dollars)

Fund Source	5th Year: 2023-24		Total: 2019-24	
	Budget Estimate	Program Capacity	Budget Estimate	Program Capacity
National Hwy Performance Program	49.278	3.496	244.797	-0.473
STP Flexible	7.867	-11.660	56.414	-2.308
STP Urban	9.675	5.974	36.698	2.795
HSIP Highway	2.668	1.943	16.423	0.064
STP NFA Bridges	0.350	0.350	2.480	0.025
<u>Total</u>	69.838	0.103	356.812	0.103
% Under/Over-programmed	0.1% under		0.0% under	

The 'Budget Estimate' is the amount of authorized federal funds (including match), including carryover funds from the period prior to 2019-20. Amounts available are based upon the historic Capital District shares of amounts allocated to NYSDOT Region 1.

'Program Capacity' is the difference between the amount available and the amount programmed. Negative numbers indicate overprogramming. The fiscal constraint data above is shown only for the years and federal fund sources for which it applies.

04-23-2019, 5:00 PM

Table 5
 Capital District Transportation Committee
 Transportation Improvement Program
 Fiscal Constraint By Fund Source By Program Year (2019-24)
 For All Federal Fund Sources Including those Programmed Statewide
 All funds are in millions of dollars by funding split and are not matched.

Fund Source	1st Yr: 2019-20		2nd Yr: 2020-21		3rd Yr: 2021-22		4th Yr: 2022-23		5th Yr: 2023-24		Total: 2019-24	
	Budget Estimate	Programmed										
National Hwy Performance Program	43.659	47.457	43.886	53.982	40.736	42.647	40.736	32.857	40.408	36.805	209.425	213.748
STP Flexible	19.477	10.862	6.454	6.328	6.454	7.397	6.454	6.770	6.294	15.622	45.133	46.978
STP Urban	-1.602	7.882	7.740	1.637	7.740	4.214	7.740	10.428	7.740	2.961	29.358	27.122
HSIP Rail	3.267	3.267	0	0	0	0	0	0	0	0	3.267	3.267
HSIP Highway	6.992	4.879	3.391	2.242	2.941	6.719	2.941	4.117	2.401	0.653	18.666	18.609
STP NFA Bridges	3.012	3.012	0.280	0.159	0.280	0.941	0.280	0	0.280	0	4.132	4.112
Congestion Mitigation/Air Quality	3.238	3.238	0	0	0.706	0.706	0	0	0	0	3.944	3.944
Transportation Alternatives Program	1.120	1.120	0	0	0	0	0	0	0	0	1.120	1.120
Section 5339	1.478	1.478	1.498	1.498	1.536	1.536	1.567	1.567	1.591	1.591	7.670	7.670
Section 5307	14.508	14.508	14.802	14.802	15.100	15.100	15.406	15.406	15.717	15.717	75.533	75.533
Section 5310	0.620	0.620	0.620	0.620	0.620	0.620	0.620	0.620	0.620	0.620	3.100	3.100
Total	95.769	98.322	78.671	81.268	76.113	79.880	75.744	71.765	75.051	73.968	401.348	405.203
% Under/Over-programmed	2.7% over		3.3% over		4.9% over		5.3% under		1.4% under		1.0% over	
Total Non-Federal Split	NA	19.930	NA	17.141	NA	15.746	NA	15.034	NA	18.177	NA	86.028

The 'Budget Estimate' is the amount of authorized unmatched federal funds, including carryover funds from the period prior to 2019-20. Amounts available are based upon the historic Capital District shares of amounts allocated to NYSDOT Region 1.

The Budget Estimate for NHPP core funding is estimated at 82% of the matched amount.