

New Visions 2030
Safety Planning in the Capital Region
A Requirement of SAFETEA-LU

Background

*SAFETEA-LU introduced a new safety planning factor for MPOs to incorporate into their planning and programming activities. That planning factor is to: **Increase the safety of the transportation system for motorized and non-motorized users.** The legislation includes a number of new programs and policies including financial support for improving the safety of the overall transportation system. The following summarizes the key provisions in the law for both CDTC as the MPO and for New York State which is required to prepare a great deal of material that the MPO plans and programs must be coordinated with.*

Issues Explored

- **SAFETEA-LU Safety Requirements** – The requirements under SAFETEA-LU for both CDTC and New York State were reviewed and documented.
- **New York State’s Approach** – New York State’s approach to meeting SAFETEA-LU’s safety requirements were reviewed and documented. This includes descriptions of New York State’s safety plans, policies and priorities.
- **CDTC’s Safety Planning Philosophy and Planning Principle** – CDTC’s approach to integrating safety in its planning and programming activities along with its approach to coordinating with the safety plans and programs of New York State were documented. A new safety planning principle was created for inclusion in the New Visions long range plan.

Performance Measurement (relevance to existing performance measures or proposed new performance measures (if applicable))

New Visions 2025, CDTC’s current long range transportation plan, includes safety as one of its goals. As stated in the plan, the goal for safety is to reduce the per capita cost of crashes. This goal is articulated as a core system performance measure and is measured in terms of what the estimated costs to society are of transportation crashes. This performance measure will be refined in the coming months, but has long served CDTC by directing attention to safety aspects of all planning, programming and project development decisions.

Policy/Budget Implications and/or Recommendations

- A new planning principle for New Visions that is consistent with the goals, objectives and strategies in the New York State Strategic Highway Safety Plan has been developed. The proposed safety principle is to:

Improve the safety of the regional transportation system by creating a traveling environment that is consistent with the community context and provides a reasonable range of risk for all users of the system.

This principle reflects the more integrated approach CDTC envisions for its safety planning activities. It not only supports the continued use of traditional safety countermeasures on high speed facilities (clear zones, rumble strips, etc.), where appropriate, but also leaves room for the integration of the “Complete Streets” concept and innovative design techniques including the use of roundabouts, the use of “visual friction” or visual cues drivers get from the road environment to slow down, access management techniques, etc. as well as the education and enforcement efforts of a wide variety of local safety professionals who have a real impact on driver behavior. It also integrates the community context in the design process as appropriate designs can help encourage responsible driving behavior. Designing for a reasonable range of risk allows the transportation system to be forgiving such that when a crash does occur, lives are not threatened. This concept will help to reduce the level of risk for the region’s most vulnerable users of the transportation system, particularly bicyclists, pedestrians, children and the elderly.

- See attached strategies and actions.

SAFETY STRATEGIES AND ACTIONS

CDTC has been actively engaged in safety planning and programming since its inception. Under recent progressive federal transportation legislation, including SAFETEA-LU, the safety of the transportation system was elevated in its level of importance in state and MPO planning and programming processes. In 2005, CDTC became actively engaged in the newly formed New York State Metropolitan Planning Organizations' Safety Working Group (SWG). The safety working group is co-chaired by a staff member of the CDTC and represents the SWG on a number of statewide safety planning efforts including the Traffic Records Coordinating Council, the Strategic Highway Safety Plan working group and the Accident Location Information System (ALIS) development team. The SWG has also submitted a statewide planning and research grant application for a uniform safety audit process to be developed for use by the MPOs in their project programming activities. The involvement of CDTC staff in these efforts has given CDTC and all of New York State's MPOs an opportunity to be active participants in New York State's safety activities.

Representing the MPOs through the SWG on statewide safety issues is just one aspect of CDTC's safety activities. The following briefly describes safety strategies incorporated into CDTC's plan.

Core Performance Measurement. *New Visions 2025*, CDTC's current long range transportation plan, includes safety as one of its goals. As stated in the plan, the goal for safety is to reduce the per capita cost of crashes. This goal is articulated as a core system performance measure and is measured in terms of what the estimated costs to society are of transportation crashes. This performance measure will be refined in the coming months, but has long served CDTC by directing attention to safety aspects of all planning, programming and project development decisions.

Transportation Improvement Program (TIP) safety consideration. Under CDTC's integrated process, available funding is directed to categories of projects (from the 17 budget elements in the *New Visions* plan) as necessary to achieve a balanced program of projects. This has led in the past decade to unprecedented investment in pedestrian and bicycle accommodations, technology and traffic management services, infrastructure upgrades, transit investment and urban reconstructions – all with safety components. Further, CDTC's procedures require that transportation projects competing for federal transportation funds all must be evaluated for their safety benefits. Safety benefits are measured in the dollar value of the projected reduction in crashes each year. The annual crash costs and crash reduction factors are provided by NYSDOT and are applied to each project based on the identified set of improvements in order to calculate safety benefits. The safety benefit is used in the benefit/cost ratio which is used to prioritize proposed projects as the final step in the project evaluation process.

As a result, there are substantial resources dedicated to safety or safety related regional projects in the Draft 2007-2012 TIP. **During the 2007-12 TIP Update, CDTC members reaffirmed their significant commitment to safety by reinvesting in all**

existing regional set-asides, while establishing two new safety-specific programs: a regional set-aside for intersections, queue jumpers and roundabouts; and a set-aside for safety actions on non-state roads. The primary safety programs on the TIP are listed below, along with the 2005-12 (seven-year) funding commitment.

RG23: Traffic Signal Set-Aside	\$ 3.066 M
RG28: Intelligent Transportation System Set-Aside	5.780 M
RG37: Highway Emergency Local Patrol (HELP) Program	3.850 M
RG37A: Traffic Management Center (TMC)	20.500 M
RG40: Grade Crossing Safety Improvements Set-Aside	3.250 M
RG41: SPOT Improvements for Bicycle and Ped Access Set-Aside	0.500 M
RG104: Intersections, Queue Jumpers and Roundabouts Set-Aside	5.000 M
RG105: Safety Set-Aside for Non-State Roads	7.520 M

These selected projects total nearly \$50,000,000. In addition, previous SPOT Improvement Program commitments have been made to 37 additional bike and pedestrian access projects. Along with these projects, there are hundreds of specific highway and transit projects listed in the draft TIP which incorporate safety improvements as part of the project scope. CDTC will continue to work NYSDOT, local governments and other safety stakeholders to ensure safety is appropriately addressed in the TIP.

Community and Transportation Linkage Planning Program. This is CDTC’s unparalleled local planning assistance program which links land use and transportation planning. Depending on the study context, safety is incorporated into the planning process either through a comprehensive review of safety data in a corridor or study area or through planning for smart growth and mixed use, compact development patterns which encourage a more sustainable transportation system and offers system users safe options for their travel, particularly bicycling and walking. Linkage studies are not traditional corridor studies. They are intended to be progressive conceptual strategic planning efforts that relate the land use and transportation system design concepts to the context or future vision of the community. Since 2000, CDTC has advanced 55 Linkage studies with total investment exceeding \$3,000,000, reflecting the incorporation of “integrated planning” as a budget element of the New Visions plan. CDTC has led work on integrated, safety-conscious regional/local planning in 30 municipalities in these few years. The Linkage program remains a key strategy of New Visions.

Implementers’ Training in Integrating Transportation and Community Planning and Design. CDTC chaired a steering committee and contracted with consultants representing the New York State Metropolitan Planning Organizations’ on a shared cost initiative to articulate the concept of integrated design and catalog exemplary projects that followed this approach in their planning and development processes. This effort demonstrated that transportation and community facilities which are properly designed and integrated can have substantial public safety benefits. On the development side, locating stores, offices, and housing in walkable neighborhoods was found to enhance overall community safety. On the transportation side, reduced street widths and traffic

calming measures were found to slow automobile traffic in neighborhoods to safer levels for bicyclists and pedestrians, especially for children and the elderly. Training of transportation and land use officials will follow in the coming months and years.

Establish a Safety Working Group. CDTC will establish a safety working group which will serve as the regional forum on transportation safety issues. This group, which will include representatives from state and local governments as well as enforcement, education and emergency service stakeholders, will be charged with the task of further articulating CDTC's safety planning program including:

1. Develop an appropriate performance measure for the long range plan.
2. Develop a new or refined process to evaluate candidate transportation improvement program projects for their safety benefits, including safety set-aside projects.
3. Work with NYSDOT Region 1 and the Adirondack-Glens Falls MPO on developing a process to program High Risk Rural Road funds when they are available.
4. Develop a catalog of innovative safety treatments using cutting edge resources to help guide local communities on the options available to them. This may include traditional countermeasures (signs, rumble strips, guiderails, etc.) as well as innovative techniques such as complete streets, roundabouts, traffic calming, access management, walking and bicycling facilities, etc. which all seek to reduce fatalities and injuries on all public roads in the Capital Region. Facility function and the community context will also be considered in the articulation of appropriate countermeasures.
5. Evaluate CDTC's role in education and enforcement activities and if/how resources can be allocated to pursue those activities. Issues related to driver behavior will be a key component of the evaluation.
6. Work with emergency service providers on how best to incorporate their issues and concerns into the transportation planning process.

Development of a Formal Safety Management System. CDTC has had the development of a safety management system on its work program for some time. For this exercise, CDTC has relied on the NYSDOT Safety Information Management System (SIMS) crash data and the county safety summaries prepared by ITSMR for the Governors' Traffic Safety Committee. This project has been challenging over the years due to issues related to data access, the timeliness and quality of the data, and the availability of data on the local road system but is on-going. Improvements planned by the state for safety data in 2007 through the implementation of the Accident Location Information System (ALIS) should enhance CDTC's access to safety data. In addition, NYSDOT and the Department of Motor Vehicles have been improving the timeliness of the data and reportable crashes are now available in NYSDOT's Safety Information Management System through the end of 2006 (note: only reportable crash data is available through 2006, complete data records which include both reportable and non-reportable crashes is only available through 2003). The central elements to the Safety Management System are:

- 1) Collect, analyze and share available regional safety data with regional safety partners. CDTC plans to create a regional safety profile to help establish problem areas including locations experiencing a high number of crashes, particularly a high number of severe crashes, as well as to document trends related to driver behavior. This will help CDTC and the regions' safety stakeholders focus their safety planning resources on key issues. Particular focus will be given to the local road system. The safety needs of specific groups such as pedestrians and bicyclists, the elderly and disabled, motorcyclists and large trucks, including the other emphasis areas identified in the New York State Strategic Highway Safety Plan will be evaluated. In addition, the relationship between land use and transportation will be evaluated through safety data in before and after analysis of regional transportation projects. The data will feed into the work of the safety working group and will be used in both planning and programming activities. To jump start the process, data obtained from the Governor's Traffic Safety Committee was used to assemble a brief regional safety profile to help better understand the regional priorities for safety. See **Appendix C** for a summary of some of that data.

- 2) Pilot Safety Projects. Since early 2006, CDTC has been working with Rensselaer County on a pilot safety data project. The purpose of the project is to review all available safety data files related to the county and create a detailed crash profile on all public roads. The timeliness and quality of the data on the local road system, particularly with respect to geographic coding, has been problematic. The only way to currently get the geographic location of a local road crash is to obtain the crash report, and even that geographic description can be somewhat vague. This lack of geographic coding, which should be resolved once NYSDOT implements its ALIS project, limits the level of analysis one can undertake on the local road system, particularly in identifying problematic locations and countermeasures. CDTC will continue to work on this pilot effort to develop a manageable safety data analysis process for the other three counties in the region.

- 3) Use of Regional Geographic Information System (GIS). CDTC's GIS contains crash data for both the state and local road systems from roughly 1996 through 2001. This data set is currently being updated to reflect all available safety data from 2002 to 2006. This data was extracted from the NYSDOT SIMS and is used for many of CDTC's data analysis and mapping activities.

Emphasis on Arterial Management. The Traffic/Land Use Conflict Index, which measures the degree to which the close proximity of numerous driveways for commercial or residential land uses increase the number of conflicts on the adjacent roadway, is an important measure relative to safety. The more conflict points there are on a roadway for

drivers, the more likely an incident will occur. CDTC uses this index in its planning activities, particularly those that relate to access management.

Operations/Intelligent Transportation Systems (ITS). ITS deployment in the Capital Region has been supported by CDTC as a way to improve traveler information, particularly with respect to incidents on the Interstate system and to improve the time it takes for emergency personnel to reach and clear a crash scene, thereby improving the overall operation of the highway system. A recently formed operations committee will be looking at issues such as incident management and how the Capital Region can better manage its higher end facilities when an incident occurs. In addition, the investigation of innovative technologies such as red light running cameras are a key aspect of ITS for the future in the Capital Region.

Bicycle and Pedestrian Planning. CDTC's Bicycle and Pedestrian Task Force meets monthly and has participated in a number of safety related activities such as the development of bicycle/pedestrian crash maps and data analysis, the development of the bicycle and pedestrian priority network, the development of CDTC's SPOT Improvement program for bicycles and pedestrians, participation in safety education and enforcement campaigns, participation in walkable communities workshops, research on right turn on red safety problems and data collection for the pedestrian infrastructure index, the sidewalk inventory and bicycle level of service. This group will also be essential in the forthcoming planning work for the Safe Routes to School program once NYSDOT develops guidance on the program.

Continue to participate with the NYS MPOs Safety Working Group. CDTC, who has been an active participant on the New York State MPOs Safety Working Group (SWG), will continue to devote staff effort to this important task. The SWG has been an effective mechanism to communicate and coordinate the safety activities of New York State with the MPOs and other units of local government. CDTC will represent the SWG on statewide safety committees as needed including our continued involvement in the update of the state's Traffic Records Strategic Plan, the Strategic Highway Safety Plan and continued involvement in the development of the Accident Location Information System (ALIS). CDTC will also be involved in the initiative to develop statewide crash rates for non-state owned local roads as well as in the NYS MPOs planned state planning and research program project on road safety audits.