

APPENDIX C: AIR QUALITY CONFORMITY STATEMENT

CDTC developed its first long-range transportation plan and adopted it on March 31, 1981. Routine amendments and updates have occurred since that time through incorporating recommendations from sub-regional studies, corridor studies, and NYSDOT project development work. This *New Visions* Regional Transportation Plan report is a major update to that previous work. *New Visions* focuses on travel conditions and needs in the year 2015 and 2021.

Plan Conformity Findings

Support for SIP

This plan conforms to the existing Statewide Implementation Plan (SIP) by supporting the SIP's intentions of achieving and maintaining the National Ambient Air Quality Standards (NAAQS). CDTC's transportation planning process historically has ensured that air quality issues are fully considered and given adequate priority. In this regard, CDTC's *Continuing Operations Plan* defines air quality planning and implementation responsibilities required ensuring maintenance of air quality standards in the Capital District. In addition, air quality is one factor considered in corridor and subarea studies, and in the identification and prioritization of projects for inclusion in CDTC's TIP.

The impacts of the *New Visions* plan on air quality were evaluated. Air quality effects, as measured by hydrocarbon emissions and nitrogen oxide emissions, are core performance measures for *New Visions*. Improving environmental quality is included in the CDTC Long Range Transportation System Goals. The air quality impacts of recommended projects, programs and strategies were evaluated in development of the *New Visions* plan. Evaluation of projects for inclusion in the Transportation Improvement Program will continue to include an assessment of air quality impacts.

TCM Implementation

There are no applicable transportation requirements or commitments in the SIP for the four-county Capital District region. Therefore, no goals, directives, or recommendations of the plan conflict with SIP or interfere with implementation of transportation control measures (TCMs). In fact, the Capital District is voluntarily implementing transportation control measures listed in the Clean Air Act Amendments of 1990 in Section 108(b)(1)(A). These implementing actions are summarized below.

(i) programs for improved public transit; The primary public transit provider in the Capital District is CDTA. There are also numerous private providers of transit services, such as Upstate Transit. CDTC has demonstrated a commitment to public transit in a number of ways. CDTC has advocated full allocation of authorized levels of Federal Transit Act funding and the use of the SDF for transit projects. All FTA-provided funding to CDTA for capital and operating funds is programmed in the CDTC TIP. CMAQ funds for transit projects have been programmed and allocated where they are warranted. CDTA and other transit projects have garnered a significant portion of the available CMAQ funds. Essentially every transit project proposed for consideration in the CMAQ program was fully funded.

New Visions explored alternative transit futures for the region. The last time that these options were studied was in 1980. A major effort to ascertain public support for expanded transit services of various types was undertaken. Recommendations to restructure existing transit service and pursue a "Best Bus" strategy, particularly in the Route 5 corridor, while continuing to study fixed guideway opportunities are included in this plan.

CDTA has a Special Events program that adds service to accommodate increased transit demand during the holiday shopping season to the malls, to the First Night celebration on New Year's Eve, and to summer cultural events.

CDTA is actively involved with NYSDOT in mitigation activities surrounding major construction projects. The provision of new or supplemental transit services where a major bridge or highway is under construction is a good way to introduce people to transit services. It can be expected to attract long term riders. In the past, transit in construction work zones has been negotiated on a project-by-project basis. There is now an acceptance that this practice has merit. It should be used for every major construction project. CDTA has been granted CMAQ program funds to allow the provision of these services on an ongoing basis. This will reduce the administrative start-up time for the provision of such services, thus facilitating implementation.

CDTA has "partnered" with the private operators serving commuters in the Capital District. Commuters using the private bus service from outlying areas to downtown Albany are provided free transfers to the CDTA system. CMAQ program funds finance this project; the project is successful and has increased ridership.

CDTC has established a project merit evaluation framework for the consideration of new capital projects for flexible funds that allows transit projects to compete on a level playing field with other project types for flexible funding opportunities. CDTC's experience has been that improved public transit services are able to demonstrate mobility benefits and can be competitive with highway projects in this regard. The CDTC TIP project selection methodology has also been modified to encourage arterial projects to consider the accommodation of transit (and non-motorized modes) in their design and scope. This will have the long-term effect of making the transportation system as a whole work better.

(ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles (HOVs); Limited land availability for highway expansion and limited funds available for expansion projects of all types has prevented the implementation of HOV lanes in the Capital District. However, the Northway (I-87) is projected to be the most congested corridor in the region, and ongoing considerations of expansion alternatives for the corridor will include HOV options on new and existing lanes as a viable alternative.

(iii) employer-based transportation management plans, including incentives; *New Visions* includes Transportation Demand Management (TDM) strategies as a major focus for its efforts to maintain and improve mobility in the Capital District. Implementation is at the preliminary stages at the regional level. However, the Statement of Findings for the Albany County Airport Area GEIS strongly recommends the implementation of employer-based transportation management plans in the Airport/Wolf Road area. This area is one of the most congested in the region and the program has a high likelihood of success. CDTC will continue to work to establish employer-based programs where opportunities arise.

(iv) trip reduction ordinances; Trip reduction ordinances fall into the same general work effort as (iii) above. CDTC's subarea studies have historically considered Transportation Demand Management strategies alongside capital improvements, and will continue to do so. In addition, CDTC has established a planning program with STP funds that will allow local governments to update and improve their transportation and land use planning efforts. Such efforts may point to the need for trip reduction ordinances in some instances.

(v) traffic flow improvement programs that achieve emission reductions; Mobility projects considered for funding the CDTC TIP are analyzed for hydrocarbon emissions reductions, reductions in travel time, and the excess vehicle hours of delay reduced by project implementation. This evaluation of project merit leads to the programming of the best mobility projects in both the CMAQ program and the STP.

A notable example of CDTC's leadership role in promoting projects to improve traffic flow is the Intelligent Transportation System (ITS) project in the TIP. This project will use a combination of radio broadcasts, signal timing improvements, incident detection technology, new transit technologies, and incident management techniques and will significantly reduce emissions and relieve congestion in the Capital District.

(vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service; CDTA has sponsored an aggressive program to establish a network of Park-and-Ride facilities in the Capital District. This program, which is ongoing, is focused on critical corridors and the provision of transit service to the parking facilities. The recent inauguration of the lot in Schodack and the plans for a new lot at Exit 8 on I-87 provide evidence of an expanding and effective program. CDTA is also pursuing an agreement for a lot at Exit 8A of I-87.

(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use; Carbon monoxide emissions are not a major issue in the Capital District. Therefore, programs to address CO "hot spots" have not been the focus of CDTC's efforts. There is, however, a long-standing program for state workers that buses them from the State Office Campus area to downtown, thus eliminating a number of vehicle trips to downtown Albany during the peak period. Peripheral park and ride lots also exist in Menands and at McCarty Avenue (Exit 23).

(viii) programs for the provision of all forms of high-occupancy, shared-ride services; CDTC is the publisher of the *Commuter Register*, a bimonthly [website newsletter](#). This publication provides shared-ride-matching services to interested parties. This effort includes periodic checks with carpoolers to confirm their participation and advice as to how to start and maintain a carpooling arrangement. This effort is ongoing and will continue.

A Guaranteed Ride Home Program (GRH) was established for monthly transit pass holders in 1993 to remove one of the main obstacles to sharing a ride: fear of being stranded, especially in an emergency. The GRH program was expanded in 1996 to provide a "safety" net to carpoolers, persons who bike to work, and to users of the non-CDTA private commuter services. This program strengthens the shared ride services already provided.

(ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place; CDTC expended a major effort to incorporate bicycle and pedestrian considerations into *New Visions*. This work included the establishment of an advisory committee of interested parties, the documentation of available fund sources for bicycle and pedestrian projects, and the establishment of a regional bicycling network. This effort will continue.

In addition, CDTC has considered bicycle and pedestrian projects in its programming of both CMAQ and STP Flexible funds.

There is limited experience in limiting the road network to non-motorized vehicles. Jay Street in Schenectady for a portion of its length does this. The practice has been more towards separated bike paths/sidewalks or bike lanes in addition to road surface for vehicles. The popular support for restricting road surface use is limited, but will be pursued where local support exists.

(x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas; The planning effort cited above in (ix) included all aspects of the promotion of bicycle usage. The primary funding mechanisms for these projects are the CMAQ and STP Enhancement Programs. **CDTA recently instituted buses equipped with bicycle racks to allow cyclists to store their bicycles while riding the bus.**

(xi) programs to control extended idling of vehicles; The ITS effort cited in (v) above includes signal timing and other projects that would reduce the extended idling of vehicles at intersections. In addition, the focus of the mobility portion of the CDTC TIP is on congestion relief, prevention, and incident management, which would reduce the extended idling of vehicles on the highway network.

(xii) programs to reduce motor vehicle emissions, consistent with Title II, which are caused by extreme cold start conditions; The CDTC efforts to improve public transit in the region will all reduce cold starts.

(xiii) employer-sponsored programs to permit flexible work schedules; The CDTC RTP includes Transportation Demand Management strategies as a major focus for our efforts to maintain and improve mobility in the Capital District. Implementation is at the preliminary stages at the regional level. However, the Statement of Findings for the Albany County Airport Area GEIS strongly recommends the implementation of employer-based transportation management plans, which would include flexible work schedules in the Airport/Wolf Road area. This area is one of the most congested in the region and the program has a high likelihood of success. CDTC will continue to work to establish employer-based programs of all kinds where opportunities arise.

(xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity; CDTC initiated a program, funded with STP funds to encourage local government planning processes to better integrate transportation and land use. This program incorporates methods of facilitating non-automobile travel as an essential component.

CDTC's TIP project selection criteria includes a basic screening requirement for all capacity-increasing projects to be linked to local land use management. Because the Capital District must maximize the effectiveness of existing facilities, a plan or commitment to access management, construction of new local streets, or provision of supplemental transit services was required to be in place prior to commitment to major capacity work.

CDTA, the regional transit operator, does have a program for Special Event service, as noted in (i) above. In addition, as part of a CMAQ-funded project, CDTA will prepare a manual to guide policy officials on how to amend local ordinances so that transit options are incorporated into the project review process.

(xv) programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For the purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; This TCM is addressed in (ix) and (x) above.

(xvi) programs to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks. There are no programs in place or planned in the Capital District that will remove older vehicles from use voluntarily.

Marginal Non-Attainment Status of the Capital District

In accordance with the Clean Air Act Amendments of 1990, the U.S. Environmental Protection Agency (EPA) designated the Capital District area as a marginal non-attainment area for ozone pollution in 1991. This designation was based on the fact that national ambient air quality standards were exceeded at all three Capital District monitoring sites at some time during the three-year period 1988-90^[1]. The Capital District has not been in violation of the National Ambient Air Quality Standards (NAAQS) for ozone since 1989.

As a marginal non-attainment area, the Capital District must show conformity of the Regional Transportation Plan with the Clean Air Act Amendments of 1990, and must abide by actions set forth in an approved State Implementation Plan. Until a new SIP can be prepared and approved, conformity of transportation plans and programs must be based on analysis of the potential

impacts of plans, programs, and projects on air quality. CDTC used the methodology developed cooperatively by the New York State Department of Transportation and the U.S. Environmental Protection Agency. CDTC's draft Plan, *New Visions for the Capital District*, was found to meet the requirements established by the 1990 amendments to the Clean Air Act regarding the conformity of transportation plans. As demonstrated in the following narrative, emission levels of **volatile organic compounds (VOCs)** and nitrogen oxides (NOx)-- the precursors to ozone formation-- are less for the plan build scenario than for the 1990 base year.

Methodology Used to Model the Emission Impacts of the Plan

The methodology that was used is described in the January, 1994 NYSDOT memorandum, *Proposed Transportation Improvement Program Conformity Determination Process Based on EPA's Final Transportation Conformity Rule*. In accordance with these guidelines, regional emissions estimates were generated by using EPA's Mobile Model 5B software for 1990 (base year), 1996 (plan year), and "no-build" and plan "build" scenarios for years 2005, 2015 **and 2021**. **These regional emissions rates were updated by the New York State Department of Environmental Conservation using EPA's Mobile Model 5B software in year 2000**. The estimates of emissions were based upon the most recent population, employment, travel, and congestion information developed by the CDTC staff for the four counties.

The calculation of base year (1990) travel and congestion data (VMT and speed) for the four county Capital District regional highway network was derived from CDTC's Systematic Traffic Evaluation and Planning (STEP) model.^[2] Using TMODEL2 software, the regional STEP model directly generated PM peak hour VMT and speed data attendant to existing land use, traffic, and highway network conditions. Twenty four-hour estimates were generated by factoring the PM peak hour trip set in accordance with NYSDOT's guidelines. For this exercise, the factor used to adjust the trip set was derived from hourly traffic distributions at more than 100 locations in the Capital District.

In order to evaluate the impact of the TIP on emissions, the impacts of a "no-build" scenario were evaluated. The no-build scenario is a hypothetical scenario that would result if the TIP were not implemented. The networks used for the 2005, 2015 **and 2021** "no-build" scenarios assume projects in the TIP would not be implemented.

Travel demand for the year 2005, 2015 **and 2021** "no-build" scenarios was simulated using Capital District Regional Planning Commission (CDRPC) official forecasts of households and employment, and CDTC forecasts of vehicle ownership. These forecasts are documented in the CDTC reports, *Forecasts of Regional Traffic Growth for Use in the Year 2000 Needs Estimate, November 1, 1989* and *Analysis of Year 2000 Congestion Levels in Critical Corridors of the Capital District, October, 1993*.

For build conditions for years 2005 and 2015, travel demand forecasts were prepared that were consistent with achievements expected from implementation of the *New Visions* plan. With full implementation of the *New Visions* plan, increases in daily vehicle travel will be dampened from the trend forecast of 30% (1996-2015) to approximately one-third to one-half that level. This will occur through a combination of substitution of communication for travel, increased carpooling, increased bus, bike, and/or walk travel, and shorter trip lengths (due to proximity of activities). This dampening of daily vehicle travel was represented in the CDTC STEP model as a 10% reduction in vehicle trips in 2005 with respect to trend growth forecasts, and as a 15% reduction in vehicle trips in 2015 **and 2021**.

The financially constrained plan is based on "steady-state funding". Steady state funding is the currently expected state, federal and local funds would continue at current levels (adjusted for inflation) through the 20-year period, and all federal demo project funds would be received. This scenario makes comparable progress across all plan improvement initiatives. The financially constrained plan is assumed to achieve comparable progress -- **71** percent -- in the reduction in travel that would be achieved by full plan implementation.

The TIP network used in the analysis assumes that all TIP projects are implemented. All non-exempt projects were modeled, as well as a number of exempt projects that will affect intersection capacities. In addition, the year 2015 **and 2021** full plan scenario was modeled that includes TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the *New Visions* Plan.

EPA's Mobile Model 5B emission rates for volatile organic compounds and NOx were applied on a link by link basis using speed and VMT estimates developed in the STEP model for each scenario. VMT was increased by ten percent in all scenarios to reflect summer traffic volumes, since the highest levels of ozone are usually detected in the summer months. The Mobile Model 5B emission rates reflect the most current New York State SIP proposals for upstate non-attainment.

Air Quality Impacts of the *New Visions* Plan

Supplementary Table C-1 presents the results of the emission modeling of the TIP and the *New Visions* Plan impacts. Supplementary Table C-1 indicates that although vehicle miles of travel are forecast to increase in the Capital District between 1996 and the year **2021**, hydrocarbon and nitrogen oxide (NOx) emissions will be reduced under all scenarios. Reduced vehicle emission rates are the primary cause. Compared to the "no-build" scenario, **VOC** and NOx emissions will be reduced by financially constrained *New Visions* Plan, and further reduced by the Full Plan Implementation. The analysis demonstrated that full implementation of the *New Visions* Plan would result in the lowest emissions of any scenario tested.

Conformity Finding

The analysis described above indicates that CDTC's *New Visions* Plan satisfactorily meets the requirements established by the 1990 Clean Air Act Amendments regarding the conformity of transportation programs. The analysis demonstrates that emission levels of **volatile organic compounds** and nitrogen oxides -- the precursors to ozone formation -- are less for the plan implementation scenarios in 2005 and 2015 relative to the "no-build" condition. These levels are dramatically lower than 1990 or 1996 emission levels.

Supplementary Table C - 1: Air Quality Impact of the *New Visions* Plan

Scenario	Volatile Organic Compounds (VOCs) Emissions in Kilograms Per Day	Nitrogen Oxides (NO _x) Emissions in Kilograms Per Day	Daily Vehicle Miles Traveled (Thousands)
1990	52,182	59,954	17,740
1996	55,912	62,234	20,470
Year 2005 No-build	42,790	46,332	23,979
Year 2005 with Financially Constrained New Visions Plan	38,912	44,177	22,447
Year 2015 No-build	22,338	18,114	26,581
Year 2015 with Financially Constrained New Visions Plan	18,756	16,724	23,739
Year 2015 with full <i>New Visions</i> Plan ²	17,565	16,184	22,739
Year 2021 No-build	19,742	12,473	27,773
Year 2021 with Financially Constrained New Visions Plan	16,564	11,540	24,935
Year 2021 with full <i>New Visions</i> Plan ²	15,479	11,149	23,797

1. The "Financially Constrained New Visions Plan" for 2005, 2015 and 2021 includes the TIP network as well as the VMT reduction that would result from the implementation of the financially constrained *New Visions* Plan. It is assumed that 71% of the VMT reduction of the full implementation of the plan would be achieved by the financially constrained plan.
2. "Year 2015 with full *New Visions* Plan" and "Year 2021 with full *New Visions* Plan" includes TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the *New Visions* Plan.

This section was revised on September 27, 2000.

[1] Determination of the compliance of the ozone standard for the Capital District is based on data collected at monitoring sites located at the Loudonville Reservoir in Albany County, Skidmore College in Saratoga County, and Mont Pleasant High School in Schenectady County. The compliance status is determined by the most recent three consecutive years of air quality data; non-attainment is designated if the standard of 0.12 ppm (one-hour average) is exceeded three times over the monitoring period.

[2] Details concerning the regional STEP model and its calibration are contained in a separate document, Systematic Traffic Evaluation and Planning (STEP) Model - User's Guide and Documentation of Applications, July, 1991.