

STARK COUNTY AREA TRANSPORTATION STUDY
TRANSPORTATION IMPROVEMENT PROGRAM 2008-2011
STARK COUNTY, OHIO

Final Document
April 2007

Prepared by

Stark County Area Transportation Study
201 Third Street NE, Suite 201
Canton, Ohio 44702

The contents of this document represent cooperative efforts involving the following agencies: US Department of Transportation, Ohio Department of Transportation, Stark County Area Transportation Study, and the Stark Area Regional Transit Authority. Funding for the preparation of this document was provided by the US Department of Transportation Federal Highway Administration and Federal Transportation Administration, the Ohio Department of Transportation, Stark County, and the cities of Alliance, Canton, Louisville, Massillon, and North Canton.

TABLE OF CONTENTS

I. INTRODUCTION	1
TIP Development	1
SCATS STP and CMAQ Project Priority Rating System	2
SCATS Transportation Enhancement Project Priority Rating System.....	3
SCATS Funding Policies	6
Planning Analysis	7
Public Involvement	8
Summary	9
II. TRANSPORTATION PROJECT LISTINGS	10
Status of Previous TIP Projects.....	10
<i>Table 1 – Status of Previous TIP Projects</i>	<i>10</i>
FY 2008-2011 TIP Highway Projects.....	13
<i>Table 2 - SCATS FY 2008-2011 Highway Project Listing</i>	<i>14</i>
TIP Table –16 pages	15
TIP Map	16
Statewide Line Items.....	17
III. TRANSIT PROJECTS	20
<i>Table 3 – SCATS Transit Table</i>	<i>22</i>
<i>Table 4 –ODOT Format Transit Table.....</i>	<i>28</i>
IV. FUNDING	29
Highway Fiscal Constraint.....	29
<i>Table 5 - Summary of Federal, State and Local Usage by Fiscal Year.....</i>	<i>30</i>
<i>Table6 - SCATS Program Fiscal Constraint</i>	<i>31</i>
Other Highway Programs Fiscal Constraint	32
Transit Fiscal Constraint	32
Maintenance, Operation And Preservation Of The Existing System	33
APPENDIX A -ENVIRONMENTAL JUSTICE ASSESSMENT	34
Introduction.....	34
<i>EJ Target area map</i>	<i>36</i>
Travel Time to Work	37
Impact Analysis	37
<i>Impact project and impacted zone map</i>	<i>40</i>
APPENDIX B - AIR QUALITY CONFORMITY ANALYSIS	41
Introduction.....	41
Nonattainment Area Designation and Redesignation Plan.....	41
Interagency Consultation	42
Latest Planning Assumptions.....	44
Latest emissions modeling.....	44

TCM Implementation.....	45
Public involvement process	45
Plan mobile source emissions budget test results	46
Meets the emissions budget test.....	48
Final Conformity Determination.....	48
SCATS Resolution FY 2007-9	49
SCATS 2008-2011 TIP Conformity Analysis Technical Memo	51

I. INTRODUCTION

The Transportation Improvement Program or TIP is the schedule of transportation improvements recommended for implementation within the next four years. It is, therefore, the product of the transportation planning process. In Ohio, the TIP is a biennial document adopted every 2 years to coincide with the Ohio biennium budget.

TIP Development

The TIP is developed from both the short and long range planning processes. Major projects generally originate from the SCATS Long-range Transportation Plan. This plan recommends the location and type of improvements to meet future traffic demands. Most other projects come from transportation management systems. These systems analyze conditions on the existing system and identify projects maintain an acceptable condition or to bring the system up to standards. SCATS is not a project implementer. All projects in the TIP must have a project sponsor who initiates the project and applies for funding.

Project selection depends on the types of projects and source of funding. ODOT selects Major New Capacity projects through the Transportation Review Advisory Council (TRAC). This nine-member committee ranks proposed projects based on objective criteria. ODOT has other selection criteria for safety, transportation enhancement and local bridge projects. These projects are funded through the appropriate ODOT office in Columbus.

Each ODOT District has a budget for bridge and roadway projects. The districts develop a work program to determine how to manage these funds. Bridge, capacity, pavement and safety management systems help the district determine the type and priority of projects. The district then submits a program of projects to fit available funding and satisfy other criteria.

The County Engineers Association has an allocation of STP funds for projects on the county highway system. It funds projects submitted by the individual county engineers.

SARTA is allocated federal transit funds by formula to fund capital projects. Other FTA funds are available on a competitive basis.

To develop the TIP, SCATS meets with the appropriate officials from the municipalities, county, state and the Stark Area Regional Transit Authority to update the previous TIP to reflect the status of each project. As new funds become available and communities develop programs, projects are submitted to SCATS.

The SCATS Policy Committee selects projects for funding using the SCATS allocation of STP, CMAQ and Transportation Enhancement funds. The SCATS Policy Committee has developed a project selection process to select and prioritize projects. The process rates STP and CMAQ projects using the following criteria shown below:

SCATS STP and CMAQ Project Priority Rating System

Economic Development (subjective) Up to 13 Points

- 8 points for projects, which encourage Industrial development.
- 5 points for projects that encourage other economic development.

Fair Share Up to 6 points

- 4 points to projects in communities that have received less than 80% of fair share
- 2 points to projects in communities that have received more than 80 but less than 100% of fair share
- 0 points to projects in communities that have received fair share
- 2 additional points for projects that benefit more than one community

Environmental Factors (subjective) Up to 7 points

- Up to 5 points for projects that have the least negative SEE effects.
- Up to 2 points for projects which are multimodal

Financial Factors Up to 8 points

- Up to 8 points for projects with higher local match

System Planning Up to 10 points

Corridor Completion

- Up to 5 points for projects which complete corridors or close gaps (Examples Include Bottleneck eliminators)

Continuity

- Up to 5 points for projects that connect roads or eliminate jogs

Safety/Engineering Factors Up to 17 points

- Safety - up to 17 points for projects that specifically improve safety problems
- 5 points minimum for projects that widen roads with narrow lane widths
- 17 points for critical repair/replacement projects (i.e. Closed or posted bridges)

Traffic Factors Up to 22 points

Future Traffic

- 11 points if DADT is >25,000
- 9 points if DADT is >20,000
- 7 points if DADT is >15,000
- 5 points if DADT is >10,000
- 3 points if DADT is >5,000
- 1 point if DADT is <5,000

Existing Congestion

- 11 points if V/C >1.2
- 8 points if V/C > 1.0
- 5 points if V/C >.0.7
- 2 points if V/C <0.7

Readiness Up to 7 points for projects that can be constructed first

- 5 Points if plans are filed
- 2 Points if R/W acquisition is complete or no R/W required

System Preservation Up to 10 points

- Up to 10 points for projects which maintain the existing system as opposed to expansion

100 Total points Adopted May 19, 1997

Each project is scored and projects ranked for funding. The project rank is not the only determinant for programming projects. Other factors considered in programming include the length of time required for the preliminary engineering and right-of-way acquisition phases and the availability of funds by funding category. Finally, SCATS must consider the priority rating the implementing agency assigns to the project.

SCATS Transportation Enhancement Project Priority Rating System

Due to their nature, a separate project selection priority system is used for transportation enhancement projects. Upon receipt of the application from the sponsor, the SCATS staff conduct an evaluation using the following criteria:

Project Delivery. Sponsor's past performance on the delivery of ODOT projects, OPWC projects, or other state-funded projects. The maximum total point value is 15.

15	Project completed in a timely and professional manner with no problems
8	Project completed but with some problems
0	No project delivery experience
-5	Major problems or unsatisfactory performance

Cost Estimates. Determination as to reasonableness and detail of cost estimates. The maximum total point value is 5.

5	Cost estimates are reasonable and have sufficient detail
3	Cost estimates are moderately high or low and have sufficient detail
-5	Cost estimates are not reasonable and/or have insufficient detail, and/or contain ineligible costs

Funding Commitment: Available funding for preliminary engineering, design and the local share of construction. The maximum total point value is 10.

10	Resolution/ordinance with identified available and accessible local share
0	No resolution/ordinance, or document does not contain required information
-5	Reviewer's knowledge of financial difficulty/hardship

Project Quality and Viability. Extent of project's strengths or weaknesses; show of public support; and ability to be awarded within two years of notice. The maximum total point value is 20.

Project Strengths/Weaknesses	
5	Project has no obstacles
3	Project has minor obstacles
-5	Project has major obstacles

Demonstration of public awareness	
5	Sponsor has used various methods to inform public of project (e.g. news articles, website, support letters, part of local or regional plan) and virtually no known public opposition
3	Sponsor has made some effort to inform public and minimal opposition
0	Minimal awareness and/or some well documented opposition

Ability to be awarded within two years from notice of funding	
5	Project can be awarded within two years from notice of funding
0	Project can not be awarded within two years from notice of funding

Operation and Maintenance Capabilities	
5	Sponsor has shown strong ongoing maintenance commitment as evidenced by other projects, park facilities, staff knowledge, etc.
0	Sponsor is committed to maintaining the project but there are some potential issues with maintenance
-5	Maintenance commitment has not been made and/or clear evidence of lack of maintenance on other facilities, parks, projects, etc.

Category I - Historic and Archaeological

Project Usage. Estimated user base within a logical distance from the project. This is the approximate number of people who may have a direct benefit from the proposed project on an annual basis (e.g. the number of visitors to the site or facility, or the number of vehicles driving past a site). The maximum total point value is 15.

15	>20,000
10	5,000 to 20,000
5	<5,000

Historical Importance. Extent that the project preserves a historically or archaeologically significant site. The maximum total point value is 15.

15	Site is a National Landmark
10	Site is on National Register
5	Site is eligible for inclusion on National Register

OR New Transportation Museums

15	Construction of a new facility or wing to an existing facility (enhances existing facility)
10	Conversion of an existing facility, such as railroad stations or historic properties (stand-alone)
5	The purchase of artifacts or displays for the creation and operation of the facility.

Historical Characteristics. Number of historic characteristics the project possesses. The maximum total point value is 15.

5	The site is representative of a significant period in Ohio's history
---	--

5	The site involves the use of materials or techniques that are historically or archaeologically unique, or is one of only a few remaining examples of a once common structure/site in Ohio
5	The site was designed, constructed or occupied by a person of historic significance

Category II - Scenic and Environmental

Estimated user base within a logical distance from the project. The user base is a factor of census and employment data for individuals within a one-mile area surrounding the project. An alternative user base is the number of vehicles that pass the location on a daily basis (ADT). The maximum total point value is 15.

Residents & Workers		OR	Vehicles	
5	<5,000		5	<20,000
10	5,000 to 20,000		10	20,000 to 50,000
15	>20,000		15	>50,000

Project Characteristics. Degree of the project's environmental and visual impact. The maximum total point value is 35.

15	The project will remove an existing visual blighting influence or will substantially enhance the visual environment
10	The project is a good use of public dollars that can be quantified with short- and long-range economic benefits
4	The project creates a visual impact, and is unique to the area's identity
4	The project will save a site that has a major threat to be lost
2	The project is located within a historic district currently listed on the National Register of Historic Places

Category III - Bicycle and Pedestrian Projects

Relationship to Transportation System. Need(s) the proposed project will address. The maximum total point value is 25.

10	Included in the SCATS bicycle plan
5	Included in an adopted local bicycle or pedestrian plan
10	Completion of a missing link on a state or countywide wide facility
5	Completion of a missing link on a local facility, or extension to existing trail
3	Provides new access to major destinations such as schools, shops, transit facilities, park and ride lots and other major community facilities
2	Enhances existing facility (e.g. benches, lighting, etc.)

Project Usage. Estimated user base within a logical distance from the project. The user base is a factor of census and employment data. A three-mile area is used for bicycle projects and a one-mile area is used for pedestrian projects. The maximum total point value is 10.

10	> 20,000
8	15,001 to 20,000
6	10,001 to 15,000
4	5,000 to 10,000
2	< 5,000

Project Characteristics. Degree to which the project addresses existing or future safety problems for bicyclists and/or pedestrians along the existing corridor. The maximum total point value is 15.

Legal Speed Limit 0-5	5	> 50 MPH
	4	40 to 50 MPH
	3	30 to 40 MPH
	1	<30 MPH
	0	No alternative roadway

Conflict Factor 0-10	4	Provide safe crossing at railroads, roadways or rivers
	4	Provide safe accommodation for bicyclists and/or pedestrians parallel to railroads, freeways or rivers
	1	Eliminates one or more intersections
	1	Eliminates ten or more driveways

The SCATS Policy Committee will make the final determination of funding for a project. They will be assisted by the SCATS Technical Advisory Committee that will meet to review the projects and staff rating in a work session and make funding recommendations to Policy Committee. The ranking is a means to help the committee generally prioritize and rank projects. Other factors the Technical Advisory Committee determines to be relevant may be taken into consideration such as geographical distribution and whether the project is stand alone or in conjunction with another planned project.

SCATS Funding Policies

In order to contain project costs and fund additional projects the SCATS Policy Committee has adopted the following policies for administering TIP projects:

- Preliminary engineering will not be funded from SCATS federal funding allocations. Preliminary engineering includes all activities in both the preliminary and final development phases of the ODOT project development process. This includes the development of alternatives, the environmental

assessment and the final construction plans, specifications and estimates

- A cap will be placed on the amount of SCATS federal funding for each project. This cap will be 120% of the federal funding approved at the time the project was initially placed on the TIP. If the final estimate for a project shows the need for funds in excess of 120% of the original amount the SCATS Policy Committee must concur. If the amount is in excess of 150%, the project sponsor must be able to show the reasons for the cost overrun. This Policy will not prevent a project from proceeding if the project sponsor is willing to fund the federal share in excess of the 120 % amount. The cap is included in the project agreement with ODOT and ODOT will not allow the federal funding to exceed the cap without SCATS concurrence.
- The Committee will only guarantee funding for a project phase for a specific fiscal year. If funds for the project phase are not encumbered in the fiscal year shown in the most recent TIP, the funds will be assigned to another project. Project sponsors for these projects may reapply for funds in subsequent fiscal years, but this application will be considered with all new projects. The Policy Committee and staff will work with the project sponsor and ODOT to attempt to encumber all funds in the year shown in the TIP. They may be able to reschedule projects before the end of the fiscal year to avoid lapse of obligation authority and project funding.
- All new TIP projects are now funded through a project funding agreement. This funding agreement provides project information and description beyond what is normally shown in the TIP. It also contains provisions for the project monitoring. Finally, it provides for funding commitments to project sponsors beyond the TIP period.

Planning Analysis

All projects regardless of source of funding or process of selection, are reviewed for consistency with the SCATS Transportation Plan. The Plan was developed around the following objectives and strategies:

Objectives:

1. Adopt a “system preservation” policy towards Stark County roadways in conjunction with ODOT’s system preservation policy.

Strategies:

A. prioritize funding for system preservation

B. implement Intelligent Transportation System strategies

2. Provide a multi-modal transportation system that includes various modal options, such as pedestrian access, bikeways, mass transit, rail, and air facilities.

Strategies:

A. evaluate and adjust SARTA’s routes to provide adequate transportation to and from suburbs and center cities for jobs

B. support SARTA’s continued curb-to-curb programs to serve the aging population

C. utilize federal transportation dollars for scenic improvements, historic improvements, and pedestrian and bike trails

D. structure new subdivisions to include pedestrian and bicycle facilities (sidewalks and trails), tying into the countywide trail system where possible

E. make places walkable for aging populations in response to new demographics and special needs

3. Provide a congestion free transportation system.

Strategies:

A. work cooperatively with appropriate agencies to create and implement countywide access management regulations

B. solve existing congestion before building new roads in undeveloped areas

4. Provide an efficient, safe and economically sound transportation system.

Strategies:

A. identify and target high crash locations for safety improvements

B. ensure projects are sensitive to social, economic and environmental effects

A fiscal analysis of the TIP is also made to determine funding availability and project priorities may be adjusted to stay within fiscal constraints. An air quality conformity analysis must be conducted on the entire TIP and Plan comparing the emissions for the TIP/Plan build scenario with the established emission budgets. The documentation is included in the appendix. After completion of these steps, the draft TIP is reviewed with the public and the Citizens' Advisory Council and approved for submission to ODOT by the SCATS Policy Committee. SCATS then transmits the draft document to ODOT and FTA.

Public Involvement

The Federal planning regulations call for a formal public involvement process. The SCATS Public Participation list has been expanded to include local/State land use management, natural resource, environmental protection, conservation and historic agencies. SCATS will provide these agencies with the opportunity to review and comment on the Plan and TIP. SCATS will prepare GIS layers to allow the comparison of transportation plans with available conservation plans and maps and/or with available inventories of historic or natural resources. The following paragraphs describe the SCATS Public Involvement Process as it relates to the TIP. During its drafting, information on the SCATS TIP was presented to members of the Citizens' Advisory Council, the SCATS Policy Committee, and the RPC at their regularly scheduled meetings. The development of the SCATS TIP is coordinated with the State Transportation Improvement Program and SCATS utilizes the STIP public involvement procedures which provide for review of the complete package of all the MPO TIPs and the STIP in each ODOT District and each MPO during a two week public comment period. The SCATS TIP is distributed to area libraries during the comment period. A news release on the availability of the draft SCATS TIP was issued by the SCRPC Public Relations office.

A public meeting was held on April 12, 2007 at 1:30 PM at the Goodwill Board meeting room. During the comment period, two written comments were received. The Army Corps of Engineers comment directed us to the regulations pertaining to obtaining Corps of Engineer permits for projects affecting navigable waters and wetlands. The Ohio Department of Natural Resources Division of Water comment directed us to the floodplain regulations. Both of these comments only highlighted existing project development requirements and do not call for any TIP amendments.

SCATS will provide opportunities for public review of major amendments to the TIP, such as change in design concept or scope of project on a major transportation corridor. Also considered major are amendments affecting the TIP fiscal constraint or air quality conformity determination.

Summary

The TIP report is divided into five sections. The first section is this introduction. In section II, highway projects are presented in a series of tables and on a map displaying the location of projects. Recommended transit projects are presented in section III. Section IV outlines revenues and costs of the highway and transit improvements. Appendix A includes a documentation of the impact of the projects on low-income and minority populations as required by the President's executive order on environmental justice. Appendix B documents the conformity of the TIP and Plan with the Clean Air Act Amendments of 1990.



II. TRANSPORTATION PROJECT LISTINGS

This section of the TIP details the TIP Projects. It includes a status report on the project obligations and a listing of the current TIP projects.

Status of Previous TIP Projects

The status of projects from previous TIPs must be monitored. The table below shows the status of these projects from the SCATS FY 2006-2009 TIP. All projects are included which had funding programmed in FY 06 or 07. Projects may not proceed as programmed in previous TIPs. Principle reasons for the delay are lack of funds, changes in priorities, or delays in plan preparation, review and approval. No Transportation Control Measures (TCMs) were required for air quality attainment or maintenance in Stark County and therefore no required TCMs were implemented in the SCATS FY 2006-2009 TIP. The following information is included in the table:

PID# - Project identification number from ODOT's project management system.

Project Designation - ODOT uses the County, route and section as the project designation. The STA is for Stark County. The route number is next. Section numbers expressed as hundredths (xx.xx) are the mileage from the South or West county line.

FY Scheduled by Phase of project

In each of the three columns, the scheduled State Fiscal Year is shown for each Phase of the project. State Fiscal Years begin on July 1 (FY 2006 begins July 1, 2005).

Status

The status is shown for each project not yet under construction. If under construction or completed UC is shown.

Table 1 – Status of Previous TIP Projects

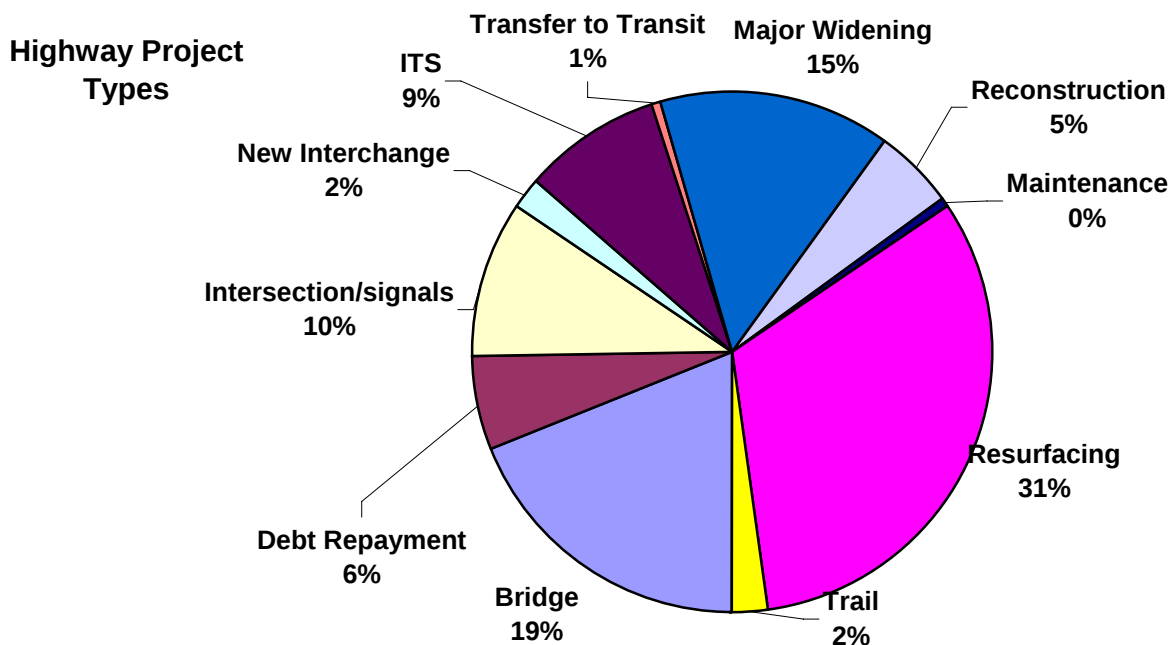
PID	Project Name	Lead Agency	FY Scheduled by Phase			Status
			PE	R/W	Construction	
10748	STA/COL -US 30-22.11/0.00	ODOT	2006			Project suspended
19945	STA-SR800-04.35	ODOT			2007	UC
20299	STA-SR 44- 4.87	ODOT		2007		On schedule
20344	STA-US 30-18.35	ODOT			2007	On schedule
20412	STA-IR 77-10.33	ODOT			2006	UC
20430	STA-SR241-12.82	ODOT		2006	2008	Construction Rescheduled for FY 09
20431	STA-SR687-02.46	Stark County			2006	UC
21317	STA-IR 77- 0.29	ODOT	2006			Project on hold
22486	STA-US 62-37.02	ODOT			2006	UC
22578	STA-SR 21-13.66	ODOT			2006	UC
22867	STA-CR 98- 0.00	Stark County		2007	2009	On schedule

22872	STA-SR172-13.90	Canton		2006	2007	RW Authorized, Construction on Schedule
22906	STA-SR 43- 0.00	ODOT			2007	UC
23703	STA-US 62- 8.32	ODOT	2006		2006	UC
23754	STA-US 30/SR 297- 6.03/0.17	ODOT			2007	UC
24074	STA-SR 43-12.38	ODOT			2006	UC
25071	STA-SR 236-0.41	ODOT			2006	UC
25072	STA-SR 225-0.76	ODOT			2006	UC
25209	STA-SR 30/44-19.16/ 8.68	ODOT			2006	UC
25432	STA-SR 93/US 62/SR 212-0.00/0.00/0.00	ODOT		2006	2008	On schedule
25450	STA-SR172- 8.83	ODOT			2007	UC
25636	STA-SR 43/43D-12.03/0.00	ODOT			2007	On schedule
76006	STA-Canton Market Ave Signals	Canton			2006	UC
76175	STA-SR 44-18.50	ODOT			2006	UC
76263	STA-SR153-14.35	ODOT			2006	UC
76439	STA-SR800-07.05	ODOT	2006	2007	2009	Construction Rescheduled for FY 12
76440	STA-SR 43-10.26	ODOT		2006	2008	Project Dropped
76473	STA-SR 44-10.34	ODOT			2007	UC
77482	STA-SUM ITS	ODOT	2006		2008	PE authorized Construction on Schedule
78366	STA-Fulton Signals Phase 2	Canton			2006	UC
78402	STA-CR 348-0.00	Stark County			2007	UC
78610	STA-Sign Upgrade (west)	ODOT			2006	UC
78613	STA-US 30 Signing	ODOT			2006	UC
78679	STA Sign Upgrade (US-30) 2007	ODOT			2007	UC
79440	STA-SR 297- 03.39 (Whipple Ave)	Stark County			2006	UC
79514	STA-Ohio & Erie Canal Towpath Trail	Stark County Park District	2006		2008	PE authorized Construction on Schedule
79629	STA-SR 619 Traffic Study	ODOT	2006			PE authorized
79894	STA-SR 627- 3.26	Stark County	2006	2007	2008	Funds transferred to ODOD
80089	STA-Long Line Pavmt Marking 08	Stark County			2007	On Schedule
80090	STA-Cleveland Ave Bridge	Stark County	2006		2008	PE authorized Construction on Schedule
80669	STA-Treemont Ave (CR 510)	Stark County	2006		2008	PE authorized Construction on Schedule
80676	STA-CR 190-0.48 Applegrove	Stark County	2006	2008		On Schedule
80678	STA-Market/Lake Center	Stark County	2006	2009		On Schedule
80679	STA-Riverland Ave	Stark County	2006	2008	2011	On Schedule
80680	STA-CR 44-4.65 (Paris Rd)	Stark County	2007	2009		On Schedule
80917	STA-US 62 Corridor Study	ODOT	2007			PE Authorized
81002	STA-SR 172-13.98/MRTA	Akron Metro RTA			2007	On Schedule
81280	STA-CR 170-2.85 (Trump Ave)	Stark County	2006	2009		On Schedule
81282	STA-CR 190-0.00 (Werner Church)	Stark County	2006	2009		On Schedule
81283	STA-CR 196-0.50 (55th St)	Stark County	2006	2009		On Schedule
81284	STA-CR 240-1.42 (12th St)	Stark County	2006	2008	2009	On Schedule
81896	STA-SR- 172-8.78	ODOT	2007	2008	2008	On Schedule
81897	STA-SR- 241-8.83	ODOT	2007	2008	2008	On Schedule

82003	STA-Cleveland Ave (CR 66)	Stark County	2007	2008	2009	On Schedule
N/A	Farebox replacement project	SARTA			2006	Authorized
N/A	Replacement <30-ft buses	SARTA			2006	Authorized
N/A	Gateway renovation	SARTA			2006	Authorized
N/A	Development/comprehensive planning	SARTA	2006			Authorized
N/A	Preventive maintenance	SARTA			2006	Authorized
N/A	Communications system	SARTA			2006	Authorized
N/A	Computer software	SARTA			2006	Authorized
N/A	Misc. support equipment	SARTA			2006	Authorized
N/A	Computer hardware	SARTA			2006	Authorized
N/A	Rehab pedestrian access/walkways	SARTA			2006	Authorized
N/A	Replacement <30-ft buses	SARTA			2006	Authorized
N/A	Ped Access/Walkways	SARTA			2006	Authorized
N/A	Expansion replica trolleys	SARTA			2006	Authorized
N/A	General development/comprehensive planning	SARTA	2006			Authorized
N/A	Preventive maintenance	SARTA			2006	Authorized
N/A	Misc. support equipment	SARTA			2006	Authorized
N/A	Systemwide farebox replacement	SARTA			2006	Authorized
N/A	Support vehicles	SARTA			2006	Authorized
N/A	Computer hardware`	SARTA			2006	Authorized

FY 2008-2011 TIP Highway Projects

The FY 2008-2011 TIP includes 58 highway projects. All projects have been reviewed by the SCATS Policy Committee and found to be consistent with the Transportation Plan. Projects in the first two years of the TIP are limited to funds available. The SCATS TIP, as demonstrated in the fiscal constraint section, meets this test.



The project selection requirements recognize projects listed in the first year of an approved STIP as an "agreed to" list of projects for subsequent implementation. Projects listed in any of the four years of the approved STIP are eligible for authorization in any other of the four years of the STIP, subject to the project selection requirements.

According to an agreed general rule, projects from the second, third or fourth year may be advanced into the first year following appropriate project selection activities. Any project listed in the four fiscal years may be eligible for authorization at any time within the life of the STIP. In MPO areas, any project phase that is proposed to proceed to federal authorization prior to the year it is shown on the MPO TIP requires that a letter of concurrence be secured by the Program Manager through the District from the affected MPO. This is not intended to constitute a formal amendment to the TIP.

The following table shows each proposed project, the total cost and a listing of funding by project phase and source of funds, the year each phase of the project is scheduled to begin, the type of work to be done, the agency responsible for implementation and the air quality status of each project. A map (Figure 1) shows the location of all projects on the TIP.

Table 2 - SCATS FY 2008-2011 Highway Project Listing

TABLE FIELDS AND CODES

PID#-This field contains the project identification number used by ODOT's project management system for all highway projects which have been assigned a number. This field is also used to label projects on the map.

County-This will be Stark for all SCATS projects

Project Name - Official project name designation used by ODOT for highway projects. Most ODOT sponsored projects use County, Route and Section. Section numbers are the mileage from the South or West county line.

Location and Termini – a descriptive field indicated the extent of the project. Below this is a description of the project components.

Phase and Subphase

Phase	ENG	ROW	CON
Subphases	Prel Dev-Preliminary Development	Acquis - Acquisition	Co Contr – Construction Contract
	Dtl Dsgn – Detail Design	RE Services – Real estate services	Co Engr – Construction Engineering or Inspection

FY - State Fiscal Year is shown for each Phase of the project. State Fiscal Years begin on July 1. (FY 2008 begins July 1, 2007)

Funding Source – Federal or Non-Federal

Fund Description – a description of the type of funds.

Amount - The cost of each phase of a project to be funded during the TIP period is listed.

Project Sponsor – the agency responsible for implementing the project.

Air Quality Status - Indicates if the project is exempt from the calculation of emissions for the air quality conformity analysis or must be included in the analysis.

Remarks - a field included to allow explanatory information concerning the project. SCATS funding caps are listed here.

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
23262	Stark	STA Aqueduct 00.000 0.10 Mile From SR212 & Tuscarawas River, Perform Preliminary Studies to Replace an Aqueduct over the Tuscarawas River for pedestrians using the Ohio & Erie Canal towpath trail.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	Stark Co Park Distr
			2009 ENG	Prel Dev	Federal HP	\$397		
81363	Stark	STA Belden Signals Dressler/Belden Village, Dressler/Everhard, Dressler/Belden Parke Crossing, Dressler/University, Belden Village/Everhard, and Belden Village/Higbee Intersections. Belden Village Traffic Signal System Reconstruction at six intersections:	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	Stark Co Engineer
			2011 CON	CO Contr	Federal CMAQ-SCATS	\$778	Project Cap =\$1,036,800	
			2011 CON	CO Contr	Non-Federal LNTF	\$194		
			2011 CON	CO Engr	Federal CMAQ-SCATS	\$86		
			2011 CON	CO Engr	Non-Federal LNTF	\$22		
80260	Stark	STA Cleveland Ave. SIB Payback SIB repayment Repayment of SIB Loan associated with Construction of Cleveland Avenue, under PID # 14830. SIB encumbrance under PID # 79730. Loan repaid over eight years.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2008 CON	Dbt Service	Federal STP-SCATS	\$531		
			2009 CON	Dbt Service	Federal STP-SCATS	\$531		
			2010 CON	Dbt Service	Federal STP-SCATS	\$531		
			2011 CON	Dbt Service	Federal STP-SCATS	\$531		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor	
82003	Stark	STA Cleveland Ave (CR66) Cleveland Avenue and Mt. Pleasant Street intersection in Lake Township	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	Stark Co Engineer
			2009 ROW	Acquis	Federal	HSIP	\$339		
			2009 ROW	Acquis	Non-Federal	LNTF	\$38		
			2010 CON	CO Contr	Non-Federal	LNTF	\$68		
			2010 CON	CO Contr	Federal	HSIP	\$613		
			2010 CON	CO Engr	Federal	HSIP	\$68		
			2010 CON	CO Engr	Non-Federal	LNTF	\$8		
Intersection improvement at Cleveland Ave. and Mt Pleasant St., which includes the addition of turn lanes and the replacement of the existing traffic signal									
80090	Stark	STA Cleveland Ave Bridge Over the West Branch of the Nimishillen Creek South of Market Ave.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt Now includes OPWC Funding	Stark Co Engineer
			2008 CON	CO Contr	Federal	HP	\$127		
			2008 CON	CO Contr	Non-Federal	LNTF	\$32		
			2008 CON	CO Contr	Non-Federal	LNTF	\$381		
			2008 CON	CO Engr	Federal	HP	\$14		
			2008 CON	CO Engr	Non-Federal	LNTF	\$42		
			2008 CON	CO Engr	Non-Federal	LNTF	\$4		
Replacement of 2-span concrete beam structure with a single span bridge									
79630	Stark	STA Deer Creek Park Ped Bridge From south end of pedestrian bridge approach to north end of pedestrian bridge on Deer Creek Mahoning Valley Connector Trail	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt Project Cap = 1,138,400	Stark Co Park Distr
			2009 CON	CO Contr	Non-Federal	Local	\$579		
			2009 CON	CO Contr	Federal	TEA-SCATS	\$1,025		
			2009 CON	CO Engr	Federal	TEA-SCATS	\$114		
			2009 CON	CO Engr	Non-Federal	Local	\$64		
Construct bicycle/pedestrian bridge at Deer Creek Dam spill way									

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
81383	Stark	STA Duquette Ave (CR39) Begins at SR619 in Lake & Marlboro Townships and ends at the Portage County line	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	Stark Co Engineer
			2009 CON	CO Contr	Non-Federal LNTP	\$125		
			2009 CON	CO Contr	Federal HP	\$501		
			2009 CON	CO Engr	Non-Federal LNTP	\$14		
			2009 CON	CO Engr	Federal HP	\$56		
3R improvement includes resurfacing, repair guardrail, and striping improvements								
22867	Stark	STA Hills & Dales Road CR-98, from SR-241 (Wales Ave.) to Brunerdale Ave.	FY	Phase/Subphase	Fund Source and Type	Amount	Non-Exempt Project Cap =1,200,000 R/W and 5,792,000 Constr	Stark Co Engineer
			2009 CON	CO Contr	Non-Federal LNTP	\$1,303		
			2009 CON	CO Contr	Federal STP-SCATS	\$5,213		
			2009 CON	CO Engr	Non-Federal LNTP	\$116		
			2009 CON	CO Engr	Federal STP-SCATS	\$579		
Widen existing road to 4 lanes with curb & gutters, 5 lanes to be provided at all major intersections. Includes Storm sewer & Traffic Signals.								
77482	Stark	STA/SUM ITS All interstate and interstate look-alikes, in Summit and parts of Stark counties	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2008 CON	CO Contr	Non-Federal State	\$1,240		
			2008 CON	CO Contr	Federal CMAQ	\$11,160		
Design, construction, and systems integration of a freeway management system in Stark and Summit counties. Includes traffic flow detection, cameras, dynamic message signs, and control center equipment.								
80088	Stark	STA Long Line Pavt Marking 09 Various county roads.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	Stark Co Engineer
			2008 CON	CO Contr	Federal STP	\$135		
			2008 CON	CO Engr	Federal STP	\$15		
Polyester Long-Line Pavement Marking - 2009 Program								

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor	
80678	Stark	STA Market Ave. / Lake Center Lake Center to Woodmont Road	FY	Phase/Subphase	Fund Source and Type		Amount	Non-Exempt Project Cap = \$768,000 R/W and \$1,008,000 Construction	Stark Co Engineer
			2009 ROW	Acquis	Non-Federal LNTF		\$160		
			2009 ROW	Acquis	Federal	CMAQ-SCATS	\$640		
			2011 CON	CO Contr	Federal	CMAQ-SCATS	\$756		
			2011 CON	CO Contr	Non-Federal LNTF		\$482		
			2011 CON	CO Contr	Federal	HP	\$1,171		
			2011 CON	CO Engr	Federal	HP	\$130		
			2011 CON	CO Engr	Federal	CMAQ-SCATS	\$84		
			2011 CON	CO Engr	Non-Federal LNTF		\$44		
Addition of turn lane(s) at three intersections. Market Avenue at Lake Center. Market Avenue at Woodmont Road. Lake Center at King Church. Signal coordination.									
82417	Stark	STA Mill Street (TR 259) Bridge over Nimishillen Creek West of Allenford.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	Stark Co Engineer
			2010 CON	CO Contr	Federal	BR	\$834		
			2010 CON	CO Contr	Non-Federal LNTF		\$209		
			2010 CON	CO Engr	Federal	BR	\$93		
			2010 CON	CO Engr	Non-Federal LNTF		\$23		
Replacement of bridge along with improvement to adjacent Mill St/Allenford Ave intersection.									
80588	Stark	STA/SUM Mowing 2008-09 Stark and Summit Counties.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT
			2008 CON	CO Contr	Non-Federal State		\$500		
Two-year mowing of various routes in Stark and Summit Counties.									

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
76007	Stark	STA Navarre Road SW Signals City of Canton	FY	Phase/Subphase	Fund Source and Type		Exempt Project Cap = \$1,000,000	City of Canton
			2011 CON	CO Contr	Federal	CMAQ-SCATS		
						\$797		
			2011 CON	CO Contr	Non-Federal	Local		
						\$199		
			2011 CON	CO Contr	Non-Federal	Local		
79514	Stark	STA Ohio & Erie Canal Towpath Tr From existing trail at Lincoln Way to existing trail at Walnut Ave. Building a 2500 feet towpath trail parallel to SR21 in Massillon	2011 CON	CO Contr	Non-Federal	Local	\$181	Exempt Stark Co Park Distr
			2011 CON	CO Engr	Non-Federal	Local	\$38	
			2011 CON	CO Engr	Federal	CMAQ-SCATS	\$80	
			2009 CON	CO Contr	Federal	HP	\$830	
			2009 CON	CO Engr	Federal	HP	\$80	
82410	Stark	STA Price Street (CR-3) Bridge over Walborn Reservoir Replacement of existing bridge.	FY	Phase/Subphase	Fund Source and Type		Exempt	Stark Co Engineer
			2010 CON	CO Contr	Non-Federal	LNTF		
						\$42		
			2010 CON	CO Contr	Federal	BR		
						\$793		
			2010 CON	CO Engr	Non-Federal	LNTF		
New Transfer	Stark	STA SARTA Buses Transfer to transit for bus purchases	2010 CON	CO Engr	Federal	BR	\$88	Exempt SARTA Project Cap = \$1,080,000
			2008 CON	TRAN	Non-Federal	Local	\$184	
			2008 CON	TRAN	Federal	CMAQ-SCATS	\$900	

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
25842	Stark	STA Sherman Church Avenue From 200 ft north of existing bridge south to County Line.	FY	Phase/Subphase	Fund Source and Type		Exempt	Stark Co Engineer
			2008 CON	CO Contr	Federal	BR		
						\$1,539		
			2008 CON	CO Contr	Non-Federal	LNTP		
						\$81		
		Replacement Of 4 Span Bridge Over Tuscarawas River On Sherman Church Avenue.	2008 CON	CO Engr	Non-Federal	LNTP		
						\$9		
			2008 CON	CO Engr	Federal	BR		
						\$171		
80264	Stark	STA Shuffel Rd. SIB Payback SIB loan payback.	FY	Phase/Subphase	Fund Source and Type		Exempt	ODOT
			2008 CON	Dbt Service	Federal	STP-SCATS		
						\$1,500		
			2009 CON	Dbt Service	Federal	STP-SCATS		
						\$1,500		
		Repayment of \$ 9,760,000 loan for the Construction of the Shuffel Road Interchange, under PID # 23482, STA- 77-17.92.	2010 CON	Dbt Service	Federal	STP-SCATS		
						\$1,500		
			2011 CON	Dbt Service	Federal	STP-SCATS		
						\$1,827		
80669	Stark	STA Tremont Avenue (CR-510) Over SR-21, Tuscarawas River, Railroad tracks.	FY	Phase/Subphase	Fund Source and Type		Exempt	Stark Co Engineer Project Cap = \$1,200,000
			2008 CON	CO Contr	Federal	HP		
						\$495		
			2008 CON	CO Contr	Federal	BR		
						\$981		
			2008 CON	CO Contr	Non-Federal	Local		
						\$594		
			2008 CON	CO Contr	Federal	STP-SCATS		
						\$900		
		Placement of new superstructure on bridge. Work will include steel beams, concrete deck, sidewalk.	2008 CON	CO Engr	Federal	STP-SCATS		
						\$100		
			2008 CON	CO Engr	Federal	BR		
						\$109		
			2008 CON	CO Engr	Non-Federal	Local		
						\$66		
			2008 CON	CO Engr	Federal	HP		
						\$55		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
25433	Stark	STA SR 21-08.25/12.39 From Massillon South limits to Finefrock Rd & Massillon North Limits to Lawrence Twp Line.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2008 CON	CO Contr	Federal BR	\$6,960		
			2008 CON	CO Contr	Federal NHS	\$2,640		
			2008 CON	CO Contr	Non-Federal State	\$2,400		
			2008 CON	CO Engr	Non-Federal State	\$1		
			2008 CON	CO Engr	Federal NHS	\$4		
		Minor Rehab/resurfacing of pavement, Redeck & Paint Bridge #1248 L&R over Tuscarawas River						
23753	Stark	STA SR 21-08.98 Erie St Bridge over SR 21.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2008 CON	CO Contr	Non-Federal Local	\$181	Project Cap is \$724,000	
			2008 CON	CO Contr	Non-Federal State	\$40		
			2008 CON	CO Contr	Federal NHS	\$160		
			2008 CON	CO Contr	Federal STP-SCATS	\$724		
			2008 CON	CO Contr	Federal NHS	\$800		
			2008 ENG	Dtl Dsgn	Non-Federal State	\$200		
		Redeck with Widening and painting of one structure in Stark County on SR 21.						
76444	Stark	STA SR 21-10.24 From SR241 to Massillon northern corporation limits	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	D-4 Production
			2011 CON	CO Contr	Federal NHS	\$1,520		
			2011 CON	CO Contr	Non-Federal State	\$380		
		Minor rehabilitation resurfacing. Miscellaneous bridge work to 5 culverts.						
76344	Stark	STA US 30-00.00 Wayne County line to Massillon West Corp line	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	D-4 Production
			2008 CON	CO Contr	Non-Federal State	\$1,020		
			2008 CON	CO Contr	Federal NHS	\$4,080		
			2008 CON	CO Engr	Federal NHS	\$2		
		Minor rehabilitation/resurfacing. Re- deck and painting of Structure # 7607164, STA-30-0.00						

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor	
80681	Stark	STA SR 43-17.24 55th Street to Mount Pleasant Major widening and reconstruction.	FY	Phase/Subphase	Fund Source and Type		Amount	Non-Exempt	Stark Co Engineer
			2008	ENG	Dtl Dsgn	Federal HP	\$1,000		
			2009	ROW	Acquis	Federal HP	\$1,640		
25408	Stark	STA SR 43/619-25.00/0.00 SR 43 from State St to Middlebranch. SR 619 from Summit County Line to SR 43 Minor Rehab resurfacing & Minor repairs to STR 619-2.05 and STR 43-26.79 Additional resurfacing on SR 619.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT
			2008	CON	CO Contr	Federal NHS	\$600		
			2008	CON	CO Contr	Federal NHS	\$900		
			2008	CON	CO Contr	Non-Federal State	\$150		
82483	Stark	STA SR 44-04.26 Bridge over branch of Littles Sandy Creek Remove and replace existing structure	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	D-4 Production
			2009	CON	CO Contr	Non-Federal State	\$350		
80680	Stark	STA CR 44-4.65 (Paris Ave) Paris Ave at Meese Road. Paris / Meese intersection improvement, consisting of profile corrections, widening.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	Stark Co Engineer
			2009	ROW	Acquis	Federal HP	\$320		
			2009	ROW	Acquis	Non-Federal LNTP	\$80		
			2011	CON	CO Contr	Federal HP	\$515		
			2011	CON	CO Contr	Non-Federal LNTP	\$900		
			2011	CON	CO Engr	Non-Federal LNTP	\$100		
			2011	CON	CO Engr	Federal HP	\$57		
77858	Stark	STA US 62 03.96 US62 from bridge to Navarre northern corporation limits - On SR212 from Tuscarawas County to Tusc. County Reactive maintenance resurfacing.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT
			2011	CON	CO Contr	Non-Federal State	\$490		
			2011	CON	CO Contr	Federal NHS	\$1,960		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor	
25536	Stark	STA US 62-22.19 West Canton Corporation Limit to Louisville West Corporation Limit.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT Project Cap = \$254,400 construction
			2008 CON	CO Contr	Federal	STP	\$2,920		
			2008 CON	CO Contr	Federal	STP-SCATS	\$212		
			2008 CON	CO Contr	Non-Federal State		\$208		
Minor Rehab and resurface of US-62 From SLM-22.19 to 27.40.									
76339	Stark	STA US 62-27.40 From Louisville western corporation limit to State Street.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	D-4 Production
			2011 CON	CO Contr	Federal	STP	\$4,800		
			2011 CON	CO Contr	Non-Federal State		\$1,200		
			2011 CON	CO Contr	Federal	STP	\$320		
			2011 CON	CO Contr	Non-Federal State		\$80		
Minor rehabilitation/resurfacing.									
82606	Stark	STA US 62-32.80 US 62 and Paris Intersection	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	Stark TID SCATS Project Cap = \$403,440
			2010 CON	CO Contr	Federal	STP-SCATS	\$303		
			2010 CON	CO Contr	Non-Federal State		\$59		
			2010 CON	CO Contr	Non-Federal Local		\$17		
			2010 CON	CO Engr	Federal	STP-SCATS	\$34		
			2010 CON	CO Engr	Non-Federal State		\$7		
			2010 CON	CO Engr	Non-Federal Local		\$2		
Intersection safety improvement including turn lanes and signalization									
25542	Stark	STA US 62-38.99 .04 Miles North of SR619 to Portage, and US 62 From SR 183 to Columbiana County Line.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT
			2008 CON	CO Contr	Federal	STP	\$1,285		
			2008 CON	CO Contr	Non-Federal State		\$250		
			2008 CON	CO Contr	Non-Federal Local		\$206		
Minor Rehab resurfacing From SR619 to Portage County. Concrete overlay on structure 21.09 and repair, overlay to structure 19.16 and 23.15. US 62 From SR 183 to Columbiana County Line.									

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
24879	Stark	STA IR 77-00.29 Two structures STA-77-0029 L&R over CR275.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2010 CON	CO Contr	Non-Federal State	\$170		
			2010 CON	CO Contr	Federal IM	\$1,530		
			2010 ENG	Dtl Dsgn	Non-Federal State	\$130		
		Redecking, Widening and painting of two structures, over CR275 (Gracemont)						
21317	Stark	STA IR 77-00.29 0.29 Miles North of the Tuscarawas County LinE.	FY	Phase/Subphase	Fund Source and Type	Amount	Non-Exempt	ODOT
			2010 ROW	Acquis	Non-Federal Local	\$2,171	Stark TID no longer Project Sponsor	
			2010 ROW	Acquis	Federal HP	\$684		
		Gracemont Interchange Access Study						
25432	Stark	STA SR 93/212-0.00/0.00 On SR 93 from Tuscarawas Co Line to Harmon Ave in Brewster and from SR 172 to N of bridge in Canal Fulton. Add'nl resurfacing on SR 212.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2008 CON	CO Contr	Federal STP	\$360		
			2008 CON	CO Contr	Non-Federal State	\$90		
			2008 CON	CO Contr	Federal STP	\$2,650		
		Minor Rehab/resurfacing, overlay and Paint Bridge # 430, overlay to Bridge # 1173. . Structure replacement (#7604955), at SLM STA-93-9.99 Culvert replacement at SLM STA-93-16.70						

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
22862	Stark	STA SR 153-05.50 (Main Street) From Louisville West Corp to SR 44	FY	Phase/Subphase	Fund Source and Type		Exempt Project Cap = \$616,000 R/W and \$3,778,000 Constr	City of Louisville
			2008 ROW	Acquis	Non-Federal	Local		
						\$154		
			2008 ROW	Acquis	Federal	CMAQ-SCATS		
						\$616		
			2010 CON	CO Contr	Non-Federal	Local		
						\$850		
			2010 CON	CO Contr	Federal	CMAQ-SCATS		
		Reconstruct & Rehab of SR153 with new curb gutters, sidewalk pavement Widening West of California . New traffic signal at California.				\$3,400		
			2010 CON	CO Contr	Non-Federal	State		
						\$600		
			2010 CON	CO Engr	Federal	CMAQ-SCATS		
						\$378		
			2010 CON	CO Engr	Non-Federal	Local		
						\$95		
25581	Stark	STA SR 153/173-7.81/0.00 From Louisville eastern Corp Limits to Parks Avenue. SR 173 from SR 44 to US 62.	FY	Phase/Subphase	Fund Source and Type		Exempt	ODOT
			2009 CON	CO Contr	Non-Federal	State		
						\$240		
		Minor Rehab-resurfacing of SR153/SR173 includes Minor repairs to Bridge # STA- 173-4.25	2009 CON	CO Contr	Federal	STP		
						\$960		
81280	Stark	STA CR 170 02.85 (Trump Ave) Intersection of Trump Avenue (CR-170) and Georgetown Street (CR-112) in Canton Township.	FY	Phase/Subphase	Fund Source and Type		Exempt	Stark Co Engineer
			2009 ROW	Acquis	Federal	HP		
						\$240		
			2010 CON	CO Contr	Federal	HP		
						\$494		
			2010 CON	CO Contr	Non-Federal	LNTF		
		Intersection improvement, includes replacing existing signal and addition of turn lanes if warranted.				\$649		
			2010 CON	CO Engr	Non-Federal	LNTF		
						\$72		
			2010 CON	CO Engr	Federal	HP		
		Minor rehabilitation/resurfacing.				\$55		
76341	Stark	STA SR 172/241 0.00/3.64 From Wayne County line to Massillon western corporation limits. SR 241 from SR 93 to US30.	FY	Phase/Subphase	Fund Source and Type		Exempt	D-4 Production
			2011 CON	CO Contr	Non-Federal	State		
		Minor rehabilitation/resurfacing.				\$1,500		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
80686	Stark	STA SR 172 08.83 Massillon to Canton	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	D-4 Maintenance
		Safety reconstruction, related safety improvements, including access management and drainage.	2008 CON	CO Contr	Federal HP	\$2,068		
25430	Stark	STA SR 172-11.91/15.55 West Canton Corp to Shroyer and Third Street NE to Trump Ave.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
		Minor Rehab resurfacing SR-172.	2010 CON	CO Contr	Federal STP-SCATS	\$657	Project Cap = \$876,000 construction	
			2010 CON	CO Contr	Non-Federal State	\$788		
			2010 CON	CO Engr	Federal STP-SCATS	\$73		
			2010 CON	CO Engr	Non-Federal State	\$88		
77869	Stark	STA SR 172-17.28 Bridge is located over W & LE railroad W of Trump Avenue.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	D-4 Production
		Removal and replacement of existing structure	2010 CON	CO Contr	Non-Federal State	\$800		
82092	Stark	STA SR 183-18.54 Norfolk Southern Railroad bridge over SR183 in Alliance.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	D-4 Production
		Lower profile grade to provide adequate clearance under bridge.	2008 ENG	Dtl Dsgn	Non-Federal LNTF	\$28		
			2008 ENG	Dtl Dsgn	Federal HSIP	\$250		
			2009 ROW	Acquis	Non-Federal LNTF	\$153		
			2009 ROW	Acquis	Federal HSIP	\$1,373		
			2011 CON	CO Contr	Federal HSIP	\$3,600		
			2011 CON	CO Contr	Non-Federal LNTF	\$1,475		
			2011 CON	CO Engr	Non-Federal LNTF	\$164		
			2011 CON	CO Engr	Federal HSIP	\$400		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
82124	Stark	STA-SR 183-18.54 SR 183 at Main Street and Ely Street Traffic signal replacement with standard 12" lean signals. Replace controllers, signal cable and loop detectors.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	City of Alliance
			2008 CON	CO Contr	Non-Federal State	\$32		
			2008 CON	CO Engr	Non-Federal State	\$4		
81282	Stark	STA CR 190 0.00 (Werner Church) Structure over the Middlebranch of Nimishillen in Plain Township Replacement of structure possible alternative alignment of bridge with Applegrove Street	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	Stark Co Engineer
			2010 ROW	Acquis	Federal HP	\$400		
80676	Stark	STA CR-190-0.48 (Applegrove) Marquardt to Market Street Road widening from two lanes to four lanes, including replacement of bridge PL-4-7.	FY	Phase/Subphase	Fund Source and Type	Amount	Non-Exempt Project cap = \$1,200,000 R/W and \$1,080,000 Constr	Stark Co Engineer
			2008 ROW	Acquis	Non-Federal LNTF	\$250		
			2008 ROW	Acquis	Federal STP-SCATS	\$1,000		
			2011 CON	CO Contr	Non-Federal LNTF	\$1,088		
			2011 CON	CO Contr	Federal HP	\$1,966		
			2011 CON	CO Contr	Federal STP-SCATS	\$750		
			2011 CON	CO Engr	Federal HP	\$218		
			2011 CON	CO Engr	Federal STP-SCATS	\$150		
			2011 CON	CO Engr	Non-Federal LNTF	\$138		

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor	
81283	Stark	STA CR 196 00.50 (55th Street) Intersection of Harmont and East Center Road and at structure over middlebranch of Nimishillen	FY	Phase/Subphase	Fund Source and Type		Amount	Non-Exempt	Stark Co Engineer
			2009 ROW	Acquis	Federal	HP	\$200		
			2011 CON	CO Contr	Non-Federal	LNTP	\$919		
			2011 CON	CO Contr	Federal	HP	\$611		
			2011 CON	CO Engr	Non-Federal	LNTP	\$142		
			2011 CON	CO Engr	Federal	HP	\$28		
Replacement of structure and realignment of bridge and intersection									
25073	Stark	STA SR 212-05.37 structure over Tuscarawas River	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	ODOT
			2008 CON	CO Contr	Non-Federal	State	\$200		
			2008 CON	CO Contr	Federal	STP	\$800		
			2008 CON	CO Engr	Non-Federal	State	\$2		
Redecking and painting of structure									
76342	Stark	STA SR 225 00.33 From Alliance Northern Corporation Limit to Portage County line.	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	D-4 Production
			2009 CON	CO Contr	Non-Federal	State	\$725		
Minor rehabilitation/resurfacing and bridge work on structure over Berlin Reservoir									
81284	Stark	STA CR 240 01.42 (12th Street) From Brunnerdale Avenue to Bowen Street in Perry Township	FY	Phase/Subphase	Fund Source and Type		Amount	Exempt	Stark Co Engineer
			2008 ROW	Acquis	Federal	HP	\$50		
			2009 CON	CO Contr	Non-Federal	LNTP	\$403		
			2009 CON	CO Contr	Federal	HP	\$497		
			2009 CON	CO Engr	Non-Federal	LNTP	\$45		
			2009 CON	CO Engr	Federal	HP	\$45		
Full depth pavement replacement and raise profile to minimize roadway flooding and replace existing road base with light weight fill or geotechnical solution									

SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
25238	Stark	STA SR 241-07.81 Bridge over SR21 Remove and Replace existing deck & Paint	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2009 CON	CO Contr	Non-Federal State	\$135		
			2009 CON	CO Contr	Non-Federal State	\$300		
			2009 CON	CO Contr	Federal STP	\$1,200		
81897	Stark	STA SR 241 08.83 SR 241 from SR 172 to Hills & Dales. Intersections of SR241/Tremont and SR172/Jackson. Reconstruct signals at SR241/Tremont and SR172/Jackson. Add turn lanes at SR241/Lake and SR 241/Hankins. Resurface from SR 172 to Hills & Dales.	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	City of Massillon SCATS Project Cap = \$1,800,000 for construction
			2010 CON	CO Contr	Non-Federal State	\$387		
			2010 CON	CO Contr	Non-Federal LNTF	\$366		
			2010 CON	CO Contr	Federal CMAQ-SCATS	\$1,350		
			2010 CON	CO Engr	Non-Federal Local	\$40		
			2010 CON	CO Engr	Non-Federal State	\$42		
			2010 CON	CO Engr	Federal CMAQ-SCATS	\$150		
20430	Stark	STA SR 241-12.82 0.60 Miles South of SR687 on SR241 North to Mudbrook Improve SR 241/687 Intersection by Extending NB & SB Left Turn Lanes & Add Right Turn Lane From WB 687 to NB 241.	FY	Phase/Subphase	Fund Source and Type	Amount	Non-Exempt	Stark TID Stark TID no longer sponsor.
			2008 CON	CO Contr	Non-Federal Local	\$2,691		
			2008 CON	CO Contr	Federal HSIP	\$840		
			2008 CON	CO Contr	Non-Federal State	\$810		
			2008 CON	CO Contr	Federal HP	\$1,165		
25549	Stark	STA US 250/62-1.28/0.00 US 250 From US62 to Tuscarawas County Line. Additional paving on US-62. Minor Rehab and resurfacing	FY	Phase/Subphase	Fund Source and Type	Amount	Exempt	ODOT
			2009 CON	CO Contr	Non-Federal State	\$525		

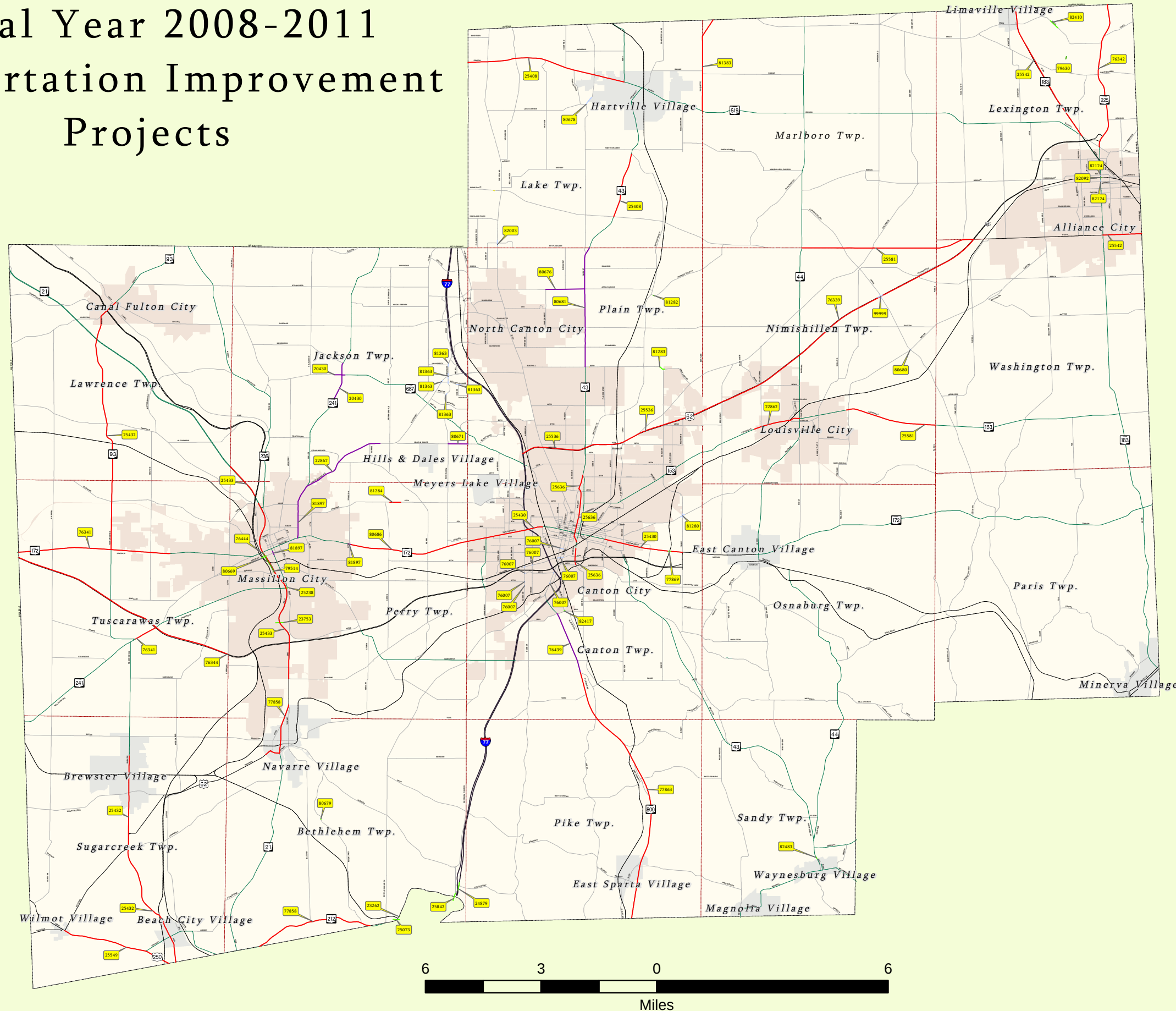
SCATS FY 2008-2011 Transportation Improvement Program Highway Project Listing

PID	Count	Location and Termini	Funding By State Fiscal Year and Phase				Air Quality Status	Project Sponsor
80679	Stark	STA TR-298 Riverland Avenue Riverland Avenue over the Tuscarawas River.	FY	Phase/Subphase	Fund Source and Type		Exempt Project Cap =\$360,000	Stark Co Engineer
			2009 ROW	Acquis	Federal	HP		
			2011 CON	CO Contr	Federal	STP-SCATS		
			2011 CON	CO Contr	Non-Federal	LNTF		
			2011 CON	CO Contr	Federal	HP		
		Replacement of Riverland Avenue bridge						
			2011 CON	CO Engr	Federal	HP		
			2011 CON	CO Engr	Non-Federal	LNTF		
			2011 CON	CO Engr	Federal	STP-SCATS		
77863	Stark	STA SR 800-00.00 From Tuscarawas County to 45th Street	FY	Phase/Subphase	Fund Source and Type		Exempt	D-4 Production
			2010 CON	CO Contr	Non-Federal	State		
		Reactive maintenance resurfacing. Substructure bridge work to SFN 7606699. Culvert repair to SFN 7606729.NB and SB left turn lane at 53rd street.						
			2010 CON	CO Contr	Federal	STP		
76439	Stark	STA SR 800-07.05 From 43rd Street to IR-77. From 29th Street to Mill Street	FY	Phase/Subphase	Fund Source and Type		Exempt	D-4 Production
			2008 ROW	Acquis	Non-Federal	State		
		Widen to include turn lanes and improve street identification of side streets and driveway definition employing access management.						

Fiscal Year 2008-2011 Transportation Improvement Projects

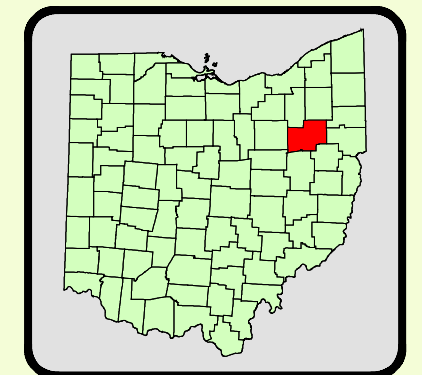


Current as of March, 2007



-  Bridge Project
-  Intersection
-  Resurfacing
-  Trail
-  Widening

-  State Routes
-  U.S. Routes
-  City
-  Village
-  Township



Prepared by
**STARK COUNTY
REGIONAL PLANNING
COMMISSION**

Statewide Line Items

Projects associated with programs such as railroad grade crossing protection, enhancement, scenic byway, rural transit, and specialized transportation (clarify requirement) may be included in the STIP under statewide line items. Other statewide line items, by work type, are used to incorporate ODOT and locally sponsored federal and state funded resurfacing and maintenance projects which arise in the short term. Below is a complete list of current statewide line items followed by a table showing line item funding.

FY 2008-2011 STIP Statewide Line Items Updated 3/5/07

Amish Buggy
Appalachia Development Local Access
Bridge Inspections
Bridge Maintenance Activities
Bridge Rehabilitation, Reconstruction, & Replacement
CEAO Program Administration
Emergency Relief Projects (Category B & C) (PE, CO)
Environmental Mitigation
Federal Discretionary Programs (Interstate, Covered Bridge, Innovative Bridge, NCPD, Scenic Byway, TCSP, etc.) (All Phases)
Forest Highways/Public Lands
Geologic Site Assessment
Highway Maintenance Activities
Highway Planning and Research
Highway Resurfacing, Rehabilitation, & Improvements
Highway Safety
Job Access Reverse Commute
Local Government Programs
Local Planning Agencies
Major Project Garvee Bond Payments
National Recreational Trails Program
New Freedom
Ohio Department of Public Safety - 402 Safety Program
Rail Grade Separation Program
Rail Highway Crossing Safety Program
Rideshare Program
Right-of-Way Hardship and Protective Buying
Rural Transit Program
Safe Routes to School Program
Specialized Services Provided by Statewide/Districtwide Consultant Contract
Specialized Transportation Program
Transportation Enhancement Program

Statewide Transportation Improvement Program (STIP)
State Fiscal Years 2008-2011
Total Project Cost by Fiscal Year

LOCATION	STATEWIDE LINE ITEMS	TOTAL PROJECT COST (000'S)	TYPE OF FEDERAL FUNDS	FEDERAL SHARE OF COST BY PHASE			RESPONSIBLE AGENCY
				PE	R/W	CO	
ALL SYSTEMS	AMISH BUGGY	\$300	STP	\$50	\$50	\$100	STATE
ALL SYSTEMS	APPALACHIAN DEVELOPMENT LOCAL ACCESS	\$1,000	APL	\$200	\$200	\$600	STATE
ALL SYSTEMS	BRIDGE INSPECTION	\$1,000	BR	\$800			STATE
ALL SYSTEMS	BRIDGE MAINTENANCE ACTIVITIES	\$750	STP			\$750	STATE
ALL SYSTEMS	BRIDGE REHABILITATION, RECONSTRUCTION, & REPLACEMENT	\$5,000	BR STP		\$1,000	\$4,000	STATE
LOCAL SYSTEMS	CEAO PROGRAM ADMINISTRATION	\$300	STP	\$300			STATE
ALL SYSTEMS	EMERGENCY RELIEF PROJECTS (CATEGORY B & C)	\$5,000	ER			\$5,000	STATE
ALL SYSTEMS	ENVIRONMENTAL MITIGATION	\$1,000	STP	\$1,000			STATE
ALL SYSTEMS	FEDERAL DISCRETIONARY PROGRAMS	\$3,000	IMD DCB FBD INB NCPD SB TCSP	\$500	\$500	\$2,000	STATE
ALL SYSTEM	FOREST HIGHWAYS/PUBLIC LANDS	\$200	FH PLH	\$25	\$25	\$150	STATE
ALL SYSTEM	GEOLOGIC SITE ASSESSMENT	\$2,000	IM NH STP	\$250	\$250	\$1,500	STATE
ALL SYSTEMS	HIGHWAY MAINTENANCE ACTIVITIES	\$1,500	IM NH STP			\$500 \$500 \$500	STATE
ALL SYSTEMS	HIGHWAY PLANNING AND RESEARCH	\$29,000	SPR PL STP CMAQ	\$13,000 \$8,000 \$1,000 \$1,000			STATE

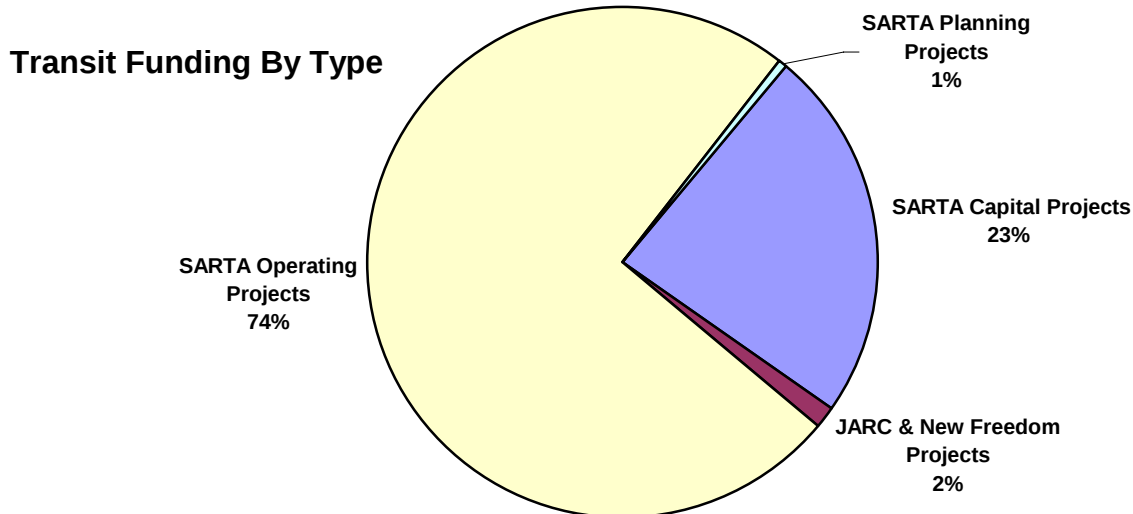
ALL SYSTEMS	HIGHWAY RESURFACING, REHABILITATION, & IMPROVEMENTS	\$5,000	IM NH STP	\$200 \$200 \$200	\$150 \$150 \$150	\$1,000 \$1,000 \$1,000	STATE
ALL SYSTEMS	HIGHWAY SAFETY PROGRAM	\$1,500	IM NH STP HSIP	\$300	\$500	\$1,000	STATE
ALL SYSTEMS	JOB ACCESS REVERSE COMMUTE	\$900	5316	\$900			STATE
LOCAL SYSTEMS	LOCAL GOVERNMENT PROGRAMS	\$5,000	BR HRRR HSIP STP	\$1,000	\$1,000	\$2,000	STATE
ALL SYSTEMS	LOCAL PLANNING AGENCIES	\$50	STP	\$40			STATE
ALL SYSTEMS	MAJOR PROJECT GARVEE BOND PAYMENTS	\$70,000	IM NH STP APD			\$70,000	STATE
ALL SYSTEMS	NATIONAL RECREATIONAL TRAILS	\$500	NRT	\$100	\$100	\$200	STATE
ALL SYSTEMS	NEW FREEDOM	\$600	5317				STATE
ALL SYSTEMS	OHIO DEPARTMENT OF PUBLIC SAFETY 402 SAFETY PROGRAM ACTIVITIES	\$2,000	STP	\$1,600			STATE
ALL SYSTEMS	RAIL GRADE SEPARATION PROGRAM	\$6,000	STP CMAQ		\$500 \$500	\$2500 \$2500	STATE
ALL SYSTEMS EXCEPT INTERSTATE	RAIL HIGHWAY CROSSING SAFETY	\$15,000	STP	\$1,000		\$14,000	STATE
ALL SYSTEMS	RIDESHARE PROGRAM	\$2,000	STP CMAQ	\$1,500 \$500			STATE
ALL SYSTEMS	RIGHT-OF-WAY HARDSHIP AND PROTECTIVE BUYING	\$1,000	NH STP		\$400 \$400		STATE
ALL RURAL TRANSIT SYSTEMS	RURAL TRANSIT PROGRAM	\$11,400	5311	\$10,700			STATE
ALL SYSTEMS	SAFE ROUTES TO SCHOOL	\$1,000	LU10 LU20 LU30	\$300	\$100	\$500	STATE
ALL SYSTEMS	SPECIALIZED SERVICES PROVIDED BY STATE WIDE/DISTRICTWIDE CONSULTANT CONTRACT	\$2,000	NH STP	\$800 \$800			STATE
ALL TRANSIT SYSTEMS	SPECIALIZED TRANSPORTATION PROGRAMS	\$3,500	5310	\$3,400			STATE
ALL SYSTEMS	TRANSPORTATION ENHANCEMENT ACTIVITIES	\$3,000	STP		\$1,100	\$1,800	STATE

III. TRANSIT PROJECTS

Public transportation in Stark County is provided by the Stark Area Regional Transit Authority or SARTA. Before 1997, the Canton Regional Transit Authority provided transit service in a 19 square miles area with a population base of 88,000 within the city of Canton. On May 6, 1997, a five-year ¼% sales tax was finally approved providing \$8 million a year for the next five years for public transportation. With the passage of Issue 2, , the system became known as the Stark Area Regional Transit Authority, serving an area of 560 square miles and a population base of 373,000. Between May and December 1997, SARTA's management team planned new countywide routes, held public meetings, acquired new buses and vans, and hired and trained four classes of new drivers. Expanded service began December 1, 1997. The first component of this new service consisted of 21 fixed-routes serving the cities of Alliance, Canton, Louisville, Massillon, and North Canton, as well as portions of Canton, Jackson, Nimishillen, Perry, and Plain Townships.

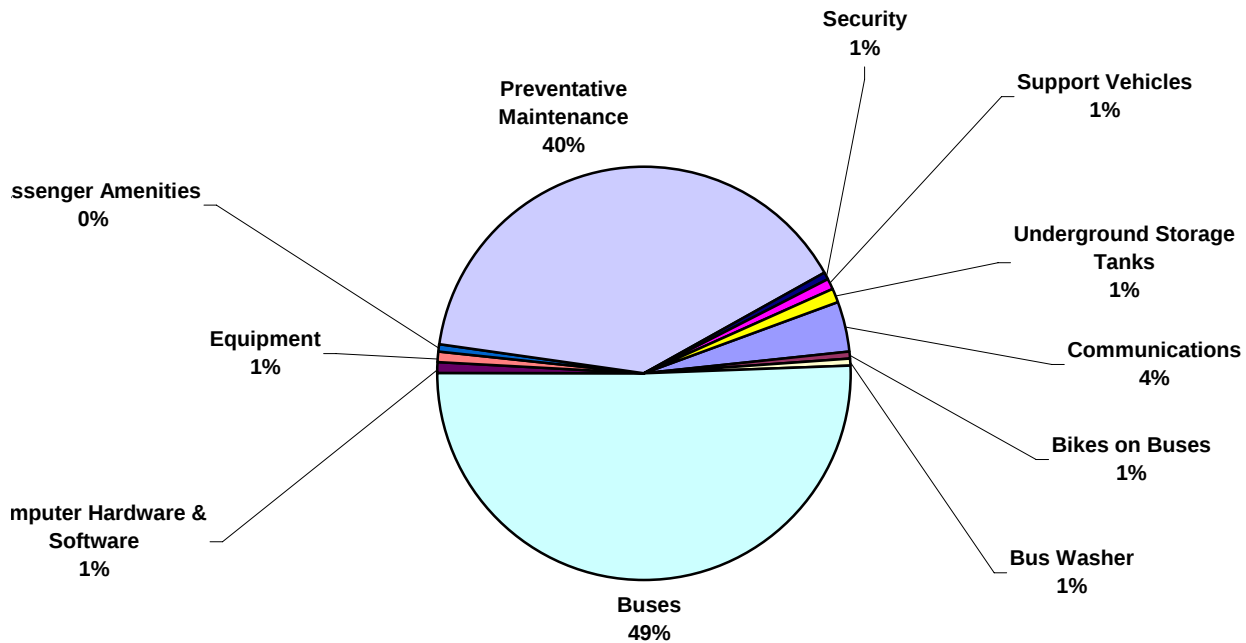
SARTA periodically revises its existing routes to better serve its customers in Stark County. Unlike highway routes, bus routes can be revised in a short time frame with little or no capital costs. In systems without rail service, transit capital planning consists of planning for adequate rolling stock and fixed facilities necessary to support the existing and proposed transit service. This section contains a listing of transit projects programmed for implementation within the next four years by the Stark Area RTA. Transit projects are developed through the Transit Development Plan that is updated periodically by SCATS to provide planning documentation for transit funding decisions.

The following charts show transit expenditures by type. Seventy four per cent of transit spending is for operations. Job Access/Reverse Commute and New Freedom projects are two new programs which represent 2% of transit expenditures. The SARTA capital projects represent 23% of funding. The next chart breaks down this 23% by project type. Bus purchases and capitalized maintenance represent the



majority of SARTA's capital project spending.

SARTA Capital Project Expenditures by Project Type



Transit projects are shown in the following tables. Following this table is a more detailed table in ODOT's Public Transit format. Transit fiscal constraint is indicated in the table.

Contents of the SCATS Transit TIP Table

Transit System Name – The name of the Transit System.

Project Description – The project name and description.

Type – Indicates if Operating or Planning or Capital.

State FY – The State fiscal year the project is programmed.

Federal Funding - The amount of federal funds for the Federal Funding Source identified in the next column. If a single project has multiple federal funding sources, there is a separate row for each federal funding source.

Federal Fund Source – The name of the Federal Funding Source that corresponds to the previous field.

State Funding - The amount of matching state funds for the Federal Funding Source in the previous column and the State Funding Source identified in the next column..

Local Funding - The amount of matching local funds for the Federal Funding Source in the previous column and the Local Funding Source identified in the next column.

Total Project - The total cost of the project.

Table 3 – SCATS Transit Table

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
SARTA	Operating	Operating	2008	yes	\$ -		\$ 105,000	\$15,949,000	\$ 16,054,000
SARTA	Competitively Selected Projects	Operating	2008	yes	\$ 6,995	5317 - New Freedom	\$ -	\$ 6,995	\$ 8,744
SARTA	Competitively Selected Projects	Operating	2008	yes	\$ 11,403	5316 - JARC	\$ -	\$ 11,403	\$ 14,254
Designated Recipient	Competitively Selected Projects	Operating	2008	yes	\$ 62,955	5317 - New Freedom	\$ -	\$ 62,955	\$ 125,910
Designated Recipient	Competitively Selected Projects	Operating	2008	yes	\$ 102,630	5316 - JARC	\$ -	\$ 102,630	\$ 205,260
SARTA	Planning	Planning	2008	yes	\$ 100,000	5307 - Urban Formula	\$ -	\$ 25,000	\$ 125,000
SARTA	Preventative Maintenance	Capital	2008	yes	\$ 1,048,062	5307 - Urban Formula	\$ 209,612	\$ 52,403	\$ 1,310,078
SARTA	Purchase 2 40' Buses	Capital	2008	yes	\$ 1,913,121	5307 - Urban Formula	\$ -	\$ 478,280	\$ 2,391,401
SARTA	Advance Communications	Capital	2008	yes	\$ 688,000	5307 - Urban Formula	\$ -	\$ 172,000	\$ 860,000
SARTA	Support Vehicles	Capital	2008	yes	\$ 48,000	5307 - Urban Formula	\$ -	\$ 12,000	\$ 60,000
SARTA	Equipment	Capital	2008	yes	\$ 37,500	5307 - Urban Formula	\$ -	\$ 9,375	\$ 46,875
SARTA	Computer Hardware	Capital	2008	yes	\$ 51,745	5307 - Urban Formula	\$ -	\$ 12,936	\$ 64,681

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
SARTA	Computer Software	Capital	2008	yes	\$ 15,000	5307 - Urban Formula	\$ -	\$ 3,750	\$ 18,750
SARTA	Bikes on Buses	Capital	2008	no	\$ 100,000	5309 - State Earmark	\$ -	\$ 25,000	\$ 125,000
SARTA	Security	Capital	2008	yes	\$ 18,500	5307 - Urban Formula	\$ -	\$ 4,625	\$ 23,125
SARTA	Passenger Amenities	Capital	2008	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Purchase 3 30' Buses	Capital	2008	yes	\$ 900,000	CMAQ	\$ -	\$ 184,337	\$ 1,084,337
SARTA	Operating	Operating	2009	yes	\$ -		\$ 105,000	\$16,736,000	\$ 16,841,000
SARTA	Competitively Selected Projects	Operating	2009	yes	\$ 7,264	5317 - New Freedom	\$ -	\$ 7,264	\$ 9,080
SARTA	Competitively Selected Projects	Operating	2009	yes	\$ 11,899	5316 - JARC	\$ -	\$ 11,899	\$ 14,874
Designated Recipient	Competitively Selected Projects	Operating	2009	yes	\$ 62,955	5317 - New Freedom	\$ -	\$ 62,955	\$ 125,910
Designated Recipient	Competitively Selected Projects	Operating	2009	yes	\$ 102,630	5316 - JARC	\$ -	\$ 102,630	\$ 205,260
SARTA	Planning	Planning	2009	yes	\$ 100,000	5307 - Urban Formula	\$ -	\$ 25,000	\$ 125,000
SARTA	Preventative Maintenance	Capital	2009	yes	\$ 1,897,780	5307 - Urban Formula	\$ 379,556	\$ 94,889	\$ 2,372,225
SARTA	Purchase 6 30' Buses	Capital	2009	yes	\$ 963,900	5307 - Urban Formula	\$ -	\$ 197,425	\$ 1,161,325
SARTA	Purchase 10 <30' Buses	Capital	2009	yes	\$ 892,500	5307 - Urban Formula	\$ -	\$ 182,801	\$ 1,075,301

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
SARTA	Support Vehicles	Capital	2009	yes	\$ 25,000	5307 - Urban Formula	\$ -	\$ 6,250	\$ 31,250
SARTA	Equipment	Capital	2009	yes	\$ 37,500	5307 - Urban Formula	\$ -	\$ 9,375	\$ 46,875
SARTA	Computer Hardware	Capital	2009	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Computer Software	Capital	2009	yes	\$ 15,000	5307 - Urban Formula	\$ -	\$ 3,750	\$ 18,750
SARTA	Security	Capital	2009	yes	\$ 37,000	5307 - Urban Formula	\$ -	\$ 9,250	\$ 46,250
SARTA	Passenger Amenities	Capital	2009	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Bus Washer Replaced	Capital	2009	yes	\$ 100,000	5307 - Urban Formula	\$ -	\$ 25,000	\$ 125,000
SARTA	Operating	Operating	2010	yes	\$ -		\$ 105,000	\$17,456,000	\$ 17,561,000
SARTA	Competitively Selected Projects	Operating	2010	yes	\$ 7,847	5317 - New Freedom	\$ -	\$ 7,847	\$ 9,809
SARTA	Competitively Selected Projects	Operating	2010	yes	\$ 12,891	5316 - JARC	\$ -	\$ 12,891	\$ 16,114
Designated Recipient	Competitively Selected Projects	Operating	2010	yes	\$ 62,955	5317 - New Freedom	\$ -	\$ 62,955	\$ 125,910
Designated Recipient	Competitively Selected Projects	Operating	2010	yes	\$ 102,630	5316 - JARC	\$ -	\$ 102,630	\$ 205,260
SARTA	Planning	Planning	2010	yes	\$ 100,000	5307 - Urban Formula	\$ -	\$ 25,000	\$ 125,000

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
SARTA	Preventative Maintenance	Capital	2010	yes	\$ 1,997,977	5307 - Urban Formula	\$ 399,595	\$ 99,899	\$ 2,497,471
SARTA	Purchase 3 30' Buses	Capital	2010	yes	\$ 1,009,800	5307 - Urban Formula	\$ -	\$ 206,827	\$ 1,216,627
SARTA	Purchase 13 <30' Buses	Capital	2010	yes	\$ 892,500	5307 - Urban Formula	\$ -	\$ 182,801	\$ 1,075,301
SARTA	Support Vehicles	Capital	2010	yes	\$ 25,000	5307 - Urban Formula	\$ -	\$ 6,250	\$ 31,250
SARTA	Equipment	Capital	2010	yes	\$ 37,500	5307 - Urban Formula	\$ -	\$ 9,375	\$ 46,875
SARTA	Computer Hardware	Capital	2010	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Computer Software	Capital	2010	yes	\$ 15,000	5307 - Urban Formula	\$ -	\$ 3,750	\$ 18,750
SARTA	Security	Capital	2010	yes	\$ 37,000	5307 - Urban Formula	\$ -	\$ 9,250	\$ 46,250
SARTA	Passenger Amenities	Capital	2010	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Underground Storage Tanks	Capital	2010	yes	\$ 200,000	5307 - Urban Formula	\$ -	\$ 50,000	\$ 250,000
SARTA	Operating	Operating	2011	yes	\$ -		\$ 105,000	\$18,260,000	\$ 18,365,000
SARTA	Competitively Selected Projects	Operating	2011	yes	\$ 8,295	5317 - New Freedom	\$ -	\$ 8,295	\$ 10,369
SARTA	Competitively Selected Projects	Operating	2011	yes	\$ 13,593	5316 - JARC	\$ -	\$ 13,593	\$ 16,991

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
Designated Recipient	Competitively Selected Projects	Operating	2011	yes	\$ 62,955	5317 - New Freedom	\$ -	\$ 62,955	\$ 125,910
Designated Recipient	Competitively Selected Projects	Operating	2011	yes	\$ 102,630	5316 - JARC	\$ -	\$ 102,630	\$ 205,260
SARTA	Planning	Planning	2011	yes	\$ 100,000	5307 - Urban Formula	\$ -	\$ 25,000	\$ 125,000
SARTA	Preventative Maintenance	Capital	2011	yes	\$ 1,933,156	5307 - Urban Formula	\$ 386,631	\$ 96,658	\$ 2,416,445
SARTA	Purchase 3 30' Buses	Capital	2011	yes	\$ 1,055,700	5307 - Urban Formula	\$ -	\$ 216,228	\$ 1,271,928
SARTA	Purchase 13 <30' Buses	Capital	2011	yes	\$ 1,372,800	5307 - Urban Formula	\$ -	\$ 281,176	\$ 1,653,976
SARTA	Support Vehicles	Capital	2011	yes	\$ 25,000	5307 - Urban Formula	\$ -	\$ 6,250	\$ 31,250
SARTA	Equipment	Capital	2011	yes	\$ 37,500	5307 - Urban Formula	\$ -	\$ 9,375	\$ 46,875
SARTA	Computer Hardware	Capital	2011	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000
SARTA	Computer Software	Capital	2011	yes	\$ 15,000	5307 - Urban Formula	\$ -	\$ 3,750	\$ 18,750
SARTA	Security	Capital	2011	yes	\$ 37,000	5307 - Urban Formula	\$ -	\$ 9,250	\$ 46,250
SARTA	Passenger Amenities	Capital	2011	yes	\$ 20,000	5307 - Urban Formula	\$ -	\$ 5,000	\$ 25,000

Transit System Name	Project Description	Type	State FY	Fiscally Constrained	Federal Funding	Federal Funding Source	State Funding	Local Funding	Total
Specialized	Vehicles		2008		\$ -	5310 - Specialized	\$ -	\$ -	\$ -
Specialized	Vehicles		2009		\$ -	5310 - Specialized	\$ -	\$ -	\$ -
Specialized	Vehicles		2010		\$ -	5310 - Specialized	\$ -	\$ -	\$ -
Specialized	Vehicles		2011		\$ -	5310 - Specialized	\$ -	\$ -	\$ -
Totals					\$18,762,068		\$1,795,395	\$71,952,812	\$ 92,450,135

Ohio Department of Transportation - Transit TIP Table

Transit STIP					Text - Exempt or Non- exempt	Text - Operating or Planning or Capital	Number (0000)	Yes/No	Currency	Text (See Funding Source Descriptions)	Currency	Text (See Funding Source Descriptions)	Currency	Text (See Funding Source Descriptions)	Currency
T#	MPO Name	Transit System Name	FTA ALI Code	Project Description	Air Quality	Type	State FY	Fiscally Constrained	Federal Funding \$	Federal Funding Source	State Funding \$	State Funding Source	Local Funding \$	Local Funding Source	Total Line Cost \$
	SCATS	SARTA	30.09.00	Operating	Exempt	Operating	2008	yes			\$ 105,000	E&D Fare Assistance	\$ 15,949,000	Dedicated Local Tax	\$ 16,054,000
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2008	yes	\$ 6,995	5317 - New Freedom			\$ 6,995	Other	\$ 8,744
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2008	yes	\$ 11,403	5316 - JARC			\$ 11,403	Other	\$ 14,254
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2008	yes	\$ 62,955	5317 - New Freedom			\$ 62,955	Other	\$ 125,910
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2008	yes	\$ 102,630	5316 - JARC			\$ 102,630	Other	\$ 205,260
	SCATS	SARTA	44.22.00	Planning	Exempt	Planning	2008	yes	\$ 100,000	5307 - Urban Formula			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	11.7A.00	Preventative Maintenance	Exempt	Capital	2008	yes	\$ 1,048,062	5307 - Urban Formula	\$ 209,612	UTP Formula	\$ 52,403	Dedicated Local Tax	\$ 1,310,078
	SCATS	SARTA	11.12.01	Buses - 40'	Exempt	Capital	2008	yes	\$ 1,913,121	5307 - Urban Formula			\$ 478,280	Dedicated Local Tax	\$ 2,391,401
	SCATS	SARTA	11.62.02	Advance Communications	Exempt	Capital	2008	yes	\$ 688,000	5307 - Urban Formula			\$ 172,000	Dedicated Local Tax	\$ 860,000
	SCATS	SARTA	11.42.11	Support Vehicles	Exempt	Capital	2008	yes	\$ 48,000	5307 - Urban Formula			\$ 12,000	Dedicated Local Tax	\$ 60,000
	SCATS	SARTA	11.42.20	Equipment	Exempt	Capital	2008	yes	\$ 37,500	5307 - Urban Formula			\$ 9,375	Dedicated Local Tax	\$ 46,875
	SCATS	SARTA	11.42.07	Computer Hardware	Exempt	Capital	2008	yes	\$ 51,745	5307 - Urban Formula			\$ 12,936	Dedicated Local Tax	\$ 64,681
	SCATS	SARTA	11.42.08	Computer Software	Exempt	Capital	2008	yes	\$ 15,000	5307 - Urban Formula			\$ 3,750	Dedicated Local Tax	\$ 18,750
	SCATS	SARTA	11.92.06	Bikes on Buses	Exempt	Capital	2008	no	\$ 100,000	5309 - State Earmark			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	11.42.09	Security	Exempt	Capital	2008	yes	\$ 18,500	5307 - Urban Formula			\$ 4,625	Dedicated Local Tax	\$ 23,125
	SCATS	SARTA	11.93.02	Passenger Amenities	Exempt	Capital	2008	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.12.03	Buses - 30'	Exempt	Capital	2008	yes	\$ 900,000	CMAQ			\$ 184,337	Dedicated Local Tax	\$ 1,084,337
	SCATS	SARTA	30.09.00	Operating	Exempt	Operating	2009	yes			\$ 105,000	E&D Fare Assistance	\$ 16,736,000	Dedicated Local Tax	\$ 16,841,000
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2009	yes	\$ 7,264	5317 - New Freedom			\$ 7,264	Other	\$ 9,080
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2009	yes	\$ 11,899	5316 - JARC			\$ 11,899	Other	\$ 14,874
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2009	yes	\$ 62,955	5317 - New Freedom			\$ 62,955	Other	\$ 125,910
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2009	yes	\$ 102,630	5316 - JARC			\$ 102,630	Other	\$ 205,260
	SCATS	SARTA	44.22.00	Planning	Exempt	Planning	2009	yes	\$ 100,000	5307 - Urban Formula			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	11.7A.00	Preventative Maintenance	Exempt	Capital	2009	yes	\$ 1,897,780	5307 - Urban Formula	\$ 379,556	UTP Formula	\$ 94,889	Dedicated Local Tax	\$ 2,372,225
	SCATS	SARTA	11.12.03	Buses - 30'	Exempt	Capital	2009	yes	\$ 963,900	5307 - Urban Formula			\$ 197,425	Dedicated Local Tax	\$ 1,161,325
	SCATS	SARTA	11.12.04	Buses < 30'	Exempt	Capital	2009	yes	\$ 892,500	5307 - Urban Formula			\$ 182,801	Dedicated Local Tax	\$ 1,075,301
	SCATS	SARTA	11.42.11	Support Vehicles	Exempt	Capital	2009	yes	\$ 25,000	5307 - Urban Formula			\$ 6,250	Dedicated Local Tax	\$ 31,250
	SCATS	SARTA	11.42.20	Equipment	Exempt	Capital	2009	yes	\$ 37,500	5307 - Urban Formula			\$ 9,375	Dedicated Local Tax	\$ 46,875
	SCATS	SARTA	11.42.07	Computer Hardware	Exempt	Capital	2009	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.42.08	Computer Software	Exempt	Capital	2009	yes	\$ 15,000	5307 - Urban Formula			\$ 3,750	Dedicated Local Tax	\$ 18,750
	SCATS	SARTA	11.42.09	Security	Exempt	Capital	2009	yes	\$ 37,000	5307 - Urban Formula			\$ 9,250	Dedicated Local Tax	\$ 46,250
	SCATS	SARTA	11.93.02	Passenger Amenities	Exempt	Capital	2009	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.42.20	Bus Washer Replaced	Exempt	Capital	2009	yes	\$ 100,000	5307 - Urban Formula			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	30.09.00	Operating	Exempt	Operating	2010	yes			\$ 105,000	E&D Fare Assistance	\$ 17,456,000	Dedicated Local Tax	\$ 17,561,000
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2010	yes	\$ 7,847	5317 - New Freedom			\$ 7,847	Other	\$ 9,809
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2010	yes	\$ 12,891	5316 - JARC			\$ 12,891	Other	\$ 16,114
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2010	yes	\$ 62,955	5317 - New Freedom			\$ 62,955	Other	\$ 125,910
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2010	yes	\$ 102,630	5316 - JARC			\$ 102,630	Other	\$ 205,260
	SCATS	SARTA	44.22.00	Planning	Exempt	Planning	2010	yes	\$ 100,000	5307 - Urban Formula			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	11.7A.00	Preventative Maintenance	Exempt	Capital	2010	yes	\$ 1,997,977	5307 - Urban Formula	\$ 399,595	UTP Formula	\$ 99,899	Dedicated Local Tax	\$ 2,497,471
	SCATS	SARTA	11.12.03	Buses - 30'	Exempt	Capital	2010	yes	\$ 1,009,800	5307 - Urban Formula			\$ 206,827	Dedicated Local Tax	\$ 1,216,627
	SCATS	SARTA	11.12.04	Buses < 30'	Exempt	Capital	2010	yes	\$ 892,500	5307 - Urban Formula			\$ 182,801	Dedicated Local Tax	\$ 1,075,301
	SCATS	SARTA	11.42.11	Support Vehicles	Exempt	Capital	2010	yes	\$ 25,000	5307 - Urban Formula			\$ 6,250	Dedicated Local Tax	\$ 31,250
	SCATS	SARTA	11.42.20	Equipment	Exempt	Capital	2010	yes	\$ 37,500	5307 - Urban Formula			\$ 9,375	Dedicated Local Tax	\$ 46,875
	SCATS	SARTA	11.42.07	Computer Hardware	Exempt	Capital	2010	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.42.08	Computer Software	Exempt	Capital	2010	yes	\$ 15,000	5307 - Urban Formula			\$ 3,750	Dedicated Local Tax	\$ 18,750
	SCATS	SARTA	11.42.09	Security	Exempt	Capital	2010	yes	\$ 37,000	5307 - Urban Formula			\$ 9,250	Dedicated Local Tax	\$ 46,250
	SCATS	SARTA	11.93.02	Passenger Amenities	Exempt	Capital	2010	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.42.04	Underground Storage Tanks	Exempt	Capital	2010	yes	\$ 200,000	5307 - Urban Formula			\$ 50,000	Dedicated Local Tax	\$ 250,000
	SCATS	SARTA	30.09.00	Operating	Exempt	Operating	2011	yes			\$ 105,000	E&D Fare Assistance	\$ 18,260,000	Dedicated Local Tax	\$ 18,365,000
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2011	yes	\$ 8,295	5317 - New Freedom			\$ 8,295	Other	\$ 10,369
	SCATS	SARTA	44.10.01	Competitively Selected Projects	Exempt	Operating	2011	yes	\$ 13,593	5316 - JARC			\$ 13,593	Other	\$ 16,991
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2011	yes	\$ 62,955	5317 - New Freedom			\$ 62,955	Other	\$ 125,910
	SCATS	Designated Recipient		Competitively Selected Projects	Exempt	Operating	2011	yes	\$ 102,630	5316 - JARC			\$ 102,630	Other	\$ 205,260
	SCATS	SARTA	44.22.00	Planning	Exempt	Planning	2011	yes	\$ 100,000	5307 - Urban Formula			\$ 25,000	Dedicated Local Tax	\$ 125,000
	SCATS	SARTA	11.7A.00	Preventative Maintenance	Exempt	Capital	2011	yes	\$ 1,933,156	5307 - Urban Formula	\$ 386,631	UTP Formula	\$ 96,658	Dedicated Local Tax	\$ 2,416,445
	SCATS	SARTA	11.12.03	Buses - 30'	Exempt	Capital	2011	yes	\$ 1,055,700	5307 - Urban Formula			\$ 216,228	Dedicated Local Tax	\$ 1,271,928
	SCATS	SARTA	11.12.04	Buses < 30'	Exempt	Capital	2011	yes	\$ 1,372,800	5307 - Urban Formula			\$ 281,176	Dedicated Local Tax	\$ 1,653,976
	SCATS	SARTA	11.42.11	Support Vehicles	Exempt	Capital	2011	yes	\$ 25,000	5307 - Urban Formula			\$ 6,250	Dedicated Local Tax	\$ 31,250
	SCATS	SARTA	11.42.20	Equipment	Exempt	Capital	2011	yes	\$ 37,500	5307 - Urban Formula			\$ 9,375	Dedicated Local Tax	\$ 46,875
	SCATS	SARTA	11.42.07	Computer Hardware	Exempt	Capital	2011	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	SARTA	11.42.08	Computer Software	Exempt	Capital	2011	yes	\$ 15,000	5307 - Urban Formula			\$ 3,750	Dedicated Local Tax	\$ 18,750
	SCATS	SARTA	11.42.09	Security	Exempt	Capital	2011	yes	\$ 37,000	5307 - Urban Formula			\$ 9,250	Dedicated Local Tax	\$ 46,250
	SCATS	SARTA	11.93.02	Passenger Amenities	Exempt	Capital	2011	yes	\$ 20,000	5307 - Urban Formula			\$ 5,000	Dedicated Local Tax	\$ 25,000
	SCATS	Specialized		Vehicles			2008			5310 - Specialized					
	SCATS	Specialized		Vehicles			2009			5310 - Specialized					
	SCATS	Specialized		Vehicles			2010			5310 - Specialized					
	SCATS	Specialized		Vehicles			2011			5310 - Specialized					

IV. FUNDING

The federal regulations require programs to be constrained by available funding, both by category and by year. Responsibility for maintaining each program's fiscal constraint lies with the appropriate Program Manager and includes all project development phases. This requirement makes the TIP a realistic programming tool rather than a "wish list" of desired transportation improvements.

Highway Fiscal Constraint

Highway project funding is provided through the categorical federal-aid highway funds, the minimum allocation funds and state and local highway funds. The major sources of funds in the SCATS TIP are the following:

- Interstate Maintenance (IM) funds
- National Highway System (NHS) funds
- Surface Transportation Program (STP) funds
- Bridge Replacement (BR) funds
- Congestion Management/Air Quality (CMAQ) funds

The type of funding determines who is responsible for project selection. Stark County is designated as a Transportation Management Area or TMA. In TMAs, the state (ODOT) selects projects using NHS, BR or IM funds in cooperation with the MPO (SCATS). All other projects are selected by the MPO (SCATS Policy Committee) in consultation with the state (ODOT).

In addition to the annual allocation, project spending is constrained by federal obligation ceilings. These ceilings limit the annual transportation expenditures from the Highway Trust Fund to a given amount in each state, often less than the annual allocation. In order to meet obligation limit requirements, ODOT has appointed Program Managers to control obligation of funds. The ODOT Funds Management Committee, through the budgeting process, forecasts future revenues and identifies annual funding amounts for each Highway Program.

The Program Managers are responsible for establishing a fiscally constrained program of priority projects and coordinating inclusion of the first four years of these priorities into either the rural STIP or the appropriate MPO TIP. Each Program Manager is responsible for keeping State Fiscal Year (SFY) programmed expenditures to an amount equal to the approved budget. The following table shows the estimate vs. budget for each FHWA funding category in the highway portion of the TIP.

Table 5 - Summary of Federal, State and Local Usage by Fiscal Year

Summary of Federal, State and Local Usage for SFY 2008, 2009, 2010, and 2011 (000's)

Federal Funds	Comment	2008 Budget	2008 Estimates	2009 Budget	2009 Estimates	2010 Budget	2010 Estimates	2011 Budget	2011 Estimates	2008-2011 Budget	2008-2011 Estimates
Bridge		\$9,760	\$9,760			\$1,808	\$1,808			\$11,568	\$11,568
CMAQ		\$12,676	\$12,676	\$640	\$640	\$5,278	\$5,278	\$2,580	\$2,580	\$21,174	\$21,174
High Priority		\$4,974	\$4,974	\$4,906	\$4,906	\$1,633	\$1,633	\$5,293	\$5,293	\$16,806	\$16,806
Highway Safety Imp Program		\$1,090	\$1,090	\$1,712	\$1,712	\$681	\$681	\$4,000	\$4,000	\$7,483	\$7,483
Interstate Maintenance						\$1,530	\$1,530			\$1,530	\$1,530
National Hwy System		\$9,186	\$9,186					\$3,480	\$3,480	\$12,666	\$12,666
STP		\$13,132	\$13,132	\$11,122	\$11,122	\$4,138	\$4,138	\$8,678	\$8,678	\$37,070	\$37,070
State Funds (S,O)		\$7,846	\$7,846	\$2,275	\$2,275	\$2,930	\$2,930	\$3,650	\$3,650	\$16,701	\$16,701
Local Match		\$4,719	\$4,719	\$3,079	\$3,079	\$4,409	\$4,409	\$6,963	\$6,963	\$19,170	\$19,170
Total		\$63,383	\$63,383	\$23,733	\$23,733	\$22,407	\$22,407	\$34,645	\$34,645	\$144,168	\$144,168

Federal	\$50,818	\$50,818	\$18,379	\$18,379	\$15,068	\$15,068	\$24,031	\$24,031	\$108,297	\$108,297
State	\$7,846	\$7,846	\$2,275	\$2,275	\$2,930	\$2,930	\$3,650	\$3,650	\$16,701	\$16,701
Local	\$4,719	\$4,719	\$3,079	\$3,079	\$4,409	\$4,409	\$6,963	\$6,963	\$19,170	\$19,170

SCATS is the Program Manager for the Stark County STP, STP enhancement suballocation, and CMAQ allocations and budgets. The following table shows programmed expenditures verses budget limits for the SCATS funding programs. The budgets for FY 2009-2011 are those provided by ODOT. The FY 2008 budget is the ODOT provided budget plus the estimated carryover from FY 2007.

Table6 - SCATS Program Fiscal Constraint

Project	PID	STP	CMAQ	ENH	Total	Phase
FY 08 Budgets		\$ 5,805,464	\$ 3,211,034	\$ 110,650	\$ 9,127,148	
STA SR 0153 05.50 R/W	22862		\$ 616,000		\$ 616,000	Acquis
STA SR 0021 08.98	23753	\$ 724,000			\$ 724,000	CO Contr
STA-US 62 -22.19 Paving	25536	\$ 212,000			\$ 212,000	Constr
Cleveland Ave SIB Loan Payments	80260	\$ 531,212			\$ 531,212	Debt Service
Shuffel SIB Loan Payment	80264	\$ 1,500,000			\$ 1,500,000	Debt Service
SARTA Bus Purchases	New		\$ 900,000		\$ 900,000	Transfer
Treemont Ave	80669	\$ 900,000			\$ 900,000	CO Contr
Treemont Ave	80669	\$ 100,000			\$ 100,000	CO Engr
Applegrove R/W	80676	\$ 1,000,000			\$ 1,000,000	Acquis
FY08 Expenditures		\$ 4,967,212	\$ 1,516,000	\$ -	\$ 6,483,212	
Balance (FY 08 Budget - FY 08 Expenditures)		\$ 838,252	\$ 1,695,034	\$ 110,650	\$ 2,643,936	
FY 09 Budgets		\$ 4,503,584	\$ 2,491,127	\$ 450,358	\$ 7,445,069	
STA CR 0098 00.00	22867	\$ 579,200			\$ 579,200	CO Engr
STA CR 0098 00.00	22867	\$ 5,212,800			\$ 5,212,800	CO Contr
Deer Creek	79630			\$ 1,024,560	\$ 1,024,560	CO Contr
Deer Creek	79630			\$ 113,840	\$ 113,840	CO Engr
Cleveland Ave SIB Loan Payments	80260	\$ 531,212			\$ 531,212	Debt Service
Shuffel SIB Loan Payment	80264	\$ 1,500,000			\$ 1,500,000	Debt Service
Market Lake Center	80678		\$ 640,000		\$ 640,000	Acquis
FY 09 Expenditures		\$ 7,823,212	\$ 640,000	\$ 1,138,400	\$ 9,601,612	
Budget Revisions		\$ 2,500,000	\$ (3,100,000)	\$ 600,000	\$ -	
Balance (FY 09 Budget + FY 08 Balance - +revisions + FY 09 Expenditures)		18,624	446,161	22,608	487,393	
FY 10 Budgets		\$ 4,546,111	\$ 2,514,650	\$ 454,611	\$ 7,515,372	
Wales Ave NE STA SR 241 08.83	81897		\$ 1,350,000		\$ 1,350,000	CO Contr
Wales Ave NE STA SR 241 08.83	81897		\$ 150,000		\$ 150,000	CO Engr
STA-US 62-32.80	82606	\$ 302,850			\$ 302,850	CO Contr
STA-US 62-32.80	82606	\$ 33,620			\$ 33,620	CO Engr
STA SR 0153 05.50	22862		\$ 3,400,000		\$ 3,400,000	CO Contr
STA SR 0153 05.50	22862		\$ 378,000		\$ 378,000	CO Engr
STA-SR 172-11.91/15.55 Paving	25430	657,000			\$ 657,000	CO Contr
STA-SR 172-11.91/15.55 Paving	25430	73,000			\$ 73,000	CO Engr
Cleveland Ave SIB Loan Payments	80260	\$ 531,212			\$ 531,212	Debt Service
Shuffel SIB Loan Payment	80264	\$ 1,500,000			\$ 1,500,000	Debt Service
FY 10 Expenditures		\$ 3,097,682	\$ 5,278,000	\$ -	\$ 8,375,682	
Budget Revisions		\$ (1,900,000)	\$ 2,350,000	\$ (450,000)	\$ -	
Borrow From AMATS		\$ 500,000	\$ -	\$ -	\$ 500,000	

Balance (FY 10 Budget + FY 09 Balance - FY 10 Expenditures+ revision +borrowing)									
			67,053		32,811		27,219		127,083
FY 11 Budgets		\$	4,591,572	\$	2,539,797	\$	459,157	\$	7,590,526
Cleveland Ave SIB Loan Payments	80260	\$	531,212					\$	531,212 Debt Service
Shuffel SIB Loan Payment	80264	\$	1,827,268					\$	1,827,268 Debt Service
Applegrove STA-CR 190-0.48	80676	\$	750,000					\$	750,000 CO Contr
Applegrove STA-CR 190-0.48	80676	\$	150,000					\$	150,000 CO Engr
Belden Signals	81363			\$	777,600			\$	777,600 CO Contr
Belden Signals	81363			\$	86,400			\$	86,400 CO Engr
STA Navarre Road SW Signals	76007			\$	796,800			\$	796,800 CO Contr
STA Navarre Road SW Signals	76007			\$	79,680			\$	79,680 CO Engr
Market Lake Center	80678			\$	756,000			\$	756,000 CO Contr
Market Lake Center	80678			\$	84,000			\$	84,000 CO Engr
STA-Riverland	80679	\$	270,000					\$	270,000 CO Contr
STA-Riverland	80679	\$	30,000					\$	30,000 CO Engr
FY 11 Expenditures		\$	3,558,480	\$	2,580,480	\$	-	\$	6,138,960
Budget Revisions		\$	(600,000)	\$	1,075,000	\$	(475,000)	\$	-
Return to AMATS		\$	(500,000)	\$	-	\$	-	\$	(500,000)
Balance (FY 11 Budget + FY 10 Balance - FY 11 Expenditures+revisions+borrowing)									
		\$	145	\$	1,067,128	\$	11,376	\$	1,078,649

As shown in the table, programmed projects are less or equal to the overall budget limits by fund and by year over the life of the TIP. Fiscal constraint was accomplished by several budget revisions and borrowing funds. The budget revisions transfer funds between funds and end up with a zero net adjustment in total funds for each year and zero net funding category adjustments for the TIP period. SCATS is also borrowing \$500,00 in STP funds from AMATS in FY 10 with a payback in FY 11. ODOT funding procedures allow MPOs to transfer allocated funds among themselves through cooperatively developed administrative procedures to advance projects that would otherwise exceed their funding limits. Documentation of any agreement to transfer allocated funds between MPOs must be sent to the appropriate ODOT Districts and the Office of Systems Planning and Program Management. Both the budget revisions and loan are preliminary and subject to final approval.

Other Highway Programs Fiscal Constraint

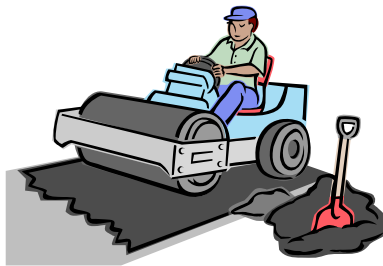
As stated earlier ODOT appointed Program Managers are responsible for fiscal constraint in each of their programs. The fiscal constraint for the ODOT and County Engineer's Association projects included in the SCATS TIP is documented in the rural counties portion of the State Transportation Improvement Program.

Transit Fiscal Constraint

Unlike highway funding, transit projects are funded through grants. The transit grant balances can be carried over from one fiscal year to another. The ODOT Office of Transit and the Federal Transit Administration establish budgets for the transit programs. The Transit TIP table in the previous chapter shows which projects can be funded within the limits of available funds. The unconstrained projects can only be implemented if additional funds become available from federal, state or local sources.

Maintenance, Operation And Preservation Of The Existing System

A TIP requirement is to demonstrate that existing transportation facilities are being adequately operated and maintained. Operation and maintenance expenditures are made by all levels of government and are often in-house activities that are difficult to document. ODOT uses a pavement management system to maintain its system of highways. The pavement conditions on state system are rated annually. A bridge rating program is also used to measure bridge conditions. ODOT has committed in its budget process to allocate enough funds to maintain the existing system at an acceptable level of service as indicated by pavement condition and bridge ratings. In 2006, SCATS contracted with ODOT to rate all municipal streets in Stark County as well as all county roads and the more important township roads. This project was the first step in establishing pavement management systems for Stark County and the larger cities. SCATS will use the ODOT bridge and pavement condition ratings to monitor the condition of its bridges and roadways to assure that the system is being maintained



APPENDIX A -ENVIRONMENTAL JUSTICE ASSESSMENT

Introduction

Recognizing that the impacts of federal programs and activities may raise questions of fairness to affected groups, President Clinton, on February 11, 1994, signed Executive Order 12898: Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-Income Populations

The U.S. EPA's Office of Environmental Justice defines EJ as follows: "The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

While not a new requirement, EJ amplifies the provisions found in the three-decade old Title VI of the Civil Rights Act of 1964. Title VI of the Civil Rights Act of 1964 prohibits discriminatory practices in programs and activities receiving federal funds. The transportation planning regulations issued in October 1993 require that metropolitan transportation planning processes be consistent with Title VI. EJ strengthens Title VI by requiring federal agencies to make achieving EJ part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

SCATS devised a process to assess the impacts of the Transportation Plan and Transportation Improvement Program on the target populations.

Target Population

Demographic data was compiled for target populations including minorities, low-income, minorities in poverty, and households without cars to respond to the direction of Executive Order 12898. These target populations were researched for the transportation study area of SCATS, which includes all of Stark County. The data set used to compile these statistics was the 2000 Census Transportation Planning Package (CTPP).

SCATS used Traffic Zone data to identify target populations. Traffic Zones are the basic unit of analysis for the SCATS transportation planning process. Census tracts and block groups were both too large an area for the detailed analysis necessary. Census blocks would provide very detailed information, but some demographic information is not available at the block level.

The map on the next page shows the target areas. There are 607 traffic zones in the SCATS area in the CTPP. Averages of regional totals for the various target populations were used as thresholds to identify concentrations of these populations in the study area.

All zones with minority populations greater than 12.0% of the total population or households in poverty of greater than 13% were identified as target areas. These numbers are slightly higher than the rates in the county as a whole. Two hundred seven (207) traffic zones were identified using the geographic information system (GIS).

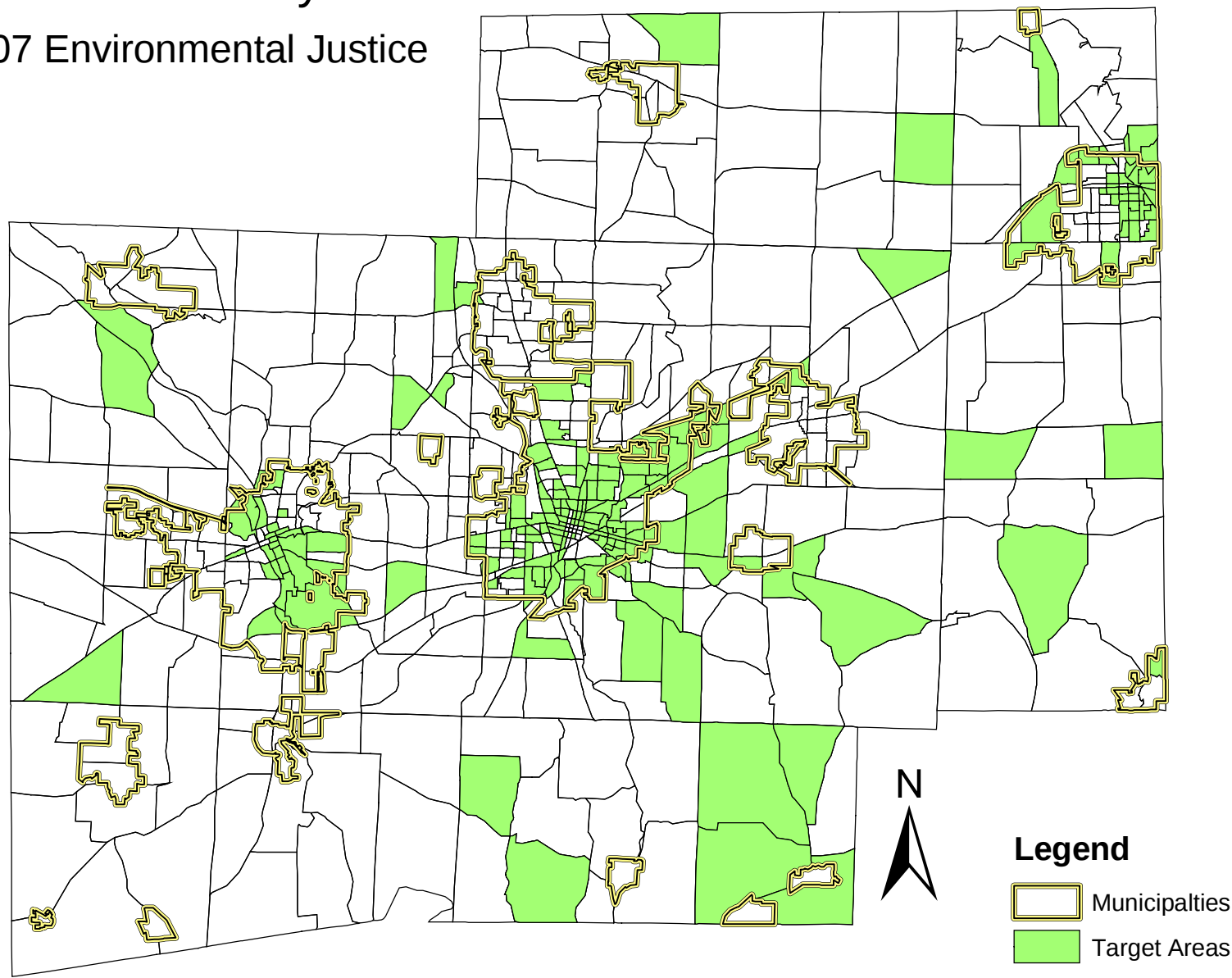
The following table provides some statistics comparing the target zones to the total county population.

Environmental Justice Target Zones	All Zones	Minority Zones	Poverty Zones	Both Minority & Poverty	Target Zones (Either)	Per Cent of County
Number of Zones	607	151	157	101	207	34.1%
Population	378,111	81,549	75,024	56,979	99,594	26.3%
Whites	341,549	55,312	53,513	36,218	72,607	21.3%
Non-White	36,562	26,237	21,511	20,761	26,987	73.8%
Black	27,067	21,752	18,093	17,644	22,201	82.0%
Households	148,398	32,042	29,936	22,332	39,646	26.7%
Households Below Poverty	13,714	6,821	7,742	6,090	8,473	61.8%
Percent Below Poverty	9.24%	21.29%	25.86%	27.27%	21.37%	
Dwelling Units	156,896	35,503	32,777	24,813	43,467	27.7%
Zero Vehicle Households	10,399	5,391	5,420	4,436	6,375	61.3%

The target zones represent 34 % of the total number of zones in the county. They have only 26.3% of the county population, but include 73.8% of the non-white population and 82 % of the black population. The target areas contain 61.8% of the households below poverty. The target areas include 61.3% of the households with no vehicles available. Zero vehicle households were initially considered in screening for target areas but was rejected since small numbers of these households were scattered all over the county.

Stark County

2007 Environmental Justice



In examining the map, it is apparent that most of the target zones are clustered around the older cities of Canton, Massillon and Alliance. There are however a number of zones located in the more rural parts of the county. A number of targeted zones in the more suburban areas have a higher than average numbers of older adults.

Travel Time to Work

One measure of the impacts of the transportation system on target populations is how well these populations are served by the system. SCATS compiled travel times for target zones versus the county as a whole. The data came from census question “Length of your travel time to work”. The average travel time includes trips by all modes.

Travel times to work in minutes	All Zones	Target Zones
All Workers	16.56	16.17
Workers who drove alone	16.03	14.6
Workers who took transit	13.58	9.07

There is very little difference in the mean travel time to work for the county versus the targeted areas. There is greater difference for those that travel by transit. The timesaving for target zones are due, in part, to the central location of these zones. This is offset somewhat by the tendency to have more transit trips from the target areas. Therefore, SCATS concludes that the transportation system serves target areas as well as it serves the non-target areas.

Impact Analysis

The executive order requires evaluation of the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but not be limited to:

- Bodily impairment, infirmity, illness or death
- Air, noise and water pollution and soil contamination
- Destruction or disruption of man-made or natural resources
- Destruction or diminution of aesthetic values
- Destruction or disruption of community cohesion
- Destruction or disruption of a community’s economic vitality
- Destruction or disruption of the availability of public and private facilities and services
- Vibration
- Adverse employment effects
- Displacement of persons, businesses, farms, or non-profit organizations
- Increased traffic congestion

- Isolation
- Exclusion or separation of minority or low-income individuals within a given community or from the broader community
- The denial of, reduction in, or significant delay in the receipt of benefits

The burden on the transportation planner is to gage the impact of the transportation program as a whole on target areas scattered across the entire region and determine whether there is disproportionate negative impacts. At the Plan and TIP stage of project development, project scopes are still being defined and there often is little information upon which to base an impact analysis.

There are however, clearly types of projects that can be expected to have the greatest impacts. Resurfacing projects, bridge replacements, signal projects, and other system preservation projects generally have few serious adverse impacts and benefits tend to accrue to the same people impacted. The projects such as new roadways, major widening projects, roadway relocations and new interchanges all may generate adverse impacts. Impacts from these projects generally fall most seriously on adjacent property, while the benefits accrue to the public at large.

SCATS concentrated on these projects in order to assess the impacts on the target areas. One characteristic these projects share is the need to acquire right of way. Therefore, SCATS identified those Plan and TIP project types that require additional right of way. These projects are listed in the table below:

PID #t	Project	Description
22867	Hills & Dales from Wales to Brunerdale	Widen to 4 lanes
20430	SR 241 Wales from south of SR 687 to Mudbrook	Widen to 5 lanes
76439	SR 800 Cleveland from 43rd S to Mill	Widen to 3 lanes
22862	SR 153 Main from Louisville west limit to 44	Reconstruction/Resurfacing
80676	Applegrove-Marquardt to Market	Widening from 2 to 4 lanes
80679	Riverland Ave. over Tuscarawas River	Replacement of Structure
80680	Paris Ave. at Meese Rd.	Intersection Improvement
80681	SR 43 from 55th ST. to Mt. Pleasant	Major Widening and Reconstruction
81280	Trump Ave. and Georgetown intersection	Intersection Improvement
81282	Werner Church Structure over Nimishillen	Replacement of Structure
81283	55th St./Harmont/E. Center intersection and Bridge	Replace Bridge and Realign
82003	Cleveland Ave./Mt. Pleasant Intersection	Intersection Improvement
82092	Norfolk Southern RR Bridge over SR 183/alliance	Low profile grade for clearance
23262	Aqueduct .10 mile from SR 212 and Tusc. River	Replace aqueduct for pedestrians
80678	Market Ave. from Lake Center to Woodland	Addition of turn lane

Impacted zones were then identified using GIS software. Any project within 0.05 mile of any part of an Impact Project was assumed to be an impacted zone. The map on the next page shows the impacted zones and impact projects. Sixty-three of the 604 zones were identified as impacted zones. Of these impacted zones, eight were target zones. The following table summarizes the economic justice analysis of the TIP highway projects.

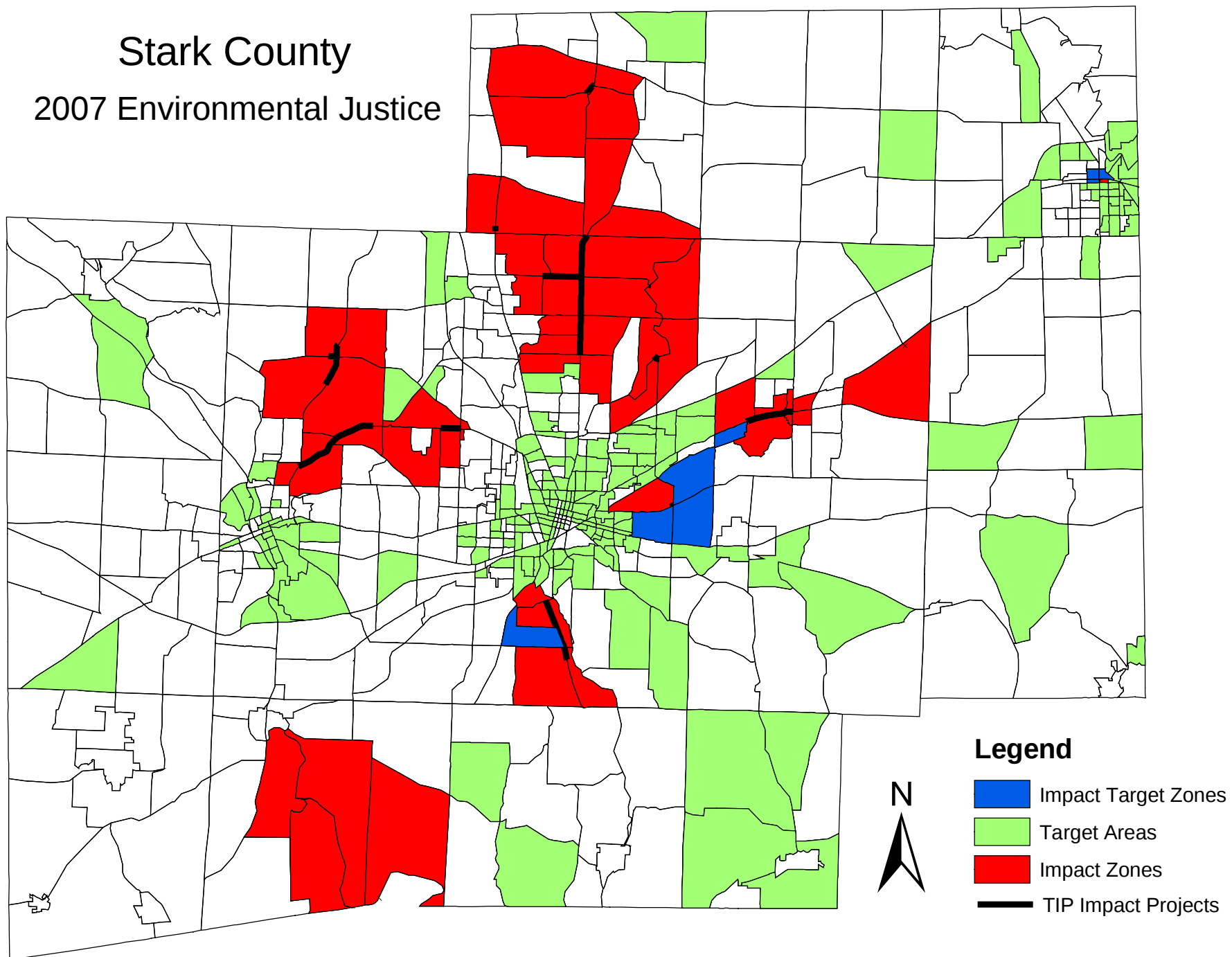
Environmental Justice Analysis for Highway Projects						
	County	Target Zones	Impacted Zones			
			All	Per Cent	Targeted	Per Cent
Zones	604	189	63	10.4%	8	4.2%
Population	367,585	90,140	74,980	20.4%	4,110	4.6%
Whites	339,421	66,883	71,220	21.0%	3,510	5.2%
Minorities	28,164	23,257	3,260	11.6%	600	2.6%
Avg Travel Time to Work	18.85	17.51	16.79		14.90	
Median Household Income	\$27,852	\$19,453	\$46,564		\$34,957	
Persons Below Poverty	33,865	8,473	1,171	3.5%	209	2.5%
Dwelling Units	146,910	38,204	29,885	20.3%	5,107	13.4%
Zero Vehicle Households	11,497	6,389	899	7.8%	601	9.4%

Only 4.22% of target zones were impacted versus 10.4% of all zones. The impacted zones contained a smaller percent of minority populations (11%) than total population (20%). Impact zones contained a smaller percent of households below poverty level.

Only 3.5 % of households in impacted zones are below the poverty level compared to 9.2% of all zones. Comparable numbers of households with no vehicle available exist both in impacted zones and in all zones. In conclusion, SCATS analysis does not show any pattern of disproportionate adverse impacts on target zones or populations.

Stark County

2007 Environmental Justice



APPENDIX B - AIR QUALITY CONFORMITY ANALYSIS

Introduction

The Clean Air Act Amendments of 1990 expanded transportation's role in contributing to national clean air goals. The 1990 amendments expand the definition of "transportation conformity" to:

Conformity to the (air quality implementation) plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities will not (i) cause or contribute to any new violations of any standards in any area, (ii) increase the frequency or severity of any existing violation of any standard in any areas, or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

This document, which is an appendix to the SCATS FY 2008-2011 Transportation Improvement Program, describes the conformity determination. The conformity determination for was conducted in accordance with the *Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act*, 40 CFR Parts 51 and 93, issued November 24, 1993 and in accordance with the Ohio State Transportation Conformity Rules, Ohio Administration Code Part 3745-1-1-01 through 20, issued August 21, 1995 and amended Spring 1997.

As will be explained below, the SCATS 2030 Transportation Plan and the SCATS FY 2008-2011 Transportation Improvement Program conform to the State Implementation Plan because it documents:

- The latest planning assumptions
- The latest emissions model
- Interagency consultation
- Timely TCM implementation
- Public Involvement
- Meets the emissions budget test
- MPO Board conformity determination resolution

Nonattainment Area Designation and Redesignation Plan

PM 2.5 -The Canton/Massillon Metropolitan Statistical Area (MSA), Ohio was classified as nonattainment for PM_{2.5} in the Federal Register January 5, 2005. Although the MSA area also includes Carroll County, OEPA (Ohio Environmental Protection Agency) and USEPA concurred that only Stark County is designated as the nonattainment area within the MSA as Carroll

County is rural in nature with a population of less than 30,000. The Stark County Area Transportation Study (SCATS) is the MPO (Metropolitan Planning Organization) for this county. The SCATS MPO boundary and urban planning model cover the entire nonattainment area.

Ozone - As part of the 1990 CAA Amendments re-evaluation, Stark County was designated as Unclassifiable/Attainment for the one-hour ozone standard pursuant to the CAA and therefore, has not previously been subject to nonattainment area rule-makings. As a result of the 2004 ozone designations, U.S. EPA designated Stark County basic nonattainment and subject to the eight-hour ozone requirements, including development of a plan to reduce volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) emissions and a demonstration that the area will meet the federal eight-hour air quality standard for ozone by June 2009. A Redesignation Plan has been submitted. The adequacy finding on the 8-Hour Redesignation budgets is pending.

Interagency Consultation

The following procedures and parameters for conducting the conformity determinations were established in a informal interagency process by which SCATS and ODOT emailed the following **Canton 2008-2011 TIP Conformity Analysis Summary** to USEPA, Ohio EPA and FHWA for review on February 5, 2007. Email replies were received from USEPA (February 6) and Ohio EPA (February 9) agreeing to the proposed conformity procedures. Copies of the email chain are available for review.

Canton 2008-2011 TIP Conformity Analysis Summary

Ozone

Attainment status: 8-hour ozone basic nonattainment area
 8-Hour Geography: Stark County
 A/Q Status: Stark Co., OH 8-Hour Redesignation Plan submitted – Adequacy finding on 8-Hour Redesignation budgets [pending](#)
 Conformity Tests: 8-Hour budget tests of SCATS Plan/TIP analysis year networks
 Analysis Years: 2009 8-Hour Redesignation Plan budget year / 1st TIP analysis year
 2018 8-Hour Redesignation Plan budget year
 2020 Interim year
 2030 Plan horizon year

8-Hour Ozone						
	Tons / Day					
	2009 Budget	2009	2018 Budget	2018	2020	2030
HC	10.02		5.37			
NOx	18.03		7.08			

PM_{2.5}

Attainment status: New PM_{2.5} Nonattainment area
 Geography: Stark County
 Conformity Tests: 2002 baseline interim budget tests of SCATS Plan/TIP analysis year networks
 Analysis Years: 2010 1st Analysis year (one of years included in new TIP)
 2020 Interim year
 2030 Plan horizon year

PM _{2.5}				
Stark Co.	Tons/Year			
	2002 Baseline	2010	2020	2030
Direct PM				
NOx Precursors				

Latest Planning Assumptions

Current and Future Population: Base year population data is 2000 Census data. Population was forecast to the year 2030 in 2004 as part of the Stark County Comprehensive Plan. The Plan used county level population projections were provided by the Ohio Department of Development - Office of Strategic Research (ODOD-OSR) through the year 2030. The RPC sub-allocated the projections to the Traffic Analysis Zone (TAZ) level. The sub-allocation process was based on allocating dwelling unit growth to TAZs as described in the section below.

Employment: Base year 2000 TAZ level employment data was developed from ES202 employment inventory of the Ohio Department of Jobs and Family Services. This data was geocoded to TAZ level and expanded to produce total employment by category for each TAZ. The RPC acquired control total MSA employment forecasts from Ohio Department of Jobs and Family Services Bureau of Labor Market Information for 2010. The trend was extrapolated to the year 2030. This forecast was by general industry (manufacturing, retail, service, etc.) type. In 2006, the 2004 employment projections were updated to provide 2-digit NAICS employment types. Allocation to the TAZ level is also described below.

TAZ Level Allocation: TAZ level TDM variables were developed in 2004 based on the previously described county-level population and employment forecasts. For transportation planning it was necessary to allocate this growth to the TAZ level and develop other data such as available vehicles, nonresidential floor area and acreage. Residential growth was allocated on a dwelling unit basis. Dwelling units were assigned to zones based on the following factors:

- Accessibility to a major county arterial road.
- Availability (or planned extension) of public water and sewer services.
- Availability of vacant, zoned residential land.
- Present or future residential subdivision activity and platted lots.
- Absence of major physical or environmental constraints to urban development

Population was then derived from dwelling units based on a person per dwelling unit ratio that was also forecast. Vehicles and labor force data were then derived from the population data.

Non-residential employment was allocated by industry based on zoning, individual communities' land use plans and factors similar to those used for the residential land use. Floor area and acreage was then derived from the employment data.

In 2006, the TAZ level allocations were reviewed and updated due to additional zones being created as part of the new travel demand model. SCATS has confidence that these numbers represent the latest and best available data.

Latest emissions modeling

The attached technical memo from ODOT Technical services documents the emissions modeling.

TCM Implementation

The Canton SIP includes no TCMs.

Public involvement process

The SCATS public involvement process provides full opportunities for public involvement in the Plan update, TIP development and conformity determination. SCATS public involvement is accomplished through the SCATS Citizen's Advisory Council and additional Plan development outreach meetings. In April of 2007, SCATS will participate with ODOT and the other Ohio MPOs in a two-week TIP public comment period in which the SCATS TIP and Conformity Report will be available statewide in all ODOT Districts and MPO offices for public comment. There will be a public meeting held by ODOT and SCATS in Stark County during this period to review the Plan, TIP and Conformity Report. This meeting will be advertised in the three daily papers in Stark County. The ODOT/MPO TIP public comment period is advertised in newspapers published in each of Ohio's 88 counties.

Plan mobile source emissions budget test results

In its conformity demonstration, SCATS demonstrates that Plan passes the "budget test" based on the approved emissions budgets. The conformity analysis highway networks are as follows:

Ozone Analysis Years:

- 2009 8-Hour Redesignation Plan budget year / 1st TIP analysis year
- 2018 8-Hour Redesignation Plan budget year
- 2020 Interim year
- 2030 Plan horizon year

PM 2.5 Analysis Years:

- 2002 baseline.
- 2010 1st Analysis year (one of years included in new TIP)
- 2020 Interim year
- 2030 Plan horizon year

The following table shows all non-exempt Plan and TIP projects in each scenario and the first scenario in which it was included.

PID Co-Rte-Sect	Project Name and Location	Type Work	Scenario
4344 STA-CR 228	Portage St NW from I-77 to 300' W of Whipple	Widen to 5 lanes	2009
	12th St NW from Woodlawn to Whipple	Widen to 3 lanes	2009
	Cleveland Ave SR 800 from 45th St to Mill St	Widen for TWLTL thru section;	2020
	Columbus Ave at Harmont	Turn lanes, signals, Storm sewer, Water & Sewer	2009
23753 STA-SR 21-8.98	Erie St over SR 21 in Massillon	Widening, redecking, curbs, resurfacing	2009
20431 STA-SR687-02.46	Fulton from CR 98 Everhard to 1000' east of Whipple.	Widen SR 687 from 2 to 5 lanes	2009
	Hills & Dales Rd from Woodlawn Ave to Whipple Ave	Widening from 2 lanes to 5 lanes	2011
20412 STA-IR 77-10.33	IR 77 in Canton from just South of SR 172 to just North of 13th St .	Major Upgrading to include modifications to mainline, ramps, service roads and bridges. Add lane both directions. Includes Final design RW and Construction	2009
25625 STA-CR 66-6.30	Main St at Everhard from Knoll St SE to Easthill St SE	Turn lanes and bridge replacement	2009
20430 STA-SR241-12.82	SR 241/687 intersection	Improve the 241/687 intersection by extending Northbound and southbound left turn lanes - add right turn lane from westbound 687 to northbound 241.	2009
	Waynesburg Dr SR 43 from 17th St to New US 30	Widen for TWLTL thru section and LT storage lanes on SR 43 at 17 th Street intersection; RR crossing upgrade	2020
22867 STA-CR 98- 0.00	Hills & Dales Rd from Wales Ave to Sir Thomas	Widen existing road to 4 lanes. Five lanes to be provided at all major intersections.	2009
	Applegrove St CR 190 from Main St to Market Ave	Widen to 4 lanes	2011
	Dressler Rd CR 98 from RR tracks to Whipple Ave	Widen to 5 Lanes	2020

	Edison St SR 619 from Cleveland Ave to SR 43 North	Widen to 4 lanes	2020
	Everhard Rd from At Whipple	Widen intersection to 5 or more Lanes	2020
	Frank Ave CR 229 from Fulton Rd to University St	Widen to 5 lanes	2020
	Fulton Rd SR 687 from 0.28 miles E of SR 241 to Brunnerdale Ave	Widen to 5 lanes	2020
	Harmont Ave CR 170 from SR 153 to US 62	Widen to 4 lanes	2020
21317 STA-IR 77-0.29	I-77 at Gracemont St.	New interchange at I-77 and Gracemont St. Improve arterial roads including widening and resurfacing as needed to accommodate the interchange.	2020
	I-77 At US 30 Interchange	Interchange Safety & Capacity improvements	2020
	Jackson Ave TR 242 from Richville Dr to Lincoln Way	2 Lane/RR Bridge	2020
	Main St Connector from Old Main St to New Main St at Sawburg	New 2-lane connector	2020
	Market Ave SR 43 from 55th St to Applegrove St	Widen to 4 lanes	2020
	US 30 Connector from SR 44 Interchange to SR 172 at Midway	New 2-lane connector	2030
20344 STA-US 30-18.35	US 30 From Trump Avenue to SR 44.	Relocation of US 30 on new Alignment	2020
	Wales Ave SR 241 from Hills & Dales Rd to Portage St	Widen to 4 lanes	2020
	Walnut Rd CR 248 from Southway St to 16th St SE	2 Lane improvement	2020
	Whipple Ave from Applegrove St to Shuffel Dr	Widen to 5 lanes	2020
	12th St NW at Market Ave	Intersection Widening	2030
	12th St NW from Perry Dr to Woodlawn	Widen to 3 lanes	2030
	Canal Fulton Connector from Butterbridge to Locust St	New 2-lane connector	2030
	Mahoning Extension from Patterson Ave to Armour St	New 2-lane connector	2030
	Market Ave SR 43 from Applegrove St to Mt Pleasant St	Widen to 4 lanes	2030
	Navarre Rd CR 511 from SR 21 to 1 Mile E of SR 21	Widen to 3 lanes	2030
	Perry Dr CR 225 from Southway St to Tuscarawas St	Widen to 4 lanes / RR bridge	2030
	Reno Drive from SR 44 to Nickleplate Ave	New 2-lane connector	2030
	SR 44 Bypass from SR 44 to SR 153 to Frana Clara	2-lane bypass / RR Bridge	2030
	Sterilite St Extension from Navarre Rd to Fohl St	New 2-lane connector	2030
	Trump Ave CR 170 from Lincoln St to SR 153	Widen to 4 lanes	2030
	Trump Ave CR 170 from SR 43 to New US 30	2 Lanes / new connector	2030
	US 30 from SR 183 to East Rochester	Super 2 lane	2030
	US 30 from SR 44 to SR 183	Super 2 lane	2030
	US 62 at Harmont	Grade Separation	2030
	US 62 from Columbus Rd to SR 44	Intersection Upgrading	2030
	US 62 from Market Ave to Columbus Rd	Major Reconst / Access Control	2030
	US 62 from SR 225 to Salem	New 4-Lane Freeway	2030
	Wales Ave SR 241 from Portage Street to Summit County	Widen to 4 lanes	2030
	Whipple Ave from Shuffel Dr to Mt Pleasant St	New 3-lanes	2030

Meets the emissions budget test

Table 2 contains the total daily emissions computed for Volatile Organic Compounds (VOC), Nitrogen Oxide (NO_x), and VMT for Stark County for the 2009, 2018, 2020, and 2030 analysis years. From this table, it can be seen that the 2009 analysis year emissions do not exceed the 2009 emissions budget, and that no other years exceed the 2018 budget.

8-Hour Ozone						
	Tons / Day					
	2009 Budget	2009	2018 Budget	2018	2020	2030
VOC	10.02	8.71	5.37	4.14	4.03	3.92
NO _x	18.03	15.35	7.08	5.36	4.95	3.91

Table 3 contains the total daily emissions computed for annual PM 2.5 and NO_x precursors for Stark County for the 2002, 2010, 2020, and 2030 analysis years. From this table, it can be seen that the analysis year emissions do not exceed the 2002 established emissions.

PM _{2.5}				
Stark Co.	Tons/Year			
	2002 Baseline	2010	2020	2030
Direct PM	162.16	77.21	45.48	48.37
NO _x Precursors	9,594.51	4,420.05	1,672.55	1,348.15

Final Conformity Determination

Based on the above descriptions, SCATS has determined conformity between the 2030 Transportation Plan, the SCATS FY 2008-2011 TIP and the Ohio State Implementation Plan budget. Resolution FY 2007-9 officially adopts the Transportation Improvement Program and affirms the consistency between the Plan, the TIP and the SIP. A copy is included below. As described in this document, the conformity determination analysis was conducted consistent with the *Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act*, 40 CFR Parts 51 and 93, issued November 24, 1993

SCATS RESOLUTION FY 2007-9

RESOLUTION OF THE POLICY COMMITTEE OF THE STARK COUNTY AREA TRANSPORTATION STUDY ADOPTION OF THE TRANSPORTATION IMPROVEMENT PROGRAM AND THE TRANSPORTATION PLAN CONSISTENCY BETWEEN THE PLAN, TIP AND SIP

WHEREAS, the Policy Committee of the Stark County Area Transportation Study is designated as the Metropolitan Planning Organization (MPO) by the Governor acting through the Ohio Department of Transportation (ODOT) and in cooperation with locally elected officials in the Canton, Ohio urbanized area as evidenced in the Agreement of Cooperation between ODOT and the Stark County Regional Planning Commission, encompassing Stark County; and

WHEREAS, the MPO has, pursuant to 23 United States Code 134, and 49 United States Code 5303, prepared the "Year 2030 Transportation Plan for Stark County, Ohio", and

WHEREAS, the MPO has, pursuant to 23 United States Code 134, and 49 United States Code 5303, prepared a Transportation Improvement Program for fiscal years 2008 through 2011 which has periodically been amended, and

WHEREAS, Section 176(c)(3) of the Clean Air Act Amendments of 1990 requires that the MPO make a determination that the Transportation Improvement Program and the Regional Transportation Plan for the transportation planning area are in conformity with respect to Ohio's State Implementation Plan for attainment of the National Ambient Air Quality Standards (NAAQS), and

WHEREAS, a quantitative air quality analysis of the "Year 2030 Transportation Plan for Stark County, Ohio" has been completed in accordance with the requirements specified by the Transportation Equity Act for the 21st Century and the Clean Air Act Amendments of 1990, and

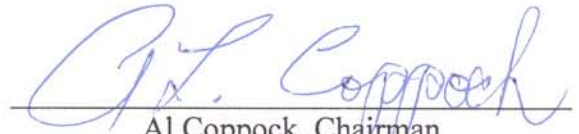
WHEREAS, the projects programmed in the SCATS Fiscal Year 2008-2011 Transportation Improvement Program are consistent with the "Year 2030 Transportation Plan for Stark County, Ohio" and were included in the air quality analysis completed for the Plan and found to be in conformity with the State Implementation Plan.

NOW THEREFORE, BE IT RESOLVED:

1. That this Committee reaffirms its approval of the "Year 2030 Transportation Plan for Stark County, Ohio" as the Transportation Plan for the Stark County area and recommends that its members incorporate the improvements into their planning for transportation improvements in their governmental units, and
2. That this Committee reaffirms its approval of the Transportation Improvement Program for fiscal years 2008 through 2011 as amended.

SCATS RESOLUTION FY 2007-9

3. That this Committee reaffirms the consistency between the Transportation Plan, Transportation Improvement Programs and the State Implementation Plan for air quality.
4. That this Committee authorizes the staff to provide copies of this Resolution to the appropriate parties as evidence of action by the MPO.



Al Coppock, Chairman
SCATS Policy Committee



Date

SCATS 2008-2011 TIP Conformity Analysis Technical Memo
ODOT Modeling & Forecasting
3/22/2007

Emission factors were generated using MOBILE6.2. Canton travel demand model run volumes were obtained using the Cube Voyager model. The emission factors were combined with the model volumes using ODOT's standard congestion management/air quality process (CMAQ) (<http://www.dot.state.oh.us/urban/data/cmaq.doc>) to compute total emissions. Since the travel demand model includes more than the entire county (see Figure 1), volumes from links in Mahoning, Columbiana, and Carroll Counties were excluded so that the calculated VMT was that only for Stark County. Stark County was analyzed for both 8-Hour Ozone and PM 2.5 emissions.

Figure 1 – Model versus Air Quality Analysis Area

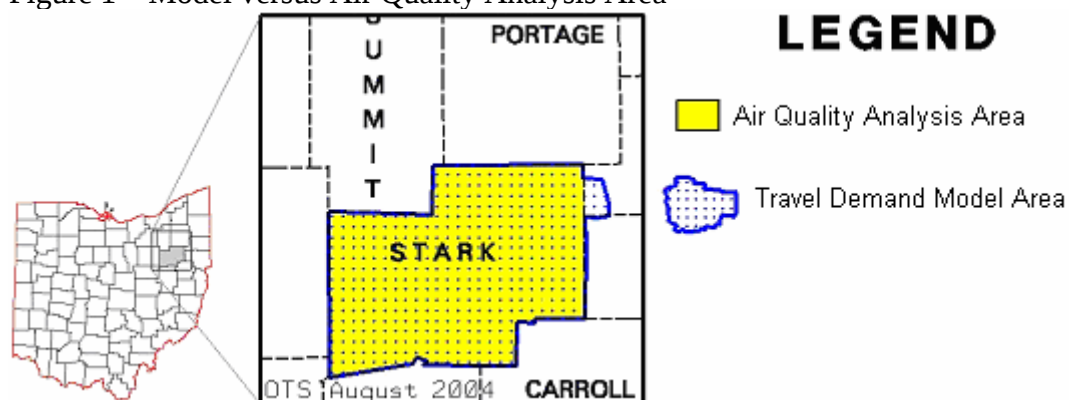


Table 1 contains the total daily emission budgets for Volatile Organic Compounds (VOC) and Nitrogen Oxide (NO_x), for Stark County for 2009 and 2018. There are no budgets for PM 2.5 and NO_x precursors since the criterion for acceptable emissions is that future year's emissions do not exceed those established for year 2002.

Table 1 – 8-Hour Ozone Budgets for Stark County

Totals	2009 Budget	2018 Budget
VOC	10.02	5.37
NO _x	18.03	7.08

Note: Emissions are expressed in tons/day

Table 2 contains the total daily emissions computed for Volatile Organic Compounds (VOC), Nitrogen Oxide (NOx), and VMT for Stark County for the 2009, 2018, 2020, and 2030 analysis years. From this table, it can be seen that the 2009 analysis year emissions do not exceed the 2009 emissions budget, and that no other years exceed the 2018 budget.

Table 2 – Ozone Emissions for Stark County

Year	VOC (tons/day)	NOX (tons/day)
2009	8.71	15.35
2018	4.14	5.36
2020	4.03	4.95
2030	3.92	3.91

Table 3 contains the total daily emissions computed for annual PM 2.5 and NOx precursors for Stark County for the 2002, 2010, 2020, and 2030 analysis years. From this table, it can be seen that the analysis year emissions do not exceed the 2002 established emissions.

Table 3 – PM 2.5 Emissions for Stark County

Direct PM							
Year	Summer			Winter			TOTAL PM 2.5 (tons/yr)
	# Days	Model PM 2.5	Summer Total	# Days	Model PM 2.5	Winter Total	
2002	183	0.47	85.41	182	0.42	76.75	162.16
2010	183	0.22	40.33	182	0.20	36.87	77.21
2020	183	0.13	23.52	182	0.12	21.97	45.48
2030	183	0.14	25.71	182	0.12	22.66	48.37

NOx Precursors							
Year	Summer			Winter			TOTAL NOx (tons/yr)
	# Days	Model NOx	Summer Total	# Days	Model NOx	Winter Total	
2002	183	26.89	4921.47	182	25.68	4673.03	9594.51
2010	183	12.23	2238.51	182	11.99	2181.54	4420.05
2020	183	4.54	830.98	182	4.62	841.57	1672.55
2030	183	3.79	693.42	182	3.60	654.73	1348.15

Travel Demand Model Runs

For this analysis the latest planning assumptions available for the Canton area were used. The SCATS model just underwent a major update that was completed April, 2006. Therefore, the existing “old” travel demand model structure was used replaced by the latest (“new”) model that was validated on the year 2000. However, this analysis required future year networks and variables, so SCATS provided the necessary files.

Networks

The 2002, 2009, 2010, 2018, 2020, and 2030 networks represent the roadways that are expected to exist in those years. The projects placed into each network are based on their expected completion dates as defined by the SCATS’s Transportation Plan:

(<http://www.co.stark.oh.us/internet/docs/rpc/2030%20PLAN%20EXEC%20SUMMARY%20WITH%20TRAN%20PROJ.pdf>)

Independent Variables

Independent variables (land use/socio-economic data) as provided by SCATS were used by ODOT to generate new trip tables for each analysis year: 2002, 2009, 2010, 2018, 2020, and 2030. Variables that were related to the number of trips produced for any given year were reviewed to make sure that they logically followed the trend of trip end growth. Figures 2 through 5 show the regional totals for the primary drivers of VMT growth: population, labor force, dwelling units, and employment.

Figure 2 – Population Growth

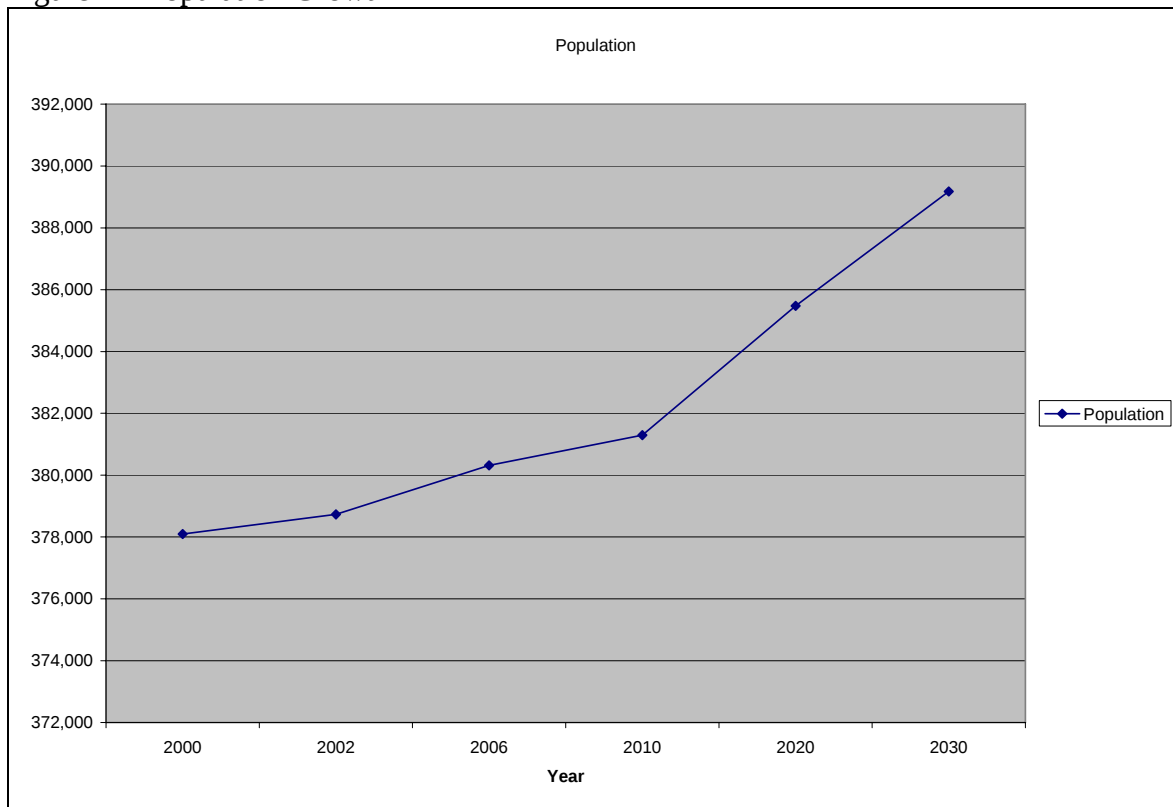


Figure 3 – Labor Force Growth

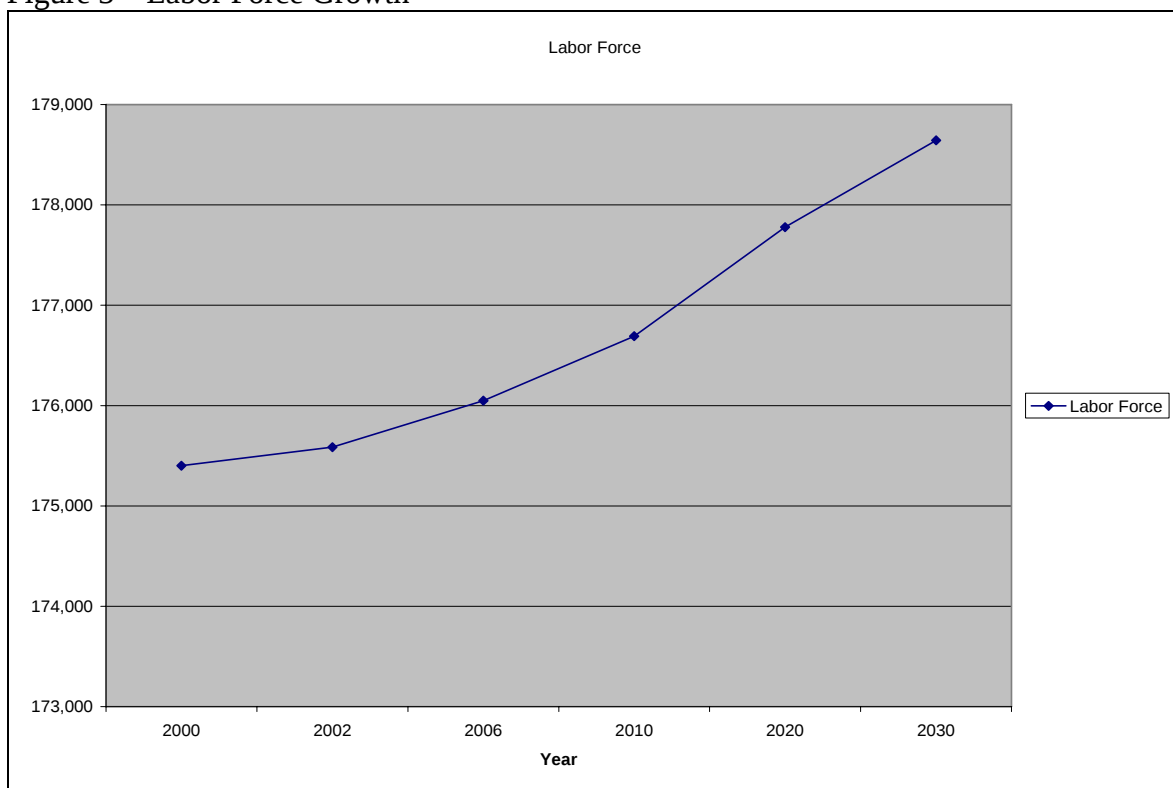


Figure 4 – Dwelling Units Growth

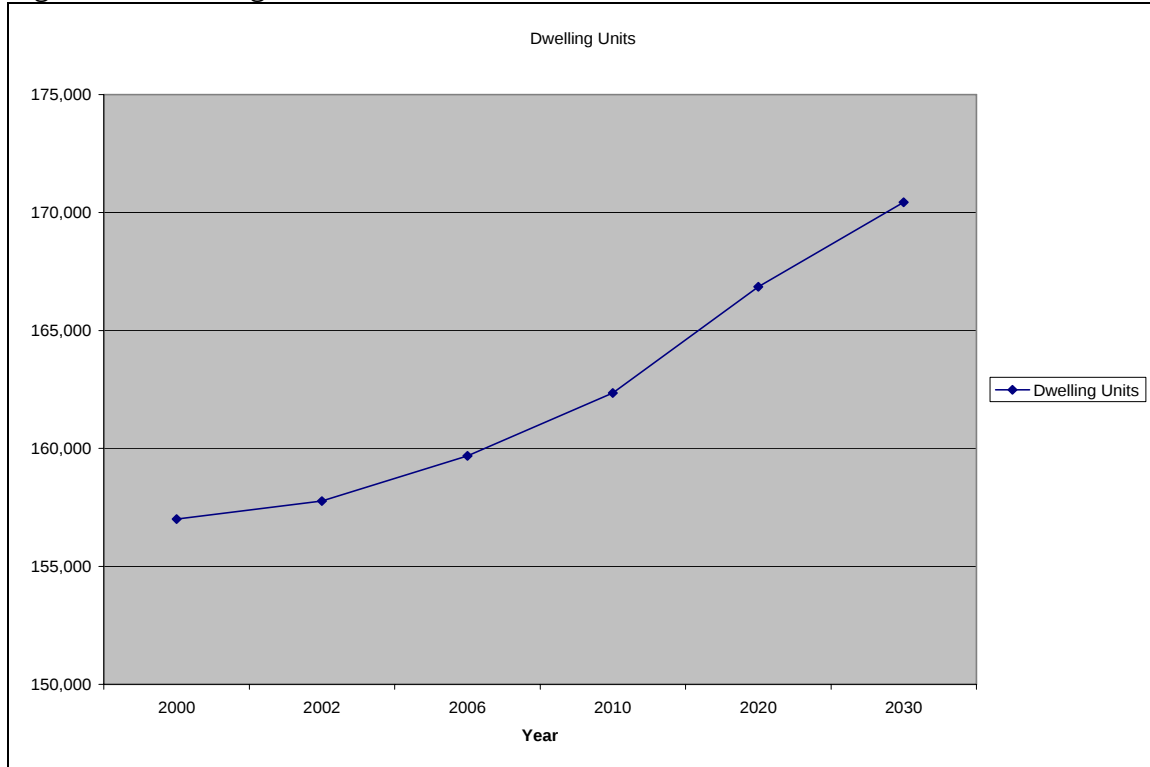
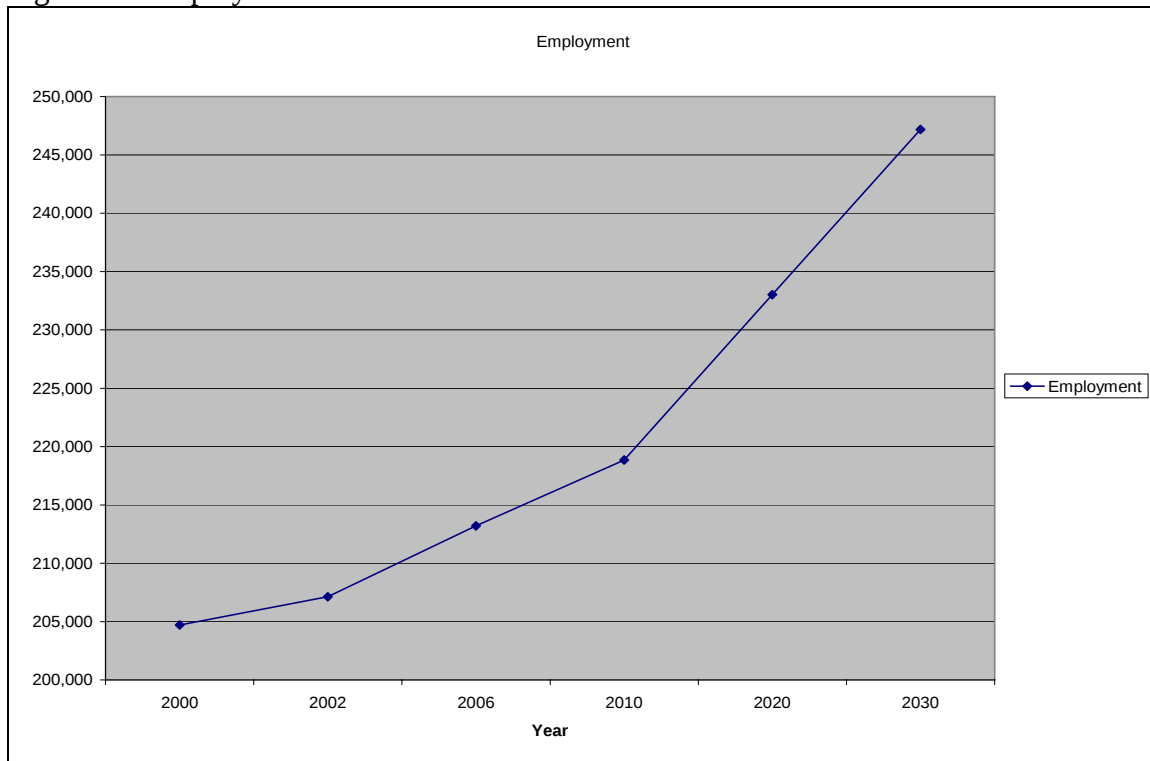


Figure 5 – Employment Growth



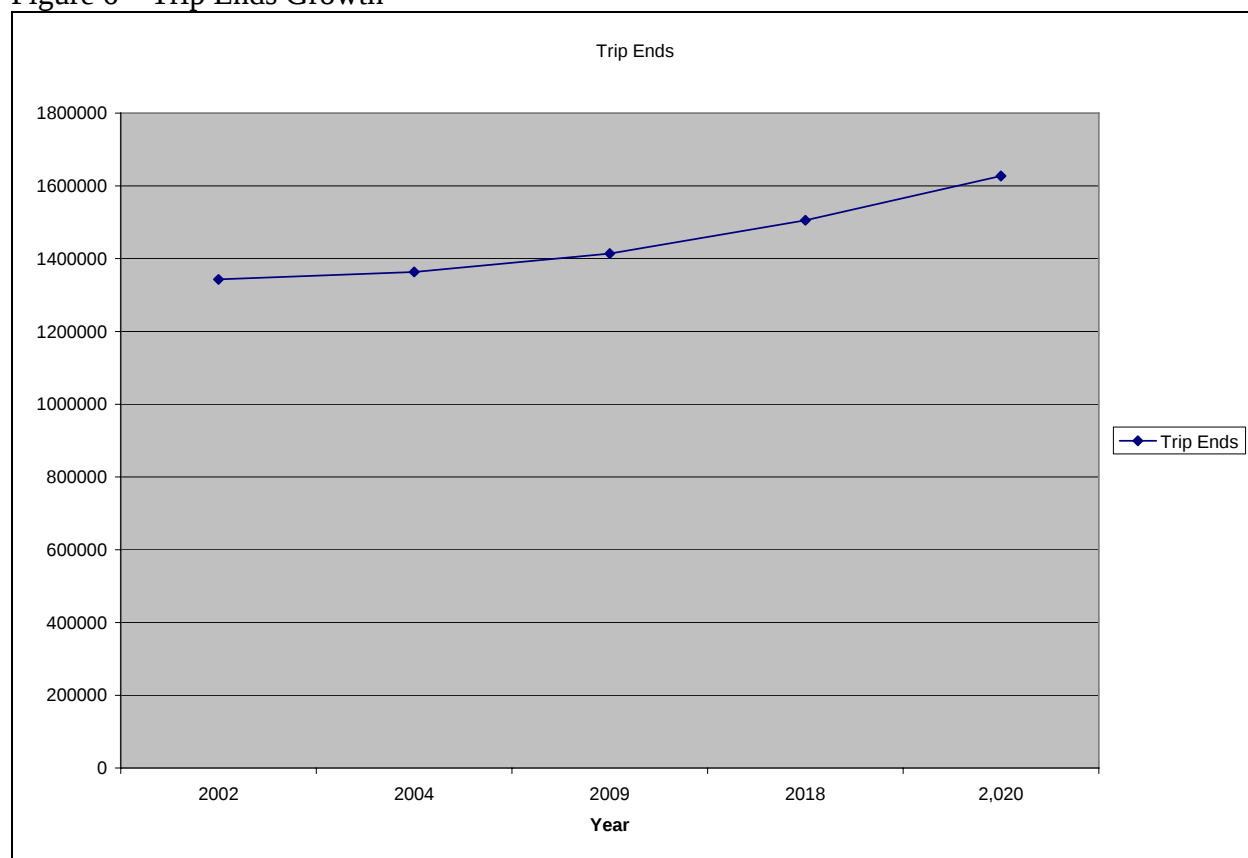
IntraZonal Trips

Intrazonal trips do not get loaded onto the network, so a Cube/Voyager emission calculation script requires a separate input file to account for these trips that use local roads to travel within the zone. The number of intrazonal trips for each zone was extracted from the total trip table using a separate Cube/Voyager script.

Trip Tables

The trip tables were created by running the SCATS model structure through many steps including trip generation, trip distribution, mode choice, auto occupancy, and time of day. The total number of trip ends from each of the four period trip tables was combined to create trip tables that represented a full day (24 hours). The total number of trip ends was extracted from the trip tables to show the growth throughout the analysis years, which is shown in Figure 6.

Figure 6 – Trip Ends Growth



Loaded Highway Networks

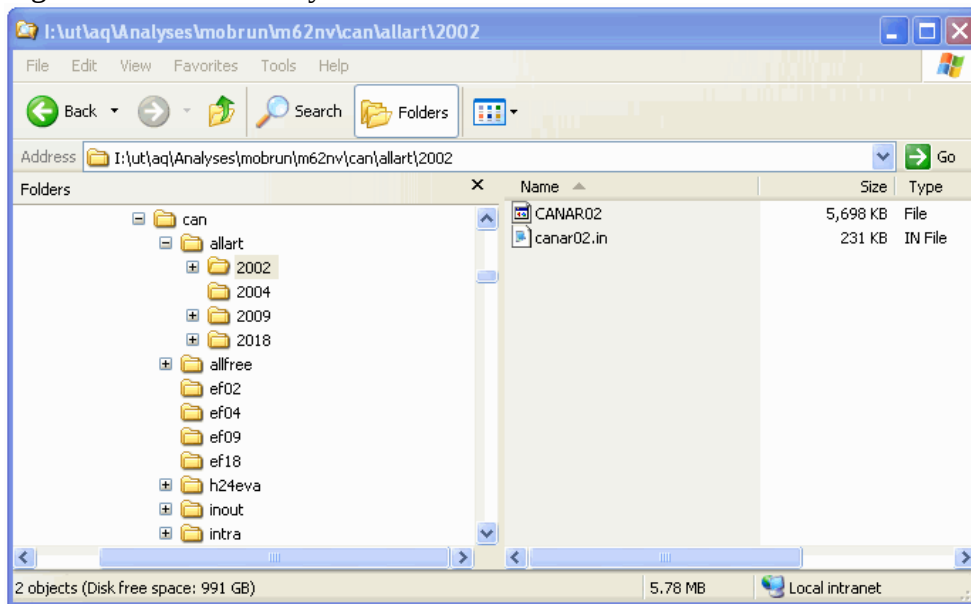
Trip assignment was run to produce a 24-hour loaded highway networks. These loaded networks include total volume for each link in the network. This network was run through the CMAQ process that combined the volumes and emission factors for the ozone and PM 2.5 air quality runs. Since the networks cover more than the entire analysis area, volumes were removed from links from Mahoning Columbiana, and Carroll Counties that were not part of the air quality

analysis area. Each network was run independently through the CMAQ process that combined the volumes and emission factors for the ozone and PM 2.5 air quality runs.

Emission Factors

Emission factor files were generated for each year of analysis. Each emission factor file for ozone involves multiple runs of MOBILE6.2, one for arterials, one for freeways, one for evaporative factors, and one for intra-zonal trips. For PM 2.5, eight emission factor files were generated: the four categories used for the ozone analysis, but for both the summer and winter seasons. Figure 7 shows the directory structure used for making the mobile runs.

Figure 7 – File Directory Structure



Emission factor results from the MOBILE6.2 runs are extracted and reformatted using a DOS batch file to run a set of FORTRAN PROGRAMS, M6FOR8A, M6FOR8B, M6FOR8C, M6FOR8D, M6EF24A, M6EF24B, M6EF24C, M6FOR8I, and M6FOR8J. The final emission factor file is in the same format as ODOT runs made for analyses under the one-hour rule.

Ozone Emission Factor Inputs

Figure 8 shows a partial listing of the MOBILE6.2 input file for ozone for arterials that is used to generate emission factors by hour of day temperatures and by speed in 1 mph increments. A similar file is used for freeways. The MOBILE6.2 input file for evaporative emissions is shown in Figure 9, and the MOBILE6.2 input file for intrazonal trip emissions is shown in Figure 10. A partial listing of the 2009 final emission factor file is shown in Figure 11. Table 4 shows a list of values specified as ozone inputs to MOBILE6.2 for all analysis years; all other inputs use default values.

Table 4 - Stark County Non-default MOBILE 6.2 Inputs for 8-Hour Ozone

Evaluation Month	Max/Min Temp	Oxygenated Fuel	Gasoline RVP	Vehicle Registration Files
July	88/62	0.0/.42/0.0/.036/2	9	OH_regdist_county76.d

Figure 8 – Partial Listing of MOBILE6.2 input file for Ozone 2009 Arterial Emission Factors

```

MOBILE6 INPUT FILE :
RUN DATA
EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :

HOURLY TEMPERATURES: 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6
                        68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6 68.6

OXYGENATED FUELS    : 0.00 0.42 0.00 .036 2
FUEL RVP             : 9.0
REG DIST             : REGDCT76.D

SCENARIO REC        : CAN 2009 MODEL RUN - VOC - ARTERIAL h0 - SPEED 5.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED      : 5 ARTERIAL

SCENARIO REC        : CAN 2009 MODEL RUN - VOC - ARTERIAL h0 - SPEED 6.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED      : 6 ARTERIAL

SCENARIO REC        : CAN 2009 MODEL RUN - VOC - ARTERIAL h0 - SPEED 7.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED      : 7 ARTERIAL

.
.
.

EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :

HOURLY TEMPERATURES: 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0
                        67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0 67.0

OXYGENATED FUELS    : 0.00 0.42 0.00 .036 2
FUEL RVP             : 9.0
REG DIST             : REGDCT76.D
SCENARIO REC        : CAN 2009 MODEL RUN - VOC - ARTERIAL h1 - SPEED 5.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED      : 5 ARTERIAL

SCENARIO REC        : CAN 2009 MODEL RUN - VOC - ARTERIAL h1 - SPEED 6.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED      : 6 ARTERIAL

.
.
.

```

Figure 9 – MOBILE6.2 Input File for Ozone 2009 Evaporative Emissions

```
MOBILE6 INPUT FILE :
RUN DATA
EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :
HOURLY TEMPERATURES: 62.1,65.6,69.9,74.7,78.7,81.7,84.0,85.5,87.7,88.0,88.1,87.8
                        86.1,83.4,78.5,74.3,72.6,70.6,68.6,67.0,65.7,64.2,63.0,62.9
OXYGENATED FUELS    : 0.00 0.42 0.00 .036 2
FUEL RVP             : 9.0
REG DIST             : REGDCT76.D

SCENARIO REC        : CAN 2009 MODEL RUN - EVA - FREEWAY H24 - SPEED 30.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED       : 30 FREEWAY 92.0 0.0 0.0 8.0

SCENARIO REC        : CAN 2009 MODEL RUN - EVA - ARTERIAL H24 - SPEED 30.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED       : 30 ARTERIAL

end of run
```

Figure 10 – MOBILE6.2 Input for Ozone 2009 Intra-zonal Trip Emission Factors

```
MOBILE6 INPUT FILE :
RUN DATA
EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :
HOURLY TEMPERATURES: 62.1,65.6,69.9,74.7,78.7,81.7,84.0,85.5,87.7,88.0,88.1,87.8
                        86.1,83.4,78.5,74.3,72.6,70.6,68.6,67.0,65.7,64.2,63.0,62.9
OXYGENATED FUELS    : 0.00 0.42 0.00 .036 2
FUEL RVP             : 9.0
REG DIST             : REGDCT76.D

SCENARIO REC        : CAN 2009 INTRA - CENTROID H24 - SPEED 20.0
CALENDAR YEAR       : 2009
EVALUATION MONTH    : 7
AVERAGE SPEED       : 20 ARTERIAL

end of run
```

Figure 11 – Partial Listing of Final for the Ozone 2009 Emission Factor File

11	0	5.0	62.6	EXHAUST	HC:	1.122
11	0	5.0	62.6	RUNING	L HC:	1.446
11	0	5.0	62.6	RSTING	L HC:	0.074
11	0	5.0	62.6	EXHAUST	CO:	19.884
11	0	5.0	62.6	EXHAUST	NOX:	2.289
11	0	6.0	62.6	EXHAUST	HC:	1.003
11	0	6.0	62.6	RUNING	L HC:	1.048
11	0	6.0	62.6	RSTING	L HC:	0.074
11	0	6.0	62.6	EXHAUST	CO:	17.742
11	0	6.0	62.6	EXHAUST	NOX:	2.170
11	0	7.0	62.6	EXHAUST	HC:	0.905
11	0	7.0	62.6	RUNING	L HC:	0.857
11	0	7.0	62.6	RSTING	L HC:	0.074
11	0	7.0	62.6	EXHAUST	CO:	16.137
11	0	7.0	62.6	EXHAUST	NOX:	2.049
11	0	8.0	62.6	EXHAUST	HC:	0.832
11	0	8.0	62.6	RUNING	L HC:	0.714
11	0	8.0	62.6	RSTING	L HC:	0.074
11	0	8.0	62.6	EXHAUST	CO:	14.932
11	0	8.0	62.6	EXHAUST	NOX:	1.959
11	0	9.0	62.6	EXHAUST	HC:	0.775
11	0	9.0	62.6	RUNING	L HC:	0.603
11	0	9.0	62.6	RSTING	L HC:	0.074
11	0	9.0	62.6	EXHAUST	CO:	13.996
11	0	9.0	62.6	EXHAUST	NOX:	1.888
11	0	10.0	62.6	EXHAUST	HC:	0.729
11	0	10.0	62.6	RUNING	L HC:	0.514
11	0	10.0	62.6	RSTING	L HC:	0.074
11	0	10.0	62.6	EXHAUST	CO:	13.246
11	0	10.0	62.6	EXHAUST	NOX:	1.832
11	0	11.0	62.6	EXHAUST	HC:	0.689
11	0	11.0	62.6	RUNING	L HC:	0.451
11	0	11.0	62.6	RSTING	L HC:	0.074
11	0	11.0	62.6	EXHAUST	CO:	12.645
11	0	11.0	62.6	EXHAUST	NOX:	1.775
11	0	12.0	62.6	EXHAUST	HC:	0.651
11	0	12.0	62.6	RUNING	L HC:	0.412
11	0	12.0	62.6	RSTING	L HC:	0.074
11	0	12.0	62.6	EXHAUST	CO:	12.161
11	0	12.0	62.6	EXHAUST	NOX:	1.713
11	0	13.0	62.6	EXHAUST	HC:	0.618
11	0	13.0	62.6	RUNING	L HC:	0.379
11	0	13.0	62.6	RSTING	L HC:	0.074
11	0	13.0	62.6	EXHAUST	CO:	11.751
11	0	13.0	62.6	EXHAUST	NOX:	1.660
11	0	14.0	62.6	EXHAUST	HC:	0.590
11	0	14.0	62.6	RUNING	L HC:	0.350
11	0	14.0	62.6	RSTING	L HC:	0.074
11	0	14.0	62.6	EXHAUST	CO:	11.400
11	0	14.0	62.6	EXHAUST	NOX:	1.615
11	0	15.0	62.6	EXHAUST	HC:	0.566
11	0	15.0	62.6	RUNING	L HC:	0.326
11	0	15.0	62.6	RSTING	L HC:	0.074

Ozone Temperatures

The low and high input temperatures used for the Stark County ozone analysis was given by OEPA via email attachment dated 5/19/06 (Appendix A). ODOT developed an average daily temperature distribution profile to derive the hourly temperature values shown in Table 5, which is also shown graphically in Figure 13.

Table 5 – Ozone Temperature Data

County	Low Temp	Hi Temp
Stark	62	88

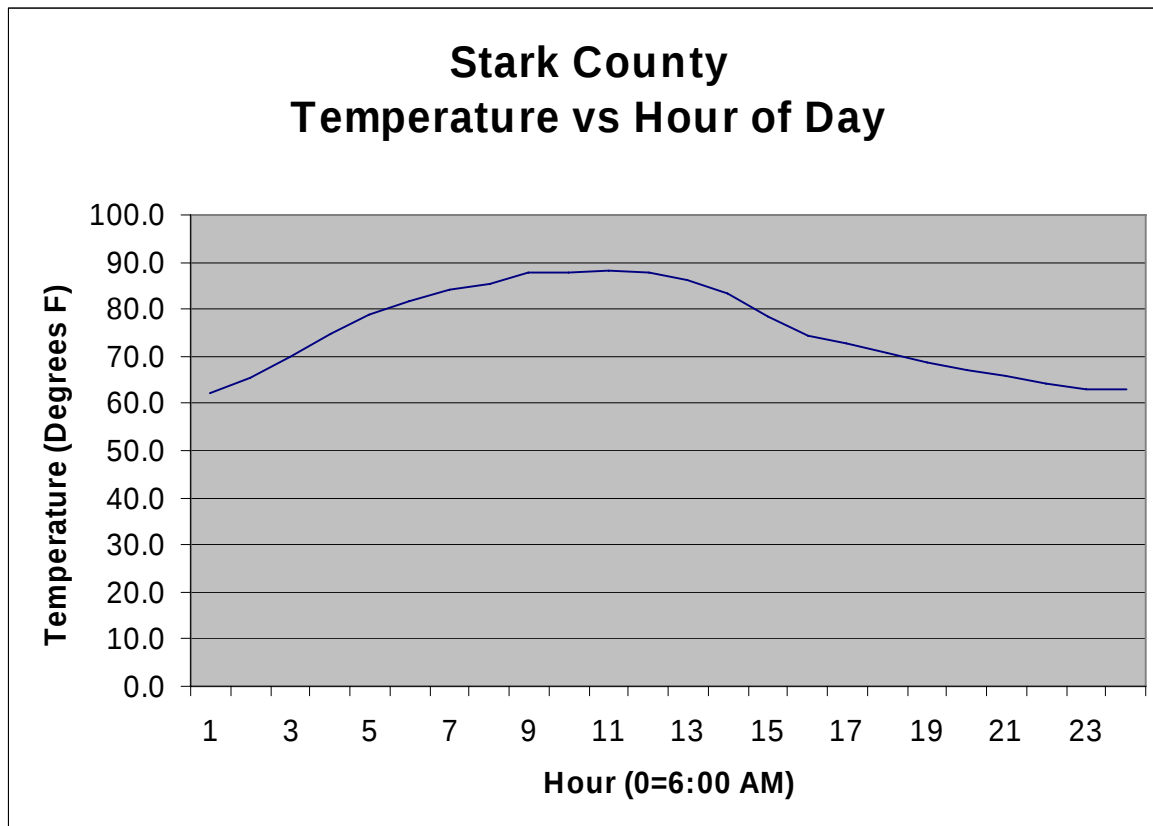
6:00 AM 0	7:00 AM 1	8:00 AM 2	9:00 AM 3	10:00 AM 4	11:00 AM 5
62.1	65.6	69.9	74.7	78.7	81.7

12:00 PM 6	1:00 PM 7	2:00 PM 8	3:00 PM 9	4:00 PM 10	5:00 PM 11
84.0	85.5	87.7	88.0	88.1	87.8

6:00 PM 12	7:00 PM 13	8:00 PM 14	9:00 PM 15	10:00 PM 16	11:00 PM 17
86.1	83.4	78.5	74.3	72.6	70.6

12:00 AM 18	1:00 AM 19	2:00 AM 20	3:00 AM 21	4:00 AM 22	5:00 AM 23
68.6	67.0	65.7	64.2	63.0	62.9

Figure 13 – Ozone Temperature Data Profile



PM 2.5 Emission Factor Inputs

Figure 14 shows a partial listing of the MOBILE6.2 input file for summer PM 2.5 for arterials that is used to generate emission factors by hour of day temperatures and by speed in 1 mph increments. A similar file is used for freeways. The MOBILE6.2 input file for summer evaporative emissions is shown in Figure 15, and the MOBILE6.2 input file for summer intrazonal trip emissions is shown in Figure 16. A partial listing of the summer 2010 final emission factor file is shown in Figure 17. Similar files exist for developing the winter emission factors. Table 6 shows a list of values specified as PM 2.5 inputs to MOBILE6.2 for all analysis years; all other inputs use default values.

Table 6 - Stark County Non-default MOBILE 6.2 Inputs for PM 2.5

Evaluation Month	Max/Min Temp	Oxygenated Fuel	Gasoline RVP	Vehicle Registration Files
July	78.1/53.4	0.0/.42/0.0/.036/2	9	OH_regdist_county76.d

Evaluation Month	Max/Min Temp	Oxygenated Fuel	Gasoline RVP	Vehicle Registration Files
January	28.1/46.5	0.0/.42/0.0/.036/2	9	OH_regdist_county76.d

Figure 14 – Partial Listing of MOBILE6.2 input file for 2010 Summer PM 2.5 Arterial Emission Factors

MOBILE6 INPUT FILE :	
PARTICULATES :	S04 OCARBON ECARBON GASPM LEAD BRAKE TIRE
RUN DATA	
EXPRESS HC AS VOC :	
EXPAND EVAPORATIVE :	
EXPAND EXHAUST :	
STAGE II REFUELING : 93 3 86. 86.	
HOURLY TEMPERATURES:	59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6
	59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6 59.6
OXYGENATED FUELS :	.035 .197 .027 .031 2
FUEL RVP :	9.0
REG DIST :	REGDCT76.D
SCENARIO REC :	CANTON 2010 MODEL RUN - VOC - ARTERIAL h18 - SPEED 5.0
CALENDAR YEAR :	2010
EVALUATION MONTH :	7
AVERAGE SPEED :	5 ARTERIAL 92.0 0.0 0.0 8.0
particulate ef :	pmgzml.csv pmgdr1.csv pmgdr2.csv pmdzml.csv pmddr1.csv pmddr2.csv
diesel sulfur :	15.0
particle size :	2.5
SCENARIO REC :	CANTON 2010 MODEL RUN - VOC - ARTERIAL h18 - SPEED 6.0
CALENDAR YEAR :	2010
EVALUATION MONTH :	7
	.
	.
	.

Figure 15 – MOBILE6.2 Input File for 2010 Summer PM 2.5 Evaporative Emissions

```
MOBILE6 INPUT FILE :
RUN DATA
EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :

STAGE II REFUELING : 93 3 86. 86.
HOURLY TEMPERATURES: 59.6 58.1 56.9 55.5 54.3 54.2 53.5 56.7 60.9 65.4 69.3 72.1
                        74.3 75.7 77.8 78.1 78.2 77.9 76.3 73.8 69.0 65.1 63.4 61.5
OXYGENATED FUELS   : .035 .197 .027 .031 2
FUEL RVP            : 9.0
REG DIST            : REGDCT76.D

SCENARIO REC       : CANTON 2010 MODEL RUN - VOC - FREEWAY H24 - SPEED 30.0
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED     : 30 FREEWAY 92.0 0.0 0.0 8.0

SCENARIO REC       : CANTON 2010 MODEL RUN - VOC - ARTERIAL H24 - SPEED 30.0
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED     : 30 ARTERIAL

end of run
```

Figure 16 – MOBILE6.2 Input for 2010 Summer PM 2.5 Intra-zonal Trip Emission Factors

```
MOBILE6 INPUT FILE :
particulates       : so4 ocarbon ecarbon gaspm lead brake tire
RUN DATA
EXPRESS HC AS VOC :
EXPAND EVAPORATIVE :
EXPAND EXHAUST :
STAGE II REFUELING : 93 3 86. 86.
HOURLY TEMPERATURES: 59.6 58.1 56.9 55.5 54.3 54.2 53.5 56.7 60.9 65.4 69.3 72.1
                        74.3 75.7 77.8 78.1 78.2 77.9 76.3 73.8 69.0 65.1 63.4 61.5

OXYGENATED FUELS   : .035 .197 .027 .031 2
FUEL RVP            : 9.0
REG DIST            : REGDCT76.D

SCENARIO REC       : CANTON 2010 INTRA - CENTROID H24 - SPEED 20.0
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED     : 20 ARTERIAL
particulate ef     : pmgzml.csv pmgdr1.csv pmgdr2.csv pmdzml.csv pmddr1.csv pmddr2.csv
diesel sulfur      : 15.0
particle size      : 2.5

end of run
```

Figure 17 – Partial Listing of Final for the 2010 Summer PM 2.5 Emission Factor File

11	0	5.0	62.6	EXHAUST	HC:	1.105
11	0	5.0	62.6	RUNING L	HC:	1.061
11	0	5.0	62.6	RSTING L	HC:	0.063
11	0	5.0	62.6	EXHAUST	CO:	21.226
11	0	5.0	62.6	EXHAUST	NOX:	2.101
11	0	6.0	62.6	EXHAUST	HC:	0.990
11	0	6.0	62.6	RUNING L	HC:	0.766
11	0	6.0	62.6	RSTING L	HC:	0.063
11	0	6.0	62.6	EXHAUST	CO:	19.067
11	0	6.0	62.6	EXHAUST	NOX:	1.992
11	0	7.0	62.6	EXHAUST	HC:	0.895
11	0	7.0	62.6	RUNING L	HC:	0.625
11	0	7.0	62.6	RSTING L	HC:	0.063
11	0	7.0	62.6	EXHAUST	CO:	17.445
11	0	7.0	62.6	EXHAUST	NOX:	1.880
11	0	8.0	62.6	EXHAUST	HC:	0.823
11	0	8.0	62.6	RUNING L	HC:	0.520
11	0	8.0	62.6	RSTING L	HC:	0.063
11	0	8.0	62.6	EXHAUST	CO:	16.228
11	0	8.0	62.6	EXHAUST	NOX:	1.796
11	0	9.0	62.6	EXHAUST	HC:	0.768
11	0	9.0	62.6	RUNING L	HC:	0.438
11	0	9.0	62.6	RSTING L	HC:	0.063
11	0	9.0	62.6	EXHAUST	CO:	15.282
11	0	9.0	62.6	EXHAUST	NOX:	1.731
11	0	10.0	62.6	EXHAUST	HC:	0.723
11	0	10.0	62.6	RUNING L	HC:	0.372
11	0	10.0	62.6	RSTING L	HC:	0.063
11	0	10.0	62.6	EXHAUST	CO:	14.525
11	0	10.0	62.6	EXHAUST	NOX:	1.678
11	0	11.0	62.6	EXHAUST	HC:	0.684
11	0	11.0	62.6	RUNING L	HC:	0.326
11	0	11.0	62.6	RSTING L	HC:	0.063
11	0	11.0	62.6	EXHAUST	CO:	13.916
11	0	11.0	62.6	EXHAUST	NOX:	1.626
11	0	12.0	62.6	EXHAUST	HC:	0.646
11	0	12.0	62.6	RUNING L	HC:	0.298
11	0	12.0	62.6	RSTING L	HC:	0.063
11	0	12.0	62.6	EXHAUST	CO:	13.425
11	0	12.0	62.6	EXHAUST	NOX:	1.569
11	0	13.0	62.6	EXHAUST	HC:	0.615
11	0	13.0	62.6	RUNING L	HC:	0.274
11	0	13.0	62.6	RSTING L	HC:	0.063
11	0	13.0	62.6	EXHAUST	CO:	13.009
11	0	13.0	62.6	EXHAUST	NOX:	1.520
11	0	14.0	62.6	EXHAUST	HC:	0.588
11	0	14.0	62.6	RUNING L	HC:	0.253
11	0	14.0	62.6	RSTING L	HC:	0.063
11	0	14.0	62.6	EXHAUST	CO:	12.652
11	0	14.0	62.6	EXHAUST	NOX:	1.479
11	0	15.0	62.6	EXHAUST	HC:	0.564
11	0	15.0	62.6	RUNING L	HC:	0.236
11	0	15.0	62.6	RSTING L	HC:	0.063
11	0	15.0	62.6	EXHAUST	CO:	12.343
11	0	15.0	62.6	EXHAUST	NOX:	1.443
11	0	16.0	62.6	EXHAUST	HC:	0.546
11	0	16.0	62.6	RUNING L	HC:	0.219
11	0	16.0	62.6	RSTING L	HC:	0.063
11	0	16.0	62.6	EXHAUST	CO:	12.109
11	0	16.0	62.6	EXHAUST	NOX:	1.417
11	0	17.0	62.6	EXHAUST	HC:	0.536
11	0	17.0	62.6	RUNING L	HC:	0.203
11	0	17.0	62.6	RSTING L	HC:	0.063
11	0	17.0	62.6	EXHAUST	CO:	11.986
11	0	17.0	62.6	EXHAUST	NOX:	1.406
11	0	18.0	62.6	EXHAUST	HC:	0.527
11	0	18.0	62.6	RUNING L	HC:	0.188
11	0	19.0	62.6	RSTING L	HC:	0.063

Seasonal Factors

Seasonal VMT factors are estimated as an average of monthly VMT factors. For each month, the VMT factor is the inverse of the factor applied to short-term traffic counts that converts them into an estimate of AADT. At the time this document was prepared the count factors shown in Tables 7-9 below are available on the ODOT web site at

http://www.dot.state.oh.us/techservsite/availpro/Traffic_Survey/Seasonal/Sea_Adj_Fctrs.htm

The winter season is defined as months October thru March and summer is defined as months April thru September. The seasonal factors are applied to the travel demand model daily volumes.

Table 7 – 2002-2004 Seasonal Adjustment Factors								
MONTH	MONTHLY SEASONAL FACTORS							
	Federal Functional Class							
	01	02	06	07-09	11	12	14	16-19
JAN	1.27	1.23	1.22	1.18	1.19	1.18	1.23	1.16
FEB	1.22	1.16	1.14	1.13	1.10	1.13	1.16	1.11
MAR	1.08	1.08	1.07	1.06	1.05	1.08	1.08	1.02
APR	1.00	1.00	1.00	0.99	1.01	1.04	1.00	0.96
MAY	0.97	0.98	0.96	0.95	1.01	0.99	0.98	0.95
JUN	0.91	0.92	0.94	0.91	0.96	0.97	0.92	0.96
JUL	0.87	0.92	0.95	0.94	0.98	1.00	0.92	1.00
AUG	0.87	0.92	0.93	0.94	0.96	0.97	0.92	0.99
SEP	0.97	0.96	0.94	0.96	1.00	1.00	0.96	0.99
OCT	0.98	0.97	0.97	0.98	0.99	0.99	0.97	1.00
NOV	1.00	1.04	1.01	1.04	1.04	1.06	1.04	1.05
DEC	1.09	1.12	1.09	1.11	1.08	1.10	1.12	1.08
From 2002-2004 ATR Data								

Table 8 - Seasonal VMT Factors (ADT to Winter and Summer)		
Federal Functional Class	Winter Oct-Mar	Summer Apr-Sep
01 – Rural Freeway	0.917	1.083
02 – Rural Interstate	0.929	1.071
06 – Rural Major Arterial	0.939	1.061
07-09 – Rural Collectors and Local	0.935	1.065
11 – Urban Interstate	0.959	1.041
12 – Urban Freeway/Expy	0.956	1.044
14 – Urban Other Principal Arterial	0.929	1.071
16-19 – Urban Collectors and Local	0.955	1.045

Table 9 – Rural Interstate Computation Example

STATE	FED_FC	MONTH	COUNT_FCT	VMT_FCT	ADJ_FCT
OH_2005	1	JAN	1.27	0.787	
		FEB	1.22	0.820	
		MAR	1.08	0.926	
		APR	1.00	1.000	
		MAY	0.97	1.031	
		JUN	0.91	1.099	
		JUL	0.87	1.149	
		AUG	0.87	1.149	
		SEP	0.97	1.031	
		OCT	0.98	1.020	
		NOV	1.00	1.000	
		DEC	1.09	0.917	
		WINTER		0.912	0.917
		SUMMER		1.077	1.083

Rural Interstate Example Computation:

Monthly VMT_FCT= $1/1.27 = 0.787$

Winter VMT_FCT = $(0.787+0.820+0.926+1.020+1.0+0.917)/6=0.912$

WINTER FACTOR = $0.912*(2/(0.912+1.077))$

Note that the last step is needed due to the way monthly factors are defined, the resulting VMT would not add up 100 percent without normalizing the factors.

Estimates made by Sam Granato, P.E. based on seasonal adjustment factors published on ODOT website dated April 2005, 05seafcallb.pdf

PM 2.5 Temperatures

Six month average minimum and average maximum temperatures were used to generate two sets of emission factors (summer and winter). Temperatures were computed using 2002 NOAA temperature data downloaded from their web site:

<ftp://ftp.ncdc.noaa.gov/pub/data/global sod/stnlist-sorted.txt>

<ftp://ftp.ncdc.noaa.gov/pub/data/global sod/2002/all-2002.tar>

Through interagency consultation, it was decided to use data from the Akron Canton Airport, 725210 KCAK AKRON AKRON-CANTON OH +4091 -08143 +0368. The extracted airport data was summarized by month as shown in Figure 18. Temperature for each hour of day for 24 hours was estimated using the seasonal average min. and average max temperatures and an average day temperature profile, temperature for each hour of day for 24 hours was computed. Figure 19 shows the temperature data.

Figure 18 – PM 2.5 Temperature Data

Season	County	Average Low Temp	Average Hi Temp
Summer	Stark	53.4	78.1
Winter	Stark	28.1	46.5

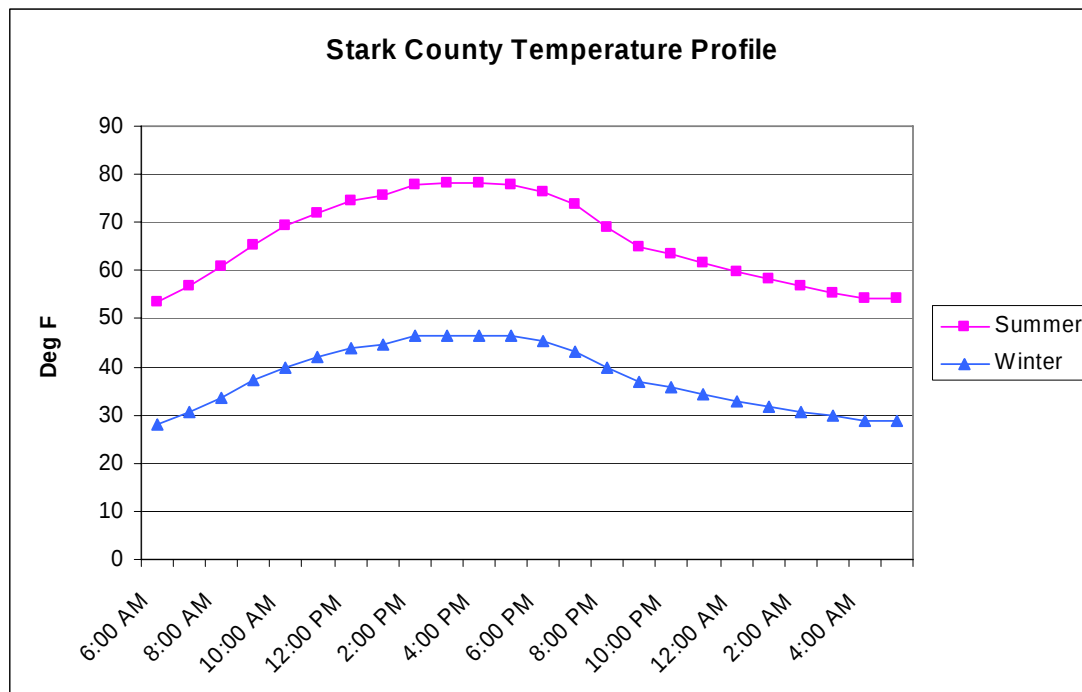
6:00 AM 0	7:00 AM 1	8:00 AM 2	9:00 AM 3	10:00 AM 4	11:00 AM 5
53.460	56.748	60.916	65.446	69.252	72.084
28.202	30.648	33.748	37.118	39.950	42.056

12:00 PM 6	1:00 PM 7	2:00 PM 8	3:00 PM 9	4:00 PM 10	5:00 PM 11
74.333	75.749	77.793	78.124	78.234	77.888
43.729	44.782	46.303	46.549	46.631	46.373

6:00 PM 12	7:00 PM 13	8:00 PM 14	9:00 PM 15	10:00 PM 16	11:00 PM 17
76.299	73.782	69.032	65.100	63.448	61.514
45.192	43.319	39.786	36.861	35.632	34.193

12:00 AM 18	1:00 AM 19	2:00 AM 20	3:00 AM 21	4:00 AM 22	5:00 AM 23
59.610	58.100	56.905	55.489	54.325	54.247
32.777	31.654	30.765	29.712	28.846	28.787

Figure 19 – PM 2.5 Temperature Data Profile



Vehicle Age Distribution

OEPA provided vehicle age distribution information that they derived using USEPA's VIN decoder and Ohio Bureau of Motor Vehicle registration data. The registration data for Stark County, used to represent the SCATS area, is listed in Figure 20.

Figure 20 – Vehicle Age Distribution Data

```
REG DIST
*LDV County 76
1 0.028 0.0373 0.0446 0.0446 0.0842 0.0894
  0.0811 0.0827 0.0737 0.0722 0.0639 0.0559
  0.0465 0.0381 0.033 0.0281 0.0225 0.0153
  0.0129 0.0095 0.0067 0.0039 0.002 0.0019 0.0221
*LDT1 County 76
2 0.0252 0.0336 0.0401 0.0236 0.0313 0.0348
  0.0459 0.052 0.0684 0.0756 0.0936 0.0738
  0.0487 0.0653 0.0468 0.0581 0.0433 0.0401
  0.0313 0.0211 0.012 0.0068 0.0066 0.0047 0.0173
*LDT2 County 76
3 0.0348 0.0464 0.0555 0.054 0.1056 0.1162
  0.1088 0.1107 0.0749 0.0592 0.057 0.0477
  0.0354 0.0228 0.0157 0.0135 0.0156 0.0035
  0.0038 0.0042 0.0044 0.0023 0.0011 0.0016 0.0052
*LDT3 County 76
4 0.025 0.0333 0.0397 0.0395 0.0733 0.1082
  0.0548 0.0541 0.0713 0.0762 0.0707 0.0518
  0.0403 0.029 0.0295 0.03 0.0285 0.0243
  0.0239 0.0169 0.0146 0.0072 0.0051 0.0026 0.0503
*LDT4 County 76
5 0.0265 0.0353 0.0419 0.0456 0.1199 0.1551
  0.1022 0.1132 0.0699 0.0654 0.0669 0.0132
  0.0221 0.0051 0.0162 0.0081 0.0132 0.0051
  0.0051 0.0059 0.0044 0.0022 0.0022 0.0007 0.0544
```

CMAQ Process

Total emissions were computed with ODOT's new CMAQ process. This process produces the same outputs as the old CMAQT, but uses newer data on daily and directional traffic distributions as well as more up to date volume/delay functions from the 2000 Highway Capacity Manual (HCM). This process also uses rewritten code able to handle the newer model network formats.

The process uses a combination of the MOBILE6.2 emission factors and the daily link volumes that come out of the travel demand model. Emissions are calculated for each link for each hour of the day. Hourly link volumes are based on a percentage of the daily volume determined by a link's facility type and area type. Link speeds from the travel demand model are not used in the analysis. The speeds are estimated as a post-process to the model based on HCM methods implemented through the process, using a link's volume-to-capacity ratio and link group code. The daily volume percentages and speed tables are included in the final report files.

The hourly volumes are multiplied by the MOBILE6.2 emission factor for the corresponding hour of day and speed to calculate emissions for every link for each hour. The final total emissions for the area is the sum of all individual link-hour emissions, which is also shown in the final report files: Appendix B shows the calculated ozone emissions for 2009, Appendix C shows the calculated summer PM 2.5 emissions for 2010, and Appendix D shows the calculated winter PM 2.5 emissions for 2010.

Technical Appendix A – OEPA Temperature Data

To: "Mark Byram" mByram@dot.state.oh.us

From:

"Bill Spires" <bill.spires@epa.state.oh.us>

05/23/2006 08:02 AM

The base year for current state implementation work for both PM_{2.5} and ozone is 2002. This was also a significant ozone year with several 1-hour and 8-hour episodes of elevated ozone within the state. For the ozone day maximum and minimum temperatures, three episodes with statewide elevated ozone concentrations were chosen to determine the average maximum and minimum temperatures for these episode days.

June 21, July 8 and August 10, 2002 were the three episodes chosen. Local Climatic Data summaries from the National Climatic Data Center for National Weather Service sites in and around Ohio were reviewed to obtain the individual temperature values. The three day average maximum and minimum temperatures were developed for each of these sites. Each county was then assigned one of these surface stations in a manner consistent with the assignment of meteorological data sets for use in air quality modeling in the Division of Air Pollution Control Engineering Guide 69 (EG69) which provides guidance on the application of air quality models within Ohio. In cases where the surface station data were not available, the upper air station identified in EG69 was assigned for those counties.



MaxMin2002.xls

County	Max T	Min T	County	Max T	Min T
Adams	89.7	61.7	Licking	90.0	62.7
Allen	89.3	66.3	Logan	89.3	66.3
Ashland	87.7	57.7	Lorain	89.0	61.0
Ashtabula	89.0	61.0	Lucas	91.3	59.3
Athens	89.7	61.7	Madison	90.0	62.7
Auglaize	89.3	66.3	Mahoning	87.3	55.0
Belmont	87.7	57.7	Marion	90.0	62.7
Brown	91.3	62.0	Medina	88.0	62.0
Butler	91.3	62.0	Meigs	89.7	61.7
Carroll	87.7	57.7	Mercer	88.7	62.0
Champaign	89.3	66.3	Miami	89.3	66.3
Clark	89.3	66.3	Monroe	87.7	57.7
Clermont	91.3	62.0	Montgomery	89.3	66.3
Clinton	91.3	62.0	Morgan	89.7	61.7
Columbiana	87.7	57.7	Morrow	90.0	62.7
Coshocton	90.0	62.7	Muskingum	90.0	62.7
Crawford	90.0	62.7	Noble	87.7	57.7
Cuyahoga	89.0	61.0	Ottawa	91.3	59.3
Darke	89.3	66.3	Paulding	88.7	62.0
Defiance	88.7	62.0	Perry	90.0	62.7
Delaware	90.0	62.7	Pickaway	90.0	62.7
Erie	89.0	61.0	Pike	89.7	61.7
Fairfield	90.0	62.7	Portage	88.0	62.0
Fayette	90.0	62.7	Preble	89.3	66.3
Franklin	90.0	62.7	Putnam	88.7	62.0
Fulton	91.3	59.3	Richland	90.0	62.7
Gallia	89.7	61.7	Ross	90.0	62.7
Geauga	89.0	61.0	Sandusky	91.3	59.3
Greene	89.3	66.3	Scioto	89.7	61.7
Guernsey	87.7	57.7	Seneca	91.3	59.3
Hamilton	91.3	62.0	Shelby	89.3	66.3
Hancock	91.3	59.3	Stark	88.0	62.0
Hardin	89.3	66.3	Summit	88.0	62.0
Harrison	87.7	57.7	Trumbull	87.3	55.0
Henry	91.3	59.3	Tuscarawas	88.0	62.0
Highland	91.3	62.0	Union	90.0	62.7
Hocking	90.0	62.7	Van Wert	88.7	62.0
Holmes	88.0	62.0	Vinton	89.7	61.7
Huron	89.0	61.0	Warren	91.3	62.0
Jackson	89.7	61.7	Washington	89.7	61.7
Jefferson	87.7	57.7	Wayne	88.0	62.0
Knox	90.0	62.7	Williams	91.3	59.3
Lake	89.0	61.0	Wood	91.3	59.3
Lawrence	89.7	61.7	Wyandot	90.0	62.7

Technical Appendix B – SCATS Ozone Emission Run Report for 2009

You can enter a comment to add to the AQ report

Loaded Network: I:\ut\mpo\model\can\aq\2007march\2009\ozone\CAN02J24ASNAQ.NET
 Emission Factors: I:\ut\mpo\model\can\aq\2007march\2009\ozone\can09ef.fac
 Intrazonal Emission Factors: I:\ut\mpo\model\can\aq\2007march\2009\ozone\canief09.crd
 24 Hour Trip Table: I:\ut\mpo\model\can\aq\2007march\2009\ozone\CAN09TBVAQ.MAT
 Area File (sq mi): I:\ut\mpo\model\can\aq\2007march\2009\ozone\CantonZoneAreas.txt
 Volume Field Used: VOL24_TOT
 Capacity Field Used: CAP24

----- CMS/AQ REPORT

POSTCMS8A, UPDATED FEB 10 2006, GTG
 DATE:03/12/2007 TIME:09:31:48

PARAMETER FILE DUMP (DAILY.DAT FILE)

HOUR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PCTADT																								
URB FWY	0.9	0.6	0.5	0.5	0.9	2.5	5.5	7.0	5.8	5.8	4.7	5.0	5.4	5.4	6.4	7.5	8.0	8.0	5.6	4.0	3.4	2.9	2.2	1.5
URB ART	0.8	0.5	0.4	0.3	0.6	1.6	3.8	5.8	5.4	5.1	5.5	6.3	6.6	6.2	6.6	7.5	7.7	7.7	6.1	4.8	4.1	3.2	2.1	1.4
RUR FWY	1.6	1.2	1.1	1.1	1.3	2.5	3.9	4.8	4.8	5.0	5.5	5.7	5.6	6.1	6.7	7.1	7.1	6.8	5.4	4.4	3.9	3.4	2.9	2.2
RUR ART	0.9	0.7	0.6	0.5	0.9	2.6	3.7	6.4	5.3	5.2	5.3	5.8	5.9	5.8	6.4	7.8	8.0	7.7	5.8	4.4	3.7	3.1	2.2	1.6
PCTADT TRK																								
URB FWY	1.8	1.6	1.6	1.7	2.2	3.0	4.1	5.5	5.9	6.3	6.4	6.7	6.7	6.5	6.6	6.0	5.5	4.9	3.9	3.2	2.8	2.6	2.4	2.0
URB ART	1.0	0.9	1.0	1.1	1.5	2.1	3.8	6.1	6.9	7.1	7.7	8.0	7.6	7.3	7.2	7.0	5.9	4.8	3.5	2.7	2.2	1.9	1.5	1.2
RUR FWY	2.9	2.6	2.4	2.4	2.7	2.9	3.1	3.5	4.1	4.8	5.1	5.3	5.2	5.6	5.7	5.4	5.3	5.0	4.7	4.7	4.5	4.4	4.2	3.7
RUR ART	1.8	1.6	1.6	1.7	2.1	2.8	4.0	5.1	5.8	6.7	7.0	7.1	6.8	6.5	6.4	6.1	5.3	4.5	3.7	3.2	2.9	2.6	2.4	2.1
PCTDIR																								
URB FWY	38	40	40	46	56	64	70	70	68	62	58	52	52	52	50	46	38	38	46	52	46	42	42	40
URB ART	44	46	44	48	54	62	66	68	64	56	54	52	50	50	50	46	40	38	46	52	48	46	46	46
RUR FWY	44	46	48	54	60	68	68	64	58	54	52	50	50	52	52	48	42	40	44	48	48	44	46	44
RUR ART	40	42	44	48	58	66	72	68	60	56	54	50	50	50	50	46	40	38	46	50	46	44	44	44
LOS E VC	0	0.625	1.25	1.875	2.5	3.125	3.75	4.375	5	5.625	6.25	6.875	7.5	8.125	8.75	9.375	10	10.625	11.25	11.875	12.5			
13.125 13.75 14.375																								
SPEEDVC																								
curve1	75	75	75	75	75	75	74.9	74.8	74.6	74.2	73.5	72.3	70.5	67.8	64.2	59.5	54	47.7	41.2	34.9	28.9	23.7	19.2	
15.5																								
curve2	70	70	70	70	70	70	69.9	69.8	69.6	69.2	68.4	67.1	65.1	62.2	58.2	53	47	40.5	33.9	27.7	22.2	17.6		
13.8																								
curve3	65	65	65	65	65	65	65	65	65	64.9	64.8	64.4	63.8	62.6	60.5	57	52	45.4	37.8	29.9	22.7	16.7	12.1	
8.6																								
curve4	60	60	60	60	60	60	60	60	60	59.9	59.8	59.6	59.1	58.2	56.7	54.3	50.8	46.1	40.3	33.8	27.3	21.3	16.2	
12.2																								
curve5	55	55	55	55	55	55	55	55	55	55	55	54.9	54.7	54.3	53.6	52.3	50	46.5	41.5	35.3	28.5	21.9	16.1	
11.5																								
curve6	60	60	60	60	60	60	60	60	59.9	59.8	59.7	59.4	59.1	58.5	57.7	56.5	55	53.1	50.7	47.9	44.7	41.1	37.3	
33.4																								
curve7	55	55	55	55	55	55	55	55	54.9	54.9	54.7	54.5	54.2	53.8	53.1	52.2	50.9	49.3	47.3	44.9	42.1	39	35.7	
32.2																								
curve8	50	50	50	50	50	50	50	50	49.9	49.9	49.8	49.6	49.4	49	48.5	47.7	46.7	45.4	43.8	41.8	39.5	36.8	33.9	
30.9																								
curve9	45	45	45	45	45	45	45	45	44.9	44.8	44.7	44.4	44.1	43.6	43	42.1	40.9	39.4	37.6	35.5	33.1	30.5		
27.8																								
curve10	50	50	50	50	49.9	49.8	49.7	49.4	49	48.4	47.5	46.5	45.1	43.5	41.7	39.6	37.3	34.9	32.4	29.8	27.3	24.9		
22.6 20.4																								
curve11	50	50	50	50	50	49.9	49.7	49.4	48.9	48	46.7	44.9	42.5	39.6	36.2	32.6	28.7	25	21.4	18.2	15.3	12.9	10.8	
9																								
curve12	50	50	50	50	50	49.9	49.8	49.6	49.1	48.2	46.8	44.5	41.4	37.5	32.9	28	23.1	18.7	14.9	11.8	9.2	7.2	5.7	
4.5																								
curve13	40	40	40	40	40	39.9	39.8	39.5	39.2	38.6	37.8	36.7	35.3	33.5	31.4	29	26.4	23.7	21.1	18.5	16.1	13.9		
12																								
curve14	40	40	40	40	40	39.9	39.8	39.6	39.1	38.5	37.5	36.1	34.3	32.1	29.4	26.5	23.5	20.5	17.7	15.1	12.8	10.7	9	
7.6																								
curve15	40	40	40	40	40	39.9	39.7	39.4	38.8	37.9	36.5	34.7	32.3	29.5	26.4	23.2	20	17	14.3	11.9	9.9	8.2	6.8	
5.6																								
curve16	35	35	35	35	35	34.9	34.8	34.5	34	33.2	32.1	30.5	28.5	26.1	23.5	20.6	17.9	15.2	12.8	10.7	8.9	7.4	6.1	
5.1																								
curve17	35	35	35	35	35	34.9	34.7	34.4	33.9	33.1	32	30.3	28.3	25.8	23.1	20.3	17.5	14.9	12.5	10.4	8.6	7.2	5.9	
4.9																								

curve18 3.6	35	35	35	35	35	34.9	34.6	34.2	33.5	32.4	30.9	28.8	26.3	23.4	20.4	17.4	14.6	12.1	9.9	8.1	6.6	5.4	4.4
curve19 3.8	30	30	30	30	30	29.9	29.8	29.5	29	28.2	27.1	25.6	23.7	21.5	19.1	16.6	14.2	12	10	8.3	6.8	5.6	4.6
curve20 3.6	30	30	30	30	30	29.9	29.7	29.4	28.9	28.1	26.9	25.3	23.4	21.1	18.6	16.1	13.6	11.4	9.5	7.8	6.4	5.3	4.3
curve21 2.9	30	30	30	30	30	29.9	29.7	29.3	28.7	27.7	26.2	24.4	22.1	19.6	17	14.4	12	9.9	8.1	6.6	5.4	4.4	3.6

VC RATIO TO LOS CONVERSION (VALUE SHOWN IS LOWER LIMIT FOR THAT LOS)(URBAN ROADS USE SPEED BREAKS BELOW FOR LOS DETERMINATION) (ALL USE THE BASE VC'S TO DETERMINE EXCEEDANCE)

BASE RUR2 FWY

A 0.00 0.00 0.00
B 0.30 0.00 0.25
C 0.50 0.10 0.40
D 0.70 0.30 0.60
E 0.90 0.50 0.80
F 1.00 1.00 1.00
F+ 1.10 1.10 1.10
F++ 1.30 1.30 1.30

SPEED VC RATIO BREAKS FOR URBAN STREETS (HIGHEST SPEED FOR GIVEN LOS & FF SPEED)

FFS B C D E F
>47 42. 34. 27. 21. 16.
>37 35. 28. 22. 17. 13.
>32 30. 24. 18. 14. 10.
<33 25. 19. 13. 9. 7.

LEVEL OF SERVICE THRESHOLD BY AREA

NUM LOS DEFINITION

- 1 F CINCINNATI,CLEVELAND,COLUMBUS CENTRAL MPO COUNTIES (CUY,FRA,HAM)
- 2 E OTHER TMA MPOS (AKRON,CANTON,DAYTON,TOLEDO,YOUNGSTOWN + NON-CENTRAL COUNTIES FROM 1)
- 3 E OTHER MPOS & PARTS OF AREAS 1 & 2 OUTSIDE URBANIZED AREA
- 4 E RURAL NON MPO COUNTIES

PEAK SPREADING MODEL INFO (SET MAX ITERATIONS TO 0 TO DISABLE PEAK SPREADING)

AX VC RATIO FWY: 1.30
MAX VC RATIO ART: 1.30
MAX ITERATIONS : 1000

TRUCK PCE: 3.00

AQ SEASON FACTOR: 1.08

AIR QUALITY, EMISSIONS SUMMARY REPORT

FACTYPE	VMT	HC EX	HC RUN	HC REST	HC EVAP	HC REF	HC TOT	NOX	CO	PM2.5
FWY	2613905.	1.247	0.245	0.252	0.516	0.277	2.537	5.870	37.847	
8.345										
ART	5593734.	2.875	1.121	0.525	1.102	0.591	6.213	9.548	66.273	
31.374										
TOT	8207638.	4.121	1.365	0.777	1.619	0.868	8.750	15.418	104.120	
39.719										
INTRA	45998.	0.027	0.013	0.004	0.008	0.005	0.057	0.079	0.532	
0.000										
FINAL	8253637.	4.148	1.378	0.781	1.627	0.873	8.807	15.497	104.652	
39.719										

Appendix C – SCATS Summer PM 2.5 Emission Run Report for 2010

You can enter a comment to add to the AQ report

Loaded Network: I:\ut\mpo\model\can\aq\2007march\2010\pmsum\CAN10J24ASNAQ.NET
 Emission Factors: I:\ut\mpo\model\can\aq\2007march\2010\pmsum\can10pm.fac
 Intrazonal Emission Factors: I:\ut\mpo\model\can\aq\2007march\2010\pmsum\canint10.crd
 24 Hour Trip Table: I:\ut\mpo\model\can\aq\2007march\2010\pmsum\CAN10TBVAQ.MAT
 Area File (sq mi): I:\ut\mpo\model\can\aq\2007march\2010\pmsum\CantonZoneAreas.txt
 Volume Field Used: VOL24_TOT
 Capacity Field Used: CAP24

 CMS/AQ REPORT
 POSTCMS8A, UPDATED FEB 10 2006, GTG
 DATE:03/12/2007 TIME:09:37:55

PARAMETER FILE DUMP (DAILY.DAT FILE)

HOUR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PCTADT																								
URB FWY	0.9	0.6	0.5	0.5	0.9	2.5	5.5	7.0	5.8	5.8	4.7	5.0	5.4	5.4	6.4	7.5	8.0	8.0	5.6	4.0	3.4	2.9	2.2	1.5
URB ART	0.8	0.5	0.4	0.3	0.6	1.6	3.8	5.8	5.4	5.1	5.5	6.3	6.6	6.2	6.6	7.5	7.7	7.7	6.1	4.8	4.1	3.2	2.1	1.4
RUR FWY	1.6	1.2	1.1	1.1	1.3	2.5	3.9	4.8	4.8	5.0	5.5	5.7	5.6	6.1	6.7	7.1	7.1	6.8	5.4	4.4	3.9	3.4	2.9	2.2
RUR ART	0.9	0.7	0.6	0.5	0.9	2.6	3.7	6.4	5.3	5.2	5.3	5.8	5.9	5.8	6.4	7.8	8.0	7.7	5.8	4.4	3.7	3.1	2.2	1.6
PCTADT TRK																								
URB FWY	1.8	1.6	1.6	1.7	2.2	3.0	4.1	5.5	5.9	6.3	6.4	6.7	6.7	6.5	6.6	6.0	5.5	4.9	3.9	3.2	2.8	2.6	2.4	2.0
URB ART	1.0	0.9	1.0	1.1	1.5	2.1	3.8	6.1	6.9	7.1	7.7	8.0	7.6	7.3	7.2	7.0	5.9	4.8	3.5	2.7	2.2	1.9	1.5	1.2
RUR FWY	2.9	2.6	2.4	2.4	2.7	2.9	3.1	3.5	4.1	4.8	5.1	5.3	5.2	5.6	5.7	5.4	5.3	5.0	4.7	4.7	4.5	4.4	4.2	3.7
RUR ART	1.8	1.6	1.6	1.7	2.1	2.8	4.0	5.1	5.8	6.7	7.0	7.1	6.8	6.5	6.4	6.1	5.3	4.5	3.7	3.2	2.9	2.6	2.4	2.1
PCTDIR																								
URB FWY	38	40	40	46	56	64	70	70	68	62	58	52	52	52	50	46	38	38	46	52	46	42	42	40
URB ART	44	46	44	48	54	62	66	68	64	56	54	52	50	50	50	46	40	38	46	52	48	46	46	46
RUR FWY	44	46	48	54	60	68	68	64	58	54	52	50	50	52	52	48	42	40	44	48	48	44	46	44
RUR ART	40	42	44	48	58	66	72	68	60	56	54	50	50	50	50	46	40	38	46	50	46	44	44	44
LOS E VC	0	0.625	1.25	1.875	2.5	3.125	3.75	4.375	5	5.625	6.25	6.875	7.5	8.125	8.75	9.375	10	10.625	11.25	11.875	12.5			
13.125 13.75 14.375																								
SPEEDVC																								
curve1	75	75	75	75	75	75	74.9	74.8	74.6	74.2	73.5	72.3	70.5	67.8	64.2	59.5	54	47.7	41.2	34.9	28.9	23.7	19.2	
15.5																								
curve2	70	70	70	70	70	70	69.9	69.8	69.6	69.2	68.4	67.1	65.1	62.2	58.2	53	47	40.5	33.9	27.7	22.2	17.6		
13.8																								
curve3	65	65	65	65	65	65	65	65	65	64.9	64.8	64.4	63.8	62.6	60.5	57	52	45.4	37.8	29.9	22.7	16.7	12.1	
8.6																								
curve4	60	60	60	60	60	60	60	60	60	59.9	59.8	59.6	59.1	58.2	56.7	54.3	50.8	46.1	40.3	33.8	27.3	21.3	16.2	
12.2																								
curve5	55	55	55	55	55	55	55	55	55	55	55	54.9	54.7	54.3	53.6	52.3	50	46.5	41.5	35.3	28.5	21.9	16.1	
11.5																								
curve6	60	60	60	60	60	60	60	60	59.9	59.8	59.7	59.4	59.1	58.5	57.7	56.5	55	53.1	50.7	47.9	44.7	41.1	37.3	
33.4																								
curve7	55	55	55	55	55	55	55	55	54.9	54.9	54.7	54.5	54.2	53.8	53.1	52.2	50.9	49.3	47.3	44.9	42.1	39	35.7	
32.2																								
curve8	50	50	50	50	50	50	50	50	49.9	49.9	49.8	49.6	49.4	49	48.5	47.7	46.7	45.4	43.8	41.8	39.5	36.8	33.9	
30.9																								
curve9	45	45	45	45	45	45	45	45	44.9	44.8	44.7	44.4	44.1	43.6	43	42.1	40.9	39.4	37.6	35.5	33.1	30.5		
27.8																								
curve10	50	50	50	50	49.9	49.8	49.7	49.4	49	48.4	47.5	46.5	45.1	43.5	41.7	39.6	37.3	34.9	32.4	29.8	27.3	24.9		
22.6 20.4																								
curve11	50	50	50	50	50	49.9	49.7	49.4	48.9	48	46.7	44.9	42.5	39.6	36.2	32.6	28.7	25	21.4	18.2	15.3	12.9	10.8	
9																								
curve12	50	50	50	50	50	49.9	49.8	49.6	49.1	48.2	46.8	44.5	41.4	37.5	32.9	28	23.1	18.7	14.9	11.8	9.2	7.2	5.7	
4.5																								
curve13	40	40	40	40	40	39.9	39.8	39.5	39.2	38.6	37.8	36.7	35.3	33.5	31.4	29	26.4	23.7	21.1	18.5	16.1	13.9		
12																								
curve14	40	40	40	40	40	39.9	39.8	39.6	39.1	38.5	37.5	36.1	34.3	32.1	29.4	26.5	23.5	20.5	17.7	15.1	12.8	10.7	9	
7.6																								
curve15	40	40	40	40	40	39.9	39.7	39.4	38.8	37.9	36.5	34.7	32.3	29.5	26.4	23.2	20	17	14.3	11.9	9.9	8.2	6.8	
5.6																								
curve16	35	35	35	35	35	34.9	34.8	34.5	34	33.2	32.1	30.5	28.5	26.1	23.5	20.6	17.9	15.2	12.8	10.7	8.9	7.4	6.1	
5.1																								
curve17	35	35	35	35	35	34.9	34.7	34.4	33.9	33.1	32	30.3	28.3	25.8	23.1	20.3	17.5	14.9	12.5	10.4	8.6	7.2	5.9	
4.9																								

curve18 3.6	35	35	35	35	35	34.9	34.6	34.2	33.5	32.4	30.9	28.8	26.3	23.4	20.4	17.4	14.6	12.1	9.9	8.1	6.6	5.4	4.4
curve19 3.8	30	30	30	30	30	29.9	29.8	29.5	29	28.2	27.1	25.6	23.7	21.5	19.1	16.6	14.2	12	10	8.3	6.8	5.6	4.6
curve20 3.6	30	30	30	30	30	29.9	29.7	29.4	28.9	28.1	26.9	25.3	23.4	21.1	18.6	16.1	13.6	11.4	9.5	7.8	6.4	5.3	4.3
curve21 2.9	30	30	30	30	30	29.9	29.7	29.3	28.7	27.7	26.2	24.4	22.1	19.6	17	14.4	12	9.9	8.1	6.6	5.4	4.4	3.6

VC RATIO TO LOS CONVERSION (VALUE SHOWN IS LOWER LIMIT FOR THAT LOS)(URBAN ROADS USE SPEED BREAKS BELOW FOR LOS DETERMINATION) (ALL USE THE BASE VC'S TO DETERMINE EXCEEDANCE)

BASE RUR2 FWY
A 0.00 0.00 0.00
B 0.30 0.00 0.25
C 0.50 0.10 0.40
D 0.70 0.30 0.60
E 0.90 0.50 0.80
F 1.00 1.00 1.00
F+ 1.10 1.10 1.10
F++ 1.30 1.30 1.30

SPEED VC RATIO BREAKS FOR URBAN STREETS (HIGHEST SPEED FOR GIVEN LOS & FF SPEED)

FFS B C D E F
>47 42. 34. 27. 21. 16.
>37 35. 28. 22. 17. 13.
>32 30. 24. 18. 14. 10.
<33 25. 19. 13. 9. 7.

LEVEL OF SERVICE THRESHOLD BY AREA

NUM LOS DEFINITION

1 F CINCINNATI,CLEVELAND,COLUMBUS CENTRAL MPO COUNTIES (CUY,FRA,HAM)
E OTHER TMA MPOS (AKRON,CANTON,DAYTON,TOLEDO,YOUNGSTOWN + NON-CENTRAL COUNTIES FROM 1)
3 E OTHER MPOS & PARTS OF AREAS 1 & 2 OUTSIDE URBANIZED AREA
4 E RURAL NON MPO COUNTIES

PEAK SPREADING MODEL INFO (SET MAX ITERATIONS TO 0 TO DISABLE PEAK SPREADING)

MAX VC RATIO FWY: 1.30
MAX VC RATIO ART: 1.30
MAX ITERATIONS : 1000

TRUCK PCE: 3.00

AQ SEASON FACTOR: 1.08

AIR QUALITY, EMISSIONS SUMMARY REPORT

FACTYPE	VMT	HC EX	HC RUN	HC REST	HC EVAP	HC REF	HC TOT	NOX	CO	PM2.5
FWY 0.066	2141915.	0.962	0.133	0.175	0.298	0.048	1.617	4.384	29.055	
ART 0.159	5362969.	2.559	0.745	0.425	0.745	0.121	4.594	8.104	58.704	
TOT 0.225	7504880.	3.520	0.878	0.600	1.043	0.169	6.211	12.488	87.759	
INTRA 0.001	46109.	0.027	0.009	0.003	0.006	0.001	0.046	0.071	0.564	
FINAL 0.226	7550990.	3.547	0.887	0.603	1.049	0.170	6.257	12.559	88.323	

Appendix D – SCATS Winter PM 2.5 Emission Run Report for 2010

You can enter a comment to add to the AQ report

Loaded Network: I:\ut\mpo\model\can\aq\2007march\2010\pmwin\CAN10J24ASNAQPM.NET
Emission Factors: I:\ut\mpo\model\can\aq\2007march\2010\pmwin\can10pm.fac
Intrazonal Emission Factors: I:\ut\mpo\model\can\aq\2007march\2010\pmwin\canint10.crd
24 Hour Trip Table: I:\ut\mpo\model\can\aq\2007march\2010\pmwin\CAN10TBVAQ.MAT
Area File (sq mi): I:\ut\mpo\model\can\aq\2007march\2010\pmwin\CantonZoneAreas.txt
Volume Field Used: WINTERVOL
Capacity Field Used: CAP24

CMS/AQ REPORT

POSTCMS8A, UPDATED FEB 10 2006, GTG
DATE:03/13/2007 TIME:10:32:38

PARAMETER FILE DUMP (DAILY.DAT FILE)

HOUR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PCTADT																								
URB FWY	0.9	0.6	0.5	0.5	0.9	2.5	5.5	7.0	5.8	5.8	4.7	5.0	5.4	5.4	6.4	7.5	8.0	8.0	5.6	4.0	3.4	2.9	2.2	1.5
URB ART	0.8	0.5	0.4	0.3	0.6	1.6	3.8	5.8	5.4	5.1	5.5	6.3	6.6	6.2	6.6	7.5	7.7	7.7	6.1	4.8	4.1	3.2	2.1	1.4
RUR FWY	1.6	1.2	1.1	1.1	1.3	2.5	3.9	4.8	4.8	5.0	5.5	5.7	5.6	6.1	6.7	7.1	7.1	6.8	5.4	4.4	3.9	3.4	2.9	2.2
RUR ART	0.9	0.7	0.6	0.5	0.9	2.6	3.7	6.4	5.3	5.2	5.3	5.8	5.9	5.8	6.4	7.8	8.0	7.7	5.8	4.4	3.7	3.1	2.2	1.6
PCTADT TRK																								
URB FWY	1.8	1.6	1.6	1.7	2.2	3.0	4.1	5.5	5.9	6.3	6.4	6.7	6.7	6.5	6.6	6.0	5.5	4.9	3.9	3.2	2.8	2.6	2.4	2.0
URB ART	1.0	0.9	1.0	1.1	1.5	2.1	3.8	6.1	6.9	7.1	7.7	8.0	7.6	7.3	7.2	7.0	5.9	4.8	3.5	2.7	2.2	1.9	1.5	1.2
RUR FWY	2.9	2.6	2.4	2.4	2.7	2.9	3.1	3.5	4.1	4.8	5.1	5.3	5.2	5.6	5.7	5.4	5.3	5.0	4.7	4.7	4.5	4.4	4.2	3.7
RUR ART	1.8	1.6	1.6	1.7	2.1	2.8	4.0	5.1	5.8	6.7	7.0	7.1	6.8	6.5	6.4	6.1	5.3	4.5	3.7	3.2	2.9	2.6	2.4	2.1
PCTDIR																								
URB FWY	38	40	40	46	56	64	70	70	68	62	58	52	52	52	50	46	38	38	46	52	46	42	42	40
URB ART	44	46	44	48	54	62	66	68	64	56	54	52	50	50	50	46	40	38	46	52	48	46	46	46
RUR FWY	44	46	48	54	60	68	68	64	58	54	52	50	50	52	52	48	42	40	44	48	44	46	44	44
RUR ART	40	42	44	48	58	66	72	68	60	56	54	50	50	50	50	46	40	38	46	50	46	44	44	44
LOS E VC	0	0.625	1.25	1.875	2.5	3.125	3.75	4.375	5	5.625	6.25	6.875	7.5	8.125	8.75	9.375	10	10.625	11.25	11.875	12.5			
13.125	13.75	14.375																						
SPEEDVC																								
curve1	75	75	75	75	75	75	74.9	74.8	74.6	74.2	73.5	72.3	70.5	67.8	64.2	59.5	54	47.7	41.2	34.9	28.9	23.7	19.2	
15.5																								
curve2	70	70	70	70	70	70	69.9	69.8	69.6	69.2	68.4	67.1	65.1	62.2	58.2	53	47	40.5	33.9	27.7	22.2	17.6		
13.8																								
curve3	65	65	65	65	65	65	65	65	65	64.9	64.8	64.4	63.8	62.6	60.5	57	52	45.4	37.8	29.9	22.7	16.7	12.1	
8.6																								
curve4	60	60	60	60	60	60	60	60	60	59.9	59.8	59.6	59.1	58.2	56.7	54.3	50.8	46.1	40.3	33.8	27.3	21.3	16.2	
12.2																								
curve5	55	55	55	55	55	55	55	55	55	55	55	54.9	54.7	54.3	53.6	52.3	50	46.5	41.5	35.3	28.5	21.9	16.1	
11.5																								
curve6	60	60	60	60	60	60	60	60	59.9	59.8	59.7	59.4	59.1	58.5	57.7	56.5	55	53.1	50.7	47.9	44.7	41.1	37.3	
33.4																								
curve7	55	55	55	55	55	55	55	55	54.9	54.9	54.7	54.5	54.2	53.8	53.1	52.2	50.9	49.3	47.3	44.9	42.1	39	35.7	
32.2																								
curve8	50	50	50	50	50	50	50	50	49.9	49.9	49.8	49.6	49.4	49	48.5	47.7	46.7	45.4	43.8	41.8	39.5	36.8	33.9	
30.9																								
curve9	45	45	45	45	45	45	45	45	44.9	44.8	44.7	44.4	44.1	43.6	43	42.1	40.9	39.4	37.6	35.5	33.1	30.5		
27.8																								
curve10	50	50	50	50	49.9	49.8	49.7	49.4	49	48.4	47.5	46.5	45.1	43.5	41.7	39.6	37.3	34.9	32.4	29.8	27.3	24.9		
22.6	20.4																							
curve11	50	50	50	50	50	49.9	49.7	49.4	48.9	48	46.7	44.9	42.5	39.6	36.2	32.6	28.7	25	21.4	18.2	15.3	12.9	10.8	
9																								
curve12	50	50	50	50	50	49.9	49.8	49.6	49.1	48.2	46.8	44.5	41.4	37.5	32.9	28	23.1	18.7	14.9	11.8	9.2	7.2	5.7	
4.5																								
curve13	40	40	40	40	40	40	39.9	39.8	39.5	39.2	38.6	37.8	36.7	35.3	33.5	31.4	29	26.4	23.7	21.1	18.5	16.1	13.9	
12																								
curve14	40	40	40	40	40	39.9	39.8	39.6	39.1	38.5	37.5	36.1	34.3	32.1	29.4	26.5	23.5	20.5	17.7	15.1	12.8	10.7	9	
7.6																								
curve15	40	40	40	40	40	39.9	39.7	39.4	38.8	37.9	36.5	34.7	32.3	29.5	26.4	23.2	20	17	14.3	11.9	9.9	8.2	6.8	
5.6																								
curve16	35	35	35	35	35	34.9	34.8	34.5	34	33.2	32.1	30.5	28.5	26.1	23.5	20.6	17.9	15.2	12.8	10.7	8.9	7.4	6.1	
5.1																								
curve17	35	35	35	35	35	34.9	34.7	34.4	33.9	33.1	32	30.3	28.3	25.8	23.1	20.3	17.5	14.9	12.5	10.4	8.6	7.2	5.9	
4.9																								

curve18 3.6	35	35	35	35	35	34.9	34.6	34.2	33.5	32.4	30.9	28.8	26.3	23.4	20.4	17.4	14.6	12.1	9.9	8.1	6.6	5.4	4.4
curve19 3.8	30	30	30	30	30	29.9	29.8	29.5	29	28.2	27.1	25.6	23.7	21.5	19.1	16.6	14.2	12	10	8.3	6.8	5.6	4.6
curve20 3.6	30	30	30	30	30	29.9	29.7	29.4	28.9	28.1	26.9	25.3	23.4	21.1	18.6	16.1	13.6	11.4	9.5	7.8	6.4	5.3	4.3
curve21 2.9	30	30	30	30	30	29.9	29.7	29.3	28.7	27.7	26.2	24.4	22.1	19.6	17	14.4	12	9.9	8.1	6.6	5.4	4.4	3.6

VC RATIO TO LOS CONVERSION (VALUE SHOWN IS LOWER LIMIT FOR THAT LOS)(URBAN ROADS USE SPEED BREAKS BELOW FOR LOS DETERMINATION) (ALL USE THE BASE VC'S TO DETERMINE EXCEEDANCE)

BASE RUR2 FWY
A 0.00 0.00 0.00
B 0.30 0.00 0.25
C 0.50 0.10 0.40
D 0.70 0.30 0.60
E 0.90 0.50 0.80
F 1.00 1.00 1.00
F+ 1.10 1.10 1.10
F++ 1.30 1.30 1.30

SPEED VC RATIO BREAKS FOR URBAN STREETS (HIGHEST SPEED FOR GIVEN LOS & FF SPEED)

FFS B C D E F
>47 42. 34. 27. 21. 16.
>37 35. 28. 22. 17. 13.
>32 30. 24. 18. 14. 10.
<33 25. 19. 13. 9. 7.

LEVEL OF SERVICE THRESHOLD BY AREA

NUM LOS DEFINITION

- 1 F CINCINNATI,CLEVELAND,COLUMBUS CENTRAL MPO COUNTIES (CUY,FRA,HAM)
- 2 E OTHER TMA MPOS (AKRON,CANTON,DAYTON,TOLEDO,YOUNGSTOWN + NON-CENTRAL COUNTIES FROM 1)
- 3 E OTHER MPOS & PARTS OF AREAS 1 & 2 OUTSIDE URBANIZED AREA
- 4 E RURAL NON MPO COUNTIES

PEAK SPREADING MODEL INFO (SET MAX ITERATIONS TO 0 TO DISABLE PEAK SPREADING)

MAX VC RATIO FWY: 1.30
MAX VC RATIO ART: 1.30
MAX ITERATIONS : 1000

TRUCK PCE: 3.00

AQ SEASON FACTOR: 1.00

AIR QUALITY, EMISSIONS SUMMARY REPORT

FACTYPE	VMT	HC EX	HC RUN	HC REST	HC EVAP	HC REF	HC TOT	NOX	CO	PM2.5
FWY 0.060	2032056.	1.111	0.073	0.127	0.051	0.034	1.396	4.262	39.950	
ART 0.143	5019136.	2.870	0.379	0.301	0.127	0.083	3.760	7.767	82.819	
TOT 0.203	7051193.	3.982	0.453	0.428	0.178	0.116	5.156	12.029	122.769	
INTRA 0.001	46109.	0.034	0.005	0.003	0.001	0.001	0.045	0.079	0.882	
FINAL 0.204	7097303.	4.016	0.458	0.431	0.179	0.117	5.201	12.108	123.651	