

**Fiscal Year 97-00
Transportation Improvement Program**

Air Quality Analysis:

**Air Quality Conformity Determination
Documentation for the Franklin, Delaware
and Licking County Maintenance Area**

**Appendix C to
FY 97-00 MORPC TIP
Appendix A to
FY 97-00 LCATS TIP**

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Introduction

Under The 1990 Clean Air Act Amendments (CAAA) Franklin, Delaware and Licking Counties were designated a marginal nonattainment area for ozone. The CAAA defines nonattainment areas as geographic regions of the Country that do not meet the National Ambient Air Quality Standards (NAAQS). In nonattainment areas, air quality implementation plans must be developed which identifies strategies and programs nonattainment areas will implement to provide the emission reductions needed for the areas to meet the NAAQS. In Ohio, the Ohio Environmental Protection Agency (Ohio EPA) is the lead agency for coordinating development of the State Implementation Plan (SIP). The SIP includes actions done on a statewide basis as well as actions done within each specific nonattainment area of the state to achieve the air quality standards.

Redesignation requests to attainment are SIP revisions which document that the NAAQS have been met and provide a maintenance plan to ensure meeting the standards for the next ten years. The first item of documentation contained in a redesignation request is three consecutive years of air quality monitoring data that meets the NAAQS. Second, an inventory of point source, area source and mobile source emissions are developed. The total of the three sources are certified as the attainment emission levels that will allow the air quality standards to be met. Next, emission projections for each source are made to the end of the maintenance period. It must be documented that the total emissions will not exceed the attainment emissions level. Any difference between the total future emissions and the total attainment level emissions is considered a safety margin.

Future emission budgets are then established for each source. These budgets are the future projections plus any of the safety margin which the local area may choose to allocate to any of the sources. A final part of the redesignation request is a contingency plan to be implemented if monitoring data indicate that the air quality fails to meet the NAAQS during the maintenance period.

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

A fourth requirement is that plans, programs and projects do not delay the timely

implementation of transportation control measures (TCMs) in the applicable SIP. Transportation conformity is the process of analyzing the projects included in the Transportation Improvement Program (TIP) to ensure they do not lead to violations in the air quality standards. The documentation of this process is called the conformity determination. This appendix is the transportation conformity documentation for the three county Columbus nonattainment area.

Nonattainment Area Designation and Redesignation Request

Under the CAAA Franklin, Delaware and Licking Counties were designated a marginal nonattainment area for ozone. This designation was based on 1988 air quality data which violated the NAAQS for ozone. At ground level, ozone is formed by the reaction of volatile organic compounds (or hydrocarbons, HC) and oxides of Nitrogen (NOx). The CAAA requires that HC and NOx emissions be reduced to lower the amount of ground level ozone. Since 1988 year the nonattainment area has had no violations of the standards. However, the area must comply with the nonattainment area requirements in the CAAA.

In January 1994, the Ohio EPA working with the Ohio Department of Transportation (ODOT), the Mid-Ohio Regional Planning Commission (MORPC), and the Licking County Area Transportation Study (LCATS) submitted a redesignation request to United States Environmental Protection Agency (USEPA) for the three county nonattainment area. On April 11, 1994 Ohio EPA provided additional information to USEPA. On February 1, 1996, a direct final rule was published in the Federal Register approving the redesignation request. The approval is effective April 1, 1996. The approved emission inventories and budgets are shown in Table 1.

Table 1
Emission Inventory and Forecasts for the Columbus Nonattainment Area

	HC				NOx			
	Point	Area	Mobile	Total	Point	Area	Mobile	Total
1990 Inventory	16.44	101.18	94.73	212.35	13.79	96.68	78.65	189.12
1996 Budget	17.52	107.47	63.36	188.35	14.35	102.62	68.85	185.82
2005 Budget	19.33	117.30	61.38	198.01	15.27	111.82	61.24	188.33
	2005 Safety Margin			14.34	2005 Safety Margin			0.79

NOx Waiver

The CAAA allows the USEPA administrator to issue a waiver of the NOx requirements if the administrator determines that additional reductions of NOx would not contribute to attainment

of the air quality standards. A final rule approving a NOx waiver was published in the July 13, 1995 Federal Register. The NOx waiver removes the build/no-build test and less than 1990 test which apply to NOx. However, an area that is redesignated to attainment must still meet the approved NOx budget for the conformity analysis. Thus the NOx waiver is no longer applicable to the Columbus nonattainment area.

Transportation Conformity Procedures

On November 24, 1993 USEPA published regulations, 40 CFR 51 Subpart T, which define the specific process necessary to demonstrate conformity of Transportation Plans, TIPs and projects. The conformity regulations identified two tests to be performed at various milestone or horizon years to show conformity. One test is a build/no build test. The second is a budget test. The test that must be satisfied depends upon the status of an area's SIP submittals. As a marginal nonattainment area with an approved redesignation request (maintenance area) the budget test is the only test required.

This appendix documents that the conformity determination for the three county nonattainment area Transportation Improvement Programs are based upon analysis that was conducted consistent with the final transportation conformity regulation procedures.

Multiple Metropolitan Planning Organizations

The three county maintenance area consists of two metropolitan planning organizations (MPOs), MORPC and LCATS with no portions not in one of the MPOs planning area. The MORPC transportation planning area consists of Franklin County, Delaware County, Lima and Etna Townships in Licking County, and Violet and Bloom Townships in Fairfield County. The LCATS transportation planning area covers the remainder of Licking County.

Each MPO develops a Transportation Plan and TIP for their respective transportation study area. The conformity procedures require that the entire maintenance area be considered as a whole. This requires that the two TIPs be considered together to make a conformity determination. This appendix documents the process used to combine the entire three county area to make a single conformity determination. Thus this air quality conformity determination document is an appendix to the MORPC FY97-00 TIP and the LCATS FY97-00 TIP.

Latest Planning Assumptions

The FY 97-00 TIP conformity analyses readily meet this requirement. The TIP is developed consistent with the most recent MORPC and LCATS Transportation Plans. The modeling process used to develop each MPO Transportation Plan is calibrated using the latest population, land use, highway and transit data available. There are not any TCM's in the SIP for the three county area to be included in the conformity analysis. Further, USEPA's most recent emissions software, MOBILE5A, is used for all mobile source emission analyses. The

1990 mobile source emission inventory is from the approved inventory which were developed using the MOBILE5A software. The mobile source emission inventories, budgets, and milestone projections were generated using the appropriate Inspection and Maintenance, anti-tampering, and vapor recovery flags in MOBILE5A.

Urban Transportation Modeling Process

The three county maintenance area is partially covered by a regional transportation model. This model employs the traditional four step modeling process to project existing and future traffic volumes and travel patterns on the regional transportation network. The four step process consists of trip generation, trip distribution, modal split, and route assignment. Output from the urban models is link-by-link directional 24 hour traffic volumes for the existing or future regional transportation network. These 24 hour traffic volumes provide the basis for performing the air quality conformity analysis. ODOT holds the models and provides extensive technical support for of the area. ODOT's modeling is run on the main frame PlanPac software.

Maintenance Area Geography not Covered by the Urban Model

A limitation of the urban model is that it does not cover the entire maintenance area boundary. For the non-modeled portions of the maintenance area, conformity analyses are performed based on a process using the Highway Performance Monitoring System (HPMS) vehicle miles of travel (VMT) estimates. The HPMS VMT estimates are generated on a countywide basis by functional classification. The base year 1990 VMT estimates are taken directly from the HPMS information that was used to develop the maintenance area SIP. Milestone year VMT values, for the conformity analysis, are derived by applying a growth factor by functional classification to the base year VMT estimates.

Projects in the non-modeled area are analyzed individually. This analysis consists of determining the impacts of the project on VMT and speeds in the project vicinity. The HPMS data and the individual project calculations are in attachment A to this appendix.

Air Quality Modeling Process

The TIP conformity demonstrations for Ohio's urbanized nonattainment and maintenance areas utilize the capabilities of the urban transportation models. These models are uniquely suited to perform milestone year TIP build and no build scenarios analyses required under the final conformity rule. The modeling process identifies growth in vehicle miles of travel and changes in regional travel patterns resulting from the projects that are proposed in the nonattainment or maintenance area transportation plans and programs.

To generate pollutant burdens for the respective TIP analysis scenarios, ODOT completes a three phase process. Phase 1 uses program G5AOHPAR, written by ODOT, to create the control records required by U. S. EPA MOBILE5A to estimate emission factors. The

temperature, percent hot and cold starts, and the vehicle mix vary for each hour of the day for both hydrocarbons (HC) and carbon monoxide (CO). Emission factors are calculated for each speed measured in miles per hour (MPH). The speeds vary from 5 MPH to 65 MPH for freeways and from 5 MPH to 55 MPH for surface arterials. Parameter records are used to override default values. The values for the Inspection Maintenance program, Anti-Tampering program, Pressure test, the Stage II Vapor Recovery System, and on board VRS were specified by the Ohio EPA.

The G5AOHPAR.MSG listing is given in the technical information attachment and shows:

- a) The control records for program G5AOHPAR
- b) The flag summary for the hourly ambient HC, the hourly ambient CO and the 24 hour HC required for evaporative and refueling emission factors
- c) The hours requested
- d) Inspection and Maintenance program summary
- e) Anti-Tampering program summary
- f) Pressure Test program summary
- g) Stage II Vapor Recovery System program summary
- h) On board Vapor Recovery System summary
- i) The hourly temperatures (s for HC and w for CO), percent Cold and Hot starts and the vehicle mixes for freeways and surface arterials.
The percent Cold and Hot starts were developed using "Determination of Percentages of Vehicles Operating In the Cold Start Mode, EPA-450/3-77-023, Office of Air and Waster Management, Office of Air Quality Planning Standards, Research Triangle park, North Carolina 27711". The vehicle mixes were developed using Ohio observed data obtained by the Bureau of Technical Services.
- j) Summary of the first scenario record for HC for freeway
- k) Summary of the first local area parameter record for HC for freeway

Phase 2 uses USEPA MOBILE5A to generate 13,444 emission factors based on input created by program G5AOHPAR. Output routines were added to MOBILE5A to write the emission factors in an array format.

Phase 3 uses program CMAQ5ANO, written by ODOT, to relate the MOBILE 5A emission factors with the urban model's 24 hour link data files to generate hourly pollutant burdens for hydrocarbons (HC), oxides of nitrogen (NOx), and carbon monoxide (CO).

Program CMAQ5ANO reads 1) the transportation links containing the weighted 24 hour volumes 2) the node grid coordinates and 3) emission factors from program MOBILE5A (5Mar93) and then lists 1) the credits 2) the program control records 3) the table summaries used by the program 4) the number of centroids 5) the option values used 6) the hours requested 7) the seasonal factors for both HC and CO and 8) interzonal VMT. The VMT is calculated by assuming that the zonal area in square miles is represented as a circle. The radius is computed and the interzonal trips are multiplied by the radius to compute the

intrazonal VMT.

The directional hourly volumes are estimated by taking the link ADT and applying hourly percent ADT, percent direction, and the seasonal factors. The direction hourly V/C ratio is then estimated by taking the hourly volumes and applying the percent heavy duty trucks adjusted by 1.7 to represent auto equivalents and divided by the directional capacity. The resulting volume to capacity ratio (V/C) is used in a table lookup to determine the directional speed. The hour, functional classification and directional speed are used to derive the directional emission factor using USEPA MOBILE5A array file. If required, emission factors are interpolated. The appropriate emission factor is used to calculate the pollutant burden of the link for each hour.

The above process is done hourly by direction on each link in the network. After processing all hours, CMAQ5ANO lists the 1) hourly vehicle miles of travel and pollutant burdens for freeways and surface arterials 2) the total vehicle miles and pollutant burden for evaporative and refueling HC determined on a 24 hour basis and 3) the total HC pollutant burden. All items listed above are summarized for the Build runs and is in attachment A to this appendix.

At a July 15, 1994 meeting, the FHWA suggested that the VMT growth projected in Ohio's urban transportation models be compared with historical HPMS VMT growth. It was suggested that this comparison would provide an additional means of assuring that the models were providing accurate results, thereby meeting the conformity requirements for using the latest planning assumptions.

To initiate this comparison, ODOT reviewed the HPMS data, as submitted to the FHWA, for Ohio's urbanized areas for the years 1980 to 1992. As a first step, data for each functional class of roadway in each urbanized area was totaled by year. This calculation represents total urbanized area HPMS VMT for each year between 1980 and 1992. A percentage annual change in total HPMS VMT growth was then calculated for each urbanized area. ODOT's intent was to then compare the annual percentage HPMS VMT growth with the annual percentage VMT growth from the urban models. However, there was so much fluctuation in the annual HPMS VMT growth, that ODOT does not have confidence in the HPMS VMT growth trends. The ODOT Engineers working with the HPMS data assert that any comparison of the pre 1990 data and the post 1990 data is not valid. The urban transportation models are therefore the best information that ODOT can provide concerning urbanized area VMT growth. As stated above the models are developed and kept current based upon the most recent population and land use data available. They are also validated based upon current traffic counts. ODOT is confident that the urban models accurately project VMT growth in Ohio's urbanized areas.

Projects Included in the Air Quality Analysis

The projects contained in the TIPs can be in one of two categories. A project can be required to undergo the air quality analysis or can be exempt from the analysis requirement. The

criteria used to determine the air quality status of a project is provided in the conformity regulations (40 CFR 51 Subpart T). Specific criteria that allow a project to be exempt is given in sections 51.460 and 51.462.

Because the Columbus maintenance area must only perform the budget test, there is no baseline (or no build) scenario. There is only a single build scenario for each analysis year.

The general TIP listings provides the air quality status of each project on the TIPs. This listing includes all regionally significant non-Federal projects. The projects that require air quality analysis are also summarized in the following two lists and includes all regionally significant projects. The first list are all the projects expected to be in place by the year 2005. The second list includes the additional projects expected to be in place by the year 2010. The year 2010 is also the current Transportation Plan out year. Thus the 2010 analysis includes all projects on the Transportation Plan. There are no TCM's in the SIP for the Columbus maintenance area thus the projects included in the TIP are consistent with those stated in the SIP. Both federally funded and non-federally funded projects are included in the TIP listing and the following lists.

**FY-97-00 TIP Air Quality Analyzed Projects (Year 2005 Build)
Indexed on Agency County Route & Section 04/5/1996**

AGENCY: BEXLEY

PID	COUNTY ROUTE & SECTION	SHORTNAME
13895	FRA-BROAD-STREET	Bexley Signal & Lighting System, Broad St Group
13896	FRA-MAIN-STREET	Bexley Signal & Lighting System, Main St Group

AGENCY: CANAL WINCHESTER

PID	COUNTY ROUTE & SECTION	SHORTNAME
NP	FRA-674-GROVEPORT	Gender Rd Widening (SR-674), Groveport Rd to US-33 Intch.

AGENCY: COLUMBUS

PID	COUNTY ROUTE & SECTION	SHORTNAME
NP	FRA-023-FLINT	N. High Widening, Flint to Lazelle
9946	FRA-070-14.78 PHZ 6	Freeway Surveillance Phase 6, I-70 East Freeway
9941	FRA-071-15.26 PHZ 1	Freeway Surveillance Phase 1, I-71 North Freeway
9942	FRA-270-00.00 PHZ 2	Freeway Surveillance Phase 2, I-270 West Outerbelt
9948	FRA-270-00.00 PHZ 8	Freeway Surveillance Phase 8, US-33/SR-104 Expressways
9944	FRA-270-08.88 PHZ 4	Freeway Surveillance Phase 4, I-270 South Outerbelt
9945	FRA-270-17.89/01.94 PHZ	Freeway Surveillance Phase 5, SR-315 Expressway
9947	FRA-270-22.94/28.31 PHZ	Freeway Surveillance Phase 7, I-71 South Freeway
NP	FRA-270-SAWMILL INTCH	Sawmill & I-270 Interchange
7930	FRA-315-03.48	OSU Ramps & Interchange Upgrade from SR315 to Cannon Drive
4677	FRA-670-01.25 A-1	SSI A1, new I-670 from Grandview Ave
4675	FRA-670-01.25 A-2	SSI A2, US-33 Relocation
4673	FRA-670-01.25 A-3	SSI A3, Souder Ave Extension
4670	FRA-670-01.25 A-4	SSI A4, Major New Interchange of SR315 & I670 @ Scioto River
4668	FRA-670-01.25 A-5	SSI A5, SR-315 Reconstruction south of Broad Street
4666	FRA-670-01.25 B-1	SSI B1, New I-670 from Neil Avenue
4354	FRA-670-01.25 B-3	SSI B3, I-670 Mainline Elements
4350	FRA-670-01.25 C-3	SSI C3, Reconstruction of SR-315 south of Third Avenue
4352	FRA-670-01.25 D	SSI D, SR-315 @ Sullivant

FY-97-00 TIP Air Quality Analyzed Projects (Year 2005 Build Cont)
Indexed on Agency County Route & Section 04/5/1996

AGENCY: COLUMBUS

PID	COUNTY ROUTE & SECTION	SHORTNAME
9943	FRA-670-03.18/35.16 PHZ	Freeway Surveillance Phase 3, I-670 & I-270 East Fwy
NP	FRA-ALUM CREEK-FREBIS	Alum Creek Dr Widening, Frebis to Refugee (North Segment)
NP	FRA-ALUM CREEK-REFUGEE	Alum Creek Dr Widening, Refugee to Williams (South Segment)
NP	FRA-FIFTH AVENUE-OLENTANGY	5th Ave Widening, Olentangy Rvr to Battelle
13244	FRA-FRANTZ RD-TUTTLE	Frantz Rd Major Widening, Hayden-Run Road to Tuttle Blvd
11079	FRA-HARD RD-SAWMILL	Hard Road Widening, Sawmill to SR-315
14538	FRA-HILLIARD ROME ROAD-I-70	Hilliard-Rome Widening, I-70 to Roberts Rd
NP	FRA-KENNY/GODOWN-HENDERSON	Kenny/Godown Widening, Henderson to Bethel
NP	FRA-LANE AVENUE-NEIL	Lane Ave widening @ OSU, Olentangy Rvr to Neil
NP	FRA-LIVINGSTON AVE-COLLEGE	Livingston Ave widening, College (Fransis) - Nelson
13246	FRA-NORTON-BROAD	Norton Rd Widening, Broad-Hall
NP	FRA-ROBERTS-HILLIARD/ROME	Roberts Rd Widening from Hilliard-Rome to I-270
11795	FRA-SAWMILL-CASE	Sawmill Rd Widening, Case to SR-161
13036	FRA-SIGNALIZATION-PHASE 9	Col. Signalization Phase 9, North Side
13035	FRA-SIGNALIZATION-PHASE 10	Col. Signalization Phase 10, East Side
13034	FRA-SIGNALIZATION-PHASE 11	Col. Signalization Phase 11, Grandview Area
12555	FRA-STELZER/SUNBURY-CMDS 7	Connector Road "G", Stelzer to Sunbury, (CDMS #7)

AGENCY: COTA

PID	COUNTY ROUTE & SECTION	SHORTNAME
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	FRA--	10 COTA Replacement Buses with Lift Equipment

AGENCY: DELAWARE CITY

PID	COUNTY ROUTE & SECTION	SHORTNAME
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NP	DEL-023-12.99	US-23 & Penn. Delaware, New Interchange
NP	DEL-023/042-10.32	US-23 & US-42 Delaware, Interchange Upgrade

AGENCY: DELAWARE COUNTY

PID	COUNTY ROUTE & SECTION	SHORTNAME
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	DEL-PRESIDENTIAL-PARKWAY	Presidential Parkway, Powell

AGENCY: DUBLIN

PID	COUNTY ROUTE & SECTION	SHORTNAME
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11600	FRA-161-004.77	SR-161 Widening, SR-257 to Sawmill
NP	FRA-AVERY ROAD-US-33	Avery Rd Widening, Shier-Rings to US-33
NP	FRA-COFFMAN-BRAND	Coffman Rd Widening, Perimeter Ext to Brand
	FRA-COFFMAN-EXTENSION	Coffman Extension, Shier-Rings to Tuttle Blvd.
NP	FRA-COFFMAN-US-33 OVERPASS	Coffman Rd/US-33 Overpass
	FRA-EMERALD PARKWAY-PHASE 2	Emerald Parkway Phase2, Scioto River Bridge Crossing
	FRA-POST ROAD-IR270	Post Road Bridge Replacement over I-270
	FRA-TUTTLE-AVERY	Tuttle Rd Extension
	FRA-WOERNER-TEMPLE/RINGS-	Woerner-Temple/Rings Rd from Avery to Blazer Parkway

AGENCY: FAIRFIELD COUNTY

PID	COUNTY ROUTE & SECTION	SHORTNAME
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11922	FAI-107-00.22	Amanda Northern Bridge Replacement

AGENCY: FRANKLIN COUNTY

PID	COUNTY ROUTE & SECTION	SHORTNAME
NP	FRA-CLEVELAND-FERRIS	Cleveland Ave Widening, Ferris to Morse
	FRA-DUBLIN RD-	Dublin Rd Widening, Fishinger Rd to Hayden Run
	FRA-FISHER RD-	FISHER RD Widening, PHILLIPI TO WILSON RD
NP	FRA-GENDER-US-33	Gender Rd widening, US-33 - Brice Rd
NP	FRA-GEORGESVILLE-SULLIVANT	Georgesville Rd Widening, Sullivant to Broad
NP	FRA-KING AVENUE-OLENTANGY RIVER	King Ave bridge replacement over Olentangy River
NP	FRA-LANE AVENUE-OLENTANGY RIVER	Lane Ave Bridge replacement over Olentangy
	FRA-MORSE ROAD-CLEVELAND	Morse Rd Widening, Cleveland to Trindle Way
NP	FRA-RENNER/TRABUE-00.35	Renner/Trabue Rd Widening from Hilliard-Rome to Conrail Over
	FRA-SAWMILL-SUMMITVIEW	Sawmill Pkwy PhzIII, relocated Summitview to DelCo line.
	FRA-SUNBURY-SR161	SUNBURY RD WIDENING, SR-161 to Chatham Ridge
6923	FRA-WILSON-TRABUE	Wilson Rd Widening, I-70 to Trabue

AGENCY: GAHANNA

PID	COUNTY ROUTE & SECTION	SHORTNAME
6403	FRA-317-18.38	Granville St (SR-317) Widening, Mill-Hamilton
13897	FRA-MORSE-HAMILTON	Morse Rd Widening, Stygler-Hamilton

AGENCY: GROVE CITY

PID	COUNTY ROUTE & SECTION	SHORTNAME
11794	FRA-HOOVER-WHITE ROAD	Hoover Rd Widening, White-Hoover Ct.
NP	FRA-HOOVER/ORDERS RD-I-71	MIS for Hoover Rd/Orders Rd, New Interchange w/ I-71

AGENCY: HILLIARD

PID	COUNTY ROUTE & SECTION	SHORTNAME
14785	FRA-DAVIDSON-LEAP	Davidson Rd Widening, Leap-Dublin
14537	FRA-HILLIARD ROME ROAD-MAIN	Hilliard-Rome Widening, Roberts Rd to Cemetery Rd
NP	FRA-LEAP-SCIOTO-DARBY	Leap Rd Widening, Scioto-Darby to Davidson

AGENCY: MORPC

PID	COUNTY ROUTE & SECTION	SHORTNAME
13013	FRA-RIDESHARE-	MORPC Augment to Rideshare State Line Item

AGENCY: OBETZ

PID	COUNTY ROUTE & SECTION	SHORTNAME
NP	FRA-ALUM CREEK-WILLIAMS	Alum Creek Dr Widening Obetz, Williams to I-270

AGENCY: ODOT 6

PID	COUNTY ROUTE & SECTION	SHORTNAME
NP	DEL-071-POLARIS	Polaris Interchange Modification
12598	FRA-003-25.56	Dempsey Intersection Upgrades
5881	FRA-070-14.69	I-70 East Freeway Reconstruction & Lane Additions
4721	FRA-071-00.00	I-71 South Freeway Resurfacing/Lane Addition
7278	FRA-071-25.60	I-71 North Freeway Resurfacing/Lane Addition
12557	FRA-161-16.12	Sunbury & SR-161 Interchange, (CDMS #10)
12494	FRA-270-17.10	N. Outerbelt Widening, US-33 to CSX E of Sawmill, Dublin Seg
12495	FRA-270-21.40	N. Outerbelt Widening, E of Sawmill-Conrail/NS E of US-23, Wo
12504	FRA-270-25.00	N. Outerbelt Widening, Conrail/NS E of US-23 to E of SR-3, W
12563	FRA-270-29.41	I-270 & SR-161 Interchange, (CDMS #11)
12526	FRA-270-31.41	Morse Rd Interchange Upgrade, (CDMS #6)
7583	FRA-315-05.18	SR-315 Resurfacing & Widening, Ackerman-I270 & Ramp Upgrade

AGENCY: ODOT 5

PID	COUNTY ROUTE & SECTION	SHORTNAME
13570	LIC-SR 16	SR 16 Widening, east of SR 146 to Musk Co line

AGENCY: PICKERINGTON

PID	COUNTY ROUTE & SECTION	SHORTNAME
NA	FAI-DILEY ROAD-SR-256	Diley Road Widening, SR-256 to US-33

AGENCY: WESTERVILLE

PID	COUNTY ROUTE & SECTION	SHORTNAME
8006	DEL-CLEVELAND-EXTENSION	Cleveland-Maxtown Extension to Polaris
NA	DEL-COUNTYLINE ROAD-EXTENSION	County Line Rd, Extension to Worthington-Galena
NA	FRA-COUNTYLINE ROAD-SPRING	County Line Rd Widening (Phz2), Spring to Otterbein
NA	FRA-SUNBURY-CENTRAL COLLEGE	SUNBURY RD WIDENING, Chatham Ridge to Walnut Street

Additional Air Quality Analyzed Projects in the Year 2010 Build Indexed on Agency County Route & Section 04/1/1996

Route	Description
US 23	Major Widening Lazelle Rd to Orange Rd.
SR 16	Major Widening Summit to SR 310
I-70	Interchange at Mink Street
I-70	Major Widening Hamilton to SR 256
SR 256	Major Widening I-70 to Livingston Ave.
Powell Rd	Major Widening SR 315 to US 23
Sancus Blvd.	New Roadway Polaris Pkwy to Powell Rd
Sunbury Rd.	Major Widening Morse Rd. to SR 161
Schrock Rd	New Roadway Hempstead Rd. to Sunbury Rd
SR 3	Major Widening Cleveland Ave. to I-270
SR 3	Major Widening County Line Rd. to Maxtown Rd.
McCutcheon Rd	New Roadway Stygler Rd. to Cherry Bottom Rd.
Post Rd.	Major Widening Coffman Rd. to US 33/SR 161
Rings/Woerner Temple Rd.	New Roadway Avery Rd. to I-270
Shier-Rings Rd.	Major Widening Avery Rd. to Wilcox Rd.
Wilcox Rd.	Major Widening Hayden Run Rd. to Shier-Rings Rd
Godown Rd.	New Roadway Godown Rd to SR 161
Powell Rd.	Major Widening SR 257 to SR 315
Sawmill Rd.	New Roadway Powell Rd. to Seldom Seen Rd.
US 33	Major Widening I-270 to Lancaster corp. line
Pickerington bypass	New Roadway SR 256 to I-70
I-71	New Interchange as Hoover Rd.
Orders Rd.	Major Widening US 62 to Hoover Rd.
US 62/SR 3	Major Widening South corp line to Grove City Rd.
Hilliard-Rome Rd.	Major Widening US 40 to Fisher Rd.
Norton Rd.	Major Widening Alkire Rd. to Broad St.
SR 161	Major Widening SR 310 to east of SR 37
SR 79	Major Widening Hebron to Irving Wick Dr.

Air Quality Consultation Process

The 1990 Clean Air Act Amendments required preparation and submittal of a November 1994, conformity SIP revision in which a major component is an identification of the consultation procedures that Ohio's air quality and transportation agencies will follow in the conformity process. To fulfill this requirement, the Ohio EPA has adopted rules defining the interagency consultation procedures to be used on transportation air quality issues. The rules

are Ohio Administrative Code 3745-101-04. These rules define a "straw man" process, whereby the lead agencies in the conformity process assume responsibility for preparing and distributing draft documents, with supporting information, and assuring that each affected party involved in the conformity process is included in the consultation process. In addition, a Memorandum of Understanding (MOU) between MORPC, LCATS, ODOT and Ohio EPA has been signed to further clarify OAC 3745-101-04 for the Columbus maintenance area. A copy of the MOU is included in attachment C.

The adopted state conformity SIP rules have not yet been approved by USEPA and are not yet effective. The Columbus nonattainment area TIPs conformity process employed the consultation procedures embodied in the rules. The procedures used in this air quality analysis are the same that was used and accepted in last years conformity determination. A quarterly air quality consultation report including a brief description of the FY 97-00 conformity procedure was distributed in January. The procedures and parameters for performing the FY 97-00 TIP conformity analysis were further determined through, correspondence, from, Ohio EPA and ODOT. Attachment C of this appendix contains copies of correspondence relevant to the FY 97-00 TIP conformity tests.

Air Quality Analysis for the FY97-00 Columbus Maintenance Area TIPs

The conformity analysis consists of comparing the pollutant burden in the maintenance area resulting from the projects listed in the TIPs to the approved emission budgets. The approved 1990 mobile source pollutant inventory by county is shown in table 2.

Table 2
1990 HPMS Derived Mobile Source Pollutant Levels
pollutant values are tons/day

	VMT	HC	NOx
Franklin County	20,632,520	74.89	53.48
Delaware County	2,528,430	7.69	10.93
Licking County	3,730,630	12.15	14.24
Nonattainment Area Total	26,891,580	94.73	78.65

As stated previously the non-attainment area is partially covered by a regional transportation model. The conformity analysis for this portion of the maintenance area was performed using the transportation model. The analysis for the remainder of the non-attainment area used the 1990 HPMS data and applied growth factors to forecast future vehicle miles of travel (VMT) and pollutant levels. The emission effects of projects outside the modeled area were individually calculated and then combined with the forecasted levels. The modeled and non-

modeled results were then combined for the entire maintenance area.

The air quality modeling process was used to determine the pollutant burden for the modeled area for 1990, 1997, 2005, and 2010. The 2005 and 2010 build analysis assumed all the project in the respective build lists are in place. There are not any project in the build TIP list which would be in place by 1997.

Section 51.440 of the conformity regulations require development of a factor "to reconcile and calibrate the network-based model estimates of vehicle miles traveled in the base year of its validation to the HPMS estimates for the same period." This is only a requirement of serious and above areas. However, ODOT, Ohio EPA and the MPOs decided that reconciling the HPMS generated data and the model generated data was merited. Even though adjusting VMT is specified, the group decided that the emissions were the pertinent factor and therefore used the emission difference for the calibration.

The 1990 HPMS pollutant burden data was compared to the ODOT BTS 1990 pollutant burden and adjustment factors were calculated which adjust the ODOT derived pollutant burden to the HPMS levels. These adjustment factors were then applied to the 1997, 2005 and 2010 modeled pollutant levels. The modeled pollutant burden is given in table 3. Table 4 calculates the adjustment factors. The 1990 HPMS value is Franklin County plus one-third of Delaware County which is the approximate percentage of Delaware County VMT covered by the model. Table 5 then shows the adjusted model values.

Table 3

The ODOT BTS results for the modeled area
pollutant values are tons/day

	VMT	HC	NOx
1990	25,202,630	109.881	96.594
1997 Build	27,125,641	61.900	78.853
2005 Build	29,189,367	55.508	69.177
2010 Build	31,449,408	55.728	70.693

Table 4
 1990 HPMS & Model Values with Adjustment Factors
 pollutant values are tons/day

	VMT	HC	NOx
1990 HPMS	21,475,314	77.45	57.12
1990 Model	25,202,630	109.881	96.594
Adjustment Factor	0.852	0.705	0.591

Table 5
 Future Adjusted Model Values
 pollutant values are tons/day

	VMT	HC	NOx
1997 Build	23,111,046	43.640	46.602
2005 Build	24,869,341	39.133	40.884
2010 Build	26,794,896	39.288	41.780

The year 1997, 2005 and 2010 pollutant burdens for Delaware County and Licking County was estimated by applying growth rates to the 1990 HPMS data for each functional class. The result for the two counties are summarized in table 6. The HPMS data summarized in table 6 is in attachment A.

Table 6
 1997, 2005 & 2010 HPMS Derived Pollutant Levels
 pollutant values are tons/day

Year	Delaware County			Licking County		
	VMT	HC	NOx	VMT	HC	NOx
1997	2,940,930	6.411	9.195	4,223,219	9.851	12.016
2005	3,412,360	5.938	8.105	4,786,183	8.895	10.595
2010	3,707,007	5.983	8.264	5,138,037	8.862	10.758

There are six projects outside the modeling area which require air quality analysis. These projects are as follows:

Delaware County

- I-71 at log 4.98 Lewis Center Rd. to log 11.5
- Interchange at US 23 and Pennsylvania Avenue
- Interchange at US 42 and US 23

Licking County

- LIC-16
- LIC-161-5.12 (2010 only)
- LIC-79-6.65 (2010 only)

The air quality changes due to these projects were individually calculated. The results are summarized in the table 7. The detailed calculations for these projects are in attachment A.

Table 7
Pollutant Burden for Non-Model Area Projects
tons/day

	2005 Build			2005 No Build			2010 Build			2010 No Build		
	VMT	HC	NO _x	VMT	HC	NO _x	VMT	HC	NO _x	VMT	HC	NO _x
DEL I-71 log 4.98	341,860	0.453	1.479	341,860	0.453	1.479	382,578	0.469	1.520	382,578	0.469	1.520
DEL US 23 @ PA. AVE	93	0.000	0.000	95	0.000	0.000	95	0.000	0.000	97	0.000	0.000
DEL US 23 @ US 42	1,918	0.002	0.004	4,480	0.008	0.008	1,956	0.002	0.004	4,568	0.007	0.008
DEL Subtotal	343,871	0.455	1.483	346,435	0.461	1.487	384,629	0.471	1.524	387,243	0.476	1.528
Build - no build	-2,564	-0.006	-0.004				-2,614	-0.005	-0.004			
LIC SR 16	6,840	0.007	0.016	6,840	0.010	0.013	9,348	0.009	0.020	9,348	0.014	0.017
LIC SR 161 log 5.12	N/A	N/A	N/A	N/A	N/A	N/A	93,978	0.102	0.191	93,978	0.110	0.161
LIC SR 79 log 6.65	N/A	N/A	N/A	N/A	N/A	N/A	112,288	0.133	0.215	112,288	0.149	0.207
LIC Subtotal	6,840	0.007	0.016	6,840	0.010	0.013	215,614	0.244	0.426	215,614	0.273	0.385
Build - no build	0	-0.003	0.003				0	-0.029	0.041			
Grand Total	350,711	0.462	1.499	353,275	0.471	1.500	600,243	0.715	1.950	602,857	0.749	1.913
Build - no build	-2,564	-0.009	-0.001				-2,614	-0.034	0.037			

The HPMS data for two-thirds of Delaware County and Licking County and the individual project calculations are combined in table 8. The no-build totals reflect the values in tables 5 and 6, while the build totals are the no-build totals plus the differences from tables 7 and 8. The entire maintenance area totals are shown in table 11.

Table 8
 Unmodeled Portions of Maintenance Area Totals
 pollutant values are tons/day

	Two Thirds of Delaware County			Licking County		
	VMT	HC	NOx	VMT	HC	NOx
1990	1,685,620	5.038	7.305	3,730,630	11.937	14.268
1997 Build	1,960,620	4.274	6.130	4,223,219	9.851	12.016
2005 Build	2,272,343	3.953	5.399	4,786,183	8.892	10.598
2010 Build	2,468,724	3.984	5.505	5,138,037	8.833	10.799

Table 9
 Combined Modeled and Non-Modeled Maintenance Area Totals
 pollutant values are tons/day

	VMT	HC	NOx
1990	26,891,680	94.730	78.650
1997 Build	29,926,319	59.902	67.813
2005 Build	31,927,867	51.978	56.881
2010 Build	34,401,657	52.105	58.084

CMAQ Projects

The TIPs contain several projects proposing to use Congestion Mitigation and Air Quality (CMAQ) funds. These include four phases to coordinate signals in the city of Columbus, two signal coordination projects in Bexley, two signal coordination projects in Newark, one signal coordination project in Heath, eight phases of a freeway surveillance and monitoring system, one park and pool facility, MORPC Commuter Assistance Program, Vanpool startup subsidy and continued funding of the North Outerbelt Transportation Management Association. The air quality packages submitted for each of these projects is included in the following pages (The Newark and Heath CMAQ packages have not been submitted). The impacts of the Columbus and Bexley signal coordination system projects were incorporated into the regional transportation model air quality analysis. The impacts of the other items are summarized in table 10. More detailed information is included in the individual CMAQ packages in attachment B.

Table 10
Emission Reductions from CMAQ Projects
pollutant values are tons/day

	VMT	HC	NO _x
FSMS Phase 1	no change	0.072	(0.040)
FSMS Phase 2	no change	0.020	(0.021)
FSMS Phase 3	no change	0.012	(0.014)
FSMS Phase 4	no change	0.001	(0.009)
FSMS Phase 5	no change	0.064	0.003
FSMS Phase 6	no change	0.029	(0.011)
FSMS Phase 7	no change	0.003	(0.009)
FSMS Phase 8	no change	no change	no change
Park & Pool	4,590	0.009	.007
MORPC CAP	3,165	0.007	0.005
Vanpools	7,824	0.017	0.013
NOTMA	23,354	0.056	0.040
Bus Replacement	no change	0.001	0.014
Heath Signals	no change	0.014	0.002
Newark Signals 1	no change	0.003	0.000
Newark Signals 2	no change	0.004	0.000
Total Reduction	38,933	0.312	(0.020)

Conformity Determination

Tables 9 and 10 are combined in table 11 to provide the conformity results for the entire maintenance area. The results of the conformity analysis for the entire maintenance area show that the emissions for HC and NO_x are less than the budgets. Thus the MORPC FY 97-00 TIP and the LCATS FY 97-00 TIP are in conformity with the requirements of the CAAA and the SIP.

Table 11
 FY 97-00 Conformity Analysis Results
 pollutant values are tons/day

	VMT	HC	Budget	NOx	Budget
1990	26,891,680	94.73	N/A	78.65	N/A
1997 Build	29,926,319	59.902	63.36	67.813	68.85
2005 Build	31,888,934	51.666	61.38	56.901	61.24
2010 Build	34,362,724	51.793	61.38	58.104	61.24

Attachment A
to Appendix C

Technical Air Quality Information

**Fiscal Year 97-00
Transportation Improvement Program**

Air Quality Analysis:

**Air Quality Conformity Determination
Documentation for the Franklin, Delaware
and Licking County Maintenance Area**

Appendix to
FY 97-00 MORPC TIP
FY 97-00 LCATS TIP

1 2 3 4 5 6 7 8
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ID, DEL COUNTY HPMS VMT EXPANDED AND FUTURE YEAR POLLUTANT BURDENS ESTIMATED

ID, CRG 26FEB96

ID, DELAWARE COUNTY

3 7 15 20

1.029 1.027 1.024 1.023 1.032 1.000 1.040 1.019 1.017 1.011 1.010

1.007

671260 422610 406210 326230 158010 146100 0 66020 172930 69750

52260 37050

1.583 1.684 1.858 2.014 2.286 2.433 1.687 1.753 3.134 3.024 3.003

3.015

4.333 3.405 2.062 2.124 1.905 1.660 2.019 1.737 1.631 1.842 1.652

1.578

1.262 1.357 1.490 1.614 1.838 1.954 1.361 1.407 2.535 2.470 2.453

2.462

3.091 2.459 1.656 1.688 1.568 1.422 1.633 1.462 1.382 1.508 1.390

1.348

1.175 1.264 1.383 1.499 1.712 1.818 1.266 1.305 2.364 2.310 2.293

2.300

2.846 2.269 1.577 1.602 1.503 1.377 1.558 1.410 1.336 1.444 1.341

1.306

01 INTERSTATE

02 PRINCIPAL ARTERIAL

06 MINOR ARTERIAL

07 MAJOR ARTERIAL

08 MINOR COLLECTOR

09 LOCAL

11 INTERSTATE

12 FREEWAY/EXPRESSWAY

14 PRINCIPAL ARTERIAL

16 MINOR ARTERIAL

17 COLLECTOR

19 LOCAL

DELANARE COUNTY

YEAR 1997

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	1997 VMT	VOC		NOX	
				1997 VOC EF GM/MI	POLLUTANT BURDEN TONS/DAY	1997 NOX EF GM/MI	POLLUTANT BURDEN TONS/DAY
RURAL							
01 INTERSTATE	671260	1.029	807526	1.583	1.409	4.333	3.857
02 PRINCIPAL ARTERIAL	422610	1.027	502483	1.684	0.933	3.405	1.886
06 MINOR ARTERIAL	406210	1.024	474453	1.858	0.972	2.062	1.078
07 MAJOR ARTERIAL	326230	1.023	378753	2.014	0.841	2.124	0.887
08 MINOR COLLECTOR	158010	1.032	193404	2.286	0.487	1.905	0.406
09 LOCAL	146100	1.000	146100	2.433	0.392	1.660	0.267
URBAN							
11 INTERSTATE	0	1.040	0	1.687	0.000	2.019	0.000
12 FREEWAY/EXPRESSWAY	66020	1.019	74800	1.753	0.145	1.737	0.143
14 PRINCIPAL ARTERIAL	172930	1.017	193508	3.134	0.669	1.631	0.348
16 MINOR ARTERIAL	69750	1.011	75120	3.024	0.250	1.842	0.153
17 COLLECTOR	52260	1.010	55918	3.003	0.185	1.652	0.102
19 LOCAL	37050	1.007	38865	3.015	0.129	1.578	0.068
TOTAL	2528430		2940930		6.411		9.195

DELAWARE COUNTY

YEAR 2005

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	2005 VMT	VOC		NOX	
				2005 VOC EF GM/MI	POLLUTANT BURDEN TONS/DAY	2005 NOX EF GM/MI	POLLUTANT BURDEN TONS/DAY
RURAL							
01 INTERSTATE	671260	1.029	963258	1.262	1.340	3.091	3.282
02 PRINCIPAL ARTERIAL	422610	1.027	593766	1.357	0.888	2.459	1.609
06 MINOR ARTERIAL	406210	1.024	552445	1.490	0.907	1.656	1.008
07 MAJOR ARTERIAL	326230	1.023	438779	1.614	0.781	1.688	0.816
08 MINOR COLLECTOR	158010	1.032	233854	1.838	0.474	1.568	0.404
09 LOCAL	146100	1.000	146100	1.954	0.315	1.422	0.229
URBAN							
11 INTERSTATE	0	1.040	0	1.361	0.000	1.633	0.000
12 FREEWAY/EXPRESSWAY	66020	1.019	84835	1.407	0.132	1.462	0.137
14 PRINCIPAL ARTERIAL	172930	1.017	217027	2.535	0.606	1.382	0.331
16 MINOR ARTERIAL	69750	1.011	81258	2.470	0.221	1.508	0.135
17 COLLECTOR	52260	1.010	60098	2.453	0.163	1.390	0.092
19 LOCAL	37050	1.007	40940	2.462	0.111	1.348	0.061
TOTAL	2528430		3412360		5.938		8.105

DELAWARE COUNTY

YEAR 2010

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	2010 VMT	VOC		NOX	
				2010 VOC KP GM/MI	POLLUTANT BURDEN TONS/DAY	2010 NOX KP GM/MI	POLLUTANT BURDEN TONS/DAY
RURAL							
01 INTERSTATE	671260	1.029	1060591	1.175	1.374	2.846	3.327
02 PRINCIPAL ARTERIAL	422610	1.027	650819	1.264	0.907	2.269	1.628
06 MINOR ARTERIAL	406210	1.024	601191	1.383	0.917	1.577	1.045
07 MAJOR ARTERIAL	326230	1.023	476295	1.499	0.787	1.602	0.841
08 MINOR COLLECTOR	158010	1.032	259136	1.712	0.489	1.503	0.429
09 LOCAL	146100	1.000	146100	1.818	0.293	1.377	0.222
URBAN							
11 INTERSTATE	0	1.040	0	1.266	0.000	1.558	0.000
12 FREEWAY/EXPRESSWAY	66020	1.019	91107	1.305	0.131	1.410	0.142
14 PRINCIPAL ARTERIAL	172930	1.017	231726	2.364	0.604	1.336	0.341
16 MINOR ARTERIAL	69750	1.011	85895	2.310	0.217	1.444	0.135
17 COLLECTOR	52260	1.010	62711	2.293	0.159	1.341	0.093
19 LOCAL	37050	1.007	42236	2.300	0.107	1.306	0.061
TOTAL	2528430		3707007		5.983		8.264

LICKING COUNTY

YEAR 1997

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	1997 VMT	VOC		NOX	
				1997 VOC SF GM/MI	POLLUTANT BURDEN TONS/DAY	1997 NOX SF GM/MI	POLLUTANT BURDEN TONS/DAY
RURAL							
01 INTERSTATE	820830	1.029	987458	1.583	1.723	4.333	4.716
02 PRINCIPAL ARTERIAL	346860	1.027	412416	1.684	0.766	3.405	1.548
06 MINOR ARTERIAL	292210	1.024	341301	1.858	0.699	2.062	0.776
07 MAJOR ARTERIAL	536510	1.023	622888	2.014	1.383	2.124	1.458
08 MINOR COLLECTOR	139150	1.032	170319	2.286	0.429	1.905	0.358
09 LOCAL	562600	1.000	562600	2.433	1.509	1.660	1.029
URBAN							
11 INTERSTATE	96820	1.020	110374	1.687	0.205	2.019	0.246
12 FREEWAY/EXPRESSWAY	167170	1.019	189403	1.753	0.366	1.737	0.363
14 PRINCIPAL ARTERIAL	168750	1.017	188831	3.134	0.652	1.631	0.339
16 MINOR ARTERIAL	194560	1.011	209541	3.024	0.698	1.842	0.425
17 COLLECTOR	146010	1.010	156230	3.003	0.517	1.652	0.285
19 LOCAL	259160	1.007	271858	3.015	0.904	1.578	0.473
TOTAL	3730630		4223219		9.851		12.016

LICKING COUNTY

YEAR 2005

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	2005 VMT	VOC		NOX	
				2005 VOC SF GM/MI	POLLUTANT BURDEN TONS/DAY	2005 NOX SF GM/MI	POLLUTANT BURDEN TONS/DAY
RURAL							
01 INTERSTATE	820830	1.029	1177891	1.262	1.639	3.091	4.013
02 PRINCIPAL ARTERIAL	346860	1.027	487338	1.357	0.729	2.459	1.321
06 MINOR ARTERIAL	292210	1.024	397405	1.490	0.653	1.656	0.725
07 MAJOR ARTERIAL	536510	1.023	721605	1.614	1.284	1.688	1.343
08 MINOR COLLECTOR	139150	1.032	205941	1.838	0.417	1.568	0.356
09 LOCAL	562600	1.000	562600	1.954	1.212	1.422	0.882
URBAN							
11 INTERSTATE	96820	1.020	125865	1.361	0.189	1.633	0.227
12 FREEWAY/EXPRESSWAY	167170	1.019	214813	1.407	0.333	1.462	0.346
14 PRINCIPAL ARTERIAL	168750	1.017	211781	2.535	0.592	1.382	0.323
16 MINOR ARTERIAL	194560	1.011	226662	2.470	0.617	1.508	0.377
17 COLLECTOR	146010	1.010	167911	2.453	0.454	1.390	0.257
19 LOCAL	259160	1.007	286371	2.462	0.777	1.348	0.426
TOTAL	3730630		4786183		8.895		10.595

INPUT VALUES

1 2 3 4 5 6 7 8
 1234567890123456789012345678901234567890123456789012345678901234567890

ID, LIC COUNTY HPMS VMT EXPANDED AND FUTURE YEAR POLLUTANT BURDENS ESTIMATED

ID, CRG 26FEB96

ID, LICKING COUNTY

3 7 15 20

1.029	1.027	1.024	1.023	1.032	1.000	1.020	1.019	1.017	1.011	1.010
1.007										
820830	346860	292210	536510	139150	562600	96820	167170	168750	194560	
146010	259160									
1.583	1.684	1.858	2.014	2.286	2.433	1.687	1.753	3.134	3.024	3.003
3.015										
4.333	3.405	2.062	2.124	1.905	1.660	2.019	1.737	1.631	1.842	1.652
1.578										
1.262	1.357	1.490	1.614	1.838	1.954	1.361	1.407	2.535	2.470	2.453
2.462										
3.091	2.459	1.656	1.688	1.568	1.422	1.633	1.462	1.382	1.508	1.390
1.348										
1.175	1.264	1.383	1.499	1.712	1.818	1.266	1.305	2.364	2.310	2.393
2.300										
2.846	2.269	1.577	1.602	1.503	1.377	1.558	1.410	1.336	1.444	1.361
1.306										

01 INTERSTATE

02 PRINCIPAL ARTERIAL

06 MINOR ARTERIAL

07 MAJOR ARTERIAL

08 MINOR COLLECTOR

09 LOCAL

11 INTERSTATE

12 FREEWAY/EXPRESSWAY

14 PRINCIPAL ARTERIAL

16 MINOR ARTERIAL

17 COLLECTOR

19 LOCAL

LICKING COUNTY

YEAR 2010

FUNCTIONAL CLASSIFICATION	HPMS 1990 VMT	GROWTH FACTOR PER YEAR	2010 VMT	VOC		NOX	
				2010 VOC EF GM/MI	POLLUTANT BURDEN TOMS/DAY	2010 NOX EF GM/MI	POLLUTANT BURDEN TOMS/DAY
RURAL							
01 INTERSTATE	820830	1.029	1296912	1.175	1.680	2.846	4.069
02 PRINCIPAL ARTERIAL	346860	1.027	534164	1.264	0.744	2.269	1.336
06 MINOR ARTERIAL	292210	1.024	432471	1.383	0.659	1.577	0.752
07 MAJOR ARTERIAL	536510	1.023	783304	1.499	1.294	1.602	1.383
08 MINOR COLLECTOR	139150	1.032	228205	1.712	0.431	1.503	0.378
09 LOCAL	562600	1.000	562600	1.818	1.127	1.377	0.854
URBAN							
11 INTERSTATE	96820	1.020	135547	1.266	0.189	1.558	0.233
12 FREEWAY/EXPRESSWAY	167170	1.019	230694	1.305	0.332	1.410	0.359
14 PRINCIPAL ARTERIAL	168750	1.017	226124	2.364	0.589	1.336	0.333
16 MINOR ARTERIAL	194560	1.011	237363	2.310	0.604	1.444	0.378
17 COLLECTOR	146010	1.010	175211	2.393	0.462	1.341	0.259
19 LOCAL	259160	1.007	295442	2.300	0.749	1.306	0.425
TOTAL	3730630		5138037		8.862		10.758

**CMAQ5AN WAS DEVELOPED AND WRITTEN BY CHARLES R. GEBHARDT
OF THE BUREAU OF TECHNICAL SERVICES
OHIO DEPARTMENT OF TRANSPORTATION**

**FOR CONGESTION MANAGEMENT, THE PROGRAM ESTIMATES THE VEHICLE HOURS OF TRAVEL, THE LEVEL OF SERVICE
(IN TERMS OF MILES, VEHICLE MILES, VEHICLE HOURS AND AVERAGE SPEED), THE VEHICLE DELAY AND
PERSON DELAY BY FUNCTIONAL CLASSIFICATION AND HOUR OF THE DAY IN THE CENTRAL BUSINESS DISTRICT (CBD),
CENTRAL CITY, SUBURBAN AND TOTAL AREAS.**

**FOR AIR QUALITY, THE PROGRAM USES EMISSION FACTORS FROM MOBILE5A: MOBILE SOURCE EMISSION FACTOR MODEL
DISTRIBUTED BY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR AND RADIATION
OFFICE OF MOBILE SOURCES
EMISSION CONTROL TECHNOLOGY DIVISION
TEST AND EVALUATION BRANCH
AND THE CALCULATED VEHICLE MILES OF TRAVEL TO ESTIMATE THE POLLUTANT BURDEN ASSOCIATED WITH HC, CO AND NOX.**

PROGRAM CONTROL RECORDS

	1	2	3	4	5	6	7	8
1---	5---	0---	5---	0---	5---	0---	5---	0---
5---	0---	5---	0---	5---	0---	5---	0---	5---
0---	5---	0---	5---	0---	5---	0---	5---	0---

ID,CMAQ5ANO COLUMBUS 2005 BUILD TIP NETWORK WITH 2005 TRIPS 20MAR96 CRG
 ID,1997-2000 TIP TIME PERIOD ANALYSIS TIME IS YEAR 2005.
 ID,COLU0505_FY97.LNK COL05_TIP96.GRD COL_EF05NIM_M5ANO.FAC
 ID, COLINT05_FY96.DAT COLAREA.DAT
 OPTION,PCTDIR=T,AREAXY=T,CENT=T,HSPEED=T
 FUNC-1,1,0
 FUNC-2,2, ,3,4,5,6,7,9
 FUNC-3,8
 PAR,1005
 CONTR,AQ
 AREAXY-1,185500,186500,71200,72000
 AREAXY-2,185200,186700,70700,72500
 AREAXY-3,178000,200000,62000,82000
 INTEF,1.615,0.423,0.043,0.367,0.192,27.505,1.435,1,1
 ID,USING FREEWAY SPEEDS ASSOCIATED WITH THE NEW HIGHWAY CAPACITY MANUAL
 ID,FACTORS FOR RAMP & STEADY STATE SPEEDS ARE NOT APPLIED TO MOBILE 5A EMISSION
 ID,FACTORS. MAXIMUM SPEED IS 57 MPH. SPEEDS CLOSELY RELATE TO THE SPEEDS
 ID,USED IN THE SIP.
 SPVC-11,57,57,57,57,57,57,57,57,57,57,57,54.8
 SPVC-11,53,52.5,51.8,50.4,48,32,15,15,15,15,15,15
 SPVC-21,57,57,57,57,57,57,57,57,57,57,57,54.8
 SPVC-21,53,52.5,51.8,50.4,48,32,15,15,15,15,15,15
 SPVC-31,57,57,57,57,57,57,57,57,57,57,57,54.8
 SPVC-31,53,52.5,51.8,50.4,48,32,15,15,15,15,15,15
 FCFAC-1.,1.,1.,1.,1.,1.,1.,1.,1.,45.

LISTING OF DATA TABLES

SUBSCRIPTS 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
(A, F, HR---)

1,1	1.6	0.9	0.7	0.6	0.6	1.5	4.8	7.6	6.3	4.8	4.5	4.6	4.7	5.0	5.9	7.4	8.3	8.0	5.5	4.3	3.5	3.3	3.0	2.6
2	1.4	0.8	0.5	0.5	0.5	1.4	4.0	6.9	5.9	4.6	4.7	5.1	5.5	5.5	6.1	7.3	8.2	7.9	5.7	4.9	4.0	3.3	2.9	2.4
2,1	1.6	0.9	0.7	0.6	0.6	1.5	4.8	7.6	6.3	4.8	4.5	4.6	4.7	5.0	5.9	7.4	8.3	8.0	5.5	4.3	3.5	3.3	3.0	2.6
2	1.4	0.8	0.5	0.5	0.5	1.4	4.0	6.9	5.9	4.6	4.7	5.1	5.5	5.5	6.1	7.3	8.2	7.9	5.7	4.9	4.0	3.3	2.9	2.4
3,1	1.6	0.9	0.7	0.6	0.6	1.5	4.8	7.6	6.3	4.8	4.5	4.6	4.7	5.0	5.9	7.4	8.3	8.0	5.5	4.3	3.5	3.3	3.0	2.6
2	1.4	0.8	0.5	0.5	0.5	1.4	4.0	6.9	5.9	4.6	4.7	5.1	5.5	5.5	6.1	7.3	8.2	7.9	5.7	4.9	4.0	3.3	2.9	2.4
4,1	1.6	0.9	0.7	0.6	0.6	1.5	4.8	7.6	6.3	4.8	4.5	4.6	4.7	5.0	5.9	7.4	8.3	8.0	5.5	4.3	3.5	3.3	3.0	2.6
2	1.4	0.8	0.5	0.5	0.5	1.4	4.0	6.9	5.9	4.6	4.7	5.1	5.5	5.5	6.1	7.3	8.2	7.9	5.7	4.9	4.0	3.3	2.9	2.4

PCTDIR
(A, F, HR---)

1,1	44.0	44.0	50.0	52.0	58.0	66.0	66.0	60.0	58.0	54.0	48.0	48.0	48.0	50.0	52.0	44.0	38.0	40.0	44.0	46.0	50.0	52.0	52.0	50.0
2	48.0	48.0	46.0	48.0	54.0	64.0	62.0	62.0	62.0	58.0	54.0	54.0	52.0	52.0	52.0	48.0	44.0	40.0	46.0	50.0	50.0	48.0	48.0	50.0
2,1	38.0	40.0	40.0	46.0	56.0	64.0	70.0	70.0	68.0	62.0	58.0	52.0	52.0	50.0	46.0	38.0	38.0	46.0	52.0	46.0	42.0	42.0	40.0	40.0
2	44.0	46.0	44.0	48.0	54.0	62.0	66.0	68.0	64.0	56.0	54.0	52.0	50.0	50.0	46.0	40.0	38.0	46.0	52.0	48.0	46.0	46.0	46.0	46.0
3,1	44.0	46.0	48.0	54.0	60.0	68.0	68.0	64.0	58.0	54.0	52.0	50.0	50.0	52.0	52.0	48.0	42.0	40.0	44.0	48.0	48.0	44.0	46.0	44.0
2	40.0	42.0	44.0	48.0	58.0	66.0	72.0	68.0	60.0	56.0	54.0	50.0	50.0	50.0	46.0	40.0	38.0	46.0	50.0	46.0	44.0	44.0	44.0	44.0
4,1	42.0	43.0	46.0	52.0	58.0	66.0	68.0	65.0	61.0	56.0	53.0	50.0	50.0	51.0	51.0	46.0	39.0	40.0	45.0	49.0	48.0	46.0	47.0	45.0
2	44.0	46.0	45.0	48.0	55.0	64.0	66.0	66.0	62.0	57.0	54.0	52.0	51.0	51.0	51.0	47.0	42.0	40.0	46.0	51.0	49.0	46.0	46.0	47.0

FACTIONVC
(F, VC---)

1	1.00	1.00	1.00	1.00	1.00	0.95	0.91	0.87	0.82	0.78	0.73	0.69	0.66	0.62	0.52	0.38	0.31	0.29	0.29	0.29	0.29	0.29	0.29	0.29
2	1.00	1.00	1.00	1.00	0.95	0.90	0.85	0.80	0.73	0.67	0.62	0.55	0.52	0.49	0.45	0.26	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17

SPEEDVC
(A, F, VC---)

1,1	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	54.8	53.0	52.5	51.8	50.4	48.0	32.0	15.0	15.0	15.0	15.0	15.0	15.0
2	25.0	25.0	25.0	25.0	25.0	23.8	22.5	21.2	20.0	18.9	17.5	16.6	15.7	14.8	13.6	10.8	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0
3	29.0	28.0	27.5	27.0	25.9	25.5	25.0	24.0	23.0	22.0	21.0	20.5	19.5	18.5	15.5	12.0	10.0	8.0	6.0	5.5	5.5	5.5	5.5	5.5
2,1	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	54.8	53.0	52.5	51.8	50.4	48.0	32.0	15.0	15.0	15.0	15.0	15.0	15.0
2	30.0	30.0	30.0	30.0	28.5	27.0	25.5	24.5	22.0	20.0	18.5	16.6	15.7	14.8	13.6	10.8	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0
3	29.0	28.0	27.5	27.0	25.9	25.5	25.0	24.0	23.0	22.0	21.0	20.5	19.5	18.5	15.5	12.0	10.0	8.0	6.0	5.5	5.5	5.5	5.5	5.5
3,1	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	54.8	53.0	52.5	51.8	50.4	48.0	32.0	15.0	15.0	15.0	15.0	15.0	15.0
2	35.0	35.0	35.0	35.0	33.0	31.0	29.5	27.5	25.0	23.7	22.5	18.6	17.7	16.8	13.6	10.8	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0
3	29.0	28.0	27.5	27.0	25.9	25.5	25.0	24.0	23.0	22.0	21.0	20.5	19.5	18.5	15.5	12.0	10.0	8.0	6.0	5.5	5.5	5.5	5.5	5.5
4,1	62.5	62.5	62.5	62.5	59.5	56.5	54.5	52.3	50.3	48.3	46.4	44.8	42.8	41.0	35.8	28.0	24.1	19.6	15.5	15.0	15.0	15.0	15.0	15.0
2	32.0	32.0	32.0	32.0	28.8	27.2	25.8	24.4	22.3	20.8	19.5	17.3	16.4	15.5	13.6	10.8	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0
3	29.0	28.0	27.5	27.0	25.9	25.5	25.0	24.0	23.0	22.0	21.0	20.5	19.5	18.5	15.5	12.0	10.0	8.0	6.0	5.5	5.5	5.5	5.5	5.5

LISTING OF DATA TABLES

SUBSCRIPTS 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

HIGH SPD
SAVC
(A,VC-----)

1	25.0	25.0	25.0	25.0	25.0	23.8	22.5	21.2	20.0	18.9	17.5	16.6	15.7	14.8	13.6	10.8	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2	40.0	40.0	40.0	40.0	38.0	36.0	34.0	32.0	30.0	28.0	26.0	23.2	20.4	17.6	14.8	12.0	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
3	50.0	50.0	50.0	50.0	48.0	46.0	44.0	42.0	40.0	38.0	36.0	32.1	28.2	24.4	20.6	16.8	13.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0

HIGH BASE SPD
SAHSP
(A,HR-----)

1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	23.8	23.8	22.5	22.5	22.5	22.5	21.2	20.0	20.0	22.0	24.0	25.0	25.0	25.0	25.0	25.0	25.0
2	35.0	35.0	35.0	35.0	35.0	35.0	35.0	30.0	30.0	35.0	35.0	35.0	35.0	35.0	35.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
3	45.0	45.0	45.0	45.0	45.0	45.0	45.0	38.0	38.0	45.0	45.0	45.0	45.0	45.0	45.0	38.0	38.0	38.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0

1	1.50	1.44	1.41	1.41	1.39	1.35	1.28	1.27	1.24	1.37	1.45	1.47	1.47	1.50	1.48	1.45	1.38	1.45	1.53	1.82	1.79	1.79	1.72	1.70	1.70
2	1.50	1.44	1.41	1.41	1.39	1.35	1.28	1.27	1.24	1.37	1.45	1.47	1.47	1.50	1.48	1.45	1.38	1.45	1.53	1.82	1.79	1.79	1.72	1.70	1.70
3	1.50	1.44	1.41	1.41	1.39	1.35	1.28	1.27	1.24	1.37	1.45	1.47	1.47	1.50	1.48	1.45	1.38	1.45	1.53	1.82	1.79	1.79	1.72	1.70	1.70

LISTING OF DATA TABLES

SUBSCRIPTS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
SPEEDHR																									
(A, F, HR---)																									
1,1	59.0	59.0	59.0	59.0	59.0	59.0	57.0	53.0	53.0	55.0	55.0	54.0	54.0	53.0	53.0	52.0	50.0	50.0	50.0	52.0	53.0	55.0	57.0	59.0	
2	21.0	21.0	21.0	21.0	21.0	21.0	21.0	14.5	14.5	21.0	21.0	21.0	21.0	21.0	21.0	14.5	14.5	14.5	21.0	21.0	21.0	21.0	21.0	21.0	21.0
2,1	59.0	59.0	59.0	59.0	59.0	59.0	57.0	53.0	53.0	55.0	55.0	54.0	54.0	53.0	53.0	52.0	50.0	50.0	50.0	52.0	53.0	55.0	57.0	59.0	
2	28.3	28.3	28.3	28.3	28.3	28.3	28.3	15.0	15.0	28.3	28.3	28.3	28.3	28.3	28.3	15.0	15.0	15.0	28.3	28.3	28.3	28.3	28.3	28.3	28.3
3,1	59.0	59.0	59.0	59.0	59.0	59.0	57.0	53.0	53.0	55.0	55.0	54.0	54.0	53.0	53.0	52.0	50.0	50.0	50.0	52.0	53.0	55.0	57.0	59.0	
2	32.0	32.0	32.0	32.0	32.0	32.0	32.0	23.0	23.0	32.0	32.0	32.0	32.0	32.0	32.0	23.0	23.0	23.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
4,1	59.0	59.0	59.0	59.0	59.0	59.0	57.0	53.0	53.0	55.0	55.0	54.0	54.0	53.0	53.0	52.0	50.0	50.0	50.0	52.0	53.0	55.0	57.0	59.0	
2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	17.0	17.0	25.0	25.0	25.0	25.0	25.0	25.0	17.0	17.0	17.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
HDGV																									
(A, F, HR---)																									
1,1	1.7	2.5	2.6	3.0	2.4	1.1	0.5	0.4	0.6	0.8	0.9	0.9	0.8	0.8	0.7	0.5	0.4	0.4	0.5	0.7	0.8	0.8	1.0	1.2	
2	3.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2,1	1.7	2.5	2.6	3.0	2.4	1.1	0.5	0.4	0.6	0.8	0.9	0.9	0.8	0.8	0.7	0.5	0.4	0.4	0.5	0.7	0.8	0.8	1.0	1.2	
2	3.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3,1	1.7	2.5	2.6	3.0	2.4	1.1	0.5	0.4	0.6	0.8	0.9	0.9	0.8	0.8	0.7	0.5	0.4	0.4	0.5	0.7	0.8	0.8	1.0	1.2	
2	3.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
HDDV																									
(A, F, HR---)																									
1,1	18.6	27.4	29.1	33.7	27.1	12.7	6.2	4.7	6.8	9.2	9.8	9.6	9.3	8.8	7.6	6.1	4.9	4.4	5.8	7.7	8.8	9.0	10.9	13.0	
2	5.0	16.0	16.0	16.0	16.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	5.0	5.0	
2,1	18.6	27.4	29.1	33.7	27.1	12.7	6.2	4.7	6.8	9.2	9.8	9.6	9.3	8.8	7.6	6.1	4.9	4.4	5.8	7.7	8.8	9.0	10.9	13.0	
2	5.0	16.0	16.0	16.0	16.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	5.0	5.0	
3,1	18.6	27.4	29.1	33.7	27.1	12.7	6.2	4.7	6.8	9.2	9.8	9.6	9.3	8.8	7.6	6.1	4.9	4.4	5.8	7.7	8.8	9.0	10.9	13.0	
2	5.0	16.0	16.0	16.0	16.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	5.0	5.0	

CRG

VEHICLE MILES OF TRAVEL AND POLLUTANT BURDEN BY HOUR OF DAY

HOUR	VMT HC		VMT CO		EXHAUST HC	RUNNING LOSS HC	RESTING LOSS HC	TOTAL HC	EXHAUST NOX	EXHAUST CO
	FWY	SA	FWY	SA	IN TONS	IN TONS	IN TONS	IN TONS	IN TONS	IN TONS
0	222200		205734		0.164	0.015	0.006	0.185	0.812	1.869
0		212914		197161	0.248	0.039	0.007	0.294	0.469	3.130
1	124949		115663		0.100	0.006	0.003	0.109	0.567	1.062
1		121672		112665	0.161	0.018	0.003	0.183	0.383	1.805
2	97160		89941		0.082	0.004	0.002	0.088	0.461	0.847
2		76005		70358	0.108	0.009	0.002	0.118	0.225	1.160
3	83249		77063		0.069	0.004	0.002	0.075	0.428	0.713
3		76041		70407	0.100	0.011	0.002	0.113	0.221	1.149
4	83258		77082		0.066	0.005	0.002	0.073	0.374	0.719
4		75975		70356	0.097	0.012	0.002	0.111	0.220	1.137
5	208329		192863		0.150	0.014	0.006	0.171	0.646	1.839
5		212906		197156	0.224	0.040	0.007	0.271	0.476	2.989
6	666933		617520		0.424	0.053	0.021	0.498	1.597	5.555
6		608029		563025	0.669	0.131	0.021	0.821	1.405	8.908
7	1056079		977828		0.658	0.100	0.036	0.794	2.274	8.418
7		1048741		971061	1.420	0.327	0.038	1.786	2.329	19.288
8	875396		810533		0.553	0.075	0.031	0.659	2.125	6.909
8		896719		830322	1.078	0.234	0.035	1.347	2.071	14.170
9	666927		617530		0.434	0.055	0.024	0.514	1.794	5.193
9		699215		647463	0.752	0.161	0.029	0.942	1.548	9.574
10	625225		578925		0.443	0.054	0.024	0.521	1.771	5.038
10		714382		661531	0.767	0.175	0.031	0.973	1.492	9.567
11	639265		591912		0.454	0.063	0.027	0.543	1.801	5.029
11		775202		717673	0.842	0.214	0.036	1.092	1.551	10.260
12	653168		604791		0.464	0.071	0.028	0.563	1.824	5.013
12		836005		774127	0.924	0.259	0.041	1.224	1.668	10.973
13	694756		643275		0.495	0.082	0.032	0.609	1.913	5.213
13		836005		774127	0.928	0.279	0.043	1.249	1.645	10.683
14	819827		759083		0.581	0.110	0.041	0.731	2.164	5.990
14		927130		858583	1.060	0.362	0.050	1.472	1.817	11.872
15	1028264		952092		0.718	0.157	0.054	0.929	2.536	7.200
15		1109543		1027383	1.424	0.565	0.064	2.052	2.154	15.770
16	1153329		1067898		0.811	0.212	0.065	1.087	2.664	7.787
16		1246322		1153990	2.007	0.819	0.076	2.902	2.694	21.463
17	1111647		1029298		0.780	0.218	0.066	1.064	2.530	7.448
17		1200712		1111723	1.925	0.848	0.077	2.850	2.639	20.388
18	764212		707589		0.537	0.119	0.041	0.697	1.890	5.352
18		866341		802207	1.126	0.390	0.052	1.568	1.992	11.908
19	597445		553176		0.414	0.079	0.030	0.523	1.570	4.289
19		744839		689680	0.890	0.274	0.041	1.204	1.528	9.950
20	486276		450258		0.337	0.055	0.022	0.414	1.324	3.615
20		608035		563013	0.708	0.185	0.030	0.923	1.250	8.218
21	458480		424494		0.315	0.042	0.019	0.377	1.251	3.530
21		501708		464524	0.571	0.123	0.022	0.717	0.998	6.927
22	416780		385899		0.288	0.034	0.015	0.337	1.209	3.316
22		440877		408225	0.501	0.091	0.018	0.610	0.959	6.122
23	361218		334453		0.252	0.028	0.012	0.292	1.117	2.969
23		364913		337835	0.411	0.074	0.013	0.498	0.803	5.209
HOURLY TOTAL								37.172	69.177	327.530

THE PARAMETER RECORD VALUES ARE:

NUMBER OF CENTROIDS = 1005

THE OPTION RECORD VALUES ARE:

AREA = F CENT = T SPEED = F AREAXY = T DEBUG = F TABLE = F REPORT = F PCTDIR = T HSPEED = T

BURDEN IS ESTIMATED FOR THE FOLLOWING HOURS: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

THE FACTOR VALUE APPLIED TO THE HC VOLUMES IS 1.080.

THE FACTOR VALUE APPLIED TO THE CO VOLUMES IS 1.000.

FACTOR FOR HC & CO EMISSION FACTORS ON FREEWAYS AND EXPRESSWAYS OPERATING IN NON STEADY STATE MODE IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON FREEWAYS AND EXPRESSWAYS OPERATING IN NON STEADY STATE MODE IS: 1.00

FACTOR FOR HC & CO EMISSION FACTORS ON SURFACE ARTERIALS IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON SURFACE ARTERIAL IS: 1.00

FACTOR FOR HC & CO EMISSION FACTORS ON RAMPS IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON RAMPS IS: 1.00

FACTOR FOR HC AND CO EMISSION FACTORS ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 1.00

MINIMUM SPEED ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 45.00

THE NUMBER OF COORDINATES READ IS: 5036

INTRAZONAL VMT IS: 95513.20

CMAQ5ANO COLUMBUS 2005 BUILD TIP NETWORK WITH 2005 TRIPS 20MAR96 CRG
 TOTAL VEHICLE MILES FOR HC, NOX AND CO WITH POLLUTANT BURDEN FOR EVAPORATION AND REFUELING

VMT HC		VMT NOX		VMT CO		EVAPORATIVE HC	REFUELING HC	TOTAL HC
FWY	SA	FWY	SA	FWY	SA	IN TONS	IN TONS	IN TONS
13897387.		13897387.		12867951.		6.051	2.635	8.686
	15291980.		15291980.		14159241.	6.613	3.038	9.650
							GRAND TOTAL	55.508

THE NUMBER OF COORDINATES READ IS 5036
 NUMBER OF LINKS READ IS 7212
 NUMBER OF LINKS PROCESSED IS 7212

CMAQ5ANS (04-08-95) COMPLETED

CMAQ5ANO COLUMBUS 2010 LONG RANGE PLAN BUILD-2010 TRIPS & EF NO (I

VEHICLE MILES OF TRAVEL AND POLLUTANT BURDEN BY HOUR OF DAY

HOUR	VMT HC		VMT CO		EXHAUST HC	RUNNING LOSS HC	RESTING LOSS HC	TOTAL HC	EXHAUST NOX	EXHAUST CO
	FWY	SA	FWY	SA	IN TONS	IN TONS	IN TONS	IN TONS	IN TONS	IN TONS
0	237802		220164		0.170	0.015	0.005	0.190	0.797	1.864
0		230478		213504	0.261	0.039	0.005	0.305	0.486	3.232
1	133684		123782		0.104	0.007	0.002	0.113	0.550	1.059
1		131762		121998	0.170	0.018	0.002	0.190	0.388	1.849
2	103963		96251		0.085	0.004	0.001	0.091	0.447	0.845
2		82269		76180	0.113	0.009	0.001	0.123	0.226	1.188
3	89094		82468		0.072	0.004	0.001	0.077	0.413	0.711
3		82332		76203	0.105	0.011	0.001	0.117	0.222	1.176
4	89094		82471		0.069	0.005	0.001	0.075	0.364	0.718
4		82264		76193	0.102	0.012	0.001	0.116	0.221	1.165
5	222929		206382		0.155	0.015	0.004	0.175	0.641	1.834
5		230566		213478	0.235	0.040	0.005	0.280	0.493	3.069
6	713645		660771		0.438	0.054	0.015	0.506	1.607	5.568
6		658400		609637	0.704	0.130	0.015	0.850	1.459	9.203
7	1130027		1046299		0.679	0.101	0.025	0.805	2.295	8.452
7		1135544		1051440	1.508	0.325	0.028	1.860	2.414	20.233
8	936683		867309		0.572	0.075	0.022	0.669	2.134	6.926
8		970932		899098	1.139	0.231	0.025	1.395	2.152	14.755
9	713651		660757		0.450	0.054	0.017	0.522	1.793	5.205
9		757126		701010	0.792	0.157	0.021	0.971	1.625	9.955
10	669033		619461		0.458	0.054	0.017	0.529	1.769	5.026
10		773559		716243	0.808	0.169	0.022	1.000	1.563	9.953
11	684004		633341		0.469	0.061	0.019	0.549	1.799	5.020
11		839324		777188	0.887	0.206	0.026	1.119	1.621	10.692
12	698905		647113		0.481	0.069	0.020	0.569	1.824	5.008
12		905138		838049	0.975	0.248	0.029	1.252	1.743	11.456
13	743388		688331		0.512	0.080	0.023	0.615	1.916	5.207
13		905138		838049	0.981	0.265	0.031	1.277	1.721	11.204
14	877245		812250		0.600	0.105	0.029	0.734	2.175	5.994
14		1003993		929499	1.120	0.342	0.037	1.499	1.901	12.491
15	1100268		1018760		0.742	0.150	0.039	0.931	2.554	7.209
15		1201371		1112420	1.511	0.529	0.045	2.085	2.253	16.718
16	1234100		1142675		0.835	0.198	0.045	1.079	2.692	7.816
16		1349454		1249553	2.141	0.760	0.054	2.955	2.830	22.923
17	1189495		1101374		0.803	0.202	0.047	1.053	2.562	7.475
17		1300047		1203780	2.053	0.778	0.056	2.887	2.774	21.776
18	817732		757156		0.554	0.113	0.029	0.696	1.909	5.361
18		938129		868614	1.193	0.363	0.037	1.592	2.097	12.536
19	639281		591918		0.429	0.076	0.021	0.526	1.577	4.293
19		806443		746710	0.939	0.257	0.029	1.225	1.608	10.404
20	520355		481790		0.349	0.053	0.015	0.418	1.325	3.616
20		658316		609646	0.746	0.175	0.022	0.943	1.315	8.559
21	490589		454242		0.326	0.042	0.013	0.381	1.251	3.528
21		543211		502946	0.601	0.118	0.016	0.736	1.048	7.191
22	445965		412935		0.298	0.033	0.011	0.342	1.203	3.311
22		477380		442026	0.528	0.089	0.012	0.629	0.994	6.344
23	386502		357854		0.261	0.028	0.009	0.297	1.107	2.963
23		395081		365748	0.433	0.072	0.010	0.515	0.832	5.387
HOURLY TOTAL								37.861	70.693	338.472

THE PARAMETER RECORD VALUES ARE:

NUMBER OF CENTROIDS = 1005

THE OPTION RECORD VALUES ARE:

AREA = F CENT = T SPEED = F AREAXY = T DEBUG = F TABLE = F REPORT = F PCTDIR = T HSPEED = T

BURDEN IS ESTIMATED FOR THE FOLLOWING HOURS: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

THE FACTOR VALUE APPLIED TO THE HC VOLUMES IS 1.080.

THE FACTOR VALUE APPLIED TO THE CO VOLUMES IS 1.000.

FACTOR FOR HC & CO EMISSION FACTORS ON FREEWAYS AND EXPRESSWAYS OPERATING IN NON STEADY STATE MODE IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON FREEWAYS AND EXPRESSWAYS OPERATING IN NON STEADY STATE MODE IS: 1.00

FACTOR FOR HC & CO EMISSION FACTORS ON SURFACE ARTERIALS IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON SURFACE ARTERIAL IS: 1.00

FACTOR FOR HC & CO EMISSION FACTORS ON RAMPS IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON RAMPS IS: 1.00

FACTOR FOR HC AND CO EMISSION FACTORS ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 1.00

FACTOR FOR NOX EMISSION FACTOR ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 1.00

MINIMUM SPEED ON FREEWAYS AND EXPRESSWAYS OPERATING IN THE STEADY STATE MODE IS: 45.00

THE NUMBER OF COORDINATES READ IS: 5036

INTRAZONAL VMT IS: 95513.20

Delaware County Projects

I-71 from log point 4.98 to log point 11.5 year 2005

Resurfacing/widening I-71 north (continuation of project 137 PID# 7278 north of modeling area)

Section 1 log 4.98 (Lewis center Road) to log 9.67 (SR 36)

Section 2 log 9.67 (SR 36) to log 11.5

Section 1

2005 volume build & no build= 54,791

Distance build & no build= 4.69

VMT build & no build= 256,970

Section 2

2005 volume build & no build= 46,388

Distance build & no build= 1.83

VMT build & no build= 84,890

Total VMT= 341,860

No Build Speed = 65 mph

Build speed = 65 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.793	.013	.013	.016	.001	.001	.162	.001

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6 Ambient temp CO 68.8

Region Low, altitude 500 ft Operating mode= 4.0/5.0/4.0

RVP 10.5/9.0 Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2005

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results tons/day	HC	CO	NOx
65 mph	1.205	10.976	3.932	Build	0.453	4.127	1.479
65 mph	1.205	10.976	3.932	No Build	0.453	4.127	1.479

I-71 from log point 4.98 to log point 11.5 Year 2010

Resurfacing/widening I-71 north (continuation of project 137 PID# 7278 north of modeling area)

Section 1 log 4.98 (Lewis center Road) to log 9.67 (SR 36) &

Section 2 log 9.67 (SR 36) to log 11.5

Section 1

2010 volume build & no build= 61,317

Distance build & no build= 4.69

VMT build & no build= 287,577

Section 2

2010 volume build & no build= 51,913

Distance build & no build= 1.83

VMT build & no build= 95,001

Total VMT = 382,578

No Build Speed = 65 mph

Build speed = 65 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.793	.013	.013	.016	.001	.001	.162	.001

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6 Ambient temp CO 68.8

Region Low, altitude 500 ft Operating mode= 4.0/5.0/4.0

RVP 10.5/9.0 Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results tons/day	HC	CO	NOx
65 mph	1.112	10.078	3.604	Build	0.469	4.251	1.520
65 mph	1.112	10.078	3.604	No Build	0.469	4.251	1.520

CMAQ5ANO COLUMBUS 2010 LONG RANGE PLAN BUILD-2010 TRIPS & EF NO (IM ATP VRS)
 TOTAL VEHICLE MILES FOR HC, NOX AND CO WITH POLLUTANT BURDEN FOR EVAPORATION AND REFUELING

VMT HC		VMT NOX		VMT CO		EVAPORATIVE HC	REFUELING HC	TOTAL HC
FWY	SA	FWY	SA	FWY	SA	IN TONS	IN TONS	IN TONS
14888176.		14888176.		13785348.		5.563	2.823	8.386
	16561232.		16561232.		15334473.	6.191	3.290	9.481
							GRAND TOTAL	55.728

THE NUMBER OF COORDINATES READ IS 5033
 NUMBER OF LINKS READ IS 7246
 NUMBER OF LINKS PROCESSED IS 7246

CMAQ5ANS (04-08-95) COMPLETED

Interchange at US 23 and US 42 in City of Delaware Year 2005

2005 volume build= 1744
 2005 volume no build =2240
 Distance build= 1.1
 Distance no build 2.0
 VMT build= 1918
 VMT no build = 4480

No Build Speed = 30 mph
 Build speed = 50 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.899	.019	.019	.005	.001	.001	.054	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,
 Ambient temp HC =87.6
 Ambient temp CO 68.8
 Region Low, altitude 500 ft
 Operating mode= 10.0/10.0/10.0
 RVP 10.5/9.0
 Evap test 96=20 97=40 98=90 99=100
 Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2005

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
50 mph	1.125	6.023	1.820	Build		0.002	0.013	0.004
30 mph	1.612	11.088	1.627	No Build		0.008	0.055	0.008

Interchange at US 23 and US 42 in City of Delaware Year 2010

2010 volume build= 1778
 2010 volume no build =2284
 Distance build= 1.1
 Distance no build 2.0
 VMT build= 1955.8
 VMT no build = 4568

No Build Speed = 30 mph
 Build speed = 50 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.899	.019	.019	.005	.001	.001	.054	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,
 Ambient temp HC =87.6
 Ambient temp CO 68.8
 Region Low, altitude 500 ft
 Operating mode= 10.0/10.0/10.0
 RVP 10.5/9.0
 Evap test 96=20 97=40 98=90 99=100
 Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
50 mph	1.035	5.701	1.727	Build		0.002	0.012	0.004
30 mph	1.485	10.905	1.549	No Build		0.007	0.055	0.008

Interchange at US 23 and Pennsylvania Ave in City of Delaware Year 2005

2005 volume build= 847
 2005 volume no build =867
 Distance = .11
 VMT build= 93.2
 VMT no build = 95.4

No Build Speed = 25 mph
 Build speed = 55 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.899	.019	.019	.005	.001	.001	.054	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 10.0/10.0/10.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2005

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
55 mph	1.092	6.041	2.080	Build		0.000	0.001	0.000
25 mph	1.848	13.827	1.623	No Build		0.000	0.001	0.000

Interchange at US 23 and Pennsylvania Ave in City of Delaware Year 2010

2010 volume build= 864
 2010 volume no build =883
 Distance = .11
 VMT build= 95
 VMT no build = 97.1

No Build Speed = 25 mph
 Build speed = 55 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.899	.019	.019	.005	.001	.001	.054	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 10.0/10.0/10.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
55 mph	1.005	5.717	1.969	Build		0.000	0.001	0.000
25 mph	1.708	13.715	1.544	No Build		0.000	0.001	0.000

Licking County Projects

Licking County LIC SR-16 PID# 13570 Year 2005

2005 volume build & no build= 12,000

Distance build & no build= 0.57

VMT build & no build= 6,840

No Build Speed = mph 42.2

Build speed = mph 54

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.908	.019	.019	.002	.001	.001	.048	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 5.0/10.0/5.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2005

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
mph 54	0.869	6.083	2.186	Build		0.007	0.046	0.016
mph 42.2	1.265	6.965	1.786	No Build		0.010	0.052	0.013

Licking County LIC SR-16 PID# 13570 Year 2010

2010 volume build & no build= 16,400

Distance build & no build= .57

VMT build & no build= 9,348

No Build Speed = mph 34.2

Build speed = mph 51.6

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.908	.019	.019	.002	.001	.001	.048	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 5.0/10.0/5.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a

Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
mph 51.6	0.835	5.729	1.933	Build		0.009	0.059	0.020
mph 34.2	1.356	8.856	1.651	No Build		0.014	0.091	0.017

Licking County LIC SR-161/SR 37 log 5.12/11.75 PID# 12712 Year 2010

2010 volume build & no build= 12,874

Distance build & no build= 7.29

VMT build & no build= 93,978

No Build Speed = 46 mph

Build speed = 54 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.908	.019	.019	.002	.001	.001	.048	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 5.0/10.0/5.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
54 mph	0.987	5.562	1.842	Build		0.102	0.576	0.191
46 mph	1.059	5.917	1.553	No Build		0.110	0.613	0.161

Licking County SR 79 log 6.65 Year 2010

On LCATS as LIC SR-79 log 6.65 PID# 8314

2010 volume build & no build= 29,472

Distance build & no build= 3.81

VMT build & no build= 112,288

No Build Speed = 40 mph

Build speed = 47 mph

MOBILE Emission Factor Data

Vehicle mix	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
	.878	.019	.019	.010	.001	.001	.070	.002

No I/M, no ATP, no pressure test, no stage II VRS, no reformulated gas,

Ambient temp HC =87.6

Ambient temp CO 68.8

Region Low, altitude 500 ft

Operating mode= 10.0/10.0/10.0

RVP 10.5/9.0

Evap test 96=20 97=40 98=90 99=100

Oxygenated fuels 0.035 0.197 0.027 0.031 waiver=Y

Year 2010

MOBILE 5a Emission Factors	HC	CO	NOx	Analysis results	tons/day	HC	CO	NOx
47 mph	1.074	5.898	1.733	Build		0.133	0.730	0.215
40 mph	1.207	7.405	1.676	No Build		0.149	0.917	0.207

Attachment B
to Appendix C

CMAQ Packages

**Fiscal Year 97-00
Transportation Improvement Program**

Air Quality Analysis:

**Air Quality Conformity Determination
Documentation for the Franklin, Delaware
and Licking County Maintenance Area**

**Appendix to
FY 97-00 MORPC TIP
FY 97-00 LCATS TIP**

TRANSPORTATION
OCT 10 5 1994
DEPARTMENT

September 29, 1994

Mr. Fred Hempel
Division Administrator
Federal Highway Administration
200 North High Street
Columbus, Ohio 44512

Mr. Joel Ettinger
Regional Administrator
Region 5, Federal Transit Administration
55 East Monroe St., Suite 1415
Chicago, Illinois 60603

Gentlemen:

The Bureau of Planning and Ohio EPA have reviewed and concurred with the Mid-Ohio Regional Planning Commission's (MORPC) request for the eligibility of CMAQ funds for ~~the~~ of their overall signalization project. MORPC is sponsoring this signal upgrade and coordination within the Columbus marginal ozone nonattainment area. The total amount of CMAQ funding requested is estimated at \$860,000.

Enclosed is a report presenting the scope and emission analysis of the project. This project will improve traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay, acceleration/deceleration, and travel time while improving speeds along the facility. The improved traffic flow and speed improvements provide air quality benefits.

The project has met the standard project criteria and emission reduction analysis routines developed by the Department for the request of CMAQ funds. This project, consistent with similar projects that the Department has approved, utilizes emission reduction methodologies previously accepted by the appropriate Federal Agencies. We therefore, request Federal review of the eligibility of this project for CMAQ program funding.

If you have any questions or need any additional information feel free to contact myself or Libby Rushley at (614) 644-1204. Thank You.

Respectfully,

Gordon Proctor
Administrator, Office of Transportation Planning

Enclosure

GDP:mo
LFS:TMS:DAM:EBR

c: all w/encl. - Rodrigo - Gismondi - Proctor - Lunt - Singleton - Moore - Selhorst - Rushley - McDonald - Lilly (MORPC) - Longberry - File (Columbus - CMAQ) - Reading File



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.



September 12, 1994

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Dave Moore

Re: CM/AQ-M/S Eligibility, FRA-Signalization-Phase 8, (PID #13033)

Gentlemen:

The city of Columbus has for several years been designing and implementing a city-wide computerized integrated signal system. Phase 8 of the Columbus Signal System occurs primarily along the East Broad Street, James Road and Hamilton Road corridors. Signal System Phase 8 consists of 42 intersections (29 within Columbus and 13 within Whitehall) and 3 closed-circuit cameras. This project will improve traffic flow in two areas: first by managing the peak-hour demands along these major east-side arterials and second by providing faster incident detection and response. Overall, the Columbus Signalization System and each of its many integrated phases will reduce delays, idle times, acceleration/deceleration responses and improve travel times along all the major arterials in the greater Columbus area.

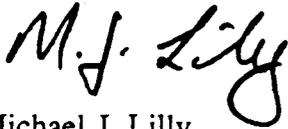
Signalization Phase 8 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table indicates that by the year 2010 we can expect nominal reductions in hydrocarbon emissions along the east-side corridors as a direct result of implementing Signalization Phase 8. However, as we have expected with signalization-type projects, there is a very slight increase in the NOx levels in direct proportion to the hydrocarbon reductions for the same segment. Nevertheless, we feel that the HC reductions warrant the continued development of this project for federal funding.

Mr. Gordon Proctor
September 12, 1994
Page two

We respectfully request your office initiate the process of CM/AQ eligibility approval for Signalization Phase 8, PID #13033. This project is listed on the current TIP presently in effect for this region. The specific sources of funds are both the CM/AQ-M funds attributable and suballocated to MORPC (85 percent) as well as the CM/AQ-S funds attributable to ODOT (15 percent). Concurrently, the city of Columbus will be processing the necessary requests through the District 6 office for final program approval.

Please do not hesitate to call upon me or Steve Jewell, P.E., at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Michael J. Lilly
Senior Project Coordinator

MJL/bn

c: James A. Gregory, P.E., ODOT District 6
Steve Jewell, P.E., Columbus Traffic Engineering

Columbus Phase 8 Signalization Project
 FRA-Signalization-Phase 8 PID # 13033

The City of Columbus will use the subject CM/AQ funds to coordinate traffic signals in the eastern part of the city. The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

This improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons. The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel (daily)	315,069	315,069
2010 Average Speed ¹ (Base)	23.5	23.5
2010 Emissions ² (Base) tons/day	0.395	0.527
2010 Average Speed ³ (Coordinated)	26.5	26.5
2010 Emissions ⁴ (Coordinated) tons/day	0.354	0.530
Change in Emissions tons/day	-0.041	0.003

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT. The average speed was determined by dividing total VMT by the total VHT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.



George V. Voinovich
Governor

OHIO DEPARTMENT OF TRANSPORTATION

25 South Front Street
P.O. Box 899
Columbus, Ohio 43216-0899

September 15, 1994

Mr. Harry Judson
Ohio Environmental Protection Agency
P.O. Box 1049
1800 Watermark Drive
Columbus, Ohio 43266-0149

Dear Mr. Judson:

Mid-Ohio Regional Planning Commission (MORPC) requests Congestion Mitigation/Air Quality (CMAQ) funding for signal upgrade and coordination in two areas of the city of Columbus, as Phase 8 of their overall signalization project. The MORPC is sponsoring this signal upgrade project which is located within the Columbus marginal ozone nonattainment area. Enclosed is an analysis of the emission reductions that will result from the signal upgrade and coordination. It documents the change in hydrocarbon, nitrogen oxide, and carbon monoxide emissions resulting from this signal upgrade project. The Ohio Department of Transportation is requesting your review and approval of this analysis. We would appreciate any comments regarding this subject.

Respectfully,

Gordon D. Proctor
Administrator, Planning and Environmental Services

Enclosure

GDP:lr

APPROVED DATE 9-26-94

FOR OHIO EPA

njl



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-M Eligibility Request
Columbus Signalization Phase 9, PID #13036

Gentlemen:

For several years, the city of Columbus has been designing and implementing a citywide computerized, integrated signal system. Phase 9 of the Columbus Signal System occurs primarily in the near-north, extending the signal system to the Summit and 4th street arterials. Phase 9 also includes 37 networks along Karl Road and Oakland Park Avenue, and a short segment along Ackerman Road in the OSU area. In all, Columbus Signal System Phase 9 will include 37 upgraded, computerized signals for a total cost of \$1,895,000. We are requesting approval to obligate 100 percent of the project construction costs from the CM/AQ funds attributable to the Mid-Ohio Regional Planning Commission.

This project will improve traffic flow in two areas: first, by managing the peak-hour demands along these major eastside arterials; and second, by providing faster incident detection and response. Overall, the Columbus Signalization System and each of its many integrated phases will reduce delays, idle times, acceleration/deceleration responses, and improve travel times along all the major arterials in the greater Columbus area.

Signalization Phase 9 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table indicates that by the year 2010 we can expect nominal reductions in hydrocarbon emissions in the project area as a direct result of implementing Signalization Phase 9. However, as we have expected with signalization type projects, there is a very slight increase in the NOx levels in direct proportion to the hydrocarbon reductions for the same segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP.

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Robster D. Junk
Chair
Franklin County Planning
Board Subcommittee

Noahy A. King
Chair
Legislative Task Force

Dele Gafford
Chair
Local Government
Committee

John Smithers
Chair
Transportation Advisory
Committee

Robert Habig
Executive Director

Mr. Gordon Proctor
March 23, 1995
Page two

We respectfully request that your office initiate the process of obtaining approval of the eligibility of Columbus Signalization Phase 9, PID #13036, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Steve Jewell at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosure: Emission Reduction Worksheet

c: James A. Gregory, P.E., ODOT District 6
Steve Jewell, P.E., Columbus Traffic Engineering
Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Columbus Phase 9 Signalization Project

FRA-Signalization-Phase 9 PID #

The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

This improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons and produces negligible affects on oxides of nitrogen. The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel	269,836	269,836
2010 Average Speed ¹ (Base)	26.8	26.8
2010 Emissions ² (Base) tons/day	0.301	0.454
2010 Average Speed ³ (Coordinated)	28.8	28.8
2010 Emissions ⁴ (Coordinated) tons/day	0.283	0.456
Change in Emissions tons/day	-0.018	+0.002

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT. The average speed was determined by dividing total VMT by the total VHT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.

mjl



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-M Eligibility Request
Columbus Signalization Phase 10, PID #13035

Gentlemen:

For several years, the city of Columbus has been designing and implementing a city-wide computerized, integrated signal system. Phase 10 of the Columbus Signal System occurs solely throughout the East Main Street (US 40) corridor, crossing the local jurisdictions of Bexley, Whitehall and Reynoldsburg. In all, Columbus Signal System Phase 10 will include 36 upgraded, computerized signal networks for a total cost of \$1,065,000. We are requesting approval to obligate 100 percent of the project construction costs from the CM/AQ funds attributable to the Mid-Ohio Regional Planning Commission.

This project will improve traffic flow in two areas: first, by managing the peak-hour demands along these major eastside arterials; and second, by providing faster incident detection and response. Overall, the Columbus Signalization System and each of its many integrated phases will reduce delays, idle times, acceleration/deceleration responses and improve travel times along all the major arterials in the greater Columbus area.

Signalization Phase 10 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table indicates that by the year 2010 we can expect nominal reductions in hydrocarbon emissions along the eastside corridors as a direct result of implementing Signalization Phase 10. However, as we have expected with signalization-type projects, there is a very slight increase in the NOx levels in direct proportion to the hydrocarbon reductions for the same segment. The NOx increase, however does not jeopardize meeting the budget established in the proposed SIP.

John S. Ensign
Chair
Judith W. Stillwell
Vice Chair
Gary Panek
Secretary
Judith W. Stillwell
Chair
Administrative Committee
Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee
Timothy A. King
Chair
Legislative Task Force
Julie Gafford
Chair
Local Government
Committee
Alph Smithers
Chair
Transportation Advisory
Committee
Bill Habig
Executive Director

Mr. Gordon Proctor
March 23, 1995
Page two

We respectfully request that your office initiate the process of obtaining approval of the eligibility of Columbus Signalization Phase 10, PID #13035, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Steve Jewell at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosure: Emission Reduction Worksheet

c: James A. Gregory, P.E., ODOT District 6
Steve Jewell, P.E., Columbus Traffic Engineering
Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Columbus Phase 10 Signalization Project

FRA-Signalization-Phase 10 PID #

The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

This improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons and produce negligible effects on oxides of nitrogen. The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel	171,704	171,704
2010 Average Speed ¹ (Base)	22.5	22.5
2010 Emissions ² (Base) tons/day	0.225	0.287
2010 Average Speed ³ (Coordinated)	25.7	25.7
2010 Emissions ⁴ (Coordinated) tons/day	0.200	0.288
Change in Emissions tons/day	-0.025	+0.001

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT. The average speed was determined by dividing total VMT by the total VHT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.

Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
Chair

Edith W. Stillwell
Vice Chair

Gary Panek
Secretary

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Edith W. Stillwell
Chair
Administrative Committee

Re: CM/AQ-M Eligibility Request
Columbus Signalization Phase 11, PID #13034

Robster D. Junk
Chair
Franklin County Planning
5a Subcommittee

Gentlemen:

Anthony A. King
Chair
Legislative Task Force

For several years, the city of Columbus has been designing and implementing a citywide computerized, integrated signal system. Phase 11 of the Columbus Signal System occurs primarily along the near-north corridor, signalizing King, 5th and 3rd avenues, as well as a major signal network in the central city along the Mound and Town street corridors. In all, Columbus Signal System Phase 11 will include 51 upgraded, computerized signal networks, for a total cost of \$1,255,000. We are requesting approval to obligate 100 percent of the project construction costs from the CM/AQ funds attributable to the Mid-Ohio Regional Planning Commission.

Debbie Gafford
Chair
Local Government
Committee

John Smithers
Chair
Transportation Advisory
Committee

David Habig
Executive Director

This project will improve traffic flow in two areas: first, by managing the peak-hour demands along these major eastside arterials; and second, by providing faster incident detection and response. Overall, the Columbus Signalization System and each of its many integrated phases will reduce delays, idle times, acceleration/deceleration responses, and improve travel times along all the major arterials in the greater Columbus area.

Signalization Phase 11 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table indicates that by the year 2010 we can expect nominal reductions in hydrocarbon emissions in the project area as a direct result of implementing Signalization Phase 11. However, as we have expected with signalization-type projects, there is a very slight increase in the NOx levels in direct proportion to the hydrocarbon reductions for the same segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP.

Mr. Gordon Proctor
March 23, 1995
Page two

We respectfully request that your office initiate the process of obtaining approval of the eligibility of Columbus Signalization Phase 11, PID #13034, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Steve Jewell at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosure Emission Reduction Worksheet

c: James A. Gregory, P.E., ODOT District 6
 Steve Jewell, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Columbus Phase 11 Signalization Project

FRA-Signalization-Phase 11 PID #

The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

This improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons and produces negligible affects on oxides of nitrogen. The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel	109,681	109,681
2010 Average Speed ¹ (Base)	26.6	26.6
2010 Emissions ² (Base) tons/day	0.124	0.184
2010 Average Speed ³ (Coordinated)	28.6	28.6
2010 Emissions ⁴ (Coordinated) tons/day	0.116	0.185
Change in Emissions tons/day	-0.008	+0.001

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT. The average speed was determined by dividing total VMT by the total VHT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.

TRANSPORTATION
APR 17 1995
DEPARTMENT

April 12, 1995

Mr. Harry Judson
Ohio Environmental Protection Agency
P.O. Box 1049
1800 Watermark Drive
Columbus, Ohio 43266-0149

Dear Mr. Judson:

The Mid-Ohio Regional Planning Commission (MORPC) has requested \$4,215,000 in Congestion Mitigation/Air Quality (CMAQ) funding to finance Phase 9, 10, and 11 of the Columbus Signal System. These three phases are the final phase of the larger Columbus Signalization System which the city of Columbus has been designing and implementing over several years.

Enclosed is an emissions reduction analysis and project description for each phase seeking CMAQ eligibility approval. The tables document the air quality benefits and emission reductions resulting from the improved traffic flow and signal upgrades for each phase. The Ohio Department of Transportation is requesting your review and approval of this analysis. We would appreciate any comments regarding this subject.

Respectfully,


David A. Moore
Planner Supervisor, Bureau of Planning

Enclosure

APPROVED DATE _____

DAM:ns

FOR OHIO EPA

EBR

c: P. Moore, w/e - Lunt, w/e - Rushley, w/e - Longberry - Lawler (MORPC) - File (Columbus - CMAQ) - Reading File



September 12, 1994

S. Ensign
W. Stillwell
Chair
Panek
Secretary
W. Stillwell
Administrative Committee
D. Junk
Franklin County Planning
Subcommittee
A. King
Legislative Task Force
E. Gafford
Local Government
Committee
L. Smithers
Transportation Advisory
Committee
M. Habig
Executive Director

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Dave Moore

Re: CM/AQ-S Eligibility, FRA-FSMS-Phase 1 (PID #9941)

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. The first phase of the FSMS will occur along the I-71 corridor from north of Greenlawn Avenue near the SR 315/I-70 interchange north to the Polaris interchange. This project will improve traffic flow in two areas: first by managing the peak-hour demands on the freeway and second by providing faster incident detection and response. Overall, the FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

FSMS Phase 1 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table indicates that by the year 2010 we can expect modest reductions in hydrocarbon emissions along I-71 as a direct result of implementing FSMS Phase 1. However, as we have expected with these types of projects, there is a slight increase in the NOx levels in direct proportion to the hydrocarbon reductions for the same freeway segment. Nevertheless, we feel that the HC reductions warrant the development of this project for federal funding.

Mr. Gordon Proctor
September 12, 1994
Page two

We respectfully request your office initiate the process of CM/AQ eligibility approval for FSMS Phase 1, PID #9941. This project is listed on the TIP presently in effect for this region. The state-shared CM/AQ-S funds attributable to ODOT are the specific funding source. Concurrently, the city of Columbus will be processing the necessary requests through the District 6 office for program approval.

Please do not hesitate to call upon me or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Michael J. Lilly
Senior Project Coordinator

MJL/bn

c: James A. Gregory, P.E., ODOT District 6
Richard McGuinness, P.E., Columbus Traffic Engineering

Enclosure B.

Columbus Freeway Management System
1 Page Summary of Air Quality & Speed Benefits

Phase	Emission Reductions		AvgSpeeds	AvgSpeeds
	HC	NOx	Before	After
I	-18.80	10.50	38.30	42.50
II	-5.21	5.4	43.50	46.70
III	-3.07	3.2	44.60	47.40
IV	-0.24	2.32	51.90	53.60
V	-16.63	-0.90	34.10	38.40
VI	-7.53	2.80	37.80	41.40
VII	-0.65	2.29	47.20	49.70
*North I-270	-19.52	-0.63	34.90	39.00
**VIII	n/a	n/a	n/a	n/a
Total Change (tons/yr)	-71.65	25.41	41.54	44.84

*North I-270 Outerbelt sections to have FSMS installed as part of the major widening/reconstruction occurring along this interstate section.

**Phase VIII includes the variable message signs and related computer hardware to connect all previous FSMS phases.



U.S. Department
of Transportation
Federal Transit
Administration
Federal Highway
Administration

DIV. OF FINANCE

FTA Region V

55 E. Monroe Street, Room 1415
Chicago, IL 60603-2439

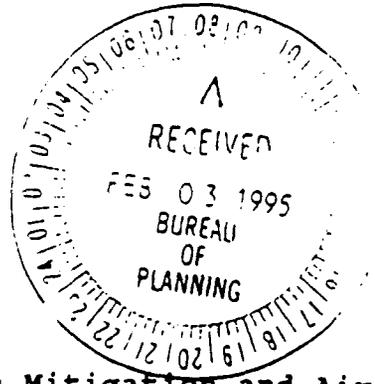
FEB 02 1995

FHWA Ohio Division

200 North High Street, Room 328
Columbus, OH 43215

ORIG. TO Stitt
COPIES TO Proctor
Hall
File

Mr. Jerry Wray, Director
Ohio Dept. of Transportation
25 S. Front St.
P.O. Box 899
Columbus, OH 43216



Subject: Congestion Mitigation and Air Quality
(CMAQ) Improvement Program Projects

Dear Mr. Wray:

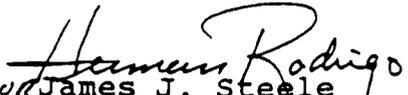
The Ohio Department of Transportation (ODOT) request for Federal review of projects proposed for CMAQ funding has been completed for the ten projects shown on the enclosed list. These projects are located in the Metropolitan Planning Areas of Cleveland (6), Columbus (2), Dayton (1), and Toledo (1).

The review and project coordination by the Region 5 offices of the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the Environmental Protection Agency (EPA), and the FHWA Ohio Division office is complete. FTA's and FHWA's comments have been incorporated into this finding or resolved. EPA had no adverse comments, but did comment on the types of projects being proposed for some of the nonattainment areas. Specifically, EPA is concerned with "Signal System Improvement" type projects. The air quality benefits from such traffic signalization projects are often short-lived and, therefore, may not be the most effective measures to address an ozone nonattainment problem. It is best to identify improvements that will reliably reduce emissions for the longest periods of time.

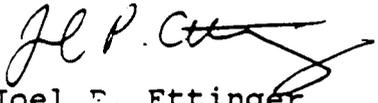
Based upon this review and coordination, we hereby accept the enclosed list of ten projects for programming into the respective MPO TIPS and the STIP. This acceptance should not be construed as an authorization or commitment of CMAQ funding for any of the above noted projects. Funds must be available and ODOT must request authorization of CMAQ funds from the FHWA division office, including requests for the transfer of funds from FHWA to FTA.

Should you have any questions about this matter, please contact Doug Gerleman, FTA, at (312) 353-2883, or Herman Rodrigo, FHWA, at (614) 469-5877.

Sincerely yours,


For James J. Steele
Acting Division Administrator
Federal Highway Administration

Sincerely yours,


Joel F. Ettinger
Regional Administrator
Federal Transit Administration

Enclosure

cc: Gordon Proctor, ODOT
w/encl

PROPOSED PROJECTS FOR CMAQ FUNDING

Cleveland

- | | | |
|----|---|-------------|
| 1. | Cleveland, upgrade existing signals to a phase-actuated system for the CBD. | \$2,200,000 |
| 2. | Cleveland, upgrade and interconnect traffic signal system for Lorain Avenue, Lee Road, and Buckeye Road. | 2,760,000 |
| 3. | Cleveland (LAKETRAN), purchase of 13 CNG buses. | 3,260,000 |
| 4. | Cleveland (LAKETRAN), construction of seven park-and-ride lots. | 2,850,000 |
| 5. | Cleveland, citywide signal upgrade and interconnection for North Royalton, Parma Heights, Day Village, and Chagrin Falls. | 3,890,000 |
| 6. | Cleveland, purchase 54 CNG fixed route and 24 new diesel-powered paratransit buses and construct a CNG fueling station. | 16,428,000 |

Columbus

- | | | |
|----|--|-----------|
| 1. | Columbus, implement Phase I of City Freeway Traffic Management System. | 2,794,000 |
| 2. | Columbus, implement Phase 8 of City Traffic Management System. | 860,000 |

Dayton

- | | | |
|----|--|---------|
| 1. | Dayton, replace City's computer control system and communication cables. | 511,000 |
|----|--|---------|

Toledo

- | | | |
|----|--|-----------|
| 1. | Toledo, construct City's centralized traffic control system. | 2,500,000 |
|----|--|-----------|



mjl

Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 28, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
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Edith W. Stillwell
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Debbie Gafford
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Local Government
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Philip Smithers
Chair
Transportation Advisory
Committee

John Habig
Executive Director

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 2, PID #9942, FRA-270-00.00

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 2 includes the I-70 West freeway from Hilliard-Rome Road interchange east to the SR 315/I-71 split, in addition to the I-270 Northwest freeway from I-70 West, north to SR 315. Since FSMS Phase 2 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 2 are approximately \$3,772,044, of which 80 percent, or \$3,017,635, would be CM/AQ-S.

Overall, there are eight individually phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

Mr. Gordon Proctor
March 28, 1995
Page two

FSMS Phase 2 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that by the year 2010 we can expect modest reductions in hydrocarbon emissions (5.21 tons/year) along both the I-70 West and I-270 Northwest legs of FSMS Phase 2. However, as we have expected with these types of projects, there is a slight increase in the NOx levels (5.44 tons/year) in direct proportion to the hydrocarbon reductions for the same freeway segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP. Enclosure B summarizes the overall emission reductions for all phases of the Freeway Management System.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 2, PID #9942, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures A. Phase II Air Study Calculations
 B. Summary, All FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Phase II Clean Air Study

Columbus, Ohio Freeway Management System
 I-70 West Freeway, NW Outerbelt
 PID # 9942

		2010	Before	After	Before	After	Change		Before	After	Change		Before	After	Change	
I-70 West Freewy		VMT	Speed	Speed	HC	HC	HC	VMT*HC	CO	CO	CO	VMT*CO	NOX	NOX	NOX	VMT*NOX
Hilliard-Rome Rd	I-270 W	3062	52.0	53.8	1.00	0.99	-0.01	-30.62	5.36	5.38	0.02	61.24	2.48	2.60	0.12	367.44
I-270 W	Wilson Rd	5371	40.7	44.0	1.17	1.10	-0.07	-375.97	6.61	5.97	-0.64	-3437.44	2.11	2.16	0.05	268.55
Wilson Rd	Hague Ave	5241	48.0	50.8	1.04	1.01	-0.03	-157.23	5.34	5.35	0.01	52.41	2.24	2.40	0.16	838.56
Hague Ave	I-670	6907	48.0	50.8	1.13	1.07	-0.06	-414.42	6.25	5.64	-0.61	-4213.27	2.14	2.20	0.06	414.42
I-670	Broad St	2333	50.0	52.2	1.02	1.00	-0.02	-46.66	5.35	5.38	0.01	23.33	2.36	2.49	0.13	303.29
Broad St	Sullivant Ave	2903	52.0	53.8	1.00	0.99	-0.01	-29.03	5.38	5.38	0.02	58.06	2.48	2.60	0.12	348.36
Sullivant Ave	Mound St	3890	48.0	50.8	1.04	1.01	-0.03	-110.7	5.34	5.35	0.01	36.90	2.24	2.40	0.16	590.40
Mound St	SR 315 & I-71	4951	48.0	50.8	1.04	1.01	-0.03	-148.53	5.34	5.35	0.01	49.51	2.24	2.40	0.16	792.16

I-270

I-70	Roberts Rd	5226	42.5	45.1	1.13	1.08	-0.05	-261.3	6.25	5.78	-0.47	-2458.22	2.14	2.18	0.04	209.04
Roberts Rd	Cemetery Rd	4405	46.1	48.8	1.07	1.03	-0.04	-176.2	5.62	5.34	-0.28	-1233.40	2.20	2.29	0.09	396.45
Cemetery Rd	Tuttle Crossing	3803	40.7	44.2	1.17	1.10	-0.07	-266.21	6.61	5.94	-0.67	-2548.01	2.11	2.16	0.05	190.15
Tuttle Crossing	US 33	3612	40.7	44.2	1.17	1.10	-0.07	-252.84	6.61	5.94	-0.67	-2420.04	2.11	2.16	0.05	180.60
US 33	Sawmill Rd	3844	40.7	44.2	1.17	1.10	-0.07	-289.08	6.61	5.94	-0.67	-2575.48	2.11	2.16	0.05	192.20
Sawmill Rd	SR 315	4902	19.6	26.0	2.04	1.63	-0.41	-2009.82	16.42	11.69	-4.73	-23186.46	2.15	2.08	-0.07	-343.14

24

Net Change in Emmissions

Hourly Emmissions in Grams
 Hourly Emmissions in Tons
 Daily Emmissions in Tons

HC

-4548.61
 -0.00501
 -0.02008

CO

-41788.87
 -0.0480648
 -0.1842583

NOX

4748.48
 0.00523
 0.02094

Net Change in
 Yearly Emmissions (Tons)

-5.21

-47.91

5.44



mjl

Mid-Ohio Regional Planning Commission

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March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
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Ohio Department of Transportation
25 South Front Street
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Local Government
Committee

Alph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 3, PID #9943, FRA-670-03.18/35.16

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 3 includes the I-670 freeway from I-71 North to I-270 East and the I-270 East outerbelt freeway from I-670 to I-70 East. Since FSMS Phase 3 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 3 are approximately \$3,427,052, of which 80 percent, or \$2,741,642, would be CM/AQ-S.

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

Mr. Gordon Proctor

March 23, 1995

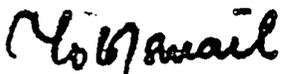
Page two

FSMS Phase 3 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that by the year 2010 we can expect modest reductions in hydrocarbon emissions (3.07 tons/year) along both the I-670 and I-270 East outerbelt segments of FSMS Phase 3. However, as we have expected with these types of projects, there is a slight increase in the NOx levels (3.59 tons/year) in direct proportion to the hydrocarbon reductions for the same freeway segment. The NOx increase, however, does not jeopardize the budget established in the proposed SIP. Enclosure B summarizes the overall emission reductions for all phases of the Freeway Management System.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 3, PID #9943, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 Office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

ML/MJL/bn

Enclosures A. Phase III Air Study Calculations
 B. Summary, all FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Phase III Clean Air Study

Columbus, Ohio Freeway Management System
 I-670, East Outerbelt
 PID # 9943

		2010	Before	After	Before	After	Change		Before	After	Change		Before	After	Change	
		VMT	Speed	Speed	HC	HC	HC	VMT*HC	CO	CO	CO	VMT*CO	NOX	NOX	NOX	VMT*NOX
I-670 East																
I-71	Leonard Ave	5509	40.7	44.2	1.64	1.54	-0.1	-550.9	9.69	8.67	-1.02	-5619.18	2.15	2.20	0.05	275.45
Leonard Ave	Fifth Ave	5368	40.7	44.2	1.64	1.54	-0.1	-538.6	9.69	8.67	-1.02	-5473.32	2.15	2.20	0.05	268.3
Fifth Ave	Airport Connector	5244	42.5	45.5	1.59	1.51	-0.08	-419.52	9.14	8.33	-0.81	-4247.64	2.17	2.22	0.05	262.2
Airport Connector	I-270	5909	35.5	39.5	1.82	1.68	-0.14	-827.26	11.63	10.09	-1.54	-9099.86	2.10	2.13	0.03	177.27

I-270																
I-670	Hamilton Rd	4587	50.0	52.0	1.43	1.41	-0.02	-91.74	7.75	7.77	0.02	91.74	2.39	2.52	0.13	596.31
Hamilton Rd	Broad St	4642	50.0	52.0	1.43	1.41	-0.02	-92.84	7.75	7.77	0.02	92.84	2.39	2.52	0.13	603.46
Broad St	Main St	4168	52.0	53.8	1.41	1.39	-0.02	-83.36	7.77	7.79	0.02	83.36	2.52	2.64	0.12	500.16
Main St	I-70 E	3735	52.0	53.8	1.41	1.39	-0.02	-74.7	7.77	7.79	0.02	74.70	2.52	2.64	0.12	448.2

Net Change in Emissions	HC	CO	NOX
Hourly Emissions in Grams	-2678.92	-24097.38	3131.35
Hourly Emissions in Tons	-0.00295	-0.02656	0.00345
Daily Emissions in Tons	-0.01180	-0.10625	0.01381

Net Change In			
Yearly Emissions (Tons)	-3.07	-27.63	3.59



njl

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March 23, 1995

Mr. Gordon Proctor
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25 South Front Street
Columbus, Ohio 43215

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Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 4, PID #9944, FRA-270-08.88

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 4 includes the I-270 South outerbelt freeway from I-70 East to I-70 West. Since FSMS Phase 4 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 4 are approximately \$4,597,133, of which 80 percent, or \$3,677,706, would be CM/AQ-S.

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

Mr. Gordon Proctor
March 23, 1995
Page two

FSMS Phase 4 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that by the year 2010 we can expect modest reductions in hydrocarbon emissions (.24 tons/year) along the I-270 South outerbelt freeway. However, as we have expected with these types of projects, there is a modest increase in the NOx levels (2.32 tons/year) relative to the hydrocarbon reductions for the same freeway segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP. Enclosure B summarizes the overall emission reductions for all phases of the Freeway Management System.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 4, PID# 9944, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and project commitment dates through the ODOT District 6 Office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures A. Phase IV Air Study Calculations
 B. Summary, all FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Phase IV Clean Air Study

Columbus, Ohio Freeway Management System

I-270 from I-70 E to I-70 W

PID # 9944

		2010 VMT	Before Speed	After Speed	Before HC	After HC	Change HC	VMT*HC	Before CO	After CO	Change CO	VMT*CO	Before NOX	After NOX	Change NOX	VMT*NOX
South Outerbelt																
I-70 E	US 33	2832	52.0	53.6	1.00	0.99	-0.01	-28.32	5.36	5.38	0.02	58.64	2.48	2.58	0.10	283.20
US 33	Alum Creek Dr	2116	56.0	57.4	1.00	1.01	0.01	21.16	5.82	6.42	0.60	1269.60	2.76	2.86	0.10	211.60
Alum Creek Dr	US 23	2111	56.0	57.4	1.00	1.01	0.01	21.11	5.82	6.42	0.60	1266.60	2.76	2.86	0.10	211.10
US 23	I-71 S	3489	42.5	45.5	1.13	1.08	-0.05	-174.45	6.25	5.72	-0.53	-1849.17	2.14	2.19	0.05	174.45
I-71 S	US 62	2107	56.0	57.4	1.00	1.01	0.01	21.07	5.82	6.42	0.60	1264.20	2.76	2.86	0.10	210.70
US 62	Georgesville Rd	2549	54.0	55.4	0.99	0.99	0.00	0.00	5.38	5.57	0.19	484.31	2.61	2.71	0.10	254.90
Georgesville Rd	US 40	2800	52.0	53.6	1.00	0.99	-0.01	-28.00	5.36	5.38	0.02	56.00	2.48	2.58	0.10	280.00
US 40	I-70 W	3940	52.0	53.6	1.00	0.99	-0.01	-39.40	5.36	5.38	0.02	78.80	2.48	2.58	0.10	394.00

Net Change in Emissions
 Hourly Emissions in Grams
 Hourly Emissions in Tons
 Daily Emissions in Tons

HC
 -206.83
 -0.00023
 -0.00091

CO
 2626.98
 0.0029
 0.01158

NOX
 2019.95
 0.00223
 0.00891

**Net Change in
 Yearly Emissions (Tons)**

-0.24

3.01

2.32



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March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
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Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Judith W. Stillwell
Chair
Administrative Committee

Re: CM/AQ-S Eligibility Request
FSMS-Phase 5, PID #9945, FRA-270-17.89/01.94

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Gentlemen:

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 5 includes the heavily congested SR 315 freeway, from I-670 North to the I-270 North outerbelt. Since FSMS Phase 5 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 5 are approximately \$2,302,411, of which 80 percent, or \$1,841,929, would be CM/AQ-S.

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

FSMS Phase 5 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that by the year 2010 we can expect significant reductions in hydrocarbon emissions (16.63 tons/year) and modest reductions in NOx (0.90 tons/year) throughout the SR 315 corridor.

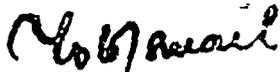
Mr. Gordon Proctor
March 23, 1995
Page two

Enclosure B summarizes the overall emission reductions for all phases of the Columbus Freeway Management System.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 5, PID #9945, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and commitment dates through the ODOT District 6 Office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures A. Phase V Air Study Calculations
 B. Summary, all FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Phase V Clean Air Study

Columbus, Ohio Freeway Management System

State Route 315

PID # 9945

		2010	Before	After	Before	After	Change		Before	After	Change		Before	After	Change	
		VMT	Speed	Speed	HC	HC	HC	VMT*HC	CO	CO	CO	VMT*CO	NOX	NOX	NOX	VMT*NOX
SR 315																
I-70	Rich St	5335	15.0	21.8	2.47	1.87	-0.60	-3201.00	19.20	14.45	-4.75	-25341.25	2.30	2.12	-0.18	-960.30
Rich St	Broad St	5135	15.5	22.4	2.41	1.83	-0.58	-2978.30	18.82	13.99	-4.83	-24802.05	2.28	2.11	-0.17	-872.95
Broad St	Long St	5527	15.0	21.8	2.47	1.87	-0.60	-3316.20	19.20	14.45	-4.75	-26253.25	2.30	2.12	-0.18	-994.86
Long St	Third St	5681	15.0	21.8	2.47	1.87	-0.60	-3408.60	19.20	14.45	-4.75	-26984.75	2.30	2.12	-0.18	-1022.58
Third St	Olentangy	5303	42.5	45.4	1.13	1.08	-0.05	-265.15	6.25	5.74	-0.51	-2704.53	2.14	2.19	0.05	265.15
Olentangy	Lane Ave	5815	48.1	49.0	1.07	1.03	-0.04	-232.60	5.62	5.34	-0.28	-1628.20	2.20	2.30	0.10	581.50
Lane Ave	Ackerman Rd	5540	48.1	49.0	1.07	1.03	-0.04	-221.60	5.62	5.34	-0.28	-1551.20	2.20	2.30	0.10	554.00
Ackerman Rd	N. Broadway	4675	44.3	47.0	1.10	1.05	-0.05	-233.75	5.92	5.49	-0.43	-2010.25	2.17	2.22	0.05	233.75
N. Broadway	Henderson	4579	44.3	47.0	1.10	1.05	-0.05	-228.95	5.92	5.49	-0.43	-1968.97	2.17	2.22	0.05	228.95
Henderson	Bethel Rd	4217	46.1	49.0	1.07	1.03	-0.04	-168.68	5.62	5.34	-0.28	-1180.76	2.20	2.30	0.10	421.70
Bethel Rd	SR 161	4048	48.0	50.5	1.04	1.02	-0.02	-80.96	5.34	5.35	0.01	40.48	2.24	2.39	0.15	607.20
SR 161	I-270	3453	42.5	45.4	1.13	1.08	-0.05	-172.65	6.25	5.74	-0.51	-1761.03	2.14	2.19	0.05	172.65

33

	HC	CO	NOX
Net Change in Emissions			
Hourly Emissions in Grams	-14508.44	-116145.76	-785.79
Hourly Emissions in Tons	-0.015993	-0.1280295	-0.00087
Daily Emissions in Tons	-0.063972	-0.5121178	-0.00346
Net Change in			
Yearly Emissions (Tons)	-16.63	-133.15	-0.90



njl

Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 6, PID #9946, FRA-70-14.78

Judith W. Stillwell
Chair
Administrative Committee

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Gentlemen:

Timothy A. King
Chair
Legislative Task Force

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 6 includes the I-70 East freeway from the I-71/I-70 split east to SR 256. Since FSMS Phase 6 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 6 are approximately \$2,565,430, of which 80 percent, or \$2,052,344, would be CM/AQ-S.

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

Mr. Gordon Proctor
March 23, 1995
Page two

FSMS Phase 6 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that by the year 2010 we can expect modest reductions in hydrocarbon emissions (7.53 tons/year) along the I-70 East freeway. However, as we have expected with these types of projects, there is a slight increase in the NOx levels (2.80 tons/year) proportionate to the hydrocarbon reductions for the same freeway segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP. Enclosure B summarizes the overall emission reductions for all phases of the Columbus Freeway Management System.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 6, PID #9946, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and commitment dates through the ODOT District 6 Office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures A. Phase VI Air Study Calculations
 B. Summary, all FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

MI/MJL

Phase VI Clean Air Study

Columbus, Ohio Freeway Management System
 I-70 East Freeway
 PID # 9946

		2010	Before	After	Before	After	Change	Before	After	Change	Before	After	Change	Before	After	Change	
		VMT	Speed	Speed	HC	HC	HC	CO	CO	CO	NOX	NOX	NOX	NOX	NOX	NOX	
							VMT*HC				VMT*CO					VMT*NOX	
East Freeway																	
I-71	Eighteenth	7747	35.5	39.5	1.29	1.19	-0.10	-774.70	7.90	6.87	-1.03	-7979.41	2.07	2.10	0.03	232.41	
Eighteenth	Miller Ave	7636	40.7	44.2	1.17	1.10	-0.07	-534.52	6.61	5.94	-0.67	-5116.12	2.11	2.16	0.05	381.80	
Miller Ave	Kelton Ave	6748	42.5	45.2	1.13	1.08	-0.05	-337.40	6.25	5.77	-0.48	-3239.04	2.14	2.18	0.04	269.92	
Kelton Ave	Alum Creek Dr	7173	40.7	44.2	1.17	1.10	-0.07	-502.11	6.61	5.94	-0.67	-4805.91	2.11	2.16	0.05	358.65	
Alum Creek Dr	Livingston Ave	6921	24.1	29.5	1.73	1.48	-0.25	-1730.25	12.82	10.00	-2.82	-19517.22	2.10	2.06	-0.04	-276.84	
Livingston Ave	US 33	6498	28.0	32.8	1.54	1.37	-0.17	-1104.32	10.67	8.74	-1.93	-12537.28	2.07	2.06	-0.01	-84.98	
US 33	James Rd	5405	40.7	44.1	1.17	1.10	-0.07	-378.35	6.61	5.98	-0.65	-3513.25	2.11	2.16	0.05	270.25	
James Rd	Hamilton Rd	5082	42.5	45.6	1.13	1.07	-0.06	-303.72	6.25	5.70	-0.55	-2784.10	2.14	2.19	0.05	253.10	
Hamilton Rd	I-270	4820	44.3	47.0	1.10	1.05	-0.05	-241.00	5.92	5.49	-0.43	-2072.60	2.17	2.22	0.05	241.00	
I-270	Brice Rd	5794	35.5	39.5	1.29	1.19	-0.10	-579.40	7.80	6.87	-1.03	-5967.82	2.07	2.10	0.03	173.82	
Brice Rd	SR 258	4005	48.0	50.5	1.04	1.02	-0.02	-80.10	5.34	5.35	0.01	40.05	2.24	2.39	0.15	600.75	

36

Net Change in Emmissions	HC	CO	NOX
Hourly Emmissions in Grams	-8565.87	-87492.70	2439.90
Hourly Emmissions in Tons	-0.00724	-0.074398	0.00269
Daily Emissions in Tons	-0.02895	-0.297593	0.01076
Net Change in			
Yearly Emissions (Tons)	-7.53	-77.37	2.80



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

mjl

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Robert D. Junk
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Franklin County Planning
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Legislative Task Force

Mike Gafford
Chair
Local Government
Committee

Cliff Smithers
Chair
Transportation Advisory
Committee

Tom Habig
Executive Director

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 7, PID #9947, FRA-270-22.94/28.31

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 7 includes the I-71 South freeway from SR 665 north to the I-71/I-70 split. Since FSMS Phase 7 occurs upon and improves the operation of the interstate system, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 7 are approximately \$2,080,829, of which 80 percent, or \$1,664,663, would be CM/AQ-S.

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

Mr. Gordon Proctor
March 23, 1995
Page two

FSMS Phase 7 has undergone a quantitative emission reduction analysis using the Mobile 5a model with ADT factors and V/C ratios developed by ODOT. The attached table (Enclosure A) indicates that, unlike the other FSMS phases, by the year 2010 we can expect slight decreases in hydrocarbon emissions (.65 tons/year) along the I-71 South freeway. However, our modeling suggests that the HC increases we witness are at the expense of a modest increase in the NOx levels (2.29 tons/year) for the same freeway segment. The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP. Phase 7 is one element of an integrated management system, and reference should be made to Enclosure B for a summary of the emission reductions experienced across the Columbus freeways.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 7, PID #9947, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures A. Phase VII Air Study Calculations
 B. Summary, all FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
 Richard McGuinness, P.E., Columbus Traffic Engineering
 Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

Phase VII Clean Air Study

Columbus, Ohio Freeway Management System
 I-71 South Freeway
 PID # 9947

		2010	Before	After	Before	After	Change		Before	After	Change		Before	After	Change	
		VMT	Speed	Speed	HC	HC	HC	VMT*HC	CO	CO	CO	VMT*CO	NOX	NOX	NOX	VMT*NOX
South Freeway																
SR 665	Stingtown Rd	2164	50.0	52.2	1.02	1.00	-0.02	-43.28	5.35	5.36	0.01	21.64	2.38	2.49	0.13	281.32
Stingtown Rd	I-270	2568	54.0	55.5	0.99	0.99	0.00	0.00	5.38	5.61	0.23	590.64	2.61	2.72	0.11	282.48
I-270	SR 104	4139	46.1	48.8	1.07	1.03	-0.04	-165.50	5.62	5.34	-0.28	-1168.92	2.20	2.20	0.00	372.51
SR 104	Greenlawn	5097	42.5	45.5	1.13	1.08	-0.05	-254.85	5.25	5.72	-0.53	-2701.41	2.14	2.19	0.05	254.85
Greenlawn	I-70/SR 315	5373	48.0	50.5	1.04	1.02	-0.02	-107.46	5.34	5.35	0.01	53.73	2.24	2.39	0.15	805.95

Net Change in Emissions	HC	CO	NOX
Hourly Emissions in Grams	-571.15	-3194.32	1997.11
Hourly Emissions in Tons	-0.00063	-0.00352	0.0022014
Daily Emissions in Tons	-0.00252	-0.01408	0.0088058
Net Change In			
Yearly Emissions (Tons)	-0.65	-3.86	2.29



mjl

Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-S Eligibility Request
FSMS-Phase 8, PID #9948, FRA-270-00.00

Gentlemen:

The city of Columbus has been developing an integrated freeway surveillance and monitoring system (FSMS) for the past several years. FSMS Phase 8 is the final phase of the Columbus Freeway Management System which primarily includes the installation of variable message signs across all segments of the FSMS. Since FSMS Phase 8 occurs upon and improves the overall operation of all the interstate systems, this CM/AQ-S project is to be funded from Ohio's allocation of CM/AQ funds. The latest cost estimates for FSMS Phase 8 are approximately \$2,000,000, of which 80 percent, or \$1,600,000, would be CM/AQ-S.

Overall, there are eight individual phased elements to the FSMS that cover all segments of the freeways in and around the greater Columbus area. While each project has merits of its own and demonstrable air quality benefits, together these eight projects improve traffic flow in two areas:

- 1) By managing the peak-hour demands on the freeway.
- 2) By providing faster incident detection and response.

The FSMS and each of its individual phases will reduce delays, idle times and improve travel along the freeway network.

John S. Ensign
Chair

Richard W. Stillwell
Chair

Tom Panek
Secretary

Judith W. Stillwell
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Administrative Committee

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Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Mr. Gordon Proctor
March 23, 1995
Page two

While FSMS Phase 8 cannot by itself be analyzed in the Mobile 5a model, all previous assumptions used in analyzing the other seven phases of the FSMS presumed the benefits of FSMS Phase 8 and the systemwide variable message signs. Attached is a summarized table of all the air quality benefits to be expected from the FSMS phases. This table also includes the elements of the freeway monitoring system of the I-270 North outerbelt being incorporated into the north outerbelt and CDMS widening projects. Again, the underlying assumption in all phases is that the FSMS would have variable message signs. As indicated in the enclosure, over 71 tons/year of hydrocarbon emission reductions are possible across the system and average vehicle speeds along the interstates improve over 3 mph.

We respectfully request that your office initiate the process of obtaining approval of the eligibility of FSMS Phase 8, PID #9948, to use CM/AQ funds. This project is listed on the TIP presently in effect for this region.

Concurrent with your office's eligibility approvals, the city of Columbus will begin processing the necessary requests and commitment dates through the ODOT District 6 office for programming approval. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff, or Mr. Dick McGuinness at Columbus Traffic Engineering (645-7790) if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosure: Summary, all Columbus FSMS Phases

c: James A. Gregory, P.E., ODOT District 6
Richard McGuinness, P.E., Columbus Traffic Engineering
Camilla P. Shepherd, P.E., Columbus Engineering & Construction Division

I-270 North Outerbelt Clean Air Study

Columbus, Ohio Freeway Management System

From	To	2010 VMT	Before Speed	After Speed	Before HC	After HC	Change HC	VMT*HC	Before CO	After CO	Change CO	VMT*CO	Before NOX	After NOX	Change NOX	VMT*NOX
US 33	Sawmill Rd	3844	41.7	45.0	1.61	1.52	-0.09	-345.96	9.38	8.46	-0.92	-3538.48	2.16	2.21	0.05	192.20
Sawmill Rd	SR 315	4902	19.6	25.8	2.84	2.30	-0.54	-2647.08	24.34	17.46	-6.88	-33725.78	2.18	2.11	-0.07	-343.14
SR 315	US 23	7729	10.0	17.0	4.72	3.20	-1.52	-11748.08	36.46	26.33	-10.13	-78294.77	2.58	2.26	-0.32	-2473.28
US 23	I-71	5519	36.5	40.5	1.78	1.65	-0.13	-717.47	11.21	9.78	-1.45	-8002.55	2.11	2.14	0.03	165.57
I-71	Cleveland Ave	5499	41.7	45.0	1.61	1.52	-0.09	-494.91	9.38	8.46	-0.92	-5059.08	2.16	2.21	0.05	274.95
Cleveland Ave	Westerville Rd	4300	47.1	49.8	1.47	1.43	-0.04	-172.00	7.95	7.75	-0.20	-860.00	2.25	2.38	0.13	559.00
Westerville Rd	SR 161	4309	47.1	49.8	1.47	1.43	-0.04	-172.38	7.95	7.75	-0.20	-881.80	2.25	2.38	0.13	580.17
SR 161	Morse Rd	5121	43.5	46.5	1.58	1.49	-0.07	-358.47	8.86	8.09	-0.77	-3943.17	2.19	2.24	0.05	256.05
Morse Rd	I-670	5239	43.5	46.5	1.56	1.49	-0.07	-366.73	8.86	8.09	-0.77	-4034.03	2.19	2.24	0.05	261.95

Net Change In Emissions

Hourly Emissions in Grams

Hourly Emissions in Tons

Daily Emissions in Tons

HC
-17023.08
-0.018765
-0.075059

CO
-138317.84
-0.1524699
-0.60987858

NOX
-546.53
-0.00060245
-0.0024098

Net Change In
Yearly Emissions (Tons)

-19.52

-158.57

-0.63

Enclosure A.

**Columbus Freeway Management System
1 Page Summary of Air Quality & Speed Benefits**

Phase	Emission Reductions		AvgSpeeds	AvgSpeeds
	HC	NO _x	Before	After
I	-18.80	10.50	38.30	42.50
II	-5.21	5.44	43.50	46.70
III	-3.07	3.59	44.60	47.40
IV	-0.24	2.32	51.90	53.60
V	-16.63	-0.90	34.10	38.40
VI	-7.53	2.80	37.80	41.40
VII	-0.65	2.29	47.20	49.70
*North I-270	-19.52	-0.63	34.90	39.00
**VIII	n/a	n/a	n/a	n/a
Total Change (tons/yr)	-71.65	25.41	41.54	44.84

*North I-270 Outerbelt sections to have FSMS installed as part of the major widening/reconstruction occurring along this interstate section.

**Phase VIII includes the variable message signs and related computer hardware to connect all previous FSMS phases.

Mike - Nick

Q-proj file
TRANSPORTATION
APR 26 1995
DEPARTMENT

April 24, 1995

Mr. William C. Jones
Division Administrator
Federal Highway Administration
200 North High Street
Columbus, Ohio 43215

Mr. Joel Ettinger
Regional Administrator
Region 5, Federal Transit Authority
55 East Monroe St., Suite 1415
Chicago, Illinois 60603

Gentlemen:

The Bureau of Planning and Ohio EPA have reviewed and concurred with the Mid-Ohio Regional Planning Commission's request for the eligibility of CMAQ funds to finance an integrated freeway surveillance and monitoring system (FSMS). Overall, there are eight individually phased elements to the FSMS that covers all the segments of the freeway in and around the greater Columbus area. Together these eight projects improve traffic flows by managing peak-hour demands and by providing faster incident detection and response.

Enclosed is an emissions reduction analysis and project description for each phase of the FSMS. This project is consistent with FHWA's, A Guide to the Congestion Mitigation and Air Quality Improvement Program. The document states for Traffic Flow Improvements, "Eligible projects include signalization to improve traffic flow, traffic management/control, such as incident management and ramp metering; and improvements at intersections, such as turning lanes." All phases of the FSMS are targeted to be funded by 1999 which is after the anticipated redesignation of the Columbus nonattainment area. We therefore request a U.S. DOT CMAQ eligibility review for this project with the understanding that sometime after the redesignation of the Columbus nonattainment area the project will no longer be eligible to receive CMAQ funds.

If you have any questions or need any additional information feel free to contact Libby Rushley at (614) 644-1204.

Respectfully,

~~David~~ A. Moore
Planner Supervisor, Bureau of Planning

Enclosure

DAM:ns
EBR: ←

c: Call, w/e - Gismondi, w/e - Lunt, w/e - Rushley, w/e - Lawler (MORPC) - Longberry - Charles - File (Columbus - CMAQ) - Reading File



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

March 23, 1995

John S. Ensign
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Judith W. Stillwell
Vice Chair

Gary Panek
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Julie Gafford
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Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Mr. Gordon Proctor
Deputy Director for Planning and
Environmental Services
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Mr. Dave Moore, ODOT Bureau of Planning

Re: CM/AQ-M Eligibility Request
Pickerington Park & Pool, PID #12671, FAI-204-Park & Pool

Gentlemen:

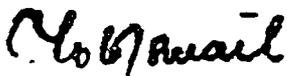
In a joint effort to relieve congestion along the I-70 East corridor, the Mid-Ohio Regional Planning Commission, the city of Pickerington, the ODOT Bureau of Public Transportation and ODOT District 5 Planning & Design have been pursuing the development of a park & pool facility at the intersection of SR 256 and SR 204 in Pickerington. The latest cost estimates for the Pickerington park & pool are \$460,000, which includes both rights-of-way acquisition and construction. We are requesting approval to fund 80 percent of the project with CM/AQ funding authority attributable to MORPC.

Using the calculations in the approved Methodologies for Estimating Emission and Travel Activity Effects of TCMS from the U.S. EPA, our emission reduction analysis for this project indicates that 125 park & pool spaces would yield a daily VMT reduction of 4,590 miles and a hydrocarbon reduction of 2.41 tons/year. While our model indicates that there is a slight increase in the NOx levels (1.87 tons/year) as a result of implementing this project, this NOx increase does not jeopardize meeting the budget established in the proposed SIP. Our emission reduction worksheet is enclosed for your review.

Mr. Gordon Proctor
March 23, 1995
Page two

We respectfully request your office to initiate the process of obtaining approval of the eligibility of Pickerington park & pool to use CM/AQ-M funds. This project is listed on the TIP presently in effect for this region. Please do not hesitate to call upon either Mr. Michael Lilly or Mr. Nick Gill of my staff if you should need further assistance regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosure: Emission Reduction Worksheet

c: Joe Charles, P.E., ODOT District 5
Mr. Bob Zack, ODOT Bureau of Public Transportation

Emission Reduction from SR 256 Park & Pool

	HC	CO	NOx
Number of Spaces	125		
Trips Reduced (daily)	250		
VMT Reduced (daily)	4590		
Average Emission Factor (g/m) ¹	1.834	14.297	1.421
Emission Reduction (grams/day)	8,420	65,622	6,523
Emission Reduction (tons/year)	2.41	18.8	1.87

¹Emission Reductions were calculated according to Methodologies for Estimating Emission and Travel Activity Effects of TCMS from USEPA. The VMT was divided between freeways and arterials. 19 mph is used for Arterial portion of VMT and 42 mph for freeway portion of VMT. The average emission factor is a composite factor based on dividing the emission reductions determined by above methodology by the VMT reduction. The complete calculations are available upon request.

✓ Nick
— Mike
— Mary Ann

f w/Pick Park

TRANSPORTATION
APR 04 1995
DEPARTMENT

March 31, 1995

Mr. Harry Judson
Ohio Environmental Protection Agency
P.O. Box 1049
1800 Watermark Drive
Columbus, Ohio 43266-0149

Dear Mr. Judson:

The Mid-Ohio Regional Planning Commission (MORPC) has requested \$368,000 in Congestion Mitigation/Air Quality (CMAQ) funding to finance a park & pool facility. The funds will be used for rights-of-way acquisition and construction of 125 park & pool spaces at the intersection of SR 256 and SR 204 in the city of Pickerington.

Enclosed is an emissions reduction analysis using the calculations in the approved Methodologies for Estimating Emission and Travel Activity Effects of TCMS from the USEPA. It documents the air quality benefits and emission reductions resulting from the reduction in VMT due to the new park & pool facility. The analysis indicates a slight increase in NOx levels as a result of implementing this project. This NOx increase does not jeopardize meeting the budget established in the proposed SIP. For the aforementioned reasons, the Ohio Department of Transportation is requesting your review and approval of this analysis. We would appreciate any comments regarding this subject.

Respectfully,

David A. Moore M.S.
Planner Supervisor, Bureau of Planning

Enclosure

APPROVED DATE _____

DAM:ns
EBB
EP

FOR OHIO EPA

c: P. Moore, w/e - Lunt, w/e - Zack, w/e - Rushley, w/e - Selhorst, w/e - Longberry - Charles - Lawler(MORPC) - File (Columbus - CMAQ) - Reading File



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

October 26, 1995

Mr. Gordon Proctor
Deputy Director of Multi-modal Planning
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

John S. Ensign
Chair
Judith W. Stillwell
Vice Chair
Gary Panek
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Local Government
Committee
Ralph Smithers
Chair
Transportation Advisory
Committee
Bill Habig
Executive Director

Attn: Mr. Dave Moore, ODOT Office of Planning

Re: CM/AQ-M Eligibility Request
FRA-Broad-Street (PID #13895)

Gentlemen:

The Mid-Ohio Regional Planning Commission recently approved conversion of the above-referenced project from one previously programmed with STP funds to a project proposed to be funded 100 percent with CM/AQ-M funds attributable to MORPC; a copy of our Policy Resolution T-21-95 illustrating this conversion is enclosed. At this time, we specifically request your office begin the process necessary to secure CMAQ eligibility approval for FRA-Broad-Street; the total programmed cost of the project is \$1,290,000.

The city of Bexley will use the subject CM/AQ-M funds to coordinate traffic signals along East Broad Street through the city of Bexley from Nelson Road on the west to Gould Road on the east, a total of 1.47 miles. The project involves upgraded traffic signals at six intersections. The Bexley project will also be interconnected with the city of Columbus's Computerized Signal System Phase 8, which recently received CM/AQ eligibility approval.

Generally, signal projects prove beneficial by improving speeds and improving air quality. The FRA-Broad-Street interconnected signalization project is a case in point:

- 1. The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals.
2. The progression improvements reduce trip delays and travel, thus improving speed along the facility.

Mr. Gordon Proctor

October 26, 1995

Page two

3. The progression improvements also reduce the air quality impacts associated with frequent acceleration and deceleration.
4. The speed improvements provide air quality benefits by lowering the emissions of hydrocarbons.

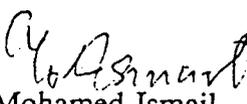
Using the Mobile 5a model, we analyzed the FRA-Broad-Street project with ADT factors and V/C ratios developed by ODOT. Our analysis (summarized on the attached table) demonstrates slight improvements in the reduction of hydrocarbons (HCs) with a negligible increase in the oxides of nitrogen (NOx). The NOx increase, however, does not jeopardize meeting the budget established in the proposed SIP.

While our region will experience redesignation to a maintenance area some time early in 1996, the July 13, 1995, Policy Revisions to the CM/AQ Program clearly state:

"Projects (or phases thereof) that are programmed in the first 2 years of the TIP that is in effect at the time of redesignation to attainment are eligible for CM/AQ funding. This new policy will, in part, provide for the continuity of an area's planning process as it relates to reducing transportation emissions."

Therefore, we respectfully request that your office initiate the process of CM/AQ eligibility approval for FRA-Broad-Street. Please do not hesitate to call upon Mr. Michael Lilly of my office should you need further information regarding this project.

Sincerely,


Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures: Resolution T-21-95 with location map
Emission Reductions Table for Broad Street

- c. Mr. Jack Marchbanks, ODOT District 6
Mr. Joe Ridgeway, Sticklen-Belsheim & Associates

Broad Street Signalization Project

City of Bexley, Ohio

FRA-Signalization- PID #13895

The City of Bexley will use the subject CM/AQ funds to coordinate traffic signals along Broad Street through the city. The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

Improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons.

The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel (daily)	22,316	22,316
2010 Average Speed ¹ (Base)	26.0	26.0
2010 Emissions ² (Base) tons/day	0.044	0.037
2010 Average Speed ³ (Coordinated)	28.3	28.3
2010 Emissions ⁴ (Coordinated) tons/day	0.041	0.038
Change in Emissions tons/day	-0.003	0.001

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

October 26, 1995

Mr. Gordon Proctor
Deputy Director of Multi-modal Planning
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

Attn: Mr. Dave Moore, ODOT Office of Planning

Re: CM/AQ-M Eligibility Request
FRA-Main-Street (PID #13896)

Gentlemen:

The Mid-Ohio Regional Planning Commission recently approved conversion of the above-referenced project from one previously programmed with STP funds to a project proposed to be funded 100 percent with CM/AQ-M funds attributable to MORPC; a copy of our Policy Resolution T-21-95 illustrating this conversion is attached. At this time, we specifically request your office begin the process necessary to secure CM/AQ eligibility approval for FRA-Main-Street; the programmed cost of this signalization project is \$1,868,000.

The city of Bexley will use the subject CM/AQ-M funds to coordinate traffic signals along East Main Street through the city of Bexley from Alum Creek Drive on the west to Gould Road on the east, a total of 1.00 mile. The project involves upgraded traffic signals at nine intersections. The Bexley project will also be interconnected with the city of Columbus's Computerized Signal System Phase 8 which recently received CM/AQ eligibility approval.

Generally, signal projects prove beneficial by improving speeds and air quality. The FRA-Main-Street interconnected signalization project is a case in point:

- 1. The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals.
2. The progression improvements reduce trip delays and travel, thus improving speed along the facility.
3. The progression improvements also reduce the air quality impacts associated with frequent acceleration and deceleration.

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

Mr. Gordon Proctor
October 26, 1995
Page two

4. The speed improvements provide air quality benefits by lowering the emissions of hydrocarbons.

Using the Mobile 5a model, we analyzed the FRA-Main-Street project with ADT factors and V/C ratios developed by ODOT. Our analysis (summarized on the attached table) demonstrates slight improvements in the reduction of hydrocarbons (HCs) with no discernable increase in the oxides of nitrogen (NOx).

While our region will experience redesignation to a maintenance area some time early in 1996, the July 13, 1995, Policy Revisions to the CM/AQ Program clearly state:

"Projects (or phases thereof) that are programmed in the first 2 years of the TIP that is in effect at the time of redesignation to attainment are eligible for CM/AQ funding. This new policy will, in part, provide for the continuity of an area's planning process as it relates to reducing transportation emissions."

Therefore, we respectfully request your office initiate the process of CM/AQ eligibility approval for FRA-Main-Street. Please do not hesitate to call upon Mr. Michael Lilly of my office should you need further information regarding this project.

Sincerely,



Mo Ismail
Director of Transportation

MI/MJL/bn

Enclosures: Resolution T-21-95 with location map
Emission Reductions Table for Main Street

c: Mr. Jack Marchbanks, ODOT District 6
Mr. Joe Ridgeway, Sticklen-Belsheim & Associates

Main Street Signalization Project

City of Bexley, Ohio

FRA-Signalization- PID #13896

The City of Bexley will use the subject CM/AQ funds to coordinate traffic signals along Main Street through the city. The coordination of signals improves traffic progression by reducing the number of stops a vehicle must make for traffic signals. This reduces delay and travel time for the traveler and improves speeds along the facility. It also reduces acceleration and deceleration.

This improved flow of traffic and speed improvements provide air quality benefits. The speed improvements lower the emissions of hydrocarbons.

The following table illustrates the air quality benefits.

Estimated emissions along the coordinated facilities

	HC	NOx
2010 Vehicle Miles of Travel (daily)	19,451	19,451
2010 Average Speed ¹ (Base)	22.8	22.8
2010 Emissions ² (Base) tons/day	0.043	0.033
2010 Average Speed ³ (Coordinated)	25.6	25.6
2010 Emissions ⁴ (Coordinated) tons/day	0.039	0.033
Change in Emissions tons/day	-0.002	0.000

¹Volumes for each hour of the day for each segment of the project was estimated using 2010 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

January 5, 1996

Michael C. Flynn, P.E.
District Deputy Director
ODOT District 6
400 East William Street
Delaware, Ohio 43015

John S. Ensign
Chair

Attn: Mr. Jack Marchbanks, Planning & Budgeting Administrator

Ludith W. Stillwell
Vice Chair

Re: Request for CM/AQ Reauthorization, PID #13720
NOTMA Expenditures for FY97, Second Program Year

Mary Panek
Secretary

Dear Jack:

Ludith W. Stillwell
Chair
Administrative Committee

As we update the TIP and our work program, it is time to reauthorize the use of CM/AQ-M funds attributable to MORPC for the above-referenced program. NOTMA (North Outerbelt Transportation Management Association) is a three-year TMA program working closely with private employers in the I-270 North Outerbelt corridor to reduce peak-hour congestion and promote travel-demand alternatives such as ridesharing.

Robert D. Junk
Chair
Franklin County Planning
Area Subcommittee

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

NOTMA was previously approved for the use of CM/AQ-M funds in May 1994, but the startup of the organization was not officially underway until its executive director, Mr. Frank Eastman, came on board in July 1995. NOTMA requires \$100,000/year of MORPC-attributable CM/AQ funds. This letter is MORPC's request for you to approve the reauthorization of CM/AQ funds for the second year of this three-year program.

Alph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

I think you'll find the attachments in the supporting documentation sufficient to familiarize yourself with the program, but please don't hesitate to call upon me if I can be of any assistance.

Sincerely
Mike

Michael Lilly
Senior Project Coordinator

MJL/bn
Enclosures

c: Frank Eastman, NOTMA
Traci Kalra, MORPC
Libby Rushley, ODOT Planning
Bob Zack, ODOT Public Transportation



Attachment 1
Authorization to Proceed

George V. Voinovich
Governor

OHIO DEPARTMENT OF TRANSPORTATION

25 South Front Street
P.O. Box 899
Columbus, Ohio 43216-0899

October 6, 1994

Mr. William C. Habig
Executive Director
Mid-Ohio Regional Planning Commission
285 East Main Street
Columbus, Ohio 43215-5272

Dear Mr. Habig:

TRANSPORTATION DEMAND MANAGEMENT REDUCTION PROGRAM - NOTMA

You were previously provided an original of the fully executed agreement between the Department and your agency for the subject project. Funds have now been obligated. You are, therefore, authorized to proceed with the project. This authorization is in accordance with Section Three of the aforementioned agreement and confirms the verbal authorization provided Tracy Kalra October 5, 1994.

The following project identification numbers have been assigned:

State Job Number: 061110
Federal-Aid Project Number: CM-270-5(61)
Encumbrance Number: 709232

Respectfully,

Carla L. Cefaratti
Deputy Director
Division of Public Transportation



Mid-Ohio Regional Planning Commission

In association of local governments providing planning, programs and services for the region.

Mr. Gordon Proctor
Deputy Director of Multi-modal Planning
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215

September 25, 1995

Attn: Mr. Dave Moore, ODOT Office of Planning

Re: CM/AQ-M Eligibility Request
FRA-RIDESHARE (PID#, programming in process)

Gentlemen:

The Mid-Ohio Regional Planning Commission operates a Commuter Assistance Program (CAP) that provides a variety of rideshare and commuting services within an 11-county service area. At present, our CAP is listed in the FY96-99 TIP as FRA-RIDESHARE, a four-year program funded with \$430,000 of STP-M funds attributable to MORPC.

While our region will experience redesignation to a maintenance area some time early in 1996, the July 13, 1995, Policy Revisions to the CM/AQ Program clearly state:

"Projects (or phases thereof) that are programmed in the first 2 years of the TIP that is in effect at the time of redesignation to attainment are eligible for CM/AQ funding. This new policy will, in part, provide for the continuity of an area's planning process as it relates to reducing transportation emissions."

Due to the tangible air quality improvements resulting from our CAP and to take advantage of recent policy revisions to the CM/AQ program, we feel it is appropriate to switch the funding of our CAP from its current STP-M to CM/AQ-M for Fiscal Years 1996 to 1999. The four-year budget for the CAP would remain at \$430,000 CM/AQ-M and our region's TIP remains in financial balance as demonstrated on the attached Table 5:D.

MORPC's CAP activities cover a wide range of carpool, vanpool and commuter ridership services marketed across an 11-county area that includes Franklin, Delaware, Licking, Union, Madison, Fayette, Ross, Pickaway, Fairfield, Knox and Marion counties. Additionally, the services of CAP are also oriented towards marketing and managing the Guaranteed Ride Home (GRH) Program and in facilitating Transportation Demand Management Plans (TDMP) for employers at central Ohio Mr.

John S. Ensign
Chair
Edith W. Stillwell
Vice Chair
Terry Panek
Secretary
Edith W. Stillwell
Administrative Committee
Robster D. Junk
Franklin County Planning
Subcommittee
Nothy A. King
Legislative Task Force
Steve Gafford
Local Government
Committee
Stephen Smithers
Transportation Advisory
Committee
Habit
Executive Director

Gordon Proctor
September 25, 1995
Page two

work sites with employee transportation-related problems. Overall, the goals of CAP include:

- 1) Encouraging a shift from low- to high-occupancy vehicles.
- 2) Reducing air pollution by decreasing the number of vehicles in operation during the peak-hour journeys to and from work.
- 3) Making the most cost-effective and efficient use of existing roads, thus minimizing congestion.
- 4) Complementing the existing public transit system rather than encouraging a switch from public transit to car- or vanpools.

We analyzed the air quality reductions possible from the existing services offered by CAP using the Methodologies for Estimating Emission and Travel Activity Effects of TCMS from the U.S. EPA. The attached table indicates that the CAP expects to serve an additional 250 carpool participants and 38 vanpool participants, thus making an improvement in our region's air quality. In the course of a year, the net annual emission reductions are: 6.961 tons/year of hydrocarbons, 56.989 tons/year of carbon monoxides and 5.310 tons/year of oxides of nitrogen.

We respectfully request that your office initiate the process of CM/AQ eligibility approval for FRA-RIDESHARE. Recently, the Policy Board of MORPC approved Resolution T-21-95, which switches MORPC's federal share of FRA-RIDESHARE from STP-M to CM/AQ-M.

Please do not hesitate to call upon Michael Lilly of my staff should you need further information regarding this project.

Sincerely,


Mohamed Ismail
Director of Transportation

MIMJL/bn

Enclosures: Air Quality Emission Reductions Worksheet
Resolution T-21-95
Table 5:D Demonstrating TIP Financial Balance

c: Mr. Bob Zack, ODOT Office of Public Transportation
Ms. Tracy Kalra, CAP Program Manager

Emission Reduction from Carpools

	HC	CO	NOx
Number of Participants (daily)	250	250	250
Trips Reduced (daily)	366	366	366
VMT Reduced (daily)	9152	9152	9152
Average Emission Factor (g/m) ¹	1.984	16.34	1.51
Emission Reduction (grams/day)	18,162	149,560	13,828
Emission Reduction (tons/year)	5.218	42.969	3.973

Emission Reduction from Vanpools

	HC	CO	NOx
Number of Participants (daily)	38	38	38
Trips Reduced (daily)	70	70	70
VMT Reduced (daily)	3165	3165	3165
Average Emission Factor (g/m) ¹	1.92	15.42	1.47
Emission Reduction (grams/day)	6,066	48,801	4,654
Emission Reduction (tons/year)	1.743	14.020	1.337

Total Emission Reduction Carpools & Vanpools (tons/year)	6.961	56.989	5.310
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¹Emission Reductions were calculated according to Methodologies for Estimating Emission and Travel Activity Effects of TCMS from USEPA. The VMT was divided between freeways and arterials. 19 mph is used for Arterial portion of VMT and 42 mph for freeway portion of VMT. The average emission factor is a composite factor based on dividing the emission reductions determined by above methodology by the VMT reduction. The complete calculations are available upon request.



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, 25 S. FRONT STREET, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

TRANSPORTATION

November 1, 1995

NOV 08 1995

Mr. Mohamed Ismail
Transportation Director
Mid-Ohio Regional Planning Agency
285 East Main Street
Columbus, OH 43215-5272

DEPARTMENT

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pl examine this*

Re: CMAQ-M Eligibility Request

*1376
Nick*

Dear Mr. Ismail:

On September 21, 1995 ODOT Planning received three requests for CMAQ eligibility. Upon careful review of these requests by ODOT staff the following comments are provided:

- FRA-Rideshare Will be sent on for further review to OEPA.
- FRA-Vanpools The normal occupancy rate for a Vanpools is 87-92%. We recommend the emission reductions be recalculated using these rates.
- FRA-CNG Vehicles Based upon the joint FHWA/FTA July 13, 1995 Revised CMAQ Program Guidance Chapter 3, Section A, Paragraph 9: Alternative Fuels, the fleet conversion must be in a serious or worse ozone nonattainment area or specifically identified in the SIP. ODOT does not believe the proposed fleet conversion is eligible.

The first project will be sent to OEPA shortly for review. The second will also be sent upon receipt of the recalculated emission reductions. If there are any questions concerning these projects, please contact Libby Rushley of my staff.

Respectfully,

Larry F. Sutherland
Acting Administrator, Office of Planning

Enclosure

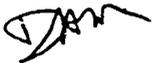
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inter-office communication

To: Patricia Moore, Administrator, Office of Urban Transit
From: David Moore, Supervisor, Office of Planning
Date: October 3, 1995
Subject: MORPC CMAQ Project Requests

Attached for your review and concurrence are three CMAQ project requests and emissions reduction calculations submitted by MORPC.

Please note the emissions reductions calculated for the vanpool project. MORPC's calculations are based on the assumption of full occupancy for each of the vans. Please forward any comments to the Office of Planning.



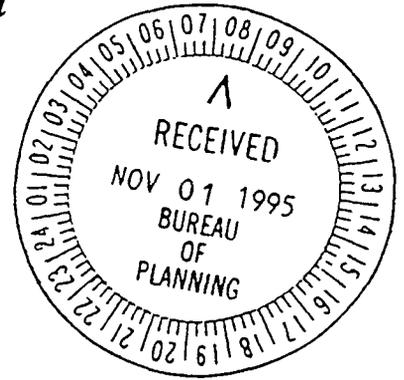
DAM:jk

Attachment

c: M. Lilly - Longberry - Rushley - File (Columbus CMAQ) - Reading File

Inter-Office Communication

To: Dave Moore, Supervisor, Office of Planning
From: Pat Moore, Administrator, Office of Public Transportation
Subject: MORPC CMAQ Requests
Date: October 25, 1995



We have reviewed your October 3, 1995 IOC transmitting three separate requests from MORPC to use CMAQ funds for Rideshare activities (FRA-Rideshare), Vanpool subsidies (FRA-Vanpool) and CNG vehicle conversions (FTA-CNG Vehicles). We support the Rideshare and Vanpool requests, but do not believe the vehicle conversions are eligible activities under the FHWA/FTA July 13, 1995 Revised CMAQ Program Guidance (Chapter 3, Section A, Paragraph 9: Alternative Fuels).

Although we support the Vanpool request, we share your concern with MORPC's assumption of full occupancy for each vanpool in the emissions calculations. Vanpools traditionally operate at 87% to 92% occupancy rates. We recommend that MORPC recalculate the emissions reductions using these assumptions.

PAM: 

c: Moore - Workman - Longberry - File - BF - RF

File: Fra-Vanpools

TRANSPORTATION
DEC 01 1995
DEPARTMENT

November 29, 1995

Mr. Harry Judson
Ohio Environmental Protection Agency
P.O. Box 1049
1800 Watermark Drive
Columbus, Ohio 43266-0149

Dear Mr. Judson:

Mid-Ohio Regional Planning Commission (MORPC) requests Congestion Mitigation/Air Quality (CMAQ) funding for vanpool subsidy as part of the existing Commuter Assistance Program (CAP). This project will add nine new vanpools in the Columbus area. The MORPC is sponsoring this vanpool project which is located within the Columbus marginal ozone nonattainment area. Enclosed is an analysis of the emission reductions that will result from the reduced SOV trips. It documents the change in hydrocarbon and nitrogen oxide emissions resulting from this project. The Ohio Department of Transportation is requesting your review and approval of this analysis. We would appreciate any comments regarding this subject.

Respectfully,

David A. Moore
Planning Supervisor, Office of Planning

Enclosure

DAM
DAM:lr

APPROVED DATE _____

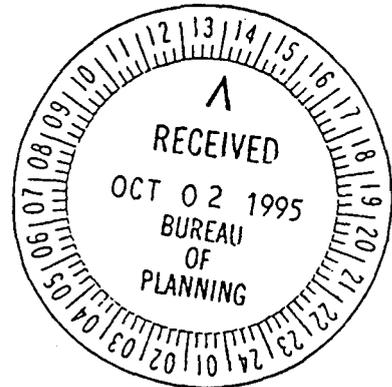
FOR OHIO EPA

EBR
EBR

c: all with e. - Call - Gismondi - P. Moore - Lilly (Columbus) - Longberry - Selhorst - Rushley
- File - (Columbus - CMAQ) - Reading File

September 21, 1995

Mr. Gordon Proctor
Deputy Director of Multi-modal Planning
Ohio Department of Transportation
25 South Front Street
Columbus, Ohio 43215



Attn: Mr. Dave Moore, ODOT Office of Planning

Re: CM/AQ-M Eligibility Request
FRA-VANPOOLS (PID# programming in process)

Gentlemen:

The Mid-Ohio Regional Planning Commission operates a Commuter Assistance Program (CAP) that provides a variety of rideshare and commuting services within an 11-county service area. A key element of the CAP is our subsidy of the VanOhio Vanpool program, a vanpool leasing program coordinated with VPSI, Inc. Our research has identified the need to expand this valuable program. Therefore, we propose the addition of nine new vanpools funded 100 percent from CM/AQ-M funds attributable to MORPC, for a total of \$73,000 in new CM/AQ-M authorization. The attached table 5:D indicates MORPC is able to meet financial balance of it TIP despite this program amendment.

While our region will experience redesignation to a maintenance area some time early in 1996, the July 13, 1995, Policy Revisions to the CM/AQ Program clearly state:

"Projects (or phases thereof) that are programmed in the first 2 years of the TIP that is in effect at the time of redesignation to attainment are eligible for CM/AQ funding. This new policy will, in part, provide for the continuity of an area's planning process as it relates to reducing transportation emissions."

MORPC's CAP activities under the VanOhio Vanpool program are marketed over an 11-county area that includes Franklin, Delaware, Licking, Union, Madison, Fayette, Ross, Pickaway, Fairfield, Knox and Marion counties. Additionally, the services of CAP are also oriented towards marketing and managing the Guaranteed Ride Home (GRH) Program and in facilitating Transportation Demand Management Plans (TDMP) for employers at central Ohio work sites with employee transportation-related problems. Overall, the goals of CAP include:

REVISED

Emission Reduction from Vanpools

	HC	CO	NOx
Number of Participants (daily) (9 vans at 90% occupancy)	121	121	121
Trips Reduced (daily)	225	225	225
VMT Reduced (daily)	7824	7824	7824
Average Emission Factor (g/m) ¹	1.942	15.757	1.485
Emission Reduction (grams/day)	15,191	123,284	11,621
Emission Reduction (tons/year)	4.364	35.420	3.339

*Revised air quality benefits November 15, 1995 per comments from ODOT, Revised table uses 90% occupancy rate for the vans.

¹Emission Reductions were calculated according to Methodologies for Estimating Emission and Travel Activity Effects of TCMS from USEPA. The VMT was divided between freeways and arterials. 19 mph is used for Arterial portion of VMT and 42 mph for freeway portion of VMT. The average emission factor is a composite factor based on dividing the emission reductions determined by above methodology by the VMT reduction. The complete calculations are available upon request.

Mr. Gordon Proctor
September 21, 1995
Page two

- 1) Encouraging a shift from low- to high-occupancy vehicles.
- 2) Reducing air pollution by decreasing the number of vehicles in operation during the peak-hour journeys to and from work.
- 3) Making the most cost-effective and efficient use of existing roads, thus minimizing congestion.
- 4) Complementing the existing public transit system rather than encouraging a switch from public transit to car- or vanpools.

We analyzed the addition of nine new vanpools for their air quality impacts using the Methodologies for Estimating Emission and Travel Activity Effects of TCMS from the U.S. EPA. The attached table indicates that nine new vanpools will involve 140 participants daily, for an average daily VMT reduction of 9,052 miles, leading to an improvement in our region's air quality. In the course of a year, the net annual emission reductions are: 5.050 tons/year of hydrocarbons, 40,981 tons/year of carbon monoxides and 3.863 tons/year of oxides of nitrogen.

We respectfully request that your office initiate the process of CM/AQ eligibility approval for FRA-VANPOOLS. This project was amended to the FY96-99 TIP as shown on the attached Resolution T-21-95, recently approved by the Policy Board of the Mid-Ohio Regional Planning Commission. Please do not hesitate to call upon Michael Lilly of my office should you need further information regarding this project.

Sincerely,



Mohamed Ismail
Director of Transportation

MI/MJL/bn

Enclosures: Air Quality Emission Reductions Worksheet
Resolution T-21-95
Table 5:D, Demonstrating TIP Financial Balance

c: Mr. Bob Zack, ODOT Office of Public Transportation
Ms. Traci Kalra, CAP Program Manager

SR 79 Signalization Project

CM/AQ packages have not been submitted for this project. Below are emission calculations for this project.

Estimated emissions along the coordinated facilities

	HC	NOx
2005 Impacted Vehicle Miles of Travel (daily)	46,710	46,710
2005 Average Speed ¹ (Base)	18.1	18.1
2005 Emissions ² (Base) tons/day	0.139	0.095
2005 Average Speed ³ (Coordinated)	20.7	20.7
2005 Emissions ⁴ (Coordinated) tons/day	0.125	0.093
Change in Emissions tons/day	-0.014	-0.002

¹Volumes for each hour of the day for each segment of the project was estimated using 2005 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.

City of Newark Signalization Projects

CM/AQ packages have not been submitted for these projects. Below are emission calculations for these projects.

Estimated emissions along group 1 coordinated facilities

	HC	NOx
2005 Impacted Vehicle Miles of Travel (daily)	9,587	9,587
2005 Average Speed ¹ (Base)	16.3	16.3
2005 Emissions ² (Base) tons/day	0.029	0.019
2005 Average Speed ³ (Coordinated)	18.6	18.6
2005 Emissions ⁴ (Coordinated) tons/day	0.026	0.019
Change in Emissions tons/day	-0.003	0.000

Estimated emissions along group 2 coordinated facilities

	HC	NOx
2005 Impacted Vehicle Miles of Travel (daily)	13,848	13,848
2005 Average Speed ¹ (Base)	16.3	16.3
2005 Emissions ² (Base) tons/day	0.042	0.028
2005 Average Speed ³ (Coordinated)	18.6	18.6
2005 Emissions ⁴ (Coordinated) tons/day	0.038	0.028
Change in Emissions tons/day	-0.004	0.000

¹Volumes for each hour of the day for each segment of the project was estimated using 2005 ADT and applying factors for percent of ADT by hour and percent by direction tables developed by ODOT. The speed for each hour of the day for each segment was estimated using speed versus V/C ratio tables developed by ODOT.

²The emissions were calculated based on the estimated speed for each hour of the day for each segment and summed over all hours and all segments. The emission factors were from MOBILE 5a.

³For the coordinated speeds, speeds for each hour for each segment were increased 16% (not to exceed the maximum speed in the speed versus V/C table). The 16% increase is based on Table 3.3 in A Toolbox for Alleviating Traffic Congestion by ITE, 1989. Table 3.3 is referenced from Urban and Suburban Highway Congestion by FHWA, 1987.

⁴The emissions were calculated based on the increased speed for each hour of the day for each segment and summed over all hours and all segments.

1997 Bus Replacement Emission Calculations

	HC	NOx
Number of New Buses	10	
Miles per week day per bus	110	
Total Bus VMT per day	1100	
Old Bus Emission Factor (g/m)	3.353	20.895
New Bus Emission Factor (g/m)	2.638	9.406
Old Bus Emissions (tons/day)	0.04	0.025
New Bus Emissions (tons/day)	0.003	0.011
Emissions Reduction (tons/day)	0.001	0.014

Attachment C
to Appendix C

Consultation Correspondence

**Fiscal Year 97-00
Transportation Improvement Program**

Air Quality Analysis:

**Air Quality Conformity Determination
Documentation for the Franklin, Delaware
and Licking County Maintenance Area**

**Appendix to
FY 97-00 MORPC TIP
FY 97-00 LCATS TIP**



Mid-Ohio Regional Planning Commission

285 East Main Street • Columbus, Ohio 43215-5272

Phone (614) 228-2663

FAX (614) 621-2401

MEMORANDUM

TO: Transportation Advisory Committee
Policy Committee
LCATS Policy Committee
Ohio EPA Central Office
Ohio EPA Central District Office
Ohio Department of Transportation Central Office
Ohio Department of Transportation, District 5
Ohio Department of Transportation, District 6
Central Ohio Transit Authority
U. S. EPA, Region 5
Federal Highway Administration, Region 5
Federal Highway Administration, Ohio Division Office
Federal Transit Administration, Region 5

FROM: Nick Gill

DATE: January 10, 1996

RE: Quarterly Air Quality Consultation Report

This is the first quarterly air quality consultation report as required by the Memorandum of Understanding (MOU) (see below) to fulfill the federal regulations. These reports will be provided through the MORPC Transportation Advisory Committee (TAC) in January, April, July and October. Special reports, if necessary, will be provided at other times.

State Transportation Conformity Rules

The state transportation conformity rules (OAC 3645-101) were adopted and became state law on August 21, 1995. These rules reiterate the conformity process issued in the November 1993 Federal Register as well as outline the interagency consultation process to be followed. The state rules have been submitted as a SIP revision to U.S. EPA as required. These are expected to be approved by this spring.

Memorandum of Understanding

A Memorandum of Understanding between MORPC, LCATS, ODOT and Ohio EPA regarding the interagency consultation process has been signed. A copy of the MOU is attached to this report. The MOU identifies the agencies involved in the consultation process and the specific responsibilities of MORPC, LCATS, ODOT and Ohio EPA with regard to air quality requirements.

Redesignation Request

On October 11, 1995, we were informed by Harry Judson of Ohio EPA that the technical reviewers in U.S. EPA Region 5 had approved the MORPC-area redesignation request. It has not, however, appeared in the Federal Register. It is expected to appear any time as a direct final notice with a 30-day public comment period. If no adverse comments are received, redesignation will take effect 60 days later.

In December, an error was discovered in the mobile source projections. Ohio EPA sent corrected mobile source projections to U.S. EPA. Since the redesignation package has not been published in the Federal Register, the correct mobile source projections will be in the redesignation request when it appears in the Federal Register. The corrected mobile source projections appear to eliminate the need to make a SIP revision to allocate some of the safety margin to mobile sources. The final emission inventory and projections are given in the following table.

Emissions are in tons per day	1990		2005	
	VOC	NO _x	VOC	NO _x
Point Sources	16.44	13.79	19.33	15.27
Area Sources	101.18	96.68	117.30	111.82
Mobile Sources	94.73	78.65	61.38	61.24
Total	212.35	189.12	198.01	188.33

Quarterly Air Quality Consultation Report

January 10, 1996

Page three

1995 Monitor Summaries

There was one ozone exceedance at two of the three monitors in the nonattainment area during 1995. In addition, an exceedance was also recorded in Knox County. The following table summarizes the exceedances since 1992 in the nonattainment area and surrounding monitors. A violation occurs when a single monitor records more than three exceedances over a three-year period.

Monitor	1993	1994	1995	3-Yr Total
Chesapeake	0	0	1	1
Maple Canyon	0	0	0	0
Heath	0	0	1	1
Knox	0	0	1	1
Madison	0	1	0	1

FY 1997-2000 TIP Conformity

MORPC has begun the conformity process for the FY97-00 TIPs. The modeling networks are being reviewed and updated. The years for which model runs will be performed are 1990, 1996, 2006 and 2010. The 1990 network has been undergoing validation. The 1990 model run will be performed on the most current network. A 1996 network will be developed which includes everything in place today. The 2006 and 2010 model runs will be on the TIP network.

Only-build 2006 and 2010 model runs will be made because it is expected that the budgets will be approved prior to TIP adoption. If, in the next several weeks, it appears the budgets will not be approved, 2006 and 2010 no-build runs will be performed. HPMS and project specific data will be used for the nonmodeled nonattainment area. As in previous years, MORPC will prepare the air quality conformity documentation as an appendix to both the MORPC and LCATS TIPs.

MEMORANDUM OF UNDERSTANDING BETWEEN THE MID-OHIO REGIONAL PLANNING COMMISSION, THE LICKING COUNTY AREA TRANSPORTATION-STUDY, THE OHIO ENVIRONMENTAL PROTECTION AGENCY AND THE OHIO DEPARTMENT OF TRANSPORTATION DEFINING THE INTERAGENCY CONSULTATION PROCESS IN ACCORDANCE WITH CHAPTER 3745-101 OF THE OHIO ADMINISTRATIVE CODE.

The 1990 Clean Air Act Amendments (CAAA) classified Franklin, Delaware and Licking counties as a marginal nonattainment area for ozone. The CAAA and resulting federal regulations require the nonattainment area to perform specific tasks which will lead to air quality improvements. These tasks include development of an implementation plan (SIP) to improve air quality and air quality analysis of Transportation Plans, Transportation Improvement Programs (TIPs) and projects for conformity with the SIP. These tasks are generally divided among agencies of the state and the metropolitan planning organizations (MPOs) within the nonattainment area.

The Ohio Environmental Protection Agency (Ohio EPA) has issued transportation conformity rules, Ohio Administrative Code (OAC) 3745-101-01 through 3745-101-20, in accordance with CAAA regulations, 40 CFR Part 51 Subpart T, issued November 24, 1993. These OAC rules define the process required of nonattainment and maintenance areas to perform air quality conformity determinations. In addition, the rules outline an interagency consultation process (OAC 3745-101-04) which must be undertaken on air quality items. For the Columbus nonattainment area, the participants in the interagency consultation process are as follows:

The Mid-Ohio Regional Planning Commission Columbus Area Transportation Study Policy Committee (MORPC), the MPO for the Columbus metropolitan area
The Policy Committee of the Licking County Area Transportation Study (LCATS), the MPO for the Newark urbanized area
Ohio EPA central office
Ohio EPA Central District office, the local air agency
Ohio Department of Transportation, including central office and Districts 5 and 6
Central Ohio Transit Authority
United States Environmental Protection Agency Region 5
Federal Highway Administration Region 5
Federal Highway Administration - Ohio Division office
Federal Transit Administration Region 5

These rules require an interagency consultation process for the development of the SIP, TCMs in the SIP and revisions to the SIP. Consultation is also required in the development of Transportation Plans, TIPs, amendments to these and the process of conformity determinations on Transportation Plans and TIPs.

The interagency consultation process described in OAC 3745-101-04 will be followed with the following items further defined for the Columbus nonattainment area:

- b. LCATS is the lead agency responsible for development of the LCATS planning area Transportation Plan and Transportation Improvement Program and any amendments or revisions thereto.
- c. MORPC is the lead agency responsible for development of the Columbus Area Transportation Study planning area Transportation Plan and Transportation Improvement Program and any amendments or revisions thereto.
- d. Conformity determinations are made for the entire nonattainment area. MORPC will be the lead agency responsible for making the conformity determination of Transportation Plans and Transportation Improvement Programs for the nonattainment area.

2. Interagency consultation will be through the MORPC Transportation Advisory Committee (TAC). Meeting notices will indicate when items subject to the interagency consultation process will be discussed, when draft and final documents will be available and provide at least quarterly reports on air quality issues. All agencies which are part of the consultation process will receive the meeting notices. At a minimum, these notices will be directed to the following locations:

MORPC	Director of Transportation
LCATS	Transportation Study Director
Ohio EPA central office	Environmental Specialist, Air Pollution Control
Ohio EPA Central District office	Director, Air Pollution Control
ODOT central office	Administrator, Office of Technical Services
ODOT Districts 5 and 6	District Deputy Directors
Central Ohio Transit Authority	Director of Service Development
U.S. EPA Region 5	Environmental Engineer, Regulation Development Section, Air Enforcement Branch
FHWA Region 5	Metropolitan Planning and Air Quality Specialist
FHWA Ohio Division office	Division Administrator
FTA Region 5	Transportation Representative

LCATS and Ohio EPA will provide MORPC with information to include in the quarterly report on items for which LCATS and Ohio EPA are responsible as well as timely advance notice as to when such items should be on the meeting agenda. Other participants will provide information as needed.

3. Section (B)(5) identifies specific roles and responsibilities of participants in the consultation process. These shall be as described with the following clarification:

data to MORPC. Until a regional model for Licking County is completed, LCATS will submit all projects which need to be included in the conformity analysis to ODOT and MORPC. After a Licking County regional model is developed, ODOT will perform the air quality analysis and provide the results to LCATS and MORPC. MORPC will combine the air quality analysis results and prepare the conformity documentation for the entire nonattainment area.

4. Section (C) identifies specific items that must be addressed through the consultation process. The lead agency preparing the document will address each of these issues in the draft document which will be available to participants through TAC in accordance with Section (B)(6).
5. Conflict resolution between state agencies or between state agencies and an MPO will be as defined in Section (D).
6. Technical meetings and other contact among participants will be initiated as necessary to disseminate or obtain necessary information, provide comments and respond to comments.

Specific air quality consultation issues not addressed in this Memorandum of Understanding (MOU) are to be addressed as stated in OAC 3745-101-04. All previous agreements relating to air quality issues addressed by OAC 3745-101-04 and this MOU are superseded by OAC 3745-101-04 and this MOU.

We the undersigned agree to consult on air quality issues as set out in OAC 3745-101-04 and as specified in this MOU. This agreement is effective on the date of the last signature.

SIGNATORIES

William C. Habig
William C. Habig, Executive Director
Mid-Ohio Regional Planning Commission

Date: 9/20/95

Jerry Bruns
Jerry Bruns, Executive Director
Licking County Area Transportation Study

Date: 10-2-95

Donald R. Schregardus
Donald R. Schregardus, Director
Ohio Environmental Protection Agency

Date: _____

Jerry Wray
Jerry Wray, Director
Ohio Department of Transportation

Date: 10-30-95



Inter-Office Communication

To: *See Below

From: Gordon D. Proctor, Deputy Director, Division of Multi-modal Planning

Date: January 24, 1996 *Gordon D Proctor*

Subject: FY 1997-2000 STIP/TIP Air Quality Conformity Process

* J. McCarty J. Mawhorr
D. Dreger C. Misel
M. Flynn G. Eyink
G. Ketron J. McClain
B. T. Groden

In nonattainment and maintenance areas development of the FY 1997-2000 STIP/TIPs must include an air quality conformity demonstration. The narrative below addresses a number of issues concerning this year's conformity process.

The requirements for demonstrating conformity differ depending on the air quality status of the respective nonattainment or maintenance area. The attached pages identify the tests and networks needed for conducting the tests, for each Ohio nonattainment or maintenance area. Also attached is a table, prepared by the OEPA, identifying the State Implementation Plan (SIP) emission budgets that will be used for the budget tests.

The conformity analysis networks must include all regionally significant projects, regardless of funding source. For this year's STIP/TIP, this will include the Turnpike lane addition projects in the Toledo, Cleveland, Akron, and Youngstown areas. The TIP out/year analysis network must also include all regionally significant projects from the Long Range Plan. In other words, the TIP out year network and the LRP out year network must be exactly the same.

Because of delays in selecting the State's major new projects and in identifying the MPO attributable funding marks, development of the MPO conformity analysis networks has been delayed. The major new selections are scheduled for February 16, 1996. The MPO attributable funding marks will be issued shortly. MPOs are encouraged to submit their conformity analysis networks, to the Office of Technical Services, as soon as possible following this information becoming available.

As a final item, Ashtabula, Clinton, Columbiana, and Preble counties are subject to the

JAN 29 1996

PLAN

air quality conformity requirements. If the FY 1997-2000 STIP includes any capacity addition projects in these counties, an air quality conformity analysis will need to be conducted. Districts can contact Office of Planning staff to coordinate the conformity analysis procedures.

Please forward this information to the nonattainment or maintenance area MPOs in your District. Questions concerning this material may be directed to the Office of Planning Metro staff.

GDP
LFS:DAM:dm

all with attachment

c: Rodrigo - Judson - P. Moore - McQuirt - Ligibel - Hunt - Schafer - Charles - Longberry - Gephart - Morris - Monaco - Taylor - Rushley - Selhorst - Moore - File (All Studies - 602) - Reading File

FY 1997-2000 TIP networks and analyses

Canton(marginal)

requirements

§51.438

networks

FY 1997 Build/No Build

FY 2005 Build/No Build

FY 2010 Build/No Build

conformity tests

FY 1997 Build/No Build for HC(§51.438)

FY 2005 Build/No Build for HC(§51.438)

FY 2010 Build/No Build for HC(§51.438)

Less than 1990 inventory budget test for HC(§51.438)

explanations

NOx waiver (only applies to the less than 1990 test and the build/no build tests)

No other budget tests are required until the area is redesignated (July 1, 1994 USEPA letter)

§51.464 (a) as referenced from §51.430(a) states that marginal areas are not required to demonstrate attainment

Redesignation of the area may occur before the July 1, 1996 TIP approval. If this occurs, the area will no longer have the §51.438 requirements of a build/no build test. The area will have to meet the §51.430 requirements of a redesignation budget test. Therefore, ODOT suggests that the area shows its 2005 redesignation budgets for HC and NOx for illustrative purposes.

Cincinnati(moderate)

requirements

§51.438

§51.430

networks

FY 1997 Build/No Build

FY 2005 Build/No Build

FY 2010 Build/No Build

conformity tests

FY 1997 Build/No Build for HC and NOx(§51.438)

FY 2005 Build/No Build for HC and NOx(§51.438)

FY 2010 Build/No Build for HC and NOx(§51.438)

Less than 1990 inventory budget test for HC and NOx(§51.438)

Budget Test with the 1996 budgets in the 15% plan for analysis years beyond 1996 for HC and NOx(§51.430) (1990 inventory number is the budget for NOx)

explanations

There is no requirement to conform to any budget year beyond 1996 because the 15% plans only contained 1996 numbers. The 2005 budget does not have to be used until the maintenance plan is approved. (May 12, 1995 USEPA letter) (Redesignation has been suspended due to air quality violation)

No NOx waiver

Cleveland/Akron(moderate)

requirements

§51.438

§51.430

networks

FY 1997 Build/No Build

FY 2006 Build/No Build

FY 2010 Build/No Build

conformity tests

FY 1997 Build/No Build for HC and NOx(§51.438)

FY 2006 Build/No Build for HC and NOx(§51.438)

FY 2010 Build/No Build for HC and NOx(§51.438)

Less than 1990 inventory budget test for HC and NOx(§51.438)

Budget Test with the 1996 budgets in the 15% plan for analysis years beyond 1996 for HC and NOx(§51.430) (1990 inventory number is the budget for NOx, June 6, 1995 USEPA letter)

explanations

There is no requirement to conform to any budget year beyond 1996 because the 15% plans only contained 1996 numbers. The 2006 budget does not have to be used until the maintenance plan is approved. (May 12, 1995 USEPA letter)

No NOx waiver

Redesignation of the area may occur before the July 1, 1996 TIP approval. If this occurs, the area will no longer have the §51.438 requirements of a build/no build test. The area will have to meet the §51.430 requirements of a redesignation budget test. Therefore, ODOT suggests that the area shows its 2006 redesignation budgets for HC and NOx for illustrative purposes.

Columbus/Newark(marginal)

requirements

§51.438

networks

FY 1997 Build/No Build

FY 2005 Build/No Build

FY 2010 Build/No Build

conformity tests

- FY 1997 Build/No Build for HC(§51.438)
- FY 2005 Build/No Build for HC(§51.438)
- FY 2010 Build/No Build for HC(§51.438)
- Less than 1990 inventory budget test for HC(§51.438)

explanations

- NOx waiver (only applies to the less than 1990 test and the build/no build tests)
- No other budget tests are required until the area is redesignated (July 1, 1994 USEPA letter)
- §51.464 (a) as referenced from §51.430(a) states that marginal areas are not required to demonstrate attainment

Redesignation of the area may occur before the July 1, 1996 TIP approval. If this occurs, the area will no longer have the §51.438 requirements of a build/no build test. The area will have to meet the §51.430 requirements of a redesignation budget test. Therefore, ODOT suggests that the area shows its 2005 redesignation budgets for HC and NOx for illustrative purposes.

Dayton(maintenance)

requirements

§51.430

networks

- FY 2005 Build
- FY 2015 Build

conformity tests

Budget Test with the 2005 budget in the maintenance plan for analysis years 2005 and beyond for HC and NOx(§51.430) (NOx waiver no longer applies to the redesignation budget test)

Springfield(maintenance)

requirements

§51.430

networks

- FY 2005 Build
- FY 2015 Build

conformity tests

Budget Test with the 2005 budget in the maintenance plan for analysis years 2005 and beyond for HC and NOx(§51.430) (NOx waiver no longer applies to the redesignation budget test)

Steubenville(maintenance)

requirements

§51.430

networks

FY 2005 Build

FY 2015 Build

conformity tests

Budget Test with the 2005 budget in the maintenance plan for analysis years 2005 and beyond for HC and NOx(§51.430) (NOx waiver no longer applies to the redesignation budget test)

Toledo(maintenance)

requirements

§51.430

networks

FY 2005 Build

FY 2010 Build

conformity tests

Budget Test with the 2005 budget in the maintenance plan for analysis years 2005 and beyond for HC and NOx(§51.430) (NOx waiver no longer applies to the redesignation budget test)

Youngstown(marginal)

requirements

§51.438

networks

FY 1997 Build/No Build

FY 2005 Build/No Build

conformity tests

FY 1997 Build/No Build for HC(§51.438)

FY 2005 Build/No Build for HC(§51.438)

Less than 1990 inventory budget test for HC(§51.438)

explanations

NOx waiver (only applies to the less than 1990 test and the build/no build tests)

No other budget tests are required until the area is redesignated (July 1, 1994 USEPA letter)

§51.464 (a) as referenced from §51.430(a) states that marginal areas are not required to

demonstrate attainment

Redesignation of the area may occur before the July 1, 1996 TIP approval. If this occurs, the area will no longer have the §51.438 requirements of a build/no build test. The area will have to meet the §51.430 requirements of a redesignation budget test. Therefore, ODOT suggests that the area shows its 2005 redesignation budgets for HC and NO_x for illustrative purposes.

Ohio Emission Budgets, in Tons Per Day

Nonattainment Area		1990 Baseline		Conformity Budget 2005/6		Remaining Margins	
		VOC	NOx	VOC	NOx		
Cincinnati REDES #s (AA) SEE (JJ) (No safety margin used yet.)	Point	70.43	280.67	80.86	339.92		
	Area	101.85	36.74	101.71	39.63		
	Mobile	125.84	130.68	36.78	65.48		
	Total	298.12	448.09	248.05	379.55		
						NOx Margin	68.54
Clinton (BB) (No safety margin used yet.)	Point	0.00	0.00	0.00	0.00		
	Area	11.30	1.62	11.45	1.66		
	Mobile	5.04	4.80	2.04	2.73		
	Total	16.34	6.42	13.49	4.39		
						NOx Margin	2.03
Clev/Ak/Ash Clev/Ak/Ash Cleveland Akron Ashtabula REDES #s (See CC, KK). (No safety margin used yet.)	Point	82.22	245.59	88.63	298.00		
	Area	201.05	80.46	200.86	80.18		
	Mobile	161.20	120.62	30.68	50.77		
	Mobile	75.52	46.35	12.94	18.73		
	Mobile	11.65	9.61	5.18	5.90		
	Total	531.64	502.63	338.29	453.58		
					VOC Margin	193.35	
						NOx Margin	49.05
Day/Spring Day/Spring Dayton Springfield (No safety margin used yet.)	Point	37.40	32.20	97.40	38.20		
	Area	54.90	36.50	64.40	41.70		
	Mobile	88.75	47.55	27.39	31.60		
	Mobile	14.85	13.35	4.31	7.80		
	Total	195.90	129.60	193.50	119.30		
					(DD)	VOC Margin	2.40
						NOx Margin	10.30
Preble (No safety margin used yet.)	Point	0.24	0.00	0.34	0.00		(EE)
	Area	41.13	5.91	41.64	6.29		
	Mobile	4.16	4.80	1.93	2.81		
	Total	45.52	10.71	43.91	9.10		
						NOx Margin	1.61
Toledo (Of original VOC safety margin of 58.48, 1.142 is used.) (Original 2005 VOC mobile number was 28.71.)	Point	60.08	73.97	38.87	40.69		
	Area	37.25	10.26	37.60	10.29		
	Mobile	66.33	37.82	29.85	24.69		
	Total	163.66	122.05	106.32	75.67		
						NOx Margin	46.38
Canton (No safety margin has been used yet.)	Point	12.36	6.74	14.07	7.96		
	Area	42.65	16.87	44.20	17.68		
	Mobile	31.66	16.24	15.34	12.00		
	Total	86.67	39.85	73.61	37.64		
						NOx Margin	2.21

Ohio's Emission Budgets, in Tons Per Day—continued

Nonattainment Area	1990 Baseline		Conformity Budget 2005/6		Remaining Margins	
	VOC	NOx	VOC	NOx		
Columbus	Point	16.44	13.79	19.33	15.27	(GG)
	Area	101.18	96.68	117.30	111.82	
	Mobile	94.73	78.65	61.38	61.24	
	Total	212.35	189.12	198.01	188.33	
No safety margin has been used yet.)					VOC Margin	14.34
					NOx Margin	0.79
Youngs- town	Point	16.71	23.25	15.42	23.46	(HH)
	Area	41.28	17.99	41.11	17.70	
	Mobile	48.98	29.87	32.16	27.30	
	Total	106.97	71.10	88.69	68.46	
Use of 7.833 of VOC safety margin of 26.11 requested.) Original 2005 VOC mobile number was 24.33.)					VOC Margin	18.28
Use of 6.18 of NOx safety margin of 8.83 requested.) Original 2005 NOx mobile number was 21.12.)					NOx Margin	2.64
Jefferson	Point	1.13	378.00	1.33	340.00	(II)
	Area	6.50	2.70	6.30	2.60	
	Mobile	8.51	4.70	4.11	3.40	
	Total	16.14	385.40	11.74	346.00	
No safety margin has been used yet.)					VOC Margin	4.40
					NOx Margin	39.40
Columbiana	Point	1.89	0.06	2.25	0.07	
	Area	10.40	4.60	10.80	4.90	
	Mobile	11.69	7.00	5.65	5.05	
	Total	23.98	11.66	18.70	10.02	
No safety margin has been used yet.)					VOC Margin	5.28
					NOx Margin	1.64

(AA) Ohio counties only. Shows maintenance plan numbers (submitted but not proposed), not 15% plan numbers.

(BB) Clinton County numbers were proposed in the Federal Register, vol. 60, page 22337ff., 05/05/95.

(CC) For Cleveland/Akron, 2006 maintenance plan numbers are used instead of 2005.

Safety margins for Clev/Ak/Ash derived by subtracting 2006 total of point, area, and mobile from 1990 total of point, area, and mobile.

(DD) Dayton numbers, excluding Preble, are from USEPA's redesignation direct-final in Federal Register, vol 60, p.22289ff, 05-05-95.

Safety margins for Dayton/Springfield derived by subtracting 2005 total of point, area, and mobile from 1990 total of point, area, and mobile.

(EE) Preble County numbers are from the "final rule" of 09/21/94 in the Federal Register, vol. 59, p. 48395ff.

(FF) Toledo numbers are from USEPA's redesignation direct-final rule for Federal Register, vol. 60, p. 21456ff, 05-02-95.

(GG) Columbus not proposed in Federal Register yet.

(HH) For Youngstown, 2006 numbers are used instead of 2005.

(II) Jefferson and Columbiana Counties' numbers are from the "final rule" of 09/21/94 in the Federal Register, vol. 59, p. 48395ff.

(JJ) If Cincinnati is not redesignated, then the 15% plan budget is used for conformity. See below.

Nonattainment Area	1990 Baseline		'96 15% plan
	VOC	NOx	VOC
Cincinnati Mobile	125.84	130.68	57.23
(No safety margin exists.)			

(KK) If Cleveland/Akron/Ashtabula is not redesignated, then the 15% plan budget is used for conformity. See below.

Nonattainment Area	1990 Baseline		'96 15% plan
	VOC	NOx	VOC
Cleveland Mobile	161.2	120.62	62.6
Akron Mobile	75.52	46.35	29.91
Ashtabula Mobile	11.65	9.61	6.989
Total Mobile	248.37	176.58	99.499
(No safety margin exists.)			



Mid-Ohio Regional Planning Commission

285 East Main Street • Columbus, Ohio 43215-5272

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MEMORANDUM

TO: Transportation Advisory Committee
 Policy Committee
 LCATS Policy Committee
 Ohio EPA Central Office
 Ohio EPA Central District Office
 Ohio Department of Transportation Central Office
 Ohio Department of Transportation, District 5
 Ohio Department of Transportation, District 6
 Central Ohio Transit Authority
 U.S. EPA, Region 5
 Federal Highway Administration, Region 5
 Federal Highway Administration, Ohio Division Office
 Federal Transit Administration, Region 5

FROM: Nick Gill

DATE: April 3, 1996

RE: Quarterly Air Quality Consultation Report

Redesignation Request

On February 1, 1996 a direct final rule was published in the Federal Register approving our redesignation request effective April 1, 1996. A comment period was available until March 4, 1996. The final emission inventory and projections as published in the Federal Register are given in the following table.

Emissions are in tons per day	1990		1996		2005	
	VOC	NOx	VOC	NOx	VOC	NOx
Point Sources	16.44	13.79	17.52	14.35	19.33	15.27
Area Sources	101.18	96.68	107.47	102.62	117.30	111.82
Mobile Sources	94.73	78.65	63.36	68.85	61.38	61.24
Total	212.35	189.12	188.35	185.82	198.01	188.33

April 3, 1996

Page 2.

FY 1997-2000 TIP Conformity

MORPC is completing the conformity process for the FY97-2000 TIPs. The modeling networks have been updated and analysis completed. Per a January 24, 1996, IOC from ODOT, the years for which model runs were performed were 1990, 1997, 2005 and 2010. The 2005 analysis was on the TIP network and the 2010 analysis was on the Long Range Plan Network (which includes all TIP projects). Only build 1997, 2005 and 2010 model runs will be made because the area was redesignated with approved emission budgets effective April 1. HPMS and project specific data was used for the non-modeled nonattainment area. The analysis shows that the TIP is in conformity.

MORPC is completing the documentation for the TIP and preparing the air quality conformity documentation as an appendix to both the MORPC and LCATS TIPs. The Final Draft TIP in April will contain the completed conformity analysis results. Also, the air quality appendix will be sent to those agencies listed in the air quality consultation MOU. The appendix is also available upon request.

NG:mkb

1996 TRANSPORTATION IMPROVEMENT PROGRAM

PUBLIC PARTICIPATION

**Appendix D to
FY 97-00 MORPC TIP**

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Additional Information

Introduction

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, has mandated an aggressive approach in involving the public in transportation planning. The planning regulations issued jointly by the Federal Transit Administration and the Federal Highway Administration stipulate that the metropolitan transportation planning process include a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and the Transportation Improvement Program (TIP). Recognizing the importance of involving the public in planning for the future of a region, MORPC made a conscious decision to develop a more proactive and interactive planning process, providing the opportunity for the community to play an integral role in transportation planning.

MORPC prepared two draft TIPs which were made available for public review and comment during the TIP annual update cycle. The public could review the draft TIPs in various settings: public libraries, Columbus Freenet, transportation-related open houses, and at the MORPC office. The public was notified through the media and direct mail that the draft TIPs were available for review. Open houses provided the public an opportunity to not only view the draft TIPs, but also to request a copy of the TIPs and ask questions of staff. In each instance, the public was asked to provide comments, preferably in writing, during the comment period. A summary of those comments is attached.

MORPC distributed each draft TIP to 45 central Ohio public libraries in the planning area. The availability of the draft and the final draft TIP was announced in letters to members, and advertised through legal notices and press releases in the Columbus Dispatch, Columbus Call and Post, Delaware Gazette, Lancaster Eagle Gazette, The Newark Advocate, the Central Ohio Radio Reading Service and through a sunshine mailing. In each notice and press release, the dates for the review and comment period were given and the public was invited to review the draft plan at their local library, a scheduled TIP open house or at the MORPC office.

Each draft TIP was presented before MORPC's Technical and Citizen Advisory committees. The meetings of the two committees were open to the public and the media was notified.

Draft TIP

A legal notice (Exhibit A) announcing the initiation of the annual TIP update process for FY97-00 was faxed in November 1995, to the Columbus Dispatch, Columbus Call and Post, Delaware Gazette, Lancaster Eagle Gazette, The Newark Advocate, the Central Ohio Radio Reading Service and a copy in press release format was mailed via sunshine mailing.

The February draft TIP was forwarded to local implementing agencies within the planning area, including incorporated villages and cities, counties, the transit authority and the Ohio Department of Transportation. The draft TIP, which is also forwarded to the state and area clearinghouses, was made available to the public for review and comment. A press release (Exhibit C),

announcing the public review period and the availability of the draft TIP at central Ohio public libraries, was mailed through a sunshine mailing.

The draft TIP was presented to the CAC (Exhibit D) on Monday, March 11, 1996, and the TAC (Exhibit E) on Wednesday, March 13, 1996. The TIP schedule as well as funding types, MORPC's TIP fiscal responsibilities under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, regional project priorities and fiscal balance were reviewed and discussed with the committees.

During the review and comment period of the draft TIP, no comments were received from the public. However, members of the CAC did request a breakdown of the projects by inner city versus suburbs and non-motorized versus motorized transportation.

Final Draft TIP

The April final draft TIP was made available to the public for comment and review through distribution to central Ohio public libraries in the planning area and on Columbus Freenet. A legal notice to the previously stated newspapers and a press release announcing the public review periods, the availability of the final draft TIP and information regarding the public information/open house were mailed through a sunshine mailing (Exhibit E). Invitations to attend the April public open house were mailed to over 500 businesses, neighborhood civic and community groups and public agencies in the transportation planning area (Exhibit G).

A public information/open house was held at MORPC on Monday, April 22, 1995, from 3-6 p.m. Approximately 12 people (Exhibit H) attended the open house. Two comments were received from the public on the final draft TIP. These comments were summarized and responses to those comments are depicted in Exhibit I.

The final draft TIP was on display at MORPC's annual meeting and at the Columbus public meeting on SR 161 in May 1996.

The final draft TIP was presented to the CAC and TAC (Exhibit J) by MORPC staff in May 1996, and the proposed Resolution, T-11-96: "Reaffirmation of the Transportation Plan and the Adoption of the FY 1997-2000 Transportation Improvement Program (TIP)," was recommended for approval by the Policy Committee (Exhibit M). CAC amended the resolution to add "That it encourages the state of Ohio to increase transit funding from the general revenues to offset the cut from the FTA." TAC, at its meeting on May 8, 1996, held the resolution pending further information. At the June 12, 1996, TAC meeting, the committee did not endorse the proposed financing for the Spring-Sandusky Interchange and encouraged the city of Columbus and ODOT to reach a conclusion on this financing at the earliest possible time. The Policy Committee, at its June 20, 1996, meeting, urged that ODOT recognize the importance of the Spring-Sandusky Interchange and its relationship in the central Ohio area. Resolution T-11-96 was approved by the Policy Committee on June 20, 1996.

PUBLIC PARTICIPATION EXHIBITS

Exhibit A

Update TIP Legal Notice and Press Release -
November 17, 1995



NEWS RELEASE

November 17, 1995

For Immediate Release

MORPC UPDATES TRANSPORTATION IMPROVEMENT PROGRAM AND REVIEWS FOR ADOPTION THE REGIONAL TRANSPORTATION PLAN

The Mid-Ohio Regional Planning Commission (MORPC) is now reviewing the Regional Transportation Plan for annual adoption and updating the Transportation Improvement Program for State Fiscal Years 1997-2000.

The Transportation Plan identifies needed transportation improvements through the year 2010 within the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County and Lima and Etna townships in Licking).

Mid-Ohio Regional
Planning Commission

285 East Main Street

Columbus, OH 43215-5272

Phone: (614) 228-2663

FAX: (614) 621-2401

The Transportation Improvement Program (TIP) is a schedule of transportation improvements, within the planning area, proposed for the period July 1996 through June 2000. Approximately \$600 million dollars in highway, transit and bikeway funds will flow to these projects through the end of this century. Projects within the TIP are eligible for federal, state and/or local funding. The TIP must adhere to requirements of the federal ISTEA (Intermodal Transportation Efficiency Act) as well as the Clean Air Act Amendments of 1990. It outlines the "air quality conformity" procedures and lists the transportation projects that undergo such scrutiny.

Copies of the Transportation Plan as well as previous TIPs are available at MORPC offices, 285 East Main Street, Columbus, Ohio 43215, all Columbus library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties or by calling the MORPC Transportation Department at (614)228-2663. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address, by 5 p.m., April 19, 1996.

William C. Habig
Executive Director

Mohamed Ismail
Director of Transportation

Exhibit B

Columbus Dispatch - Proof of Publication
Call and Post
The Delaware Gazette

THE COLUMBUS DISPATCH
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY, SS:

Carla Daniel
Voluntary Sales Supervisor

The Columbus Dispatch, a newspaper published at Columbus, Franklin County, Ohio, with a daily paid circulation of more than 25,000 copies, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in The Columbus Dispatch for 1 time time (s), on

November 22, 1995

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Carla Daniel

Subscribed and Sworn on this 22nd day of November 1995 as witness my hand and seal of office.

Melanie Howlende
NOTARY PUBLIC - STATE OF OHIO

MELANIE HOWLENDE
NOTARY PUBLIC - STATE OF OHIO
My Commission Expires June 28, 2000

MORPC UPDATES TRANSPORTATION IMPROVEMENT PROGRAM AND REVIEWS FOR ADOPTION THE REGIONAL TRANSPORTATION PLAN.

The Mid-Ohio Regional Planning Commission (MORPC) is now reviewing the Regional Transportation Plan for annual adoption and updating the Transportation Improvement Program for State Fiscal Years 1997-2000. The Transportation Plan identifies needed transportation improvements through the year 2010 within the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County and Lima and Etna townships in Licking). The Transportation Improvement Program (TIP) is a schedule of transportation improvements, within the planning area, proposed for the period July 1996 through June 2000. Approximately \$600 million dollars in highway, transit and bikeway funds will flow to these projects through the end of this century. Projects within the TIP are eligible for federal, state and/or local funding. The TIP must adhere to requirements of the federal ISTEA (Intermodal Transportation Efficiency

Act) as well as the Clean Air Act Amendments of 1990. It outlines the "air quality conformity" procedures and lists the transportation projects the undergo such scrutiny. Copies of the Transportation Plan as well as previous TIPs are available at MORPC offices, 285 East Main Street, Columbus, Ohio 43215, all Columbus library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties or by calling the MORPC Transportation Department at (614) 228-2663. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address, by 5 p.m. April 19, 1996.
William C. Habig
Executive Director
Mohamed Ismail
Director of Transportation
11/22



The Mid-Ohio Regional Planning Commission (MORPC) announces the availability of the updated Transportation Plan and the draft 199-2000 Transportation Improvement Program (TIP) for public review and comment from April 10 through April 26, 1996. A public information open house on these has been scheduled between 3 and 6 p.m. on Monday, April 22, 1996, at MORPC, 265 East Main Street, Columbus, Ohio, 43215. Staff will be available to discuss and answer questions. The Transportation Plan identifies needed improvements in the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County, and Etna and Lima townships in Licking County). The TIP is a schedule of transportation improvements which will use more than \$800 million in federal, state, and local funds between July 1996 and June 2000. The transportation improvements include highway, public transportation, bikeways, and pedestrian facilities. It also includes planning and engineering studies that lead to construction in later years. A federally required air quality conformity analysis will be completed for the TIP. Copies of the Transportation Plan and the draft TIP are available at MORPC offices, Columbus Metropolitan Library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties. They will also be made available for review at the open house. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address by 5 p.m., April 26, 1996, or during the public information open house. Individuals with sight, hearing disabilities or other special needs will be accommodated upon reasonable prior notice. The Transportation Plan and the TIP will be acted by MORPC on May 16, 1996.

William C. Habig
Executive Director

Mohamed Ismail
Director of
Transportation

Proof Of Publication

STATE OF OHIO Delaware County

Roberta Baker being duly sworn, says he / she is

Bookkeeper of the **DELAWARE GAZETTE**

a newspaper printed and published in Delaware, Delaware County, Ohio, and of general circulation therein, and that the annexed

ADVERTISEMENT

was published in said Newspaper one consecutive time the first insertion be in 24th day November in on the A. D., 1995

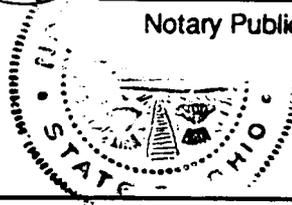
other dates _____

Roberta Baker

Sworn to before me and subscribed in my presence 24th day of Nov. A.D., 1995

Barbara L Thomas

Notary Public



Printer's Fees \$76.50

BARBARA L. THOMAS, Notary Public
in and For the State of Ohio
My Commission Expires March 10, 1999

RECEIVED

NOV 27 1995

STATEMENT DELAWARE GAZETTE CO.

ACCOUNTING DEPT

18 EAST WILLIAM ST. Fri, Nov 24, 1995
DELAWARE, OHIO 43015

Bill To: Mid Ohio Reg. Plann Comm

Brenda Noe'

19 95	TO BILL RENDERED	
	9 Inches at 8.50 one time	
	MORPC UPDATES TRANSPORTATION IMPROVEMNET PROGRAM AND REVIEW FOR ADOPTION THE REGIONAL TRANSPORTATION PLAN	
	RAN NOVEMBER 24,1995	\$76.50
Pavable by 15th of Following Month Please Send This Statement When		

COPY OF ADVERTISEMENT

MORPC UPDATES TRANSPORTATION IMPROVEMNET PROGRAM AND REVIEWS FOR ADOPTION THE REGIONAL TRANSPORTATION PLAN

The Mid-Ohio Regional Planning Commission (MORPC) is now reviewing the Regional Transportation Plan for annual adoption and updating the Transportation Improvement Program for State Fiscal Years 1997-2000. The Transportation Plan identifies needed transportation improvements through the year 2010 within the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County and Lima and Etna townships in Licking). The Transportation Improvement Program (TIP) is a schedule of transportation improvements, within the planning area, proposed for the period July 1996 through June 2000. Approximately \$600 million dollars in highway, transit and bikeway funds will flow to these

MORPC No. 15697

Date Rec. _____

Approved _____

Exhibit C

Draft TIP Press Release - February 28, 1996



NEWS RELEASE

For Immediate Release

February 28, 1996

CONTACT: Robert E. Lawler
Assistant Director, Transportation
228-2663

DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AVAILABLE FOR PUBLIC REVIEW

Mid-Ohio Regional
Planning Commission

2nd Main Street

Columbus, OH 43215-5272

Phone: (614) 228-2663

FAX: (614) 621-2401

The Mid-Ohio Regional Planning Commission (MORPC) announces the availability of the Draft Fiscal Year 1997-2000 Transportation Improvement Program (TIP) for public review and comment. A second update to the TIP, the final draft, will be available April 8, 1996. The comment period for the TIP runs from **February 23, 1996**, through **April 19, 1996**.

The TIP is a schedule of transportation improvement projects important to the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County, and Etna and Lima townships in Licking County) which will use more than \$800 million in federal, state and/or local funds between July 1996 and June 2000. The TIP also shows transportation improvements such as highway, transit, bike and pedestrian facilities, bridge, signals, etc., that are undergoing a federally required air quality conformity analysis. The TIP includes engineering studies expected to lead to construction in later years.

If you have any questions about proposed project locations, dates, costs, etc., you can review the draft TIP at MORPC, all Columbus Metropolitan Library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties. For more information, please contact Robert Lawler at 228-2663.

Exhibit D
CAC Minutes - March 11, 1996

CITIZEN ADVISORY COMMITTEE MEETING

March 11, 1996

Minutes

MORPC Conference Rooms ABC

5:30 p.m.

Members Attending:

Jon Beard

John Best

William Dodson

Frank B. Eastman

Ellsworth Eisleben

Sherry Fisher

Alf Hansen

Bill Inglis

Patrick McLean

Charles Pace

Debra Payne, Chair

Dan Province

Joseph Schaff

Marjorie Telerski

Vicky Unger

Kevin Williams

Staff Attending:

Bernice Cage

Mary Ann M. Frantz

Mohamed Ismail

Robert Lawler

Doug Moore

Brenda Noé

Ethan Ortman

Nancy Reger

The meeting was called to order at 5:35 p.m. by Chair Debra Payne.

1. Approval of January 8, 1996, Minutes

Ms. Payne asked for approval of the January 8, 1996, minutes. Charles Pace so moved and Bill Inglis seconded. The motion carried.

Ms. Payne stated that the new meeting schedule handed out is incorrect for May. The correct meeting date is May 6, not May 13.

2. Monthly Progress Report

Mohamed Ismail gave highlights of his progress report which was handed out, and discussed the Delaware Bypass update and project evaluation criteria update.

Mr. Ismail informed the committee that there is expected to be a \$7 billion reduction in total transportation funding for Fiscal Year 1997. Legislation to reorganize the U.S. Department of Transportation has been delayed. U.S. DOT Secretary Peña will hold regional hearings on the reauthorization of ISTEA in order to gather input from citizens and local governments. We will advise the committee when the meetings will be held. If desired, individuals may send letters to Secretary Peña. Mr. Inglis asked for guidance on how to word letters to the secretary. Mr. Ismail responded that we are working with other MPOs to determine guidelines on the main issues and what needs to be communicated to the administration. We are trying to build on the strengths of the act which has been in force for five years and lean

toward those areas and make minimum changes. The MPOs want to be sure they can maintain the flexibility to be able to tackle local issues through ISTEA.

Mr. Ismail stated that a request for air quality attainment was published in the Federal Register. March 4 was the last day for comments. If no adverse comments are received, hopefully by April 1 our area will be designated attainment.

Mr. Ismail advised the committee that the Northeast Transit Center project began on March 6. Wallace, Floyd, and Associates is the consultant chosen to design the center, with a view to making sure that the labor force and the transit center connect to the existing public transportation system.

a. **Project Evaluation Criteria Update**

Mr. Ismail explained that on November 4 a workshop was held at MORPC to decide how to prioritize MORPC-attributable fund projects, given our limited resources. A subcommittee was created. This subcommittee found that the process was too involved and too complex to affect the outcome of the current TIP cycle. The subcommittee will continue to meet and make recommendations for the 1998-2001 TIP.

b. **The Delaware Bypass**

Mr. Ismail stated that major changes have occurred in this study. The Ohio Turnpike Commission is no longer involved with this project and has given the responsibility to ODOT. The consultants hope to complete the study by the end of April. Mr. Ismail reviewed the alternatives being considered.

Mr. Inglis asked if the alternatives are mutually exclusive. Mr. Ismail stated they were not.

John Best asked why some of the western routes the bypass could have taken were eliminated. Robert Lawler stated they were eliminated by the committee because they felt the eastern routes to be more viable.

3. **TIP**

Mary Ann Frantz gave an overview of the TIP process and explained the graphics in the handout. Ms. Frantz stated this is a draft and some things may change before the final document is distributed. The final TIP will be presented to the committee on May 6 for its recommendation to the Policy Committee.

Citizen Advisory Committee
Meeting Minutes
March 11, 1996

Patrick McLean asked if information existed comparing how many dollars were allocated to intercity projects vs. suburban projects. He also asked for a breakdown comparing automobile traffic to nonautomobile traffic. Ms. Frantz stated she would try to get the information he requested.

Jon Beard asked how the determination is made on how much is spent for rehab/repair. Mr. Lawler stated this is based on several things, including somewhat on historical trends - where the resources were spent in the past. ODOT does want to make sure the existing systems stay up-to-date and will fund them before they do new projects.

Bill Dodson wanted to know how funds are distributed in annexed lands such as northeast Columbus and townships such as Mifflin and Clinton. Mr. Lawler stated we will define areas that represent the older community and the newer community, if they are inside or outside Columbus and try to come up with a summary along those lines.

John Best asked how the construction date for the Delaware interchange was projected. Mr. Lawler replied that the date was projected by ODOT. The highest ranked projects that are ready to go are funded first, then the projects on down the priority list.

Mr. Inglis asked if there is a cutoff figure for maintenance projects. Mr. Lawler responded that ODOT has a budget of about \$600 million of contracts let, and about three-fourths of that goes into maintenance. This does not include plowing, guard rail repair or anything else done with their own forces.

Mr. Best wanted to know when a policy might be set to curtail developers in out-of-control areas such as Sawmill. Mr. Lawler stated he did not know of any policy in place and if such a policy will ever be in force. Ms. Payne stated there is no regional planning for these areas. It is individual communities addressing these problems. The communities need to work collectively to accomplish this.

Dan Province asked if I-670 will be completed with the Spring-Sandusky interchange. Ms. Frantz replied that that portion of I-670 from Grandview onto SR 315 is considered a part of the Spring-Sandusky project.

Ms. Frantz invited the committee members to attend the TIP Open House on Monday, April 15, from 3-6 at MORPC. (The date was changed to April 22 after this meeting took place.)

4. **2020 Transportation Plan**

a. **Plan Development Process and Tentative Schedule**

Ethan Ortman gave an overview of the Transportation Plan process. He stated that MORPC is beginning a major update of its Transportation Plan to Year 2020 and expects to complete it in the spring of 1997. This plan is a critical part of our overall process. The general planning requirements come from the U.S. Department of Transportation. The principal responsibility of a metropolitan planning organization (MPO) is to have a continuing, cooperative and comprehensive (3C) planning process which means it is ongoing. The plan is updated every three years. The Transportation Plan as well as the TIP must be financially constrained. An air quality conformity analysis needs to be performed and we need to have a proactive public involvement process. The three major categories of planning factors are mobility and access for people and goods; system performance and preservation; and environmental and quality-of-life issues.

The Transportation Plan is usually for at least a 20-year horizon period and identifies the regional needs during that period. We could not get federal funding without the plan. The Transportation Plan should provide realistic solutions to area problems; establishes regional priorities; and provides a context for transportation planning. Projects on the plan must be sponsored by a community.

Mr. Ortman also explained the transportation development process we are beginning. The first thing is to identify transportation needs, then develop alternatives for dealing with some of the problems. The projects will then be prioritized and a financial plan developed. An air quality conformity analysis is then performed. There will be public involvement throughout this process. Mr. Ortman reviewed land use trends from the turn-of-the-century through today.

b. **Planning Assumptions**

Nancy Reger spoke about the portion of the Transportation Plan that focuses on identifying needs in the transportation system. In order to do that, traffic and land use forecasts are done. She works with the local governments to review their existing plans or comprehensive plans. One of the constraints in doing forecasts is controlled population figures by the state. Because the modeling is done through ODOT, all the MPOs must use the state population forecasts. Historically, central Ohio has been short-changed on population growth. Assumptions used to make forecasts were broken down into three types: demographic, employment and development. Demographic Assumptions. These are autos/household increases, people/household decreases and workers/household increases. Employment

Citizen Advisory Committee
Meeting Minutes
March 11, 1996

Assumptions. Unemployment rates are expected to remain stable at 5.5 percent through Year 2020. Thirteen percent of the workers come from outside the central Ohio area, and 5 percent of the people living in central Ohio leave that area to go to work. Office employment in 1990 made up about 30 percent of the work force. According to forecasts from the Ohio Bureau of Employment Services, about 36 percent of the work force in 2020 will be in the office, and 16 percent will be in warehousing. Development Assumptions. When transportation improvement is planned, adjacent lands will be opened for development. Downtown will continue to be stable and will continue to be a strong portion of our economy. The older established part of town will remain stable, and based on some planning designs from the city of Columbus, it should actually grow somewhat. The outlying area will be relatively flat. Population inside downtown will increase slightly, will stay the same inside I-270 and be about 80 percent outside I-270. Employment downtown and inside I-270 will remain stable, and a 62-percent growth is assumed outside I-270. These forecasts assume things will continue much as they have in the past.

Ms. Reger answered questions.

A suggestion was made to invite political leaders to speak at a CAC meeting. Ms. Payne stated she would check into it.

5. **Other Business**

Ms. Payne reminded the committee that the next meeting is Monday, May 6. She asked for a motion to adjourn. The motion was made by Ellsworth Eisleben and seconded by Vicky Unger. The meeting adjourned at 7:27 p.m.

Respectfully submitted,

Bernice Cage
Secretary

Exhibit E

TAC Minutes - March 13, 1996

**TRANSPORTATION ADVISORY COMMITTEE
MEETING MINUTES**

Wednesday, March 13, 1996
2 p.m.

**Mid-Ohio Regional Planning Commission
Conference Rooms ABC**

Members Present:	Robert Smith (Chair) Stanley Wilson (Vice Chair) Lin Carver Brooks Davis Bob Parker for Mike Greene Jean Hansford Tom Kauffman	Mohamed Ismail (Secretary) Mike Longberry Dave Phillips Dorothy Pritchard Clyde Seidle for Kim Shepherd Ralph Smithers Dave Younger
Members Absent:	Bill Bell Paula Birk Roger Davis Harry Judson	Fred Stults Jeff Smith Tim Williams
Guests:	Bill Carter Brenda Moore, ODOT Ayman Ismail, OSU	Balbir Kindra, city of Dublin Leslie Malek, Chamber of Commerce
Staff:	Ahmad Al-Akhras Maggie Bartolomucci Bernice Cage Mary Ann Frantz Robert Lawler	Mike Lilly Doug Moore Ethan Ortman Nancy Reger

Chair Robert Smith called the meeting to order at 2:00 p.m. and welcomed everyone to the meeting. Alternates attending were Clyde Seidle, representing Kim Shepherd, and Bob Parker, representing Mike Greene.

1. Approval of February 14, 1996, Minutes. Mr. Smith asked for approval of the minutes of the February 14, 1996, meeting. Jean Hansford made a motion to accept the minutes. Dave Younger seconded and the minutes were approved.

Transportation Advisory Committee
Meeting Minutes
March 13, 1996

2. Monthly Progress Report. Mohamed Ismail stated that a schedule had been placed at each member's seat that contained the dates and cities of the 10 regional hearings to be held on ISTEA reauthorization by U.S. DOT Secretary Pena. He also highlighted the fact that the period for comments on the central Ohio nonattainment area had expired on April 4, and MORPC should be notified by the end of March on the status. Ralph Smithers asked who the committee members for the Northeast Transit Center selection process were. The committee consisted of COTA, MORPC, FTA and the Limited.

3. Resolution T-4-96 "AMENDMENT TO THE BYLAWS OF THE TRANSPORTATION ADVISORY COMMITTEE (TAC) OF THE MID-OHIO REGIONAL PLANNING COMMISSION"

Mr. Ismail stated that On February 22, the Policy Committee had moved to table this resolution to allow the committee time to review the bylaws and make comments. Comments were received after the mailing date of the TAC package. Changes were made to the resolution and the bylaws based on the comments received. One major change that was proposed to the bylaws by the vice-chair was the addition of a sentence that states, "The Policy Committee may appoint other such members whose broad technical knowledge and experience in transportation planning or related field would enhance the transportation planning process." Other than this change, the remainder of the changes were editorial.

Mr. Smithers made a motion to recommend Resolution T-4-96 for Policy Committee adoption. Lin Carver seconded and the motion carried.

Resolution T-6-96, "AMENDING THE FISCAL YEAR 1996 WORK PROGRAM BUDGET"

Robert Lawler stated that each year the budget is examined and this year more time was spent on the TIP, on ODOT's major/new prioritization process and quite a bit of time on trying to develop some tools to help prioritize MORPC's attributable federal funds. More money was also spent on the Delaware Bypass and the North Outerbelt MIS. A fourth lane has been approved on I-270 and as a result a major/new investment study must be done. Some work will be delayed as a result of the extra time needed on the North Outerbelt Corridor Study and the Delaware Bypass Study. Work is being delayed on the development of the Congestion Management System. Air quality does not have as much work involved because of redesignation and other adjustments.

Mr. Smith asked for a motion to recommend Resolution T-6-96 for Policy Committee adoption. Mr. Ismail so moved and Mr. Hansford seconded. The motion carried.

Transportation Advisory Committee
Meeting Minutes
March 13, 1996

Project Status Update. Mike Lilly pointed out the following projects to the committee: the Goodale Boulevard bridge replacement is to be sold March 26; SR 104 resurfacing project should be opened for bids on March 13; the Morse/Hamilton Road intersection improvement will have been sold by the next TAC meeting and the NEFW landscaping project is new to the report.

4. Informational Items

Pedestrian Survey Results. Bernice Cage stated there had been a 58 percent response rate to the survey. It had been hoped that the survey would answer why people walk and if walking could serve as an alternative mode of transportation. Half of the responses felt walking could serve as an alternative to driving in some of the areas. Approximately one-third of the respondents felt that people walk because there is an extensive system of sidewalks and other pedestrian facilities and another third felt people walked because the community had short distances between activity centers. The two most popular traffic calming measures stated were four-way stop signs and use of police patrols. Many respondents stated they wanted a method to reduce traffic because of the large incidents of high speed in residential areas. They also acknowledged that four-way stop signs and the use of police patrols helped to reduce speed in their communities. Ms. Cage identified 16 needs the communities felt were unmet pedestrian needs. During the discussion, it was noted that it is unlawful for four-way stop signs to be used as a traffic calming device. It was also cautioned that there are specific prohibitions against using stop signs for speed control.

Progress on Livable Communities Project - Doug Moore stated that COTA's long range plan calls for a significant expansion of suburban bus service. In the future this will include 13 transit centers to bring Columbus, the central Ohio area and the outerbelt together. The initial suburban transit center (the Northeast Transit Center) will be in the vicinity of I-270 and Morse Road. There will be various types of bus services that will be integrated, such as an express service to downtown, a reverse-commute express service from downtown to the transit center, crosstown buses and neighborhood circulators. These different types of services will come together and schedules will be timed so they will meet at the transit center. It is an off-street facility that is safe and convenient for people moving between buses. The focus is on providing a transit service that provides more convenient movement to suburban destinations.

The Northeast Transit Center will be the initial suburban bus center because of the large employment base in the area and the opportunity for COTA to integrate transit planning with landuse planning. Because of this opportunity, COTA has received an FTA "livable communities" grant which is designed to integrate transit and development. The grant

Transportation Advisory Committee
Meeting Minutes
March 13, 1996

includes \$400,000 for planning and design, and a \$3 million commitment toward building this transit center. MORPC is under contract with COTA to manage this project. A considerable amount of the work will be contracted to the consultant team of Wallace Floyd and subcontractors. Wallace Floyd did the work on the multimodal transportation terminal that would be located across from the Convention Center. The suburban transit center would provide similar functions, although at a smaller scale.

Mr. Moore stated that a transit service plan will be developed to integrate express service, neighborhood service and service within the 1,000-acre development site. Analysis will be done of alternative fuels and different bus technologies. The entire analysis will take approximately nine months. Another presentation will be given to TAC to show the results of the analysis. Construction may be underway within two years. This will depend on the private development schedule and how it relates to area transit needs. This may be a very fast-track project.

Draft TIP Summary and Fiscal Issues - Mary Ann Frantz stated that basically this is the same outline as last year. A key is located in the TIP that is indexed by agency to help locate particular areas and projects. She explained the handouts which gave an overall picture of the four years (FY97-2000) of all the funds that are involved in the TIP, including the state and local projects for both highway and transit. ODOT-controlled funds were shaded to reflect how much is controlled by ODOT. The bulk of the money is on major/new. The condensed summary of the criteria that the state used showed 70 percent of the project score was transportation efficiency and safety. The next 30 percent was economic development. If there was any bonus, that project received additional points. Central Ohio did very well according to the announcement on February 16. Charts were shown comparing what was announced last year versus this year on the North Outerbelt, Spring-Sandusky and the Collector-Distributor Morris Stelzer (CDMS). The outerbelt widening does include the fourth lane. Previously this was only on the TIP for two years. This TIP shows the Spring-Sandusky interchange with all phases in the TIP. In the previous year it was phased out over a long time. The whole CDMS project is in the TIP. Previously central Ohio has consistently received 26 to 28 percent of the funds. MORPC attributable funds have been steady in the past and it is assumed under ISTEA they will remain constant. The demands on MORPC funds compared to what is available will cause a \$60 million negative by the end of SFY2000. There is not enough funds for the needs. Ms. Frantz said the final draft of the TIP will be mailed to TAC around April 9. The Open House is April 15 and closing comments are due on April 19. The final TIP will be presented on May 8 with approval by Policy Committee on May 16.

Bob Lawler stated that in the packet there was a memo and attachments relating to the fiscal

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March 13, 1996

balance. He said a task force had been formed in January to try to address prioritizing projects to available funding. This had been more complicated than expected and it couldn't be finished in time for this TIP. This working group will continue to meet to conclude this over the summer so this process will be available to use in the next TIP cycle. TAC is being asked by members of local governments who have projects in this TIP for their recommendations as to what strategies should be applied to this list of projects. A set of rules was made up and applied to the list. The funds were given to the most important projects. The remainder of the funds were spread out to the different areas so that one area did not benefit more than another. TAC is being asked how to approach this, what kinds of projects should be kept and what kinds of projects should be postponed. Since staff has proposed changing some projects on the schedule, this has to be brought to TAC as well as Policy for adoption. This will also be taken to the Citizen Advisory Committee.

It was decided that in order to receive comments from TAC before the due date, a special meeting would be held on Monday, March 18 at 10 a.m. in conference room ABC to review and prioritize the projects.

Planning Assumptions for Transportation Plan - Ethan Ortman gave a presentation on the planning assumptions being followed to update the Transportation Plan for the year 2020. This will be a different plan, including more efforts to meet the ISTEA requirements. The plan will include discussion of system maintenance and operating costs and air quality. Issues that have not been dealt with before will also be included in the plan, such as the effects of the plan on landuse, social, economic, environmental and energy resources and also freight movement issues. There is a lot of growth in central Ohio at a time that there are major financial limitations and other constraints. Identifying the transportation needs is the first step in the plan development process. The next step will be to look at alternative strategies and alternative projects. Following that there will be a project evaluation and prioritization phase. The plan is scheduled for completion by spring of next year. Overheads were shown on the process. ISTEA planning factors will be addressed, including mobility and access for people and goods (including freight movement), system preservation and performance, and quality of life issues. Major suburban growth including movement of employment to the suburbs, heavy traffic between suburbs and suburban congestion are continuing as major trends. Vehicles per household between 1980 and 1990 increased significantly. Driving alone to work increased. Vehicle miles per travel increased almost double the population increase of 1980 to 1990. Other transportation assumptions include parking costs, transit fares and fuel costs. The assumption is that these will stay the same relative to incomes. A major financial assumption is that there is not going to be enough money to fund all the transportation needs in central Ohio. There will be more projects than funding. We expect to receive over time approximately 10 percent of ODOT funds, which

Transportation Advisory Committee
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March 13, 1996

represents our approximate proportion of state population. Other federal and state funds will be assumed to remain constant. Innovative financing techniques will be important because of the expected funding shortfall.

Nancy Reger spoke about the transportation plan focusing on identifying needs in the transportation system. In order to do that, traffic forecasts and landuse forecasts are done. She works with all the local governments in reviewing their existing local plans or comprehensive plans. One of the constraints in doing the forecasts is controlled population figures by the state of Ohio. Because the modeling is done through ODOT, all the MPOs are asked to use the state population forecasts. Historically central Ohio has had a short change on population growth. The assumptions used in making forecasts were broken down into three types: demographic, employment and development. Demographic Assumptions. These are autos/household increases, people/household decreases and workers/household increases. Employment Assumptions. Unemployment rates are expected to remain stable at 5.5 percent through the year 2020. Thirteen percent of the workers come from outside the central Ohio area and 5 percent of the people that live in central Ohio leave that area to go to work. Office employment in 1990 made up about 30 percent of the workforce. According to the Ohio Bureau of Employment Services' forecasts, about 36 percent of the workforce in 2020 will be in the office; 9 percent of employment was in warehousing in 1990 with 16 percent forecasted by 2020. Development Assumptions. When transportation improvement is planned, adjacent lands will be opened up for development. Downtown will continue to be stable and will continue to be a strong portion of our economy. The older established part of town will remain stable, and based on some planning designs from the city of Columbus, it should actually grow a little. The outlying area will be relatively flat. Population inside downtown will increase slightly, inside I-270 will stay the same and outside I-270 is expected to capture 80 percent of the population growth in the region. Employment downtown and inside I-270 will remain stable and outside I-270, a 62 percent growth is assumed. These forecasts are assuming things are going to continue much the same as they have in the past. The problems being faced now are going to be even more crucial in the future.

Mr. Lawler stated that assumptions for fiscal balance have to be made over the life of the plan. This is through the year 2020. Any projects and strategies that are included in the plan must be financially achievable. Assumptions about innovative financing should be reasonable assumptions. In times past, assumptions have been made that taxes could be raised or there would be a federal grant. Those types of assumptions cannot be made under ISTEA regulations. The reason this basic information was brought to TAC was to show where this plan is headed. What is being done for the TIP, is being done on a larger scale for the T Plan. The T Plan is supposed to establish the goals and the direction on all projects. Projects should be on the T Plan, come off there and move very easily onto the TIP.

Transportation Advisory Committee
Meeting Minutes
March 13, 1996

5. Other Business.

Mr. Ismail stated that on Friday, March 15, ODOT will announce the projects on the Transportation Enhancement Program that have been approved.

The meeting adjourned at 3:17 p.m.

Respectfully submitted,


Mohamed Ismail, Secretary

/mkb

Exhibit F

Final Draft TIP Legal Notice - April 3, 1996

Final Draft TIP Press Release - April 3, 1996

Columbus Dispatch - Proof of Publication

Call and Post

The Delaware Gazette

Newspaper Article - Dublin Villager This Week -
April 15, 1996



Mid-Ohio Regional Planning Commission
285 E. Main St.
Columbus, Ohio 43215-5272

Phone: (614) 228-2663
Fax: (614) 621-2401

FAX TRANSMITTAL COVER SHEET

DATE: April 3, 1996

TO: Stephanie, Columbus Dispatch, 461-7583
W. Rickey Barksdale, Columbus Call & Post, 224-8517
Barb Thomas, Delaware Gazette, 363-6262
Public Notice Dept., Lancaster Eagle Gazette, 1-614-654-8271
Juanita Surbaugh, The Advocate, 1-614-345-1636

FROM: Mohamed Ismail, Director of Transportation
Mid-Ohio Regional Planning Commission

MESSAGE: Please run this legal advertisement (attached) in your next possible edition.
One column ad. Please send proof of ad (affidavit). Thank you.

If there is a **problem** with this transmission, call **Maggie Bartolomucci** at **(614) 228-2663**.
This transmission has 2 pages including cover sheet.

MORPC TRANSPORTATION PLAN AND DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AVAILABLE FOR PUBLIC REVIEW AND COMMENT

The Mid-Ohio Regional Planning Commission (MORPC) announces the availability of the updated Transportation Plan and the draft 1997-2000 Transportation Improvement Program (TIP) for public review and comment from April 10 through April 26, 1996. A public information open house on these has been scheduled between 3 and 6 p.m. on Monday, April 22, 1996, at MORPC, 285 East Main Street, Columbus, Ohio, 43215. Staff will be available to discuss and answer questions. The Transportation Plan identifies needed improvements in the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County, and Etna and Lima townships in Licking County). The TIP is a schedule of transportation improvements which will use more than \$800 million in federal, state and local funds between July 1996 and June 2000. The transportation improvements include highway, public transportation, bikeways and pedestrian facilities. It also includes planning and engineering studies that lead to construction in later years. A federally required air quality conformity analysis will be completed for the TIP. Copies of the Transportation Plan and the draft TIP are available at MORPC offices, Columbus Metropolitan Library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties. They will also be made available for review at the open house. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address by 5 p.m., April 26, 1996, or during the public information open house. Individuals with sight, hearing disabilities or other special needs will be accommodated upon reasonable prior notice. The Transportation Plan and the TIP will be acted upon by MORPC on May 16, 1996.

William C. Habig
Executive Director

Mohamed Ismail
Director of Transportation

TRANSACTION REPORT

P. 01

APR-03-96 WED 10:46

BROADCAST

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#
APR-03	10:39	4617583	1' 05"	2	SEND	(M) OK	51
	10:41	2248517	1' 23"	2	SEND	(M) OK	51
	10:42	3636262	53"	2	SEND	(M) OK	51
	10:44	16146548271	52"	2	SEND	(M) OK	51
	10:45	16143451636	1' 07"	2	SEND	(M) OK	51

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Mid-Ohio Regional Planning Commission
285 E. Main St.
Columbus, Ohio 43215-5272

Phone: (614) 228-2663
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W. Rickey Barksdale, Columbus Call & Post, 224-8517
Barb Thomas, Delaware Gazette, 363-6262
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Juanita Surbaugh, The Advocate, 1-614-345-1636

For Immediate Release

April 3, 1996

CONTACT: Robert E. Lawler
Assistant Director, Transportation
228-2663

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Mid-Ohio Regional
Planning Commission

285 East Main Street

Columbus, OH 43215-5272

Phone: (614) 228-2663

FAX: (614) 621-2401

The Transportation Plan identifies needed improvements in the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County, and Etna and Lima townships in Licking County).

The TIP is a schedule of transportation improvements which will use more than \$800 million in federal, state and local funds between July 1996 and June 2000. The transportation improvements include highway, public transportation, bikeways and pedestrian facilities. It also includes planning and engineering studies that lead to construction in later years. A federally required air quality conformity analysis will be completed for the TIP.

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THE COLUMBUS DISPATCH
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Carla Daniel,
Voluntary Sales Supervisor,

The Columbus Dispatch, a newspaper published at Columbus, Franklin County, Ohio, with a daily paid circulation of more than 25,000 copies, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in The Columbus Dispatch for 1 Time (s) on

April 5, 1996

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Carla Daniel

Subscribed and Sworn on this 5th day of April 1996 as witness my hand and seal of office.

Mohamed Ismail
NOTARY PUBLIC - STATE OF OHIO

MORPC TRANSPORTATION PLAN AND DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AVAILABLE FOR PUBLIC REVIEW AND COMMENT
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William C. Habig
Executive Director
Mohamed Ismail
Director of Transportation
4/5

**MORPC UP-
D A T E S
TRANSPORTA-
TION IMPROVE-
MENT PROGRAM
AND REVIEWS
FOR ADOPTION
THE REGIONAL
TRANSPORTA-
TION PLAN**

The Mid-Ohio Regional Planning Commission (MORPC) is now reviewing the Regional Transportation Plan for annual adoption and updating the Transportation Improvement Program for State Fiscal Years 1997-2000. The Transportation Plan identifies needed transportation improvements through the year 2010 within the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County and Lima and Etna townships in Licking). The Transportation Improvement Program (TIP) is a schedule of transportation improvements, within the planning area, propose for the period July 1996 through June 2000. Approximately \$600 million dollars in highway, transit and bikeway funds will flow to these projects through the end of this century. Projects within the TIP are eligible for federal, state and/or local funding. The TIP must adhere to requirements of the federal ISTEA (Intermodal Transportation Efficiency Act) as well as the Clean Air Act Amendments of 1990. It outlines the "air quality conformity" procedures and lists the transportation projects that undergo such scrutiny. Copies of the Transportation Plan as well as previous TIPs are available at MORPC offices, 285 East Main Street, Columbus, Ohio 43215, all Columbus library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties or by calling the MORPC Transportation Department at (614) 228-2663. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address, by 5 p.m., April 19, 1996.

**William C. Habig
Executive Director**

**Mohamed Ismail
Director of
Transportation**

Proof Of Publication

STATE OF OHIO Delaware County

Roberta Baker being duly sworn, says he/she is

Bookkeeper of the **DELAWARE GAZETTE**

a newspaper printed and published in Delaware, Delaware County, Ohio, and of general circulation therein, and that the annexed

ADVERTISEMENT

was published in said Newspaper one consecutive time the first insertion be in 5th day April in on the A. D., 1996

other dates _____

Sworn to before me and subscribed in my presence 5th day of April A.D., 1996

Barbara L. Thomas
Notary Public

Printer's Fees \$80.75

Notary Public
for the State of Ohio
My Commission Expires March 10, 1999

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STATEMENT
DELAWARE GAZETTE CO.

APR 08 1996

18 EAST WILLIAM ST. April 5, 1996
DELAWARE, OHIO 43015

ACCOUNTING DEPT.

Bill To: Mid Ohio Reg. Plann Comm.

Mohamed Ismail

19 <u>96</u>	TO BILL RENDERED 9.5 Inches at 8.50 one time Update Transportation Plan Ran April 5, 1996	<u>\$80.75</u>
Payable by 15th of Following Month Please Send This Statement When		

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MORPC No. _____
Notice of
Purchase Requisition Required

Approved _____

**MORPC TRANSPORTATION
PLAN AND DRAFT
TRANSPORTATION
IMPROVEMENT PROGRAM
AVAILABLE FOR PUBLIC
REVIEW AND COMMENT**

The Mid-Ohio Regional Planning Commission (MORPC) announces the availability of the updated Transportation Plan and the draft 1997-2000 Transportation Improvement Program (TIP) for public review and comment from April 10 through April 26, 1996. A public information open house on these has been scheduled between 3 and 6 p.m. on Monday, April 22, 1996, at MORPC, 285 East Main Street, Columbus, Ohio, 43215. Staff will be available to discuss and answer questions. The Transportation Plan identifies needed improvements in the MORPC transportation planning area (Franklin and Delaware counties, Violet and Bloom townships in Fairfield County, and Etna and Lima townships in Licking County). The TIP is a schedule of transportation improvements which will use more than \$800 million in federal, state and local funds between July 1996 and June 2000. The transportation improvements include highway, public transportation, bikeways and pedestrian facilities. It also includes planning and engineering studies that lead to construction in later years. A federally required air quality conformity analysis will be completed for the TIP. Copies of the Transportation Plan and the draft TIP are available at MORPC offices, Columbus Metropolitan Library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties. They will also be made available for review at the open house. Comments may be submitted in writing to Mohamed Ismail, Director of Transportation, at the above address by 5 p.m., April 26, 1996, or during the public information open house. Individuals with sight, hearing disabilities or other special needs will be accommodated upon reasonable prior notice. The Transportation Plan and the TIP will be acted upon by MORPC on May 16, 1996.

William C. Habig
Executive Director
Mohamed Ismail
Director of Transportation

Friday, April 5, 1996-1t

MORPC to show TIP plan April 22

By KATIE FOLEY
Villager Staff Writer

Dub Villager
Tues Week

4/15/96

The updated Transportation Improvement Plan and draft of plans from 1997 through 2000 will be available for public review and comment until April 26.

Bob Lawler, assistant director of transportation for MORPC, said the document identifies needed improvements in the Mid-Ohio Regional Planning Commission's transportation planning area.

The agency's planning area includes Franklin and Delaware counties. It will also include Violet and Bloom townships in Fairfield County and Etna and Lima townships in Licking County.

The agency will hold a public information open house between 3 p.m. and 6 p.m. Monday, April 22, at MORPC offices, 285 E. Main St., Columbus.

Staff members will be available to discuss and answer questions, Lawler said.

The TIP is a schedule of transportation projects which will use more than \$800 million in federal, state and local funds between July 1996 and June 2000, he said.

Projects include highway, public transportation, bikeways and pedestrian facilities.

The plan also includes planning and engineering projects for future construction, Lawler said.

A federally required air quality conformity analysis will be completed for the TIP, he added.

Copies of the plan and the draft TIP can be picked up at MORPC offices, the Columbus Metropolitan Library branches and main libraries in Delaware, Licking, Fairfield and Franklin counties. They will also be available at the open house.

Comments may be submitted in writing to Mohammed Ismail, director of transportation, at the agency's Main Street office by 5 p.m. April 26, or during the public information open house.

Individuals with sight, hearing disabilities or other special needs will be accommodated with reasonable prior notice, Lawler said.

The agency is scheduled to act on the transportation plan and the TIP May 16.

Exhibit G

Open House Invitation

**THE REGIONAL TRANSPORTATION PLAN
TRANSPORTATION IMPROVEMENT PROGRAM (TIP)
*OPEN HOUSE***

You are invited to attend a public information open house on the proposed Transportation Plan and the Final Draft FY1997-2000 TIP on ***Monday, April 22, 1996, from 3 to 6 p.m.*** at the Mid-Ohio Regional Planning Commission, 285 East Main Street, Columbus. (Free parking in rear.)

The Transportation Plan identifies needed transportation improvements throughout the region. The TIP is a four-year schedule of highway and transit improvements important to the region with a specific source of funding identified. It also shows those improvements which are presently in some stage of project development in the Columbus area.

Please review and comment on the transportation improvements scheduled for your area. If you cannot attend, you can review the Transportation Plan and the TIP at the public library and send your comments to be received by ***April 26, 1996***. Please call Robert Lawler at 228-2663 for more information.

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TRANSPORTATION IMPROVEMENT PROGRAM (TIP)
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Please review and comment on the transportation improvements scheduled for your area. If you cannot attend, you can review the Transportation Plan and the TIP at the public library and send your comments to be received by ***April 26, 1996***. Please call Robert Lawler at 228-2663 for more information.

Exhibit H
Open House Attendance Sheet

MORPC TIP OPEN HOUSE
 MONDAY, APRIL 22, 1996
 3-6 p.m.

Attendance Sheet

NAME	AFFILIATION	MAILING ADDRESS	VOICE PHONE	FAX PHONE
1. John R Cowart	Limited Credit Svcs	220 West Shrock Rd Westerville, OH 43081	523-5108	523-5196
2. GRANT MILLIKER	SHARON HEIGHTS CIVIC ASSN.	5268 RUSH AVE 43214	888-4858	
3. Paul Siemer	Coaxial Communication	3770 E Livingston Av Columbus 43227	236-1292x453	
4. Dick Bangs	Franklinston Board of Trade	455 W. Broad St. Cols. OH 43215	224-7550	224-8180
5. Tim Wagner	Dennison Place Assn.	1279 Hunter Ave Cols 43201	291-3337	
6. Joe Schaff	CAC EAST	7461 N. 27th Rd. Pataskala, Oh	927-4232	
7. Bill Inglis	MORPC CAC	87 W. Jeffrey Pl Columbus OH 43214	267-7550	267-3185
8. ALINA BUTLER	GREATER HILLTOP CDC	2558 W. BROAD ST COLS OH 43204	276-0060	276-5412
9. Vicky Linger	MORPC CAC	8367 Cliffhorne Cds 43235	645-3876	
10. Pat McLean	MORPC CAC Greater Hilltop Area Comm	239 S. Bingen Ave Columbus OH 43204	466-0637 W 272-5146 H	

MORPC TIP OPEN HOUSE
MONDAY, APRIL 22, 1996
3-6 p.m.

Attendance Sheet

NAME	AFFILIATION	MAILING ADDRESS	VOICE PHONE	FAX PHONE
11. JOHN GIDEON	COLUMBUS OUTDOOR PURSUITS	1093 S. FOURTH ST COLUMBUS, OH. 43206	444-9906	444-1885
12. Nancy Beyer	MORPC / Del Resident	228 E Main St Columbus OH 43015	228-2663	621-2401
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Exhibit I
Public Comments - Summary

FROM THE GHDCDC

A very
juicy fax.



Date: APRIL 25, 1996

Pages to follow: 1

To: MARY ANN FRANTZ
MORPC.

FAX 621-2401

From: Greater Hilltop Community Development Corporation Tele: 276-0080

2558 West Broad Street, Columbus OH 43204 FAX: 276-5412

Comments: AS PER OUR CONVERSATION AT THE
TIP OPEN HOUSE.

TO: MARY ANN FRANTZ - MORPC
FR: ALINA BUTLER, CHAIR, GREATER HILLTOP AREA PLAN
DATE: APRIL 25, 1996. DRAFT FY97-00
TRANSPORTATION IMPROVEMENT PROGRAM

COMMITTEE,
↓
2558 W. BROAD
COLUMBUS OH 43204
↓
276-0060

PUBLIC COMMENT FORM

If you have any comments concerning the proposed Draft FY97-00 Transportation Improvement Program, please submit them in writing to the Mid-Ohio Regional Planning Commission (MORPC), 285 East Main Street, Columbus, Ohio 43215, Attn: TIP. Comments must be received in the MORPC offices by 5 p.m. on Friday, April 26, 1996.

1) THE PLAN SHOULD INCLUDE THE EXTENSION OF HAGUE AVE FROM BRIGGS SOUTH TO CLIME RD - THIS NEED HAS BEEN NOTED BY THE COMMUNITY SINCE THE EARLY 1980'S THIS NEED STILL EXISTS AND IS NOTED IN THE "GREATER HILLTOP AREA PLAN" - THIS WILL PROVIDE RESIDENTS WITH ACCESS TO GOODS & SERVICES SOCIAL AND EDUCATIONAL AND EMPLOYMENT OPPORTUNITIES. IT WILL ALSO CREATE ACCESS TO NEW MARKETS FOR EXISTING BUSINESSES AND ENCOURGE ECONOMIC DEVELOPMENT THROUGH NEW BUSINESSES.

2) THE PLAN SHOULD ALSO INCLUDE A CONNECTOR FROM THE HILLTOP TO ROUTE #33 - EITHER BY EXTENDING GRANDVIEW AVE SOUTH TO WEST BROAD ST OR EXTENDING FISHER ROAD EAST TO #33 - FOR ALL THE SAME REASONS AS STATED ABOVE.

DIRECT



TRANSPORTATION

APR 25 1996

DEPARTMENT

O: TIP file
C: REL
MAMF
BC

Columbus Outdoor Pursuits

promoting outdoor recreation and education for over 50 years

April 24, 1996

Mid-Ohio Regional Planning Commission
285 East Main Street
Columbus, Ohio 43215-5272

Re: Draft FY1997-2000 Transportation Improvement Plan

Dear MORPC:

Thank you for inviting us to attend the public information open house on the proposed Transportation Plan and the Final Draft FY1997-2000 Transportation Improvement Plan and for inviting us to review and comment on the transportation improvements scheduled for the central Ohio area.

The MORPC staff who were present for the open house were most courteous, informative, and helpful. We appreciate their providing us with all the information we needed.

I would like to express my concern with the timing of and access to the open house. Holding the open house in the late afternoon (3 to 6 p.m.) of a weekday is not conducive to attendance by members of the general public. Further, when I arrived just after 5 p.m. the front doors to the MORPC building were locked. If someone did not happen to be exiting the front doors at just that moment I might have concluded that the open house was over and left. Last year one of our members did just that. I would suggest that during the hours of the open house the building should be just that--open.

We do not have any specific comments on any of the individual projects in the Transportation Improvement Program (TIP). All of the projects appear to be necessary and worthwhile.

Our concern is not with what all of the governmental jurisdictions are proposing, but rather with what they are **not** proposing. It is plain from a review of both the narrative portions of the plan

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P.O. Box 14384
Columbus, Ohio 43214
614•447•1006
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e-mail 76774.631@compuserve.com

Letter

To: MORPC

Re: TIP Comments

Date: April 24, 1996

Page 2

as well as each of the projects included in the plan that the proposed improvements in the transportation systems in central Ohio represent an overall effort to ameliorate the effects of ever-increasing traffic congestion. The projects included in the TIP are designed to alleviate the congestion and thereby make it easier for more vehicles to use our transportation systems.

In the abstract this all appears to be benign. In reality it represents a further substantial erosion in the quality of life in central Ohio. For while new roads are being built and old roads are widened and improved so that more and more people can drive more and more automobiles to more and more places with less inconvenience, the conditions for bicycle and pedestrian transportation continue--steadily and inexorably--to deteriorate.

It would not be unfair to suggest that the proposed improvements benefit automobile transportation at the expense of bicycle and pedestrian transportation. Take a good look at the transportation plan. Simply consider all of the new roads and road widenings that are proposed in this plan (leaving aside all of the new roads and road widenings of the past ten to twenty years). Only an infinitesimally small number of road widening and improvement projects take into consideration and make any allowance for bikes or pedestrians. Many of the projects involve roads that are--or were until recently--popular routes for bikes and pedestrians. The TIP appears to be a deliberate and calculated plan to displace bicycle and pedestrian transportation with automobile transportation. The proposed improvements present an opportunity--at relatively low cost--to accommodate and to promote bicycle and pedestrian transportation alternatives. Sadly, they represent, by an large, an opportunity lost--perhaps forever.

One would have expected that central Ohio's somewhat late development would have enabled it to benefit from the mistakes of other urban areas that sat back as their quality of life was lost to automobile congestion and smog. Those urban areas that are well known for their quality of life include bikeways and pedestrian walkways as an integral part of their transportation systems. It is obvious from the TIP that bicycle and pedestrian transportation is not a serious priority in central Ohio. The bike and pedestrian projects included in the draft TIP do not represent a genuine effort to improve or even to maintain a safe and viable bike and pedestrian transportation system here.

Perhaps we can take some solace in the fact that even while bikes and pedestrians continue to be pushed off more and more roads by increasing traffic congestion, planning for bikeways and walkways continues. But in this TIP bikes and pedestrians get only short shrift. Recreational bike paths, unconnected bike lanes, and nonexistent pedestrian walks are not a comprehensive area-wide transportation system for bikes and people. Alleviating traffic congestion for the benefit of automobiles does not represent a net improvement in the quality of life. Under this TIP conditions for bicycles and pedestrians will further deteriorate over the next four fiscal years.

Letter
To: MORPC
Re: TIP Comments
Date: April 24, 1996
Page 3

We sincerely wish that we could be more positive about the TIP. We look forward to progress in the future.

Thank you for giving us the opportunity to comment.

Very truly yours,

A handwritten signature in black ink, appearing to read "John J. Gideon". The signature is written in a cursive style with a large, sweeping initial "J".

John J. Gideon
President

Exhibit J

CAC Agenda/Minutes - May 6, 1996
(minutes not included - awaiting approval)

TAC Agenda/Minutes - May 8, 1996



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

NOTICE OF A MEETING

* * * * *

CITIZEN ADVISORY COMMITTEE

MID-OHIO REGIONAL PLANNING COMMISSION
285 East Main Street
Columbus, Ohio
Conference Rooms ABC

Monday, May 6, 1996
5:30 p.m.

A G E N D A

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

- 1. Approval of March 11, 1996, minutes (enclosed)
2. Monthly Progress Report - Mohamed Ismail (handout)
3. Resolutions and Project Status Report

Delaware Bypass (enclosed)

Presentation - Mike Schipper, Ohio Corridor Development Consortium

Resolution T-13-96: ACKNOWLEDGING THE WORK COMPLETED AND THE RECOMMENDATION OF THE ADVISORY COMMITTEES OF THE DELAWARE BYPASS MAJOR INVESTMENT STUDY - Robert Lawler

Resolution T-11-96: REEVALUATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (enclosed) - Mary Ann M. Frantz

- 4. Other business

NEXT CAC MEETING IS MONDAY, JULY 15, 1996.

COMMITTEE MEMBERS: PLEASE CALL BRENDA AT 228-2663 TO CONFIRM YOUR ATTENDANCE.



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

NOTICE OF A MEETING

* * * * *

TRANSPORTATION ADVISORY COMMITTEE

MID-OHIO REGIONAL PLANNING COMMISSION

285 East Main Street
Columbus, Ohio
Conference Rooms ABC

Wednesday, May 8, 1996
2 p.m.

A G E N D A

John S. Ensign
Chair

Judith W. Stillwell
Vice Chair

Gary Panek
Secretary

Judith W. Stillwell
Chair
Administrative Committee

Webster D. Junk
Chair
Franklin County Planning
Area Subcommittee

Timothy A. King
Chair
Legislative Task Force

Julie Gafford
Chair
Local Government
Committee

Ralph Smithers
Chair
Transportation Advisory
Committee

Bill Habig
Executive Director

- 1. Approval of April 10, 1996, minutes (encl)
2. Monthly Progress Report (encl) - Mohamed Ismail
3. Resolutions and Project Status Report:
o Resolution T-11-96: "REAFFIRMATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY 1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)" - Mary Ann Frantz/Robert Lawler
o Resolution T-12-96: "CERTIFICATION OF THE URBAN TRANSPORTATION PLANNING PROCESS" - Doug Moore
o Delaware Bypass (enclosed)
Presentation - Mike Schipper, Ohio Corridor Development Consortium
Resolution T-13-96: "ACKNOWLEDGING THE WORK COMPLETED AND THE RECOMMENDATION OF THE ADVISORY COMMITTEES OF THE DELAWARE BYPASS MAJOR INVESTMENT STUDY" - Robert Lawler
o Project Status Report (handout) - Mike Lilly

4. Informational Items

- o Northeast Transit Center - Doug Moore
- o State Infrastructure Improvement Bank - Ohio under pilot program (encl) - Gary Joseph, ODOT (invited)

5. Other Business

**NEXT TAC MEETING IS WEDNESDAY, JUNE 12, 1996, AT 2 P.M.
COMMITTEE MEMBERS: IF YOU ARE UNABLE TO ATTEND THIS
MEETING PLEASE CALL MAGGIE AT 228-2663**

**TRANSPORTATION ADVISORY COMMITTEE
MEETING MINUTES**

Wednesday, May 8, 1996
2 p.m.

**Mid-Ohio Regional Planning Commission
Conference Rooms ABC**

Members Present:	Robert Smith (Chair) Stanley Wilson (Vice Chair) Brooks Davis Roger Davis Mike Greene Ayman Ismail Harry Judson Jack Marchbanks	Mohamed Ismail (Secretary) Mike Longberry Mike Meeks Dave Philips Clyde Seidle Kim Shepherd Ralph Smithers Dave Younger
Members Excused:	Lin Carver	Dorothy Pritchard
Members Absent:	Tom Kauffman Leslie Malek	Jeff Smith
Guests:	Balbir Kindra, Dublin	Libby Rushley, ODOT Planning
Staff:	Maggie Bartolomucci Elena Constantine Mary Ann Frantz Nick Gill	Bob Lawler Mike Lilly Doug Moore

Chair Robert Smith called the meeting to order at 2:02 p.m. and welcomed everyone to the meeting.

1. Approval of April 10, 1996, Minutes. Mr. Smith asked for corrections or additions to the minutes of the April 10, 1996, meeting. The minutes were corrected to show Dave Younger as absent at the April meeting. Dave Younger made a motion to accept the minutes as corrected. Mohamed Ismail seconded and the minutes were approved.

2. Monthly Progress Report. Mr. Ismail announced that Mike Lilly would be leaving MORPC on Friday, May 10, to take a position with Jackson Township as village administrator.

Attention was called to the fact that the House of Representatives had voted to take the transportation trust fund off the general budget. The Senate and administration still have to take up this issue and there is no certainty that it will be approved by them. Mr. Ismail said he would be attending a presentation by the U.S. DOT (Mike Huerta) in Chicago on May 21, regarding reauthorization of ISTEA, and that he would present Resolution T-10-96 along with a statement highlighting those principles to their attention. The EPA has approved three counties: Delaware, Franklin and Licking, as clear for air quality effective April 1. Harry Judson added that on May 7 in the Federal Register the seven-county Cleveland area was approved for attainment. The only area in the state of Ohio that is still not attainment is the Hamilton County (Cincinnati) area. Mr. Ismail also called the committee's attention to the Columbus/Newark commuter train. There is discussion between ODOT, the Ohio Development Commission, Licking County, MORPC and COTA to try to initiate a commuter train from east of Newark to the Ohio Center in Columbus. Hopefully there will be a demonstration of the refurbished train this summer. Mr. Ismail said he would call the Longaberger people to arrange a visit if anyone from this committee is interested to see the trains.

3. **Resolution T-11-96 "REAFFIRMATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY 1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)"**

Mary Ann Frantz stated that a revised resolution had been handed out, but the original attachments were correct. She stated that the highway plan would be amended and COTA's short-range transit plan would be adopted in June 1996. The other components remain the same. The only change in the transportation plan is changing the north outerbelt widening to a total of eight lanes. In COTA's short range transit plan project mainstream service hours will be going up by 50 percent and they will be purchasing 53 project mainstream mini buses - 10 new and 43 replacement. They will be acquiring 117 lift equipped replacement buses, a new park and ride and will begin the engineering design of the Northeast Transit Center. She highlighted the transportation improvement program purposes and contents. Within this listing are federally funded projects, regionally significant projects, and highway/bikeway transit projects. This document is also in compliance with all federal requirements that are under mandate to complete. Within the contents of the federal requirements are the air quality conformity determination, public participation, ADA compliance, and the assurances that the local transportation system is adequately maintained. Fiscal balance for the COTA and MORPC attributable funds must be demonstrated. Last year MORPC's estimate for what was to be sold or obligated was approximately \$81.5 million. She stated that last year 73 percent of that goal was obtained. This year the goal is \$87.8 million. She explained that funding sources for 1997-2000 TIP come from various sources: federal/state (which the state

has control over), federal/MORPC (which MORPC has control over), and federal/county (which the county has control over). There is also state and local which includes match and projects that are done entirely on their own - whether it be state or locals. Transit is similar to what it was last year although the local share went up as the federal share went down and the state share stays the same. Ms. Frantz went over the various types of projects in the TIP and explained the funding. She explained that all phases of Spring-Sandusky except B-4 are in the TIP. She stated that when ODOT made its assumptions, in order to do the major/new listing, they took into consideration that some projects wouldn't get done in time. That assumption is not coming true as quickly as ODOT would like to see and therefore over programming of 45 percent could be seen. As a result, since the TIP has to be financially balanced, there are some issues that need to be addressed. CDMS 10 and 11 will be moving into the four year TIP. Spring Sandusky shows no change, but funding is still in negotiation between Columbus and ODOT. There are no changes to north outerbelt widening. A rehab from Ackerman to North Hard Road moved out to 1998. These are changes in the major new only. There are additional changes that will probably happen such as the SR 315 interchange at OSU could possibly be moved out to long range. The funding is still in discussion between District 6 and central office. MORPC attributable funds looks at demand versus available funds. The money needed to meet the need in MORPC attributable funds is not available. The draft of the TIP was prepared as of February 1996. Negotiations are still being held with the state, and the city. This was noted by the members of the Policy Committee and they suggested to delay the approval of the TIP by one month and to bring it to the committee for approval in June. By doing this, it would prevent the need to make amendments to the TIP at future dates. Federal regulations clearly state that the TIP must be fiscally balanced. The sources of revenue being used to fund each particular project is to be identified. At this time there is no way this can be done.

Mr. Ismail made a motion to delay any action on this resolution until June when the complete package would be brought before the committee which will be a compromise between the state, the city of Columbus and MORPC. Ayman Ismail seconded and the motion carried.

Resolution T-12-96, "CERTIFICATION OF THE URBAN TRANSPORTATION PLANNING PROCESS"

Doug Moore stated that this resolution is an annual requirement that states federal regulations are being met. One of the regulations is that the TIP has been passed. He said that since approval of the TIP had been delayed, it would not be appropriate to pass this resolution at this time.

Mr. Ismail stated that T-11 and T-12-96 are companion resolutions. He then made a motion to delay passage of this resolution until T-11-96 had been passed. Mike Greene seconded the motion. The motion carried.

Resolution T-13-96 "ACKNOWLEDGING THE WORK COMPLETED AND THE RECOMMENDATION OF THE ADVISORY COMMITTEES OF THE DELAWARE BYPASS MAJOR INVESTMENT STUDY"

Due to flight difficulties, Mike Schipper was unable to attend the meeting and therefore the presentation on the Delaware Bypass was made by Bob Lawler. Mr. Lawler stated that in 1991 ISTEA included several corridors of significance. One of these passed through Ohio along the US 23 corridor from Portsmouth through Toledo into the Detroit area. The Ohio Turnpike Commission became interested in this project and hired consultants called "The Ohio Corridor Development Consortium (OCDC)" to look at that whole corridor and determine what could be done to upgrade this to interstate standards. The project then became called the Great Lakes Mid-Atlantic Corridor (GL/MAC). The OCDC did between \$4.5 and \$5 million in studies and produced a prioritized list of projects. They determined the area north of Columbus was the most congested part of US 23. When they concluded the GL/MAC study from the northern to the southern part of the state, they originally looked at five different alignments through central Ohio. These included various bypasses. One thing that was determined while doing the study was that a lot of the traffic that was in the area north of Columbus was really destined to the Columbus area. As a consequence, before they adopted the statewide study, they dropped the outer outerbelt alternatives. When they concluded that study they had already eliminated from consideration any alternatives that would extend beyond I-71 to the east or beyond US 33 to the west.

In order for this kind of congestion relief project to be eligible for federal funds, a Major Investment Study (MIS) must be conducted. To conduct a MIS, the MPO's public involvement process must be followed. Therefore, MORPC sponsored the formation of an advisory committee that had representatives from five different counties: Delaware, Morrow, Union, Marion and Franklin, plus other representatives from those areas and MORPC's committees. The city of Delaware and Delaware County asked that another advisory committee be formed because they felt the major impacts of this project would be centered around Delaware County. They wanted to have closer involvement through a public involvement committee. These two separate committees were meeting separately and hearing the same information and making recommendations about this whole project.

As OCDC was going through the MIS, one of the things that changed in the scope from the statewide study to a local study is that in addition to looking at the statewide traffic which

was one of the main concerns of the statewide study, they started to look at traffic patterns in more detail in the Columbus and Delaware areas. There was a change in focus from the overall study that had originally been undertaken. Many members of the public were confused about is the Delaware bypass isn't looking at the whole state, but it is looking at the problems in a much more limited area which basically goes from Marion to the Columbus area. The scope of this study concerns a small amount of traffic in this area and not the whole state.

Through a public open house, a scoping meeting and these two advisory groups, 19 different alternatives were developed. These included mostly highway alternatives but also included some commuter rail or possibly light rail alternatives and a no-build alternative that follows US 23 all the way through the corridor. Mr. Lawler gave specifics regarding the various alternatives that were suggested at the beginning of the process. The consultants made preliminary forecasts of traffic and went through a process where they identified different kinds of impacts to homes, businesses, natural resources, farm land, etc. That information was presented to the two different advisory committees and they were asked to help narrow down the scope of this study so there were fewer than these 19 alternatives to continue into the Phase II of the detailed level of the study. The committees went through discussion, visited the sites, and eventually agreed that the study should be reduced to six alternatives.

No-build is required to be carried forward through the process because it is always possible to do nothing. Due to public support of upgrading US 23 all the way down to I-270, that alternative was also continued forward. Alternatives 10, 11 and 19 were also carried forward. The last alternative considered was a commuter rail line that would extend from US 36/37 to downtown Columbus. There was much public input throughout this process. Up to 220 people attended some MORPC meetings.

Data was collected for each of these alternatives and the information was brought back to the two committees. The committees were then asked to go through another process to recommend just one alternative. This was done because there were concerns on the part of the Delaware County officials and the public that it be narrowed down to one alternative so only one group of citizens in the area would have a project like this hanging over their heads and also ODOT had agreed to rate rank the recommendation of this study if it was reduced to one single alternative.

The Delaware city council took the position that they supported alternative 10, the Delaware County officials took the position that they wanted to see the problem solved but they didn't think it was appropriate until the schedule was brought forward to pick any one alternative because they were concerned about the effects it would have on citizens in the area. There is

Transportation Advisory Committee
Meeting Minutes
May 8, 1996

also a concern on the part of the County Engineer that the amount of traffic that would be diverted on US 23 south was not a significant amount. Alternative 10 reduced the volumes on US 23 in the vicinity of I-270 by approximately 6 percent. The two advisory groups took different positions. The two committees decided to meet jointly and discuss the issues. They went through a process where each committee voted separately and then voted together. When they went through the process the first time, the city/county committee immediately chose Alternative 10. The other committee went through a much longer process before they finally chose commuter rail. When the two committees met and voted together, they chose Alternative 10. The consultant will recommend Alternative 10 in their report. When the report is finished, it will be submitted to ODOT for their consideration and also to MORPC for incorporation into the transportation plan. Clyde Seidle thanked Mr. Lawler for properly stating what the Delaware County Engineer's position was. He said they feel this project is going to only move 8.8 percent of the people beyond Columbus and the cost is not the most effective use of dollars to solve the transportation problems that exist in that area.

Mr. Lawler called the committee's attention to Section 3 of the resolution that requests ODOT to perform an informal rating of the recommended alternative as soon as possible to give MORPC an idea on how to compare and score it with the projects that are already in major/new listing. Section 4 directs MORPC's staff to talk with the different local officials in the area in reaching a conclusion on how this project should be carried forward into the transportation plan. MORPC's transportation plan will not be updated until the spring of 1997. Section 4 also encourages the Delaware area to work toward solutions to keep mobility (or not to let the mobility deteriorate any more than it has). MORPC is not endorsing Alternate 10. Staff is being directed to look at it further and are asking ODOT to put it through their process. Clyde Seidle stated that there would only be about a 6,000 vehicle drop on US 23 between Alternate 10 and the no-build option. The numbers show 8.8 percent of those vehicles are going to continue through Columbus. The lion's share of the problem rests between Delaware and Columbus. Mr. Seidle stated even though the two committees had recommended Alternate 10, the opinion of the Delaware County Engineer's office remains that the reality of this project is not the best use of infrastructure money in the region at this time. Collectively this is what the committees decided. Ralph Smithers asked if the Delaware County Engineer's office had any ideas as to how this problem might be solved. Mr. Seidle said they are planning to start an overall thoroughfare plan for the entire county of Delaware and hope to be able to put that course of events in motion. Jack Marchbanks stated that he had spoken to Mike Schipper during the past few weeks and he had expressed a question of who would be the sponsor once this project was offered to ODOT District 6. He asked if there been any determination. Mr. Lawler stated that a project of this magnitude would probably require a state sponsor and since the Turnpike Commission had withdrawn, that left ODOT.

Mr. Smith asked for a motion to recommend Resolution T-13-96 for Policy Committee adoption. Mr. Ismail so moved and Mr. Greene seconded. The motion carried with one no vote by Clyde Seidle.

Project Status Update. Ms. Frantz pointed out on Page 4 the Hilliard-Cemetery Road deck is a new project. Three of four freeway ramps will be closed for the duration of the project with completion in the fall.

4. Informational Items

Northeast Transit Center. Mr. Moore stated the COTA long range plan had two different types of improvements. One was to beef up the service on the existing routes that focuses on downtown and the other focused on improving transit service to the suburbs and included recommendations for 13 suburban transit centers. Each of these transit centers would become a focal point for suburban service in a particular area of town. There would be a facility where cross town buses and neighborhood circulators would all meet so service could be coordinated and people could move between the different routes without going downtown. The first suburban transit center is the Northeast Transit Center which will be located in the Easton Center at Morse Road and I-270. COTA was awarded a special grant by the Federal Transit Administration for this project called a Livable Communities grant. The Mills development may also locate at Easton Center. This would have a major impact on the development. The Limited is deciding whether this development will be incorporated into Easton within the next 30 to 40 days. Mr. Moore showed charts indicating the possible various development scheme. There are two different locations that are strongly being considered for the transit center. One is north of Morse Road and the other is in the heart of the development. We are in the preliminary stages of planning and we are starting to develop evaluation criteria to figure out how to balance all these different issues. Hopefully it will be done by the end of this calendar year as soon as there are some quick decisions made about what kind of development is going to occur in the center of the site. The prime consultant for this project is Wallace, Floyd out of Boston. They did the work on the multi-modal transit terminal that Elena Constantine was the project manager on. You've probably seen some of their work before. Burgess and Niple is the main local participant. LSTS Transit Services out of New Jersey is assisting in the design of the different transit operations. There is a component that looks at alternatively fueled vehicles such as compressed natural gas or liquified natural gas, to find a vehicle that would be a more comfortable fit operating in a dense environment with a lot of pedestrian activity and that vehicle could become a prototype for a smaller neighborhood oriented vehicle that COTA would then begin to implement in other parts of the region. Ralph Smithers commented that the Livable Communities Grant was approved by TAC and all this was done prior to the COTA levy

Transportation Advisory Committee
Meeting Minutes
May 8, 1996

being defeated. It is important to let people know that this site was well underway before the vote was taken on the levy.

State Infrastructure Improvement Bank. Gary Joseph gave an overview of the State Infrastructure Bank program of ODOT. Ohio is one of eight states that the U.S. DOT awarded the privilege a pilot program to establish a State Infrastructure Bank program. Approval for two additional two states is still pending. Ohio's application was sent in March with an initial list of projects for the first round that covered all modes: highway, rail, transit, and aviation. This would give Ohio an opportunity to create a revolving loan program that can act as a tool to help facilitate projects in all the areas. This will allow alternate ways to fund projects. The state legislature created the possibility for five transportation improvement districts throughout the state to have the ability to issue debt and collect revenues to help facilitate projects, and to work out lease agreements to work as a partnership to help contribute toward the funding. U.S. DOT is giving the selected states the authority to make loans and use various non-traditional methods to raise revenues. The repayment of the loans will be deposited in a revolving loan account and will be used to make future loans. In order to encourage local funding contribution, ODOT has included in the application process a bonus category to reward local communities or non-ODOT revenue sources for their funding contribution to their project if this contribution is at least 40 percent. Such projects may gain up to 25 additional bonus points and that could move them forward more quickly. What the infrastructure bank can do is allow money to be loaned to those communities for their pledge of funds and they could pay the loan bank over time. Access Ohio was laid out with corridor completion and economic development objectives in mind as well as increased competitiveness in the economy. This is one way the infrastructure bank can be used to facilitate these projects which help reduce revenues to help pay off the debt. As economic development and growth occurs around the infrastructure improvements and new interchanges are proposed around the new alignments, that growth and the revenues can be captured. One of the goals in using the infrastructure bank is to encourage public and private investment to leverage the non-ODOT funds. The more investment there is and the more non-ODOT funds, the further the ODOT dollars can be stretched. ODOT will have an approval board who will meet regularly where loan applications can be submitted by local government entities and the board would hear these in quarterly or monthly meetings. The loan application process, the contract process, financing agreements and loan applications are currently being developed and will be submitted to this review council. The Office of Economic Development will be working with the local communities in helping them to fill out the applications and work on their financing and revenue sources. The Office of Economic Development will submit the application with the help of the Planning Office, the Finance Office and Multi-Modal Office and then submit these recommendations with the district people. These will then go to the review committee for approval. Central Office will review their requests on a modal basis,

Transportation Advisory Committee
Meeting Minutes
May 8, 1996

separate funding categories (aviation loans will be out of a separate funding pot as will rail and highway funds). The types of assistance that will be provided will be direct loan, loan guarantees, line of credits, leases, short term and construction financing and debt service cash reserve. Things that will not be eligible for funding and will not be considered will be grants with no pay back of the loans, operating assistance for subsidies, any working capital or any start up costs. All modes will be eligible and the development stages that will be eligible for the loans would be design and construction. The items that must be completed prior to the loan approval are all environmental assessments and compliance, preliminary engineering and MIS or interchange justification assessments. Revenue payments will begin within two years after the project is completed or when the project is open for operations. There will be an interest-free construction loan period and the payments will start up to two years after the project is sold. The amortization period will be up to 20 years. There is no penalty for early payment of the loan. U.S. DOT is working to give Ohio some additional funds above the appropriation level. It will be split up between the ten states that have been selected to be eligible for the loan program. Approved projects will be sent to U.S. DOT and they will approve them on a case-by-case basis. It is unknown what that amount will be. The hope is that between federal, state, aviation and rail to have around \$100 million in the loan bank. As the first round loan payments come back, it will be easier to use it. The second round repayments gives an opportunity to issue revenue bonds that can help expand the second round capitalized amount and the loan repayments will be used to pay off the debt. To determine the eligibility of a project, the project risk, how the project ranked under ODOT project selection formula, the projected revenue stream, the funding source and the amortization period will have to be taken into consideration. Different ways of obtaining additional revenues for this program are being investigated. The goal is to do a well-managed loan program, offer the opportunity for local communities throughout the state, and at the same time create another tool to help leverage limited transportation dollars. Director Wray indicated the goal is to have over \$100 million annually financed by the infrastructure bank. During the next couple of months ODOT will be receiving some guidelines from U.S. DOT on specifics. Hopefully by early 1997 fiscal year, this program will be up and running with some loans already moving. The initial round is already programmed, including projects that were ranked high enough in ODOT's project selection criteria scale. U.S. DOT wanted to use this to be a part of the nationwide pilot project and if proved successful it may in the future expand to all 50 states.

5. Other Business.

The meeting adjourned at 3:37 p.m.

Respectfully submitted,

Mohamed Ismail 6/12/96
Mohamed Ismail, Secretary

Exhibit K
TAC Agenda/Minutes - June 12, 1996
(minutes not included - awaiting approval)



Mid-Ohio Regional Planning Commission

sociation of local governments providing planning, programs and services for the region.

NOTICE OF A MEETING

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TRANSPORTATION ADVISORY COMMITTEE

**MID-OHIO REGIONAL PLANNING COMMISSION
285 East Main Street
Columbus, Ohio
Conference Rooms ABC**

**Wednesday, June 12, 1996
2 p.m.**

Judith W. Stillwell
Chair

Gary Panek
Vice Chair

Richard A. Browning
Secretary

Bill Heblg
Executive Director

A G E N D A

1. Approval of May 8, 1996, minutes (encl)
2. Monthly Progress Report (encl) - Mohamed Ismail
3. Resolutions and Project Status Report:
 - o Resolution T-11-96: **"REAFFIRMATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY 1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)"** - Mary Ann Frantz/Robert Lawler
 - o Resolution T-12-96: **"CERTIFICATION OF THE URBAN TRANSPORTATION PLANNING PROCESS"** - Doug Moore
 - o Project Status Report (handout) - Mary Ann Frantz
4. Informational Items
 - o Inland Port Phase II Part 2 (Executive Summary encl.) - Elena Constantine/Tom Harvey
 - o Livable Communities Town Meeting - Doug Moore
5. Other Business

**NEXT TAC MEETING IS WEDNESDAY, JULY 17, 1996, AT 2 P.M.
COMMITTEE MEMBERS: IF YOU ARE UNABLE TO ATTEND THIS
MEETING PLEASE CALL MAGGIE AT 228-2663**

Exhibit L

Policy Agenda/Minutes - June 20, 1996
(minutes not included - awaiting approval)



Mid-Ohio Regional Planning Commission

An association of local governments providing planning, programs and services for the region.

NOTICE OF A MEETING

* * * * *

POLICY COMMITTEE MEETING

MID-OHIO REGIONAL PLANNING COMMISSION
285 East Main Street
Meeting Room ABC

Judith W. Stillwell
Chair

Gary Panek
Vice Chair

Richard A. Browning
Secretary

Thursday, June 20, 1996
1:30 p.m.

Bill Habig
Executive Director

A G E N D A

1. Welcome and introductions - Judi Stillwell, chair

Resolution 11-96: "RECOGNITION OF PAUL J. FALCO'S DEDICATION AND SERVICE TO THE BOARD OF THE MID-OHIO REGIONAL PLANNING COMMISSION"
2. Monthly progress report - Mohamed Ismail can answer any questions
3. Consent agenda:
 - o Approval of May 16, 1996, minutes
 - o Resolution T-12-96: "CERTIFICATION OF THE URBAN TRANSPORTATION PLANNING PROCESS" - Doug Moore
4. Resolution T-11-96: "REAFFIRMATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY 1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)" - Robert Lawler - As of the mailing, our TIP was uncertain due to the funding of Spring-Sandusky (SEE ENCLOSED ALERT)
5. Other business

Next Policy Committee meeting is at 1:30 p.m., Thursday, July 25, 1996.

Exhibit M

Resolution T-11-96,
"REAFFIRMATION OF THE TRANSPORTATION PLAN
AND THE ADOPTION OF THE FY 1997-2000
TRANSPORTATION IMPROVEMENT PROGRAM (TIP)"

RESOLUTION T-11-96

REAFFIRMATION OF THE TRANSPORTATION PLAN AND THE ADOPTION OF THE FY 1997-2000 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

WHEREAS, the Mid-Ohio Regional Planning Commission is designated as the metropolitan planning organization (MPO) by the governor acting through the Ohio Department of Transportation and in cooperation with locally elected officials for Franklin and Delaware counties and four adjacent townships in Licking and Fairfield counties; and

WHEREAS, the Mid-Ohio Regional Planning Commission, pursuant to Executive Order 12372 regarding the intergovernmental review of federal programs, is designated as the metropolitan clearinghouse for Franklin and Delaware counties; and

WHEREAS, the MPO, pursuant to 23 United States Code 134 and 49 United States Code 1602(a)(2), 1603(1), and 1604(g)(1), has caused the Transportation Plan dated April 1994 to be prepared; and

WHEREAS, the MPO, pursuant to 23 United States Code 134 and 49(1607) United States Code, has prepared a Transportation Improvement Program for Fiscal Years 1997 through 2000; and

WHEREAS, in compliance with U.S. DOT's Title VI regulations, solicitation of citizens' comments on the TIP, a Transportation Plan was made by following MORPC's adopted Public Involvement Process through the Citizen Advisory Committee, advertisements in the *Columbus Dispatch*, *Delaware Gazette*, *Lancaster Eagle Gazette*, *Newark Advocate*, *Columbus Call and Post*, sunshine mailing and at open house meetings; and

WHEREAS, pursuant to 49 USC, 1607, 23 USC, 134 and 42 USC, 7506, the Transportation Plan and TIP have been analyzed based on accepted methodology and have been determined to be in conformity with the requirements of the Clean Air Act Amendments of 1990, and the HC and NO_x budgets contained in the approved State Implementation Plan; and

WHEREAS, in response to FTA's guidelines on private-sector participation, private transportation operators in the region have been involved in the planning process through representation on TAC, CAC and/or Policy; and

WHEREAS, the Short-Range Transit Plan prepared and adopted by the Central Ohio Transit Authority (COTA) in April reflects the federal funding shortage due to cutback in the Federal Transit Administration program; and

WHEREAS, the other elements of the Transportation Plan including the highway portion (including amendments), the deficient bridge listing, the Bikeway Plan and the Long-Range Transit Plan are being reaffirmed; and

WHEREAS, pursuant to 23 USC 134, financial plans for the TIP and Transportation Plan which demonstrate that they can be implemented and that they are consistent with funding reasonably expected to be available were prepared; and

WHEREAS, the TIP does not become effective until approval is received from the federal and state authorities; and

WHEREAS, the Citizen Advisory Committee at its May 6, 1996, meeting and the Transportation Advisory Committee at its June 12, 1996, meeting recommended approval of these amendments to the Policy Committee; now therefore

BE IT RESOLVED BY THE POLICY COMMITTEE OF THE MID-OHIO REGIONAL PLANNING COMMISSION:

- Section 1. That it amends and reaffirms the Transportation Plan for the Mid-Ohio Transportation Study area dated April 1994 and recommends that its members incorporate these improvements into their planning for transportation improvements in their governmental units.
- Section 2. That it updates the Short-Range Transit Plan.
- Section 3. That it adopts the Fiscal Year 1997 through 2000 TIP and recommends that its members incorporate these improvements into their transportation improvement programming for their governmental units.
- Section 4. That it reaffirms the consistency between the Transportation Plan and the State Implementation Plan (SIP).
- Section 5. That it affirms the consistency between the Fiscal Year 1997 through 2000 TIP and the SIP.
- Section 6. That it urges ODOT to recognize the importance of the Spring-Sandusky Interchange as the last section of the interstate highway system in Columbus, that it serves a high percentage of the people in central Ohio, that it is also critical for economic development and goods movement, and, finally, that it has been under development for over 20 years while reaffirming its support for widening I-270 North.
- Section 7. That it urges the state of Ohio to increase transit funding from the general revenues to offset the cut from the FTA.
- Section 8. That this committee finds and determines that all formal deliberations and actions of this committee concerning and relating to the adoption of this resolution were taken in open meetings of this committee.

Judith W. Stillwell

Judith W. Stillwell, Chair
Mid-Ohio Regional Planning Commission

June 20, 1996

Date

Additional Information

ADDITIONAL INFORMATION

The following information on public participation in the development of the TIP is available upon request.

List of Central Ohio Public Libraries

Letters to Member Governments

Sunshine Mailing List

Request for TIP Plans