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**Air Quality
Conformity Determination**



***Central Lane MPO
2007-2031 Regional Transportation Plan
and
FY08-11 Metropolitan Transportation Improvement Program***

October, 2007

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for
Central Lane MPO
2007-2031 Regional Transportation Plan
and
FY08-11 Metropolitan
Transportation Improvement Program**

October 11, 2007

This report was financed in part by the Oregon Department of Transportation,
the Federal Highway Administration, and the Federal Transit Administration.

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1.0 Overview

This document is prepared by the Central Lane Metropolitan Planning Organization (MPO) to demonstrate conformity of the 2031 Regional Transportation Plan and the FY08-11 Metropolitan Transportation Improvement Program with the Clean Air Act as required by federal and state requirements 40 CFR 93.102(a)(1) and OAR 340-252-0020(1).

Federal air quality conformity requirements are described in 40 CFR Part 93. Oregon's Conformity SIP, adopted by the Oregon Environmental Quality Commission under OAR 340-200-0040 and approved by EPA, establishes rules and standards for determining air quality conformity of transportation plans, programs and projects within Oregon (specifically, OAR 340 Division 252). This conformity determination meets all Federal and State conformity regulations.

1.1 Organizational Structure

Lane Council of Governments (LCOG) serves as the MPO for central Lane County, Oregon, an area that includes the Eugene-Springfield metropolitan area. The Governor of Oregon designated LCOG as the MPO for this area in 1974.

As MPO, LCOG must ensure that the transportation planning process is conducted in accordance with federal transportation planning regulations (23 CFR 450). In addition, transportation planning must be consistent with the Statewide Transportation Planning Rule (TPR, OAR 660 Division 12), the Oregon Transportation Plan, and the Lane County, Eugene-Springfield and Coburg Transportation System Plans. Further, LCOG is responsible for preparation of the regional long range transportation plan (RTP) (23 CFR 450.322) and the metropolitan transportation improvement program (MTIP) (23 CFR 450.324), and for making corresponding conformity determinations. LCOG provides technical modeling of the transportation system, prepares financial analyses and project programming, provides opportunities for public involvement, and manages the analysis and process for ensuring compliance of the RTP and MTIP with the federal (40 CFR 93) and state (OAR 340-252) requirements of the Clean Air Act.

The decision-making body of the Central Lane MPO is the Metropolitan Policy Committee (MPC) which was created by Eugene, Springfield and Lane County for ensuring cooperation on issues of metro-wide importance. When considering transportation issues, MPC is currently comprised of elected officials from Lane County and the cities of Springfield, Eugene, and Coburg. Lane Transit District (LTD) and the Oregon Department of Transportation (ODOT) are also represented.

The Transportation Planning Committee (TPC) is comprised primarily of technical staff from the public works and planning departments of local agencies. TPC advises MPC on technical transportation issues, reviews all of the transportation documents produced by LCOG, and recommends plans and actions to MPC for review and adoption. TPC is specifically designated by OAR 340-252-0060(2)(b)(A)(i) as the standing committee for purposes of consultation required under the Oregon transportation conformity rules for air quality planning.

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Interagency consultation must be conducted with Federal Highways Administration (FHWA), Federal Transit Agency (FTA), US Environmental Protection Agency (EPA), Lane Regional Air Protection Agency (LRAPA), and Oregon Department of Transportation (ODOT).

1.2 Status of Air Pollutants

USEPA has established health-based National Ambient Air Quality Standards (NAAQS) for six air pollutants (carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and lead (Pb)). Areas that fail to meet the standards are designated “non-attainment” and are required to develop plans to come into compliance with the standards. Once compliance is achieved, a maintenance plan is developed to ensure that air quality will not be compromised in the future. These plans are codified in the State Implementation Plan (SIP). The Eugene/Springfield area is currently classified as maintenance for CO and as non-attainment for particulate matter of less than 10 microns (PM₁₀). EPA has determined that transportation is a significant source for CO but not for PM₁₀. Air quality for all other criteria pollutants meets the NAAQS and demonstration of conformity for these pollutants is not required. Thus, CO is the only criteria pollutant which must be addressed for regional air quality conformity determinations.

LCOG, as the area’s MPO, was designated by the Governor in 1978 as the lead agency for air quality planning for transportation pollutants, and thus has responsibilities for CO air quality planning. Lane Regional Air Pollution Authority (LRAPA) is the lead agency for air quality planning for all other pollutants, and in particular, for PM₁₀.

Status of CO

On February 4, 1994, the Eugene-Springfield region was officially redesignated by EPA as being in attainment of the NAAQS for CO. The region’s maintenance plan was approved by EPA as part of the same action that approved the region’s redesignation request (see the Federal Register Notice, 58 FR 64161 in Appendix F). An update to the maintenance plan is due to carry the region through the required 20 year maintenance period.

There has not been a violation of the CO NAAQS in the maintenance area since 1980. In 2006, USEPA approved the removal of one of the two CO monitoring sites within the AQMA – the remaining monitor is located in downtown Eugene at 11th and Willamette Streets (Lane Community College Downtown Center). While monitored air quality data (Figure 1) show that CO levels are in compliance with the NAAQS and are steadily declining, demonstration of conformity relies upon compliance with the regulations in 40 CFR Part 93 and equivalently, OAR Chapter 340 Division 252, to which this document responds.

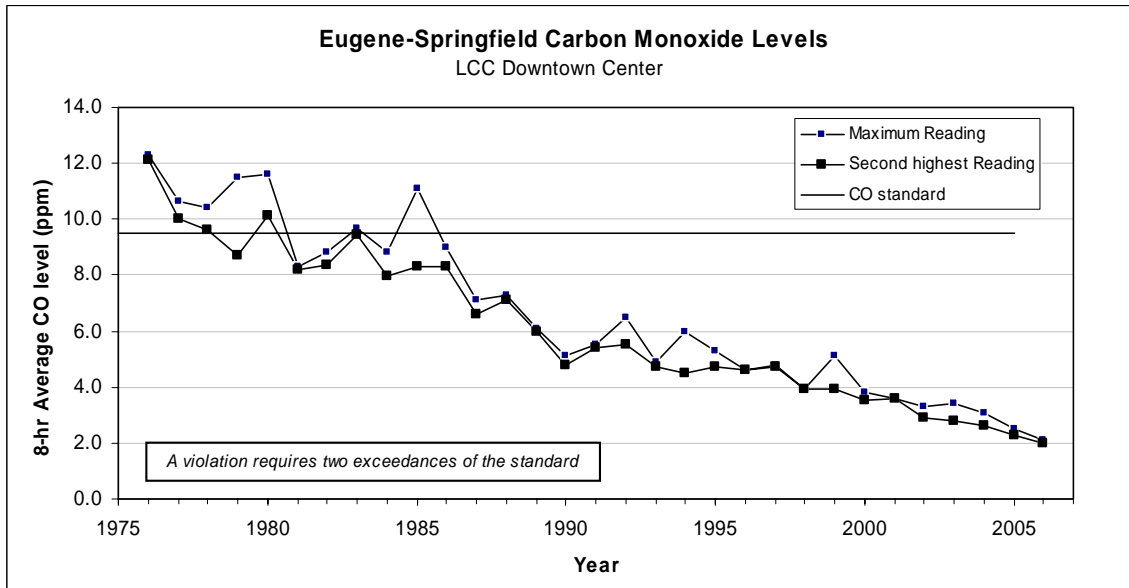


Figure 1. Trends in carbon monoxide levels from 1976 through 2006 (all sources). The last violation of the National Ambient Air Quality Standards for 8-hour average CO concentration was in 1980. The last exceedance of the standard was in 1985

Status of PM₁₀

On August 7, 1987, the Eugene-Springfield area was formally designated by EPA as a non-attainment area for PM₁₀. Since 1987, the area has not recorded an exceedance of the 24-hour PM₁₀ standard. LRAPA is currently in the process of developing an application to EPA for a formal redesignation to attainment status for PM₁₀. It is anticipated that the LRAPA Board of Directions will take action on the application by July 2008 with subsequent action by the Oregon Environmental Quality Commission and EPA. Redesignation by EPA would then place the region into maintenance status for PM₁₀.

The Eugene-Springfield PM₁₀ State Implementation Program (SIP), approved by EPA in 1994, established that emissions from motor vehicles are not a significant contributing factor to overall PM₁₀ emissions and concluded that control of emissions from motor vehicles is not necessary to demonstrate attainment of the PM₁₀ standards. As indicated by EPA’s letter of October 3, 1994 (see Appendix A), the Agency concurred that transportation conformity determinations for PM₁₀ are not required. Therefore, **no additional analysis of PM₁₀ is presented here.**

Note that project level conformity for PM₁₀ is required for projects within the Eugene-Springfield urban growth boundary, per EPA’s October 3, 1994 letter (Appendix A).

1.3 Status of Transportation Plans

The Central Lane MPO 2025 RTP was adopted on December 9, 2004 and was conformed on December 13, 2004 (see approval letter in Appendix A). It covers the time period 2004-2025. Since the initial adoption, two amendments have been approved: the I5/Coburg interchange project and the Middle Fork Path project were moved from the illustrative to the fiscally

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constrained project list of the RTP. The need for a new air quality conformity determination was not triggered by these actions as the I5/Coburg project is outside the air quality maintenance area, and the Middle Fork Path project is a bike/pedestrian project with exempt status.

The Central Lane MPO FY06-09 MTIP was adopted on July 13, 2006 and was conformed on August 22, 2006 (see approval letter in Appendix A). It has undergone a large number of amendments since adoption, none of which has triggered the need for a new air quality conformity determination.

1.4 Purpose of this Determination

The purpose of the 2031 RTP update addressed by this conformity determination is to bring the long range regional transportation plan into compliance with the requirements of the SAFETEA-LU Transportation Bill and to extend the planning horizon to at least 20 years. The purpose of the update of the short range MTIP is to align the MTIP with the cycle for the update of the FY08-11 Oregon Statewide Transportation Improvement Program (STIP), to comply with SAFETEA-LU requirements, and to ensure that the MTIP covers at least four years.

Conformity must be demonstrated for both the RTP and MTIP before they can become the operative documents for the MPO area.

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2.0 Demonstration of Conformity for CO

The December 6, 1993, Federal Register notice of Approval and Promulgation of Redesignation (58 FR 64161, Appendix F) recognizes the nature of the CO emissions problem in the Eugene-Springfield region to be within the Central Area Transportation Study (CATS) boundary. It reads:

“...Due to the nature of Eugene’s CO violation, (i.e., hot spots only) LRAPA’s emission inventory contains only on-road mobile and home wood heating emissions within the Central Area Transportation Study boundary. All point sources within the Eugene AQMA are located at a sufficient distance away as to not contribute significantly to the violations...”

In a letter dated October 3, 1994, attached in Appendix A, EPA approved and concurred that, for the purposes of conformity, regional emissions tests for CO apply only to projects within the CATS boundary of downtown Eugene (Maps 1 and 2). However, should the area not be able to demonstrate conformity, projects within the entire AQMA could be affected. Projects outside the CATS area but within the CO Air Quality Maintenance Area (Map 1) are subject to project-level hot spot analysis for CO.

All regionally significant and/or Federally funded projects in the RTP and MTIP were modeled based on the coordinated populations adopted February 2005 by the coordinating body, employment (issued October 2003 by Oregon Employment Department), travel and congestion estimates, as required by EPA conformity guidance. The CATS area was evaluated for CO emissions. The forecasts were reviewed by TPC, acting as the region’s Standing Committee on Air Quality, and also by air quality specialists from USDOT, EPA, and ODOT, consistent with requirements for interagency consultation.

Map 3 shows the location of Central Lane MPO projects programmed in the FY08-11 MTIP (see Appendix B for detailed project list). Maps 4, 5 and 6 show the financially constrained projects of the 2031 RTP (see Appendix C for the project lists). Insets show the projects within the CATS area.

2.1 General Requirements

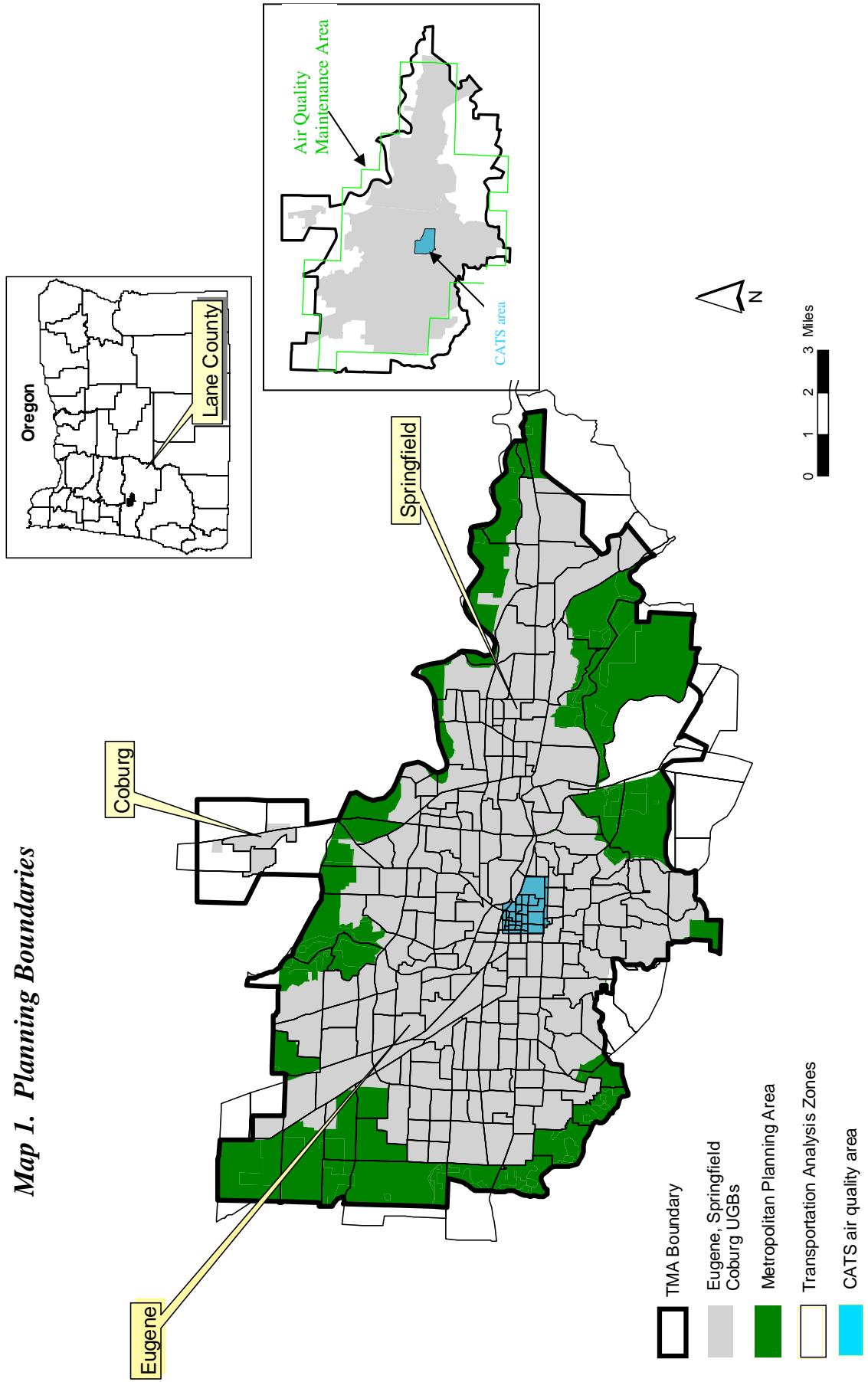
OAR 340-252-0050 and 40 CFR 93.104: Frequency of Conformity Determinations

This conformity determination conforms the Central Lane MPO 2031 RTP and FY08-11 MTIP.

The MTIP must cover a period of no less than four years, and must be updated on a cycle compatible with the development and approval of the STIP (23 CFR 450.324(a)). The FY08-11 MTIP covers 4 years and is being developed on a timeline parallel with the scheduled approval of the FY08-11 STIP in late 2007.

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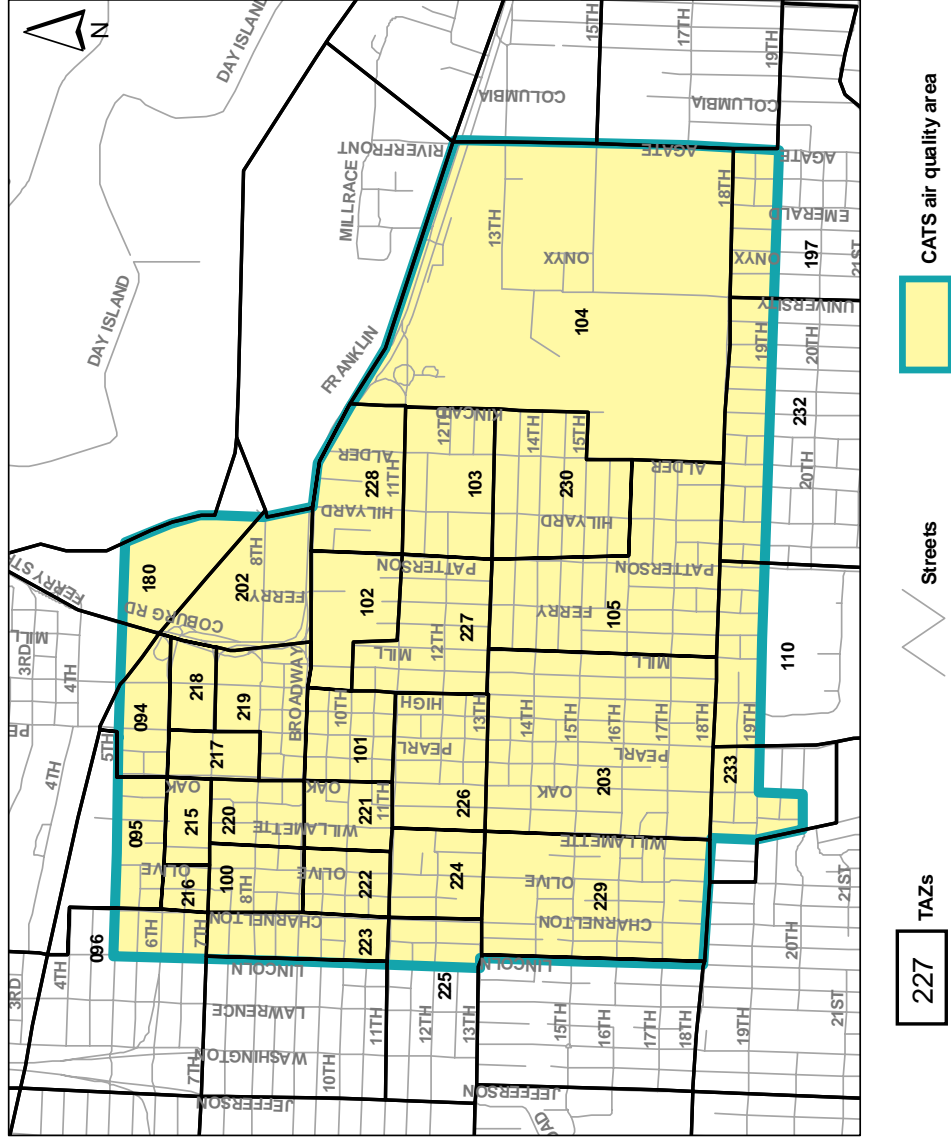
Map 1. Planning Boundaries



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Map 2. Central Area Transportation Study (CATS) Area

as specified in the Carbon Monoxide State Implementation Plan (CO SIP) for Eugene-Springfield (Note: see Map 1 for the context of this area in relation to the entire TMA.)



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Map 3. FY08-11 MTIP - Programmed Capital Investment Actions

MAP KEY			
Map Key	Jurisdiction	Project	Type
315	Eugene	Bertelsen Rd: 18 th to Bailey Hill	Urban Standards
332	Eugene	W. 11 th St: Greenhill Rd to Willamette St	Study
420	Eugene	Elmira Rd: Bertelsen Rd to Hwy 99	Urban Standards
469	Eugene	Maple St: Elmira Rd to Roosevelt Blvd	Urban Standards
532	Lane Co.	Irving Rd: UP Railway and NW Expressway	Urban Standards & Safety
555	ODOT	Beltline Highway: River Rd to Coburg Rd	Project Development
606	ODOT	I-5 @ Beltline Highway (Unit 2)	Interchange improvements
622	ODOT	Beltline Highway @ Coburg Rd	Interchange improvements
654	Eugene	Game Farm Rd North: Eugene City Limits to I-5	Urban Standards
670	Eugene	Jeppesen Acres Rd: Gilham Rd to Providence St	Urban Standards
680	Eugene	Old Coburg Rd: Chad Drive to Game Farm Rd	Roadway Improvements
789	Springfield	Gateway/Beltline Intersection improvements: International Way to Postal Way	Roadway and Interchange Improvements
1001	Coburg	Diamond St	Preservation
1002	Coburg	Locust St	Preservation
1003	ODOT	I-5 @ Coburg	Interchange improvements
1115	LTD	BRT Pioneer Parkway EmX	Transit
B	Coburg	I-5 @ Coburg	Study/Planning
C	ODOT	OR222, Springfield-Creswell Hwy	Safety
G	Lane Co.	Hayden Bridge: Shady Lane to 19 th St	Preservation
H	ODOT	I-5 Bridge Clearance (Eug-Spr)	Bridge Improvements
I	ODOT	Region 2 Illumination Replacements	Operations/Lighting
J	ODOT	OR99: Barger-Washington/Jefferson	Safety
L	Springfield	Pioneer Parkway: Hayden Br to Q St	Preservation
N	ODOT	I-5: Willamette River to Martin Creek	Preservation
O	Eugene	Eugene Rail Station – Willamette St	Off-road facilities
P	ODOT	Marcola Rd Rail Crossing	Safety
R	ODOT	OR99W: Pac Hwy W over CORP repair	Bridge Improvements
U	ODOT	Transportation Collection Facility: UO Museum of Natural History	Off-road facilities
V	ODOT	I-5 Bridge Clearance (Area 5)	Bridge Improvements
W	ODOT	I-5 @ Willamette River Bridge	Bridge Replacement
X	Eugene	Roosevelt Blvd: Beltline Hwy to Chambers Connector	Preservation
Y	Eugene	Willamette St: 18 th to 20 th St	Operations
Z	Springfield	OR126B/Franklin Blvd: west Springfield City Limits to McVay Hwy	Study, Planning

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<insert MTIP map>.

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Map 4. 2031 RTP Financially Constrained Roadway Projects.

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Map 5. 2031 RTP Financially Constrained Bike/Pedestrian Projects.

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Map 6. 2031 RTP Financially Constrained Transit Projects.

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In a maintenance area, USDOT and the MPO must make a conformity determination on a new RTP and MTIP in order for these plans to become effective. Conformity must be determined no less frequently than every three years. The FY06-09 MTIP was conformed by USDOT on August 22, 2006 and the 2025 RTP on December 13, 2004 (see letters in Appendix A). Federal action to approve this conformity determination will begin the three year cycle for the required conformity update of both the RTP and the MTIP.

After an MPO adopts a new or revised transportation plan with regionally significant updates, conformity of the MTIP must be redetermined by the MPO and USDOT within six months of the conformity determination of the RTP (OAR 340-252-0050(3)(d)). Federal action to approve this conformity determination will concurrently conform both the new RTP and the new MTIP.

OAR 340-252-0060 and 40 CFR 93.105 : Consultation

Federal, State, and local interagency consultation are required before making conformity determinations. MPO public involvement procedures must also be followed, as specified in 40 CFR 93.105, 40 CFR 93.112, and 23 CFR Part 450.

The Central Lane MPO is the lead agency responsible for making the conformity determination for the MTIP, performing transportation modeling, regional emissions analyses, and preparing and distributing the draft and final documents.

TPC is designated under this regulation as the Standing Committee for the purposes of consultation on air quality. Members include representatives of the local jurisdictions of Eugene, Springfield, and Lane County; Lane Transit District; Lane Regional Air Pollution Authority; Oregon Department of Transportation; and FHWA. This committee currently meets monthly. The meetings are open to the public and are advertised by emails to interested parties, web postings, and media notice. A 30-day comment period is required for review of the draft conformity determination by TPC.

The MPO must also consult with FHWA, FTA, USEPA, LRAPA and ODOT during development of the conformity determination. Further, the MPO's public participation plan requires that the public be provided with approximately 30 days in which to comment on the air quality conformity determination; a public hearing is also required. Notice must also be sent to a maintained list of interested parties by email.

A summary of the relevant public involvement and interagency consultation dates associated with this conformity determination is provided in the Table 1.

Responses to substantive written comments and verbal comments concerning this conformity determination are provided in Appendix H.

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Table 1. Summary Schedule of Public Outreach and Consultation

<i>Date</i>	<i>Action</i>
August 9, 2007	MPC approves FY08-11 MTIP contingent upon demonstration of conformity and approval of FY08-11 STIP.
September 25, 2007	Interagency consultation
September 27, 2007	Draft air quality conformity determination document distributed to TPC, EPA, USDOT, LRAPA, ODOT
September 28, 2007	Draft conformity determination document posted to MPO website for public access (http://www.CentralLaneMPO.org); notice of draft document availability sent to list of interested parties by email
September 29, 2007	Legal notice in Register-Guard opening public comment period for air quality conformity determination
	Interagency consultation
October 4, 2007	Draft conformity determination provided to MPC members, staff and interested parties by mail and web packet
October 11, 2007	MPC holds public hearing on conformity determination
Nlt October 26, 2007	TPC approves conformity determination
October 29, 2007	Public comment period closes
November 8, 2007	MPC adopts conformity determination; MPC approves 2031 RTP.
Approximately November 30, 2007	USDOT approves conformity determination of RTP and MTIP

As part of the ongoing planning and development of the RTP and MTIP, the MPO, USDOT and TPC evaluate proposed amendments to determine whether a new conformity determination would be triggered by adoption of the amendment. The public and interested parties are notified through routine postings of these materials to the web as part of the packet materials for the TPC and policy board meetings.

OAR 340-252-0070 and 40 CFR 93.106: Content of Transportation Plans

The Eugene-Springfield area was classified as in attainment of CO air quality standards in 1994. In accord with 40 CFR 93.106(c), the MPO has elected to continue its prior practice of not specifying intermediate horizon years: the 2031 RTP contains a single horizon year of 2031, the end of the forecast period of the RTP.

Policies and planning and program actions are described within the RTP as are future highway, transit and bike/pedestrian projects. These project lists are included in this conformity determination in Appendix C. The demographic and employment factors influencing expected transportation demand, including land use forecasts and transit operating policies are quantified in this document's response to OAR 340-252-0110 and 40 CFR 93.110, below. The highway and transit systems are described so that intersections with existing regionally significant facilities are included in the transportation model. Project scope and location and operating conditions are sufficient to model route options, congested travel times, and transit ridership.

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Projects are either identified in the RTP or are consistent with the RTP policies, goals and objectives. In particular, the FY08-11 MTIP is consistent with the 2031 RTP.

OAR 340-252-0090 and 40 CFR 93.108: Fiscal Constraint for Transportation Plans and TIPs

Table 2 provides a summary of the 2031 RTP and FY08-11 MTIP financial analyses and demonstrates financial constraint. Appendices B and C provide tabular listings of all projects included in the FY08-11 MTIP and the financially constrained projects of the 2031 RTP, respectively.

Table 2: Financial Constraint Assessment

	2031 RTP (\$Millions)	FY08-11 MTIP (\$)				Total
Description	FY04-31	FY08	FY09	FY10	FY11	FY08 - FY11
Total Revenue	\$2,344 – 2,369	\$43,547,535	\$71,179,081	\$15,490,301	\$171,069,001	\$301,285,918
Total Expenditures	\$2,341	\$43,547,535	\$71,179,081	\$15,490,301	\$171,069,001	\$301,285,918
Difference Between Revenues & Expenditures	\$0	\$0	\$0	\$0	\$0	\$0

Statement of Financial Constraint: Each project included in the financially constrained list of the Central Lane MPO 2031 RTP and programmed in the FY08-11 MTIP has an identified funding source or combination of sources reasonably expected to be available over the planning period. Funds for FY08-09 projects are available or committed.

2.2 Criteria and Procedures for Determining Conformity

OAR 340-252-0100 and 40 CFR 93.109: General

In order to demonstrate conformity of a transportation plan and MTIP, specific criteria listed in OAR 340-252-0110 through 340-252-0190 (40 CFR 93.110 through 93.119) must be addressed. These criteria include using the latest planning assumptions and the latest emissions model, and undertaking interagency consultation and public involvement. Responses to the criteria are listed below. Since the Eugene-Springfield area has been designated by EPA as a CO maintenance area and the CO SIP was approved by EPA in 1994, the conformity test applied is that of the motor vehicle budget test, OAR 340-252-0190 (equivalently 40 CFR 93.118).

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OAR 340-252-0110 and 40 CFR 93.110: Latest Planning Assumptions

The conformity determination must be based upon the most recent planning assumptions in force at the time the conformity determination is made by the MPO and USDOT.

Key assumptions are based on current and forecasted population and employment for the 306 transportation analysis zones (TAZs) over which the transportation network is defined (Map 1). The TAZs cover the area within the urban growth boundaries of Eugene, Springfield and Coburg, and a small portion of rural Lane County. Table 3 summarizes the population and employment for the base year of the model, 2004, and the analysis years of 2015 and 2031, years in which the land use model was used to allocate growth. Also shown are the estimated vehicle miles traveled (VMT) for these years.

**Table 3: Population and Covered Employment
within TMA Transportation Analysis Zones.**

Estimated Vehicle Miles Traveled (VMT) for the TMA and the CATS area are also shown.

<i>Analysis Year</i>	<i>Population</i>	<i>Employment</i>	<i>Daily Vehicle Miles Traveled²</i>	
			<i>TMA</i>	<i>CATS</i>
2004	238,600	118,200	4,830,100	201,400
2015	272,500	137,800	5,563,400	196,700
2031	330,300	173,200	7,220,200	234,300

¹ Includes group quarters; ² All trips including commercial vehicles, through trips, external to internal, internal to external, and internal to internal trips.

Population

This conformity analysis is consistent with the 2030 Lane County coordinated population projection for the areas within the urban growth boundaries of Eugene/Springfield and Coburg. These projections were adopted on 24 February 2005 by the coordinating body, Lane Council of Governments Board of Directors, and are unchanged as of October 2007. They were prepared using the 2030 county population projection received in May 2004 from the State Office of Economic Analysis, the 2004 county population estimated by the Population Research Center at Portland State University, and for each city, Census2000 data, historic population trends, comprehensive plans and transportation system plans. The estimated 2031 urban population was obtained by linearly extrapolating one year beyond the 2030 coordinated projections within the urban growth boundaries of Eugene/Springfield and Coburg.

The projections of the population in the rural portions of the TAZs outside the urban growth boundaries were based on the existing dwelling units and the small number of vacant buildable parcels under current Lane County rural development policies, present in 2004 within the model TAZ area. The growth analysis did not take into account the possibility of the development of large rural subdivisions due to Measure 37, an Oregon property rights ballot measure. The impact of this measure on the county control

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population has not yet been quantified or reflected in the coordinated populations (at either the county or the UGB level), and there are active and ongoing attempts to amend the legislation in November 2007.

Employment

The 2004 employment numbers are based on data received from the Oregon Employment Department in February 2005. These data were geocoded to a location and sorted from very specific NAICs codes into the broader categories used in the model. Employment projections were based on 2004-2014 county-level, employment sector forecasts received from the Oregon Employment Department in July 2005, and the 1980 to 2004 trend of employment in the Eugene/Springfield market area as a proportion of the Lane County covered employment. The employment growth assumptions from the Coburg Urbanization Study of April 2004 were used for the Coburg UGB. Employment by sector in the rural areas of the TAZs was assumed to be unchanged. (While the 2005 employment figures have been released by OED, processing of the raw data has not been completed. Thus, these data are not yet suitable for use in the transportation model.)

Population and employment allocations were made to transportation analysis zones using the land use allocation model for both the 2015 and 2031 forecasts.. Allocations reflect existing local development, the availability of vacant, buildable land by current plan designation, redevelopment and infill plans for mixed-use nodes, and known projects currently in the planning process.

Land Use

The adopted 2015 Eugene-Springfield Metropolitan Area General Plan was used to describe future land use within the Eugene-Springfield urban growth boundary. Metropolitan housing and employment growth was restricted to within the existing Eugene-Springfield urban growth boundary. Although the densities for the new modeled residential development are higher than current averages, they are still within allowable Metro Plan densities specific to each type of residential use, and thus no expansion of the Eugene-Springfield UGB was assumed. The Coburg Urbanization Study, approved by the Coburg City Council in April 2004, was used to guide growth in the vicinity of Coburg. Land use designations in both these plans were assumed to be static through 2031.

Eugene and Springfield staff reviewed planned nodal development areas within each city during the development of the 2031 RTP and indicated the subset which are expected to be fully functional by 2031. The RTP policies mirror those of the local Eugene-Springfield TSP (“TransPlan”) for which the State Transportation Planning Rule (OAR 660-012-0060(5)(a)) permits the reduction of vehicle trips by 10% in mixed use nodal areas when estimating VMT. However, this assumption was **NOT** made in the analysis for this conformity determination. Thus, VMT estimated here and the corresponding CO emissions are higher than those numbers that would be expected if all nodes were fully developed by 2031. Map 7 shows existing and planned nodal areas.

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Transit

Non-auto travel is estimated by use of a mode choice model. This model, which includes transit assumptions and policies, was recalibrated for ridership in the base year of 2002 following an update in the mode choice model transit fare coefficient.

Transit operating policies are assumed to remain unchanged from the prior conformity for the FY06-09 MTIP. Transit operations continue with approximately the same service hours. Basic fares are assumed to remain constant with inflation over the period 2002 to 2031 while automobile operating costs, exclusive of fuel costs, are assumed to increase by 33% from 4.5 cents/mi to 6.0 cents/mi (in 1995 dollars). Fuel costs are assumed to rise from 7.5 cents/mi to 10 cents/mile (in 1995 dollars) over the period 2002-2031. Mode choice modeling for 2015 assumes a total auto operating cost of 14 cents/mile (in 1995 dollars). (Note that for a fleet fuel economy of 27 mpg, and using the Consumer Price Index for 1995 through 2002 and an inflation rate of 3.1% thereafter, 10 cents/mile in 1995 dollars translates into a fuel cost of \$7.72 per gallon in 2031.)

Bus Rapid Transit (BRT) Phase I (“EmX” on the Franklin Blvd. corridor) began operations in January 2007. Phase II (Pioneer Parkway corridor) is assumed to be operational by 2015. The current “free-fare” policy on EmX is assumed to expire once Phase II is operational. An additional express route from River Rd Park and Ride to PeaceHealth River Bend is assumed by 2015. Portions of the entire BRT system are assumed to be fully developed by 2031 with separate guideways and intersection/signal priority. The remaining parts of the BRT corridors are assumed to have intersection priority treatments by 2031, but buses would otherwise operate in mixed traffic mode. The progressive enhancement of transit services (“Bus Plus”) is expected to begin between 2008 and 2015, but the details as to the rate of progress, the location and extent of enhancements are not yet known. Non-BRT buses are assumed to continue to operate in mixed traffic.

Dwell time is assumed to be 1 minute/mile on standard bus routes; 0.5 minutes/mile on BRT routes for which stops are not yet located; and 0.3 minutes/stop on the Phase I and Phase II BRT routes. Also, for BRT, unique transit travel time functions, derived from LTD studies, are used for buses operating with intersection and/or signal priority treatment, and for those operating in separate guideways. Headways of 10 minutes are assumed, shorter than those on most standard bus routes. No special transfer conditions are assumed for BRT – the average wait is half the combined headway services, as for standard bus service. The same mode specific bias constants are used for BRT as for the standard bus service. Due to uncertainty about the timing of BRT and Bus Plus enhancements beyond the current MTIP, the 2015 transit network assumes only the development of the BRT Phase II Pioneer Parkway corridor and a handful of other service changes pertaining to that project.

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Map 7. Nodal Development Areas within the TMA.
Nodes are identified as to whether they are assumed fully functional by 2031
The inset shows the details in the CATS area.

<insert nodal development map>

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The LTD employer group pass program has experienced dramatic growth in recent years and currently covers about 12% of all employees. It is assumed to cover about 24% of all employees in 2031 with all major employers (with more than 150 current employees) assumed to provide group passes to their workers, resulting in a slight reduction in the average fare in travel zones containing their workplaces. (Note that in 2002, employers with a minimum of 10 employees became eligible for enrollment in the LTD group pass program, and, as of 2007, 41,000 employees, UO and LCC students receive group passes, and 5,100 others receive either discounted fares or are enrolled in the emergency ride home program). While the current grant-funded free pass program for students in grades 6-12 continued in FY2007-2008 and is *expected* to become fundable on an annual basis as part of the Oregon Department of Energy's Business Energy Tax Credit program, it was not assumed in the future forecasts for this conformity determination. This program adds an additional 27,000 students to the group pass program.

In other zones, fares are assumed to remain constant with inflation. LTD monthly pass prices and three-month pass prices increased in 2007 after having been held constant since 2004; cash fare prices are scheduled to increase from \$1.25 (set in 2002) to \$1.35 in 2008. Single ride token prices remain unchanged at \$1.10. Perceived parking costs (actual costs adjusted by employer payments) in downtown Eugene are assumed to continue to outstrip inflation based on the observed increase from 1995 to 2004 of 50% above inflation. Parking costs (which vary by TAZ based on the proportion of free spaces to paid spaces) are assumed to undergo an additional 60% increase between 2002 and 2031. The paid-parking area of the downtown/university district is assumed to expand into the adjoining courthouse district.

Transit linked trips are forecast to increase from 26,800/average weekday (school-in-session) in 2002 to 44,600/day in 2031, an average growth rate of 1.9% per year. Average weekday (school-in-session) boardings for FY2006-2007 were about 37,000. Service boundaries have remained constant since 2001. However an evaluation of bus service to the City of Florence (outside the MPO area) in 2007-08 may lead to the addition of a new area within the LTD boundary.

LTD reports that, between July 2001 and June 2004, ridership decreased by 6.2 percent. This ridership decrease was caused by a reduction in bus service hours of 13 percent since June 2001. However, ridership subsequently increased by 1.8 percent in FY 2004-05, nearly 11 percent in FY 2005-06, and by more than 5 percent in FY2006-07. Bus operations are primarily funded by a payroll tax within the LTD district, and an economic downturn forced the service reduction in 2001-2004. A stabilizing of the economy allowed service levels to also stabilize in FY2005-06. This stabilization, coupled with the introduction of the middle school/high school group pass program and rising fuel prices, provided the impetus for increased ridership. Bus service hours increased between 1 percent and 2 percent annually between 2005 and 2007, as reflected in the LTD Long Range Financial Plan.

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LTD's revenues increased by 2.26% in 2006-2007. Fare revenue growth is expected to grow at 4% per year according to LTD's long range financial plan.

These transit policy assumptions are considered reasonable by LTD staff and by FTA

Tolls

There are no road and bridge tolls in the Eugene-Springfield Metro Area and none are expected in the future.

Transportation Control Measures

No transportation control measures (TCMs) are required by the Eugene-Springfield CO SIP.

OAR 340-252-0120 and 40 CFR 93.111: Latest Emissions Model

The latest emission estimation model available was used in the computation of CO emission factors. Table 4 shows the parameter values that were used in the emissions modeling.

Table 4. MOBILE 6 Assigned Parameter Values

Parameter	Value	Source
Emission Model Version	MOBILE 6.2.03	EPA
Pollutants Reported	CO	SIP
Analysis Years	2015, 2025, 2031	EPA regulations
Emission Month	January	LRAPA
Time Period	24 hours	
Vehicle Class	2004 Lane County registration data	Oregon Dept. of Environmental Quality
Speeds – freeways, arterials	1 to 65 mph	
Speeds – local roads, ramps	Not applicable	MOBILE 6 assigns single speed
Min/Max temperatures	33.6/46.2 dgF	LRAPA
Fuel Reid Vapor Pressure	15 psi	LRAPA
Absolute humidity	26.9 grains/lb	LRAPA

There are no programs for mandated fuel mixes or vehicle inspection/maintenance in this area.

LCOG staff used these local values to run MOBILE 6 to compute air quality emissions per VMT by speed range and by facility type. These CO emission factors are listed in Appendix D-1 with sample input and output files shown in Appendices D-2 and D-3, respectively.

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OAR 340-252-0130 and 40 CFR 93.112: Consultation

See responses to OAR 340-252-0060 and 40 CFR 93.105.

OAR 340-252-0140 and 40 CFR 93.113: Timely Implementation of TCMs

There are no TCM requirements in the CO SIP.

OAR 340-252-0150 and 40 CFR 93.114: Currently conforming transportation plan and TIP

The current 2025 RTP was conformed on December 13, 2004 (see USDOT letter included in Appendix A). The current FY06-09 MTIP was conformed on August 22, 2006 (see Appendix A). Approval of this conformity determination will establish the 2031 RTP and the FY08-11 MTIP as the currently conforming plan and TIP. All continuing capital projects from the FY06-09 MTIP which have not yet begun construction are included in the FY08-11 MTIP.

OAR 340-252-0160 and 40 CFR 93.115: Projects from a Plan and TIP

The projects in the FY08-11 MTIP are either included in the 2031 RTP, or are consistent with the policies and purpose of the plan and will not interfere with other projects specifically within the plan. Appendix B identifies, for each project in the MTIP, the project ID from the RTP or the consistent policy. Typically, MTIP projects that are not explicitly listed in the RTP are pavement rehabilitation/resurfacing projects, safety projects, or exempt planning projects..

As projects of design concept and scope suitable for inclusion in the regional transportation model are amended into the RTP and/or MTIP, they are also included in the emissions modeling. The amendment approval process in place in the MPO ensures consultation between USDOT and the MPO and is suitable for identifying whether a new or altered project can be considered to be conformed or not.

OAR 340-252-0190 and 40 CFR 93.118: Motor Vehicle Emissions Budget

Since the Eugene-Springfield area has an approved CO SIP and is currently a maintenance area for CO, the motor vehicle budget test must be satisfied to demonstrate conformity. On May 5, 2004, EPA verbally and by email (see Appendix A) confirmed that the only motor vehicle budget specified in the CO SIP is that of 6,021 tons/yr for 1990. No specific budget was established in the SIP for the last year of the maintenance plan.

Consistency with the emissions budget must be demonstrated for the last year of the

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transportation plan's forecast period and for any intermediate years as necessary so that the demonstrations of consistency are no more than 10 years apart. Three analysis years were chosen for the conformity determination:

- 2015 and 2025 (intermediate years to ensure analyses are at least as frequent as 10 years),
- 2031 (the last year of the transportation plan's forecast period)

The entire travel network was analyzed, and emissions computed for travel within the CATS area. All regionally significant projects contained in the RTP and MTIP and all other known regionally significant highway and transit projects expected in the maintenance area were included in the analysis based on the current description of their scope.

The regional emissions analysis meets the requirements of OAR 340-252-0230 (equivalently 40 CFR 93.122), as described below in Section 2.3.

To demonstrate conformity, emissions must be less than or equal to the emissions budget established for the last year of the maintenance plan (no such budget exists in the Eugene-Springfield SIP), and for the years in which a motor vehicle emissions budget is established (1990). Thus, emissions for all analysis years in this conformity determination must be less than or equal to the maintenance plan's budget of 6,021 tons/yr for the CATS area.

Table 5 presents the results of the regional emissions analysis. Projected emissions are shown to be less than 6,021 tons/yr, and thus the 2031 RTP and the FY08-11 MTIP are shown to be consistent with the motor vehicle budget in the CO SIP and to meet the budget test.

**Table 5: Carbon Monoxide Emissions Analysis
within the CATS boundary**

Analysis Year	Tons/Year of Carbon Monoxide	
	SIP motor vehicle budget	Projected Emissions
		All facilities
1990	6,021*	
2004**		2,401
2015		1,186
2025		1,060
2031		1,088

* Federal Register, Vol. 58, No. 232, Page 64163, December 6, 1993.

** Base year; provided for reference only

The projected emissions reflect approximately a 17% increase due to use in the model of the 2004 Lane County vehicle registration data (obtained from Oregon Dept. of Environmental Quality) instead of the default distribution provided by EPA in the MOBILE6 model. This reflects the older fleet in Lane County in contrast to the

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nationwide average. The projected increase in CO between 2025 and 2031 is attributed to the high residential and employment density in the downtown Eugene area in which the CATS area is centered, and decreases in speed due to congestion. However, the projected emissions beyond 2031 are expected to remain well within the budget and the model results raise no concerns at this time.

2.3 Regional Emissions Analysis & Methodology

OAR 340-252-0230 and 40 CFR 93.122: Procedures for Determining Regional Transportation-Related Emissions

VMT estimates

The transportation model is a four-step model of trip generation, trip distribution, mode choice and vehicle assignment. The traffic forecasting software package, EMME/2 (Version 9.6), was used to determine traffic estimates and forecasts for the entire TMA region consistent with the estimated trips within the TAZs for each analysis year. Specific data obtained from the model included speed, volumes and vehicle miles traveled as well as facility types. A link-by-link analysis was carried out. Since roadway capacity and speed are included in the model, the effects of congestion are also included.

The model base year is 2004, the year for which land use data, population and employment data, and traffic counts at the extended cordon stations were all available. See also previous section OAR 340-252-0110.

Transportation Networks

All regionally significant projects expected in the maintenance area were included in the regional analysis as required by the conformity test. These included all FHWA and FTA-funded capital projects proposed in the fiscally constrained transportation plan and the MTIP. The tables in Appendices B and C list the fiscally constrained projects considered in this conformity determination. Maps 3-6 show their location within the region. Criteria for projects required to be included in the regional emissions analysis were derived from OAR 340-252-0270 and OAR 340-252-0280 (equivalently, 40 CFR 93.126 and 40 CFR 93.127) (Appendix E).

As a usual and continuing practice, all new facilities and all road projects that affect the capacity or speed of existing facilities are included for the appropriate year in the transportation networks developed and maintained at LCOG. Regionally significant projects outside the CATS area are thus included in this analysis. The 2015 network was comprised of the 2004 network plus road improvements completed or currently underway with completion dates no later than 2015, and all projects from the FY08-11 MTIP which are expected to be in operation by 2015. The 2025 network is identical to the 2015 network as no intermediate horizon year is specified for the RTP and all projects within the MTIP are expected to be complete by 2015. All roadway and transit projects from the RTP that affected capacity or speed of travel were included in the fiscally constrained 2031 network.

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LTD supplied LCOG with future year transit networks for 2031 which included BRT as well as other conventional transit routes. It is assumed that by 2031, five BRT corridors will be fully developed with separate guideways and priority treatment at intersections. The remaining five BRT corridors will be partially developed, with intersection priority treatment, but no guideways. Total dwell time in BRT corridors will be less than non-BRT routes due to automated fare collection, boarding through multiple doors, and limited stops. These effects influence travel demand, and are thus included through the mode choice component of the transportation system model.

Off-network roadways within the TMA consist of local roads that are not explicitly included in the transportation network as links. Interzonal travel is included by computation of VMT on centroid connectors. Intrazonal distances used in VMT calculations are assumed to be 7/10ths of the distance to the nearest neighboring zone. All centroid connector and intrazonal travel is assumed to take place on local streets, and thus MOBILE 6 emissions factors for local streets are used in computing the emissions effects of travel on these streets. Through trips and trips having an origin or destination outside the TMA are represented within the model based on a cordon origin and destination survey and a modeled growth rate. Thus, all local and through trips that traverse the CATS area are included in the VMT and emissions summaries.

For each analysis year, travel demand was estimated and trips were distributed across the road network based on land use and transportation changes. The link speeds within the transportation network model reflect travel under congested conditions and are a function of both travel and capacity limitations of the road system for each analysis year.

Total Emissions

In order to compute CO emissions per link MOBILE 6 emissions factors were applied to the estimates of vehicle miles traveled (VMT) by facility type by speed for each analysis year. In addition to local roads explicitly included in the travel network, travel on local roads that are not represented by links in the network was also included through the application of emission factors to interzonal VMT (through centroid connectors), and intrazonal VMT (see “Transportation networks” above). CO emissions on the facilities within the CATS area were then totaled to estimate the CATS area-wide CO emissions in tons/year for each analysis year. The results are listed in Table 5.

Note that since emission factors pertaining to “winter” (January) conditions are applied to VMT over the entire year and the lower emission factors of the summer season are not used, the computed yearly CO load is a conservative estimate.

Credits

No emissions reduction credits are included in the analysis.

Ambient temperatures

The ambient temperatures used for the regional emissions analysis are consistent with those used to establish the emissions budget in the CO SIP.

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OAR 340-252-0270 and 40 CFR 93.126: Exempt Projects

Certain air quality projects within the financially constrained plan are exempt from the requirement that a conformity determination be made (see OAR 340-252-0270 and 40 CFR 93.126 Tables 2 and 3, Appendix E). These projects are defined by EPA as projects which will not affect the outcome of any area-wide air quality analysis. Although these projects are exempt from emissions analysis, the Central Lane MPO system-wide traffic-forecasting model reflects all capital investment projects, including those designated as exempt, to the extent possible (e.g. in approach capacities and link speeds) in the assignment of traffic and calculation of VMT.

Projects designated as exempt from the requirement to determine conformity included planning and technical studies including bike facilities; pedestrian facilities, construction of passenger shelters, purchase of operating equipment, and planning projects which do not lead directly to construction. Interagency consultation clarified that urban standards projects are also exempt based on the implementation of safety improvements, widening narrow pavements (no additional travel lanes), pavement rehabilitation, and landscaping..

The lists of projects in Appendices B and C were reviewed during interagency consultation. Exempt projects are annotated as to the reason for this classification.

OAR 340-252-0280 and 40 CFR 93.127: Projects Exempt from Regional Emissions Analyses

While certain highway and transit projects are exempt from regional emissions analysis requirements (Appendix E), it is LCOG-practice that the system-wide traffic-forecasting model reflect these projects to the extent possible (e.g. in approach capacities and link speeds) in the assignment of traffic and calculation of VMT.

The lists of projects in Appendices B and C were reviewed during interagency consultation. Exempt projects are annotated as to the reason for this classification.

OAR 340-252-0290 and 40 CFR 93.128: Traffic Signal Synchronization Projects

The status of all completed projects has been included in the emissions analysis: signal progressions have been taken into consideration by developing intersection approach capacities on the links. Regionally significant signal synchronization projects operating on a 24 hr basis are located on:

- 6th Avenue/7th Avenue couplet
- Oak St (between 19th and 7th Avenues)
- Main/South A St couplet

During interagency consultation for the FY06-09 MTIP, it was concluded that the BRT Progressive Corridor Enhancement (PCE) Project (initiating the BusPlus or “BRT-Lite” service) will involve an unknown number (at this time) of transit signal priority

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treatments by 2015 and can be treated in the same way as “traffic signal synchronization projects.” This assumption is carried forward to this conformity determination as there has been no progress to date on this project. Thus, this regional emissions analysis modeling will not anticipate the extent and location of the PCE improvements but their effect must be assessed at the time of the next conformity analysis.

3.0 Summary

As shown above in response to OAR 340-252-0190 (and equivalently, 40 CFR 93.118), the 2031 RTP and the FY08-11 MTIP are shown to be consistent with the motor vehicle budget in the CO SIP and to meet the budget test.

As shown in Figure 1, CO levels in the maintenance area have continued to decline since 1990. In 2006, the CO design value for the AQMA fell to 2.3 ppm. The observed trends in the data and the modeled results thus engender confidence that the policies and projects in the RTP and MTIP will not endanger the achievement of the NAAQS for CO in the Eugene-Springfield maintenance area.

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