

Air Quality Memorandum

REPORT NO. 29

DATE August 22, 2013

SUBJECT CONFORMITY ANALYSIS FOR THE WFRC AMENDED 2040 REGIONAL TRANSPORTATION PLAN.

ABSTRACT The Moving Ahead for Progress in the 21st Century (MAP-21) and the Clean Air Act Amendments (CAAA) require that all regionally significant highway and transit projects in air quality non-attainment and maintenance areas be derived from a “conforming” Regional Transportation Plan and Transportation Improvement Program. A conforming Plan or Program is one that has been analyzed for emissions of controlled air pollutants and found to be within emission limits established in the State Implementation Plan (SIP) or within guidelines established by Environmental Protection Agency (EPA) until such time that a SIP is approved. This conformity analysis is made by the Wasatch Front Regional Council (WFRC), as the Metropolitan Planning Organization for the region, and submitted to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for their concurrence. This conformity analysis is being prepared according to the transportation conformity rulemakings promulgated by the EPA as of March 2010 and according to FHWA final rulemakings found in the MAP-21 legislation. The EPA approved MOVES model for estimating vehicle emissions was used for this conformity analysis.

This conformity analysis addresses additional amendments to the previously amended 2011-2040 RTP (RTP). The amendments include a grade separated interchange on Bangerter Highway at Redwood Road in Salt Lake County. Bangerter Highway is a regionally significant facility. Improvements to three minor arterials in Weber County including Pioneer Road (SR-126 to 4700 West), Adams Avenue (US-89 or Washington Blvd to Washington Terrace City limits) and 4000 South (5100 West to 1900 West) were also included in this analysis but these are not regionally significant projects.

Based on the analysis presented in this document, the Amended WFRC 2011-2040 RTP conforms to the State Implementation Plan or the Environmental Protection Agency interim conformity guidelines for all pollutants in applicable non-attainment or maintenance areas. Therefore, all the transportation projects in Weber, Davis, and Salt Lake Counties in the Amended 2011-2040 RTP are found to conform.

Wasatch Front Regional Council

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A. Conformity Requirements

Conformity Process

Since the commencement of the planning requirements in the late 1960s, further requirements (most recently the 2012 Moving Ahead for Progress in the 21st Century (MAP-21) and the 1990 Clean Air Act Amendments) have added to the responsibilities and the decision making powers of local governments through the Metropolitan Planning Organization. The Wasatch Front Regional Council (WFRC) is the Metropolitan Planning Organization for the Salt Lake/West Valley and Ogden / Layton Urbanized Areas. This report summarizes WFRC's conformity analysis of the Amended 2011-2040 RTP with the Division of Air Quality's State Implementation Plan (SIP) and the Environmental Protection Agency's interim conformity guidelines. This conformity analysis is subject to public and agency review, and requires the concurrence of the Federal Highway Administration and Federal Transit Administration.

In November, 1993, the Environmental Protection Agency and the Department of Transportation issued rules establishing the procedures to be used to show that transportation plans and programs conform to the SIP. The conformity rules establish that federal funds may not be used for transportation projects that add capacity in areas designated as "non-attainment (or maintenance) with respect to the National Ambient Air Quality Standards", until and unless a regional emissions analysis of the Plan and TIP demonstrates that the projects conform to the SIP. This restriction also applies to "regionally significant" transportation projects sponsored by recipients of federal funds even if the regionally significant transportation project uses local funds exclusively.

Weber, Davis, and Salt Lake Counties, Salt Lake City, Ogden City and portions of Box Elder and Tooele Counties are designated as non-attainment (or maintenance) for one or more air pollutants. Specifically, there are four areas in the Wasatch Front region for which the conformity rules apply. These areas are listed in Table 1 below.

Table 1
Wasatch Front Region Non-attainment Designations

Area	Designation	Pollutant
Salt Lake City	Maintenance Area	Carbon Monoxide (CO)
Ogden City	Maintenance Area	Carbon Monoxide (CO)
	Moderate Non-Attainment Area	Particulate Matter (PM ₁₀)
Salt Lake County	Moderate Non-Attainment Area	Particulate Matter (PM ₁₀)
Salt Lake (including Davis, Salt Lake, and portions of Weber, Box Elder, and Tooele Counties)	Moderate Non-Attainment Area	Particulate Matter (PM _{2.5})

The CAAA established requirements for conformity. These requirements are outlined in 40 CFR 93.109 and include the following:

- Latest planning assumptions
- Transportation Control Measures (TCM)
- Emissions budget
- Project from a conforming plan and TIP
- PM₁₀ control measures
- Latest emissions model
- Consultation
- Currently conforming plan and TIP
- CO and PM₁₀ “hot spots”

Each of these requirements will be discussed in the following paragraphs.

Latest Planning Assumptions

Current travel models are based on socioeconomic data and forecasts from local building permits, the Utah Division of Workforce Services, and the Governor’s Office of Planning and Budget (GOPB). Socioeconomic data are from calendar year 2007. Forecasts of population and employment by traffic analysis zone were developed by WFRC in 2009 and 2010 and are tied to county-level forecasts published by GOPB in January, 2008.

Latest Emissions Model

The conformity analysis presented in this document is based on EPA mobile source emissions models: MOVES2010b for tailpipe emissions and AP-42 section 13.2.1 for paved road dust emissions. The application of these models will be discussed in greater detail in the Emissions Model section of this document. The mandated use of the new MOVES model began in March 2013.

Consultation Process

Section 105 of 40 CFR Part 93 (Conformity Rule) requires, among other things, interagency consultation in the development of conformity determinations. To satisfy this requirement, the State Division of Air Quality (DAQ) prepared a Conformity SIP document to outline the consultation procedures to be used in air quality and transportation planning. The Conformity SIP also defines the membership of the Interagency Consultation Team (ICT) as representatives from DAQ, WFRC, Mountainland Association of Governments, Utah Department of Transportation, Utah Transit Authority, EPA, FHWA, and the FTA. The Conformity SIP has been approved by EPA. WFRC followed the consultation procedures as outlined in the Conformity SIP in the preparation of this conformity analysis. As part of the consultation procedures defined in the Conformity SIP, WFRC presented this report to the Transportation Committee (or TransCom) for review and comment. This committee includes a member of the Utah Air Quality Board as well as representatives of UDOT, UTA, and FHWA. In addition, management level staff members from the Utah Division of Air Quality are notified of meetings and agendas of the above committees. The Utah Division of Air Quality and other members of the ICT were also provided with a copy of this report at the beginning of the public comment period for the Amended 2011-2040 RTP.

This Conformity Analysis for the Amended 2011-2040 RTP was made available for public inspection and comment for a 30-day period in accordance with EPA conformity regulations. This analysis was also posted on the WFRC website at the beginning of the comment period. Notification of the comment period was sent by electronic mail to interested stakeholders. In addition, public comment was taken during various committee meetings of the Wasatch Front Regional Council, as well as public open houses with the express purpose of soliciting public comment on this document.

TCM Implementation

A conformity analysis for the Amended 2011-2040 RTP must certify that nothing in the RTP interferes with the implementation of any Transportation Control Measure (TCM) identified in the applicable State Implementation Plan (SIP). There is one TCM from the original SIP section for the 1-hour ozone standard which has been carried forward to the current ozone maintenance plan, even though the 1-hour ozone standard has been revoked. This TCM, the employer-based trip reduction program, applies to local, state, and federal government employers. The program emphasizes measures to reduce the drive-alone rate such as subsidized bus passes, carpooling, telecommuting, and flexible work schedules. UTA has in place the ECO pass discount for a number of large employers including the University of Utah and Weber State University. Ridesharing, telecommuting, and flexible work schedules are programs currently managed, promoted, or operated by UTA Rideshare and the UDOT Travelwise program. Congestion Mitigation and Air Quality (CMAQ) funds and other transportation funds are used to support these ongoing programs.

Emissions Budget

A comparison of mobile source emission estimates to emission budgets defined in the SIP is outlined in this document in Section D - Conformity Determination.

Currently Conforming Plan and TIP

The existing 2040 RTP for the Wasatch Front Area conforms to State air quality goals and objectives as noted in a letter from FHWA and FTA dated September 26, 2012. The existing TIP for the Wasatch Front Area was also found to conform and this was noted in the same letter from FHWA and FTA.

Projects from a Conforming Plan and TIP

TIP Time Frame - All projects which must be started no later than 2019 in order to achieve the transportation system envisioned by the Amended 2011-2040 RTP are included in the 2014-2019 TIP. The TIP is fiscally constrained, meaning that only those projects with an identified source of funds are included in the TIP. Estimated funding availability is based on current funding levels and reasonable assumptions that these funds will continue to be available. Conformity for the 2014-2019 TIP is addressed separately in Air Quality Memorandum 29a.

Regionally Significant

All regionally significant projects, regardless of funding source (federal, state, or local) are included in the RTP. All regionally significant projects are also included in the regional emissions analysis of the RTP. Regionally significant projects are identified as those projects functionally classified as a principal arterial or higher order facility, and certain minor arterials as identified through the interagency consultation process (see Appendix 1 for a complete definition of regionally significant projects). The latest Utah Department of Transportation Functional Classification map was used to identify functional classification. Interstate highways, freeways, expressways, principal arterials, certain minor arterials, light rail, and commuter rail are treated as regionally significant projects.

Because of their relative impact on air quality, all regionally significant projects regardless of funding source must be included in the regional emissions analysis, and any significant change in the design or scope of a regionally significant project must also be reflected in the analysis. All regionally significant projects have been included in the regional emissions analysis, and the

modeling parameters used for these projects are consistent with the design and scope of these projects as defined in the RTP. In order to improve the quality of the travel model, other minor arterials and collectors, as well as transit service, are also included in the regional travel model (and thus the regional emissions analysis) but these facilities are not considered regionally significant since they do not serve regional transportation needs as defined by EPA. For a list of projects included in this conformity analysis please refer to Appendix 2 for Weber, Davis, and Salt Lake Counties, Appendix 3 for Box Elder County, and Appendix 4 for Tooele County.

CO, PM₁₀ and PM_{2.5} “Hot Spot” Analysis

In addition to the regional emissions conformity analysis presented in this document, specific projects within carbon monoxide (CO) and particulate matter (PM₁₀ and PM_{2.5}) non-attainment areas are required to prepare a “hot spot” analysis of emissions. The “hot spot” analysis serves to verify whether or not localized emissions from a specific project will meet air quality standards. This requirement is addressed during the NEPA phase of project development before FHWA or FTA can issue final project approval.

FHWA has issued guidance on quantitative PM₁₀ and PM_{2.5} “hot spot” analysis to be used for the NEPA process.

PM₁₀ Control Measures

Construction-related Fugitive Dust - Construction-related dust is not identified in the Utah SIP as a contributor to the PM₁₀ non-attainment area. Therefore, there is no conformity requirement for construction dust. Section 93.122(d) (1) of 40 CFR reads as follows:

“For areas in which the implementation plan does not identify construction-related fugitive PM₁₀ as a contributor to the non-attainment problem, the fugitive PM₁₀ emissions associated with highway and transit project construction are not required to be considered in the regional emissions analysis.”

In the Utah PM₁₀ SIP, construction-related PM₁₀ is not included in the inventory, nor is it included in the attainment demonstration or control strategies. Control of construction-related PM₁₀ emissions are mentioned in qualitative terms in Section IX.A.7 of the SIP as a maintenance measure to preserve attainment of the PM₁₀ standard achieved by application of the control strategies identified in the SIP. Section IX.A.7.d of the SIP requires UDOT and local planning agencies to cooperate and review all proposed construction projects for impacts on the PM₁₀ standard. This SIP requirement is satisfied through the Utah State Air Quality Rules. R307-309-4 requires that sponsors of any construction activity file a dust control plan with the State Division of Air Quality.

Other Conformity Requirements

Transit Fares - Transit fares have increased periodically and will continue to increase in response to rising operating costs. The Plan assumes that transit fare box revenues will cover a constant percentage of all transit operating cost, so future fare increases are consistent with the Plan. With any price increase some market reaction is expected. While there have been some short term fluctuations in transit patronage in response to fare increases, the implementation of light rail service and other transit improvements has retained and increased transit patronage consistent with the levels anticipated by the RTP.

Plans to expand light rail service, to increase and enhance bus service, and to extend commuter rail operations are moving forward. These transit projects are envisioned in the Plan and the steps necessary to implement these projects are moving forward including various voter approved sales tax increases for transit funding.

B. Transportation Modeling

Improvement to the WFRC travel demand model practice and procedure is an ongoing process. This conformity analysis is based on the latest version (7.0) of the travel demand model. Version 7.0 of the travel demand model updates the base year of the model from 2005 to 2007. Version 7.0 of the model also has added more traffic analysis zones, and the transit mode choice portion of the model has been enhanced. Details of Version 7.0 of the travel model are documented in a report titled “WFRC/MAG Version 7.0 Travel Demand Model Documentation” which is available upon request.

Planning Process

Federal funding for transportation improvements in urban areas requires that these improvements be developed through a comprehensive, coordinated, and continuous planning process involving all affected local governments and transportation planning agencies. The planning process is certified annually by the Regional Council and reported to the Federal Highway Administration and Federal Transit Administration. Every four years FHWA and FTA conduct a comprehensive certification review. The certification review of May 2009 found that the WFRC planning process meets federal requirements. Recommendations were made to improve WFRC’s planning process and these are being addressed.

The documentation of the planning process includes at a minimum, a twenty-year Regional Transportation Plan updated at least every four years; and a four-year Transportation Improvement Program (capital improvement program) updated and adopted at least every four years. The planning process includes the involvement of local elected officials, state agencies, and the general public.

Travel Characteristics

The WFRC travel model is used to estimate and forecast highway Vehicle Miles Traveled (VMT) and vehicle speeds for Weber, Davis, and Salt Lake Counties. A separate travel model is used to estimate VMT and speed in Tooele County. For VMT and speed estimates in Box Elder County, WFRC relied on forecasts provided by the Utah Department of Transportation. The WFRC travel demand model is based on the latest available planning assumptions and a computerized representation of the transportation network of highways and transit service. The base data for the travel demand model is reviewed regularly for accuracy and updates. The travel model files used for this conformity analysis are available upon request on compact disc.

Shown below in Table 2 is a summary of weekday VMT for the cities and counties in designated non-attainment areas. Totals for VMT are given for various air quality analysis years from 2012 to

2040. Note that the VMT values for Weber, Box Elder, and Tooele Counties are not for the entire county but only that portion of the county designated as non-attainment for a criteria pollutant.

Table 2
Vehicle Miles Traveled (Average Winter Weekday HPMS Adjusted)

	2012	2020	2030	2040
Salt Lake City	6,592,823	7,370,154	8,441,427	9,144,309
Ogden City	1,565,100	1,761,726	2,000,391	2,213,951
Salt Lake County	27,067,708	31,957,837	38,124,961	44,585,580
Davis County	8,140,970	9,519,318	10,625,030	11,571,118
Weber County*	4,970,419	5,912,858	7,026,196	8,204,030
Box Elder County*	2,380,079	2,709,337	3,227,017	3,844,694
Tooele County*	1,814,711	2,507,527	3,373,539	4,562,662

**non-attainment portion of the county*

Peak and Off-Peak Speeds

The modeled VMT and speed for each time period (AM, midday, PM, and evening) defined in the travel demand model depend on the number of vehicle trips assigned for that time period. The percentage of trips by purpose varies for each time period. The percentages in Table 3 and Table 4 below are based on data from the 1993 Home Interview Survey and 2008 observed traffic count information. Trip purposes “commercial” (COM) and “through” (THRU) were not sampled in the Home Interview Survey. These two trip types are allocated to the four time periods according to the percentages for “non-home based” (NHB) and “internal/external” (IXXI) trips respectively (with some rounding as necessary for the COM trips).

Table 3
Percent of Home Based Trips by Time of Day

	AM		Mid-day		PM		Evening	
Purpose	From Home	To Home	From Home	To Home	From Home	To Home	From Home	To Home
HBW	35%	2%	7%	8%	2%	25%	6%	15%
HBO	11%	1%	16%	15%	11%	15%	12%	18%

Table 4
Percent of Other Trips by Time of Day

Purpose	AM	Mid-day	PM	Evening
NHB	7%	51%	26%	16%
IXXI	20%	29%	26%	25%
COM	6%	53%	26%	15%
THRU	20%	29%	26%	25%

Trip Purpose abbreviations:

HBO - Home Based Other

HBW - Home Based Work

IXXI - Internal/External, External/Internal

NHB - Non-Home Based

COM - Commercial

THRU - Through

Comparison of Modeled Speeds with Observed Data

WFRC continues to adjust modeled speeds to improve consistency with samples of observed speeds. A review of Salt Lake County modeled speed and observed speed is summarized in Table 5. Modeled speeds in Table 5 are within -4.5% to 7.4% of observed speeds.

Table 5
Salt Lake County Modeled Speeds Compared to Observed Speeds

	Arterial		Freeway	
	AM Peak	PM Peak	AM Peak	PM Peak
2007 Modeled Speeds (mph)	31	29	64	64
2008 Observed Speeds (mph)	31	27	67	67

C. Emission Modeling

I/M Programs

Assumptions for the input files for EPA's MOVES vehicle emissions model include I/M programs in Salt Lake, Davis, and Weber Counties. Box Elder and Tooele Counties do not presently have I/M programs.

VMT Mix

The VMT mix describes how much a particular vehicle type is used in the transportation network. While no longer a required input for the MOVES model as it was for MOBILE6.2, VMT mix is used in several instances to generate the input files required to run the MOVES model. The national default VMT mix found in the MOVES database was used to disaggregate local vehicle type data. The local vehicle type data is collected by UDOT as part of the federal HPMS data collection system and is based on automated counters which classify vehicles based on axle spacing. The UDOT classification is used to calculate control percentages for light duty (LD) vehicles and heavy duty (HD) vehicles for each facility type. The EPA default VMT mix is then applied to disaggregate the

two UDOT control percentages into detailed percentages for the thirteen vehicle classes used in MOVES.

Vehicle Weights

Facility specific VMT mix data described above was also used to estimate the average vehicle weight on each facility type. Since vehicle weight affects the rate of re-entrained road dust emissions estimated using the AP-42 method, vehicle weight variations on different facilities will affect the amount of fugitive dust created. The VMT mix for each facility type was used to estimate an average vehicle weight for each facility type with the following results:

<u>Facility</u>	<u>Average Vehicle Weight</u>
Urban - Freeway	6,500 lbs, or 3.25 tons
Urban - Arterial	6,100 lbs, or 3.05 tons
Urban - Local	3,900 lbs, or 1.95 tons

Post Model Adjustments

For conformity analyses prior to 2000, the WFRC applied post model adjustments to vehicle emission estimates. Emission credits for work trips were modeled for reductions in single occupant vehicle rates based primarily on increased investments in transit service and rideshare programs, and the projected increase in telecommuting. Other less significant post model adjustments were also estimated for incident management, pavement re-striping, and signal coordination. Other emission reducing programs and projects supported by CMAQ funds such as park and ride lots, bicycle facilities, transit vehicles, intelligent transportation systems (ITS), and intersection improvements have also been implemented.

WFRC believes that these programs have a positive effect in reducing vehicle emissions. In practice, however, WFRC has found that documenting the air quality benefits of these programs can be challenging. WFRC will continue to support these emission reduction programs, but credits from these programs have not been included in this conformity analysis.

MOVES Inputs

The MOVES model is a very data intensive computer program based on the MySQL database software. Through the interagency consultation process the required MOVES inputs reflecting local conditions have been established.

Data files defining local conditions by county and year created for vehicle population, emission testing programs, fuel supply, fuel formulation, and vehicle age are listed in Table 6a below. Data files defining meteorological conditions conducive to elevated levels of pollution are also listed and remain consistent for all years modeled. For CO, PM₁₀, and PM_{2.5} pollution, winter weather conditions associated with temperature inversions are used because these conditions result in elevated pollution levels.

Table 6a
MOVES Data – Local Planning Assumptions

_Data library			
1_Population			
Veh Pop Analysis	VehPop_BE.xls	VehPop_CA.xls	VehPop_DA.xls
VehPop_OG.xlsx	VehPop_SL.xls	VehPop_SLcity.xlsx	VehPop_TO.xls
VehPop_UT.xls	VehPop_WE.xls		
_Data library			
2_IM Programs			
DAQ IM	IM_2011	KIP IM Old	National_SLIM
NO_IM	IM_BE_noim.xlsx	IM_DAnnynyn.xlsx	IM_SLnnynyn.xlsx
IM_TO_noim.xlsx	IM_WEnnynyn.xlsx		
_Data library			
3_Fuel			
3b_Fuel Form	Fuel Supply Analysis	Jul2012_NEW	BE_fuel_SUPPLY.xlsx
DA_fuel_SUPPLY.xlsx	Fuel_Form_UT2012.xls	Fuel_Form_UT2012.xlsx	SL_fuel_SUPPLY.xlsx
TO_fuel_SUPPLY.xlsx	WE_fuel_SUPPLY.xlsx	xFuel_FORM.xlsx	
_Data library			
4_Met			
2007			
Relative Humidity			
met_PM25.xlsx			
_Data library			
5_Age			
2008	2019	Age_OLD	Include New MY
Veh Age 2010 - Include MY2011.xlsx			

Vehicle activity input files are generated by the WFRC travel demand model using a customized in-house program for this purpose. The files listed in Table 6b below with the “csv” extension are the MOVES input files for ramp fractions, road distribution, speed distribution, and VMT by vehicle type for each county (Box Elder, Davis, Salt Lake, Tooele, and Weber) and analysis year (2009, 2016, 2020, 2030, and 2040) as required for operating the MOVES model.

Table 6b
MOVES Data – Vehicle Activity Files

Conform library			
2009			
1_VMTfraction_JAN.xls	1_VMTfraction_JUL.xls	2_VMTfraction_DAY.xls	3_VMTfraction_HOUR.xls
MV_RMP_DA2009.csv	MV_RMP_OG2009.csv	MV_RMP_SC2009.csv	MV_RMP_SL2009.csv
MV_RMP_WE2009.csv	MV_Road_WTDA2009.csv	MV_Road_WTOG2009.csv	MV_Road_WTSC2009.csv
MV_Road_WTSL2009.csv	MV_Road_WTWE2009.csv	MV_Speed_DA2009.csv	MV_Speed_OG2009.csv
MV_Speed_SC2009.csv	MV_Speed_SL2009.csv	MV_Speed_WE2009.csv	MV_VMTxVeh_DA2009_WT.csv
MV_VMTxVeh_OG2009_WT.csv	MV_VMTxVeh_SC2009_WT.csv	MV_VMTxVeh_SL2009_WT.csv	MV_VMTxVeh_WE2009_WT.csv
Summary_ALL2009.csv	Summary_DA2009.csv	Summary_OG2009.csv	Summary_SC2009.csv
Summary_SL2009.csv	Summary_WE2009.csv		
Conform library			
2016			
1_VMTfraction_JAN.xls	1_VMTfraction_JUL.xls	2_VMTfraction_DAY.xls	3_VMTfraction_HOUR.xls
MV_RMP_DA2016.csv	MV_RMP_OG2016.csv	MV_RMP_SC2016.csv	MV_RMP_SL2016.csv
MV_RMP_WE2016.csv	MV_Road_WTDA2016.csv	MV_Road_WTOG2016.csv	MV_Road_WTSC2016.csv
MV_Road_WTSL2016.csv	MV_Road_WTWE2016.csv	MV_Speed_DA2016.csv	MV_Speed_OG2016.csv
MV_Speed_SC2016.csv	MV_Speed_SL2016.csv	MV_Speed_WE2016.csv	MV_VMTxVeh_DA2016_WT.csv
MV_VMTxVeh_OG2016_WT.csv	MV_VMTxVeh_SC2016_WT.csv	MV_VMTxVeh_SL2016_WT.csv	MV_VMTxVeh_WE2016_WT.csv
Summary_ALL2016.csv	Summary_DA2016.csv	Summary_OG2016.csv	Summary_SC2016.csv
Summary_SL2016.csv	Summary_WE2016.csv		
Conform library			
2020			
1_VMTfraction_JAN.xls	1_VMTfraction_JUL.xls	2_VMTfraction_DAY.xls	3_VMTfraction_HOUR.xls
MV_RMP_DA2020.csv	MV_RMP_OG2020.csv	MV_RMP_SC2020.csv	MV_RMP_SL2020.csv
MV_RMP_WE2020.csv	MV_Road_WTDA2020.csv	MV_Road_WTOG2020.csv	MV_Road_WTSC2020.csv
MV_Road_WTSL2020.csv	MV_Road_WTWE2020.csv	MV_Speed_DA2020.csv	MV_Speed_OG2020.csv
MV_Speed_SC2020.csv	MV_Speed_SL2020.csv	MV_Speed_WE2020.csv	MV_VMTxVeh_DA2020_WT.csv
MV_VMTxVeh_OG2020_WT.csv	MV_VMTxVeh_SC2020_WT.csv	MV_VMTxVeh_SL2020_WT.csv	MV_VMTxVeh_WE2020_WT.csv
Summary_ALL2020.csv	Summary_DA2020.csv	Summary_OG2020.csv	Summary_SC2020.csv
Summary_SL2020.csv	Summary_WE2020.csv		

Conform library

2030

1_VMTfraction_JAN.xls	1_VMTfraction_JUL.xls	2_VMTfraction_DAY.xls	3_VMTfraction_HOUR.xls
MV_RMP_DA2030.csv	MV_RMP_OG2030.csv	MV_RMP_SC2030.csv	MV_RMP_SL2030.csv
MV_RMP_WE2030.csv	MV_Road_WTDA2030.csv	MV_Road_WTOG2030.csv	MV_Road_WTSC2030.csv
MV_Road_WTSL2030.csv	MV_Road_WTWE2030.csv	MV_Speed_DA2030.csv	MV_Speed_OG2030.csv
MV_Speed_SC2030.csv	MV_Speed_SL2030.csv	MV_Speed_WE2030.csv	MV_VMTxVeh_DA2030_WT.csv
MV_VMTxVeh_OG2030_WT.csv	MV_VMTxVeh_SC2030_WT.csv	MV_VMTxVeh_SL2030_WT.csv	MV_VMTxVeh_WE2030_WT.csv
Summary_ALL2030.csv	Summary_DA2030.csv	Summary_OG2030.csv	Summary_SC2030.csv
Summary_SL2030.csv	Summary_WE2030.csv		

Conform library

2040

1_VMTfraction_JAN.xls	1_VMTfraction_JUL.xls	2_VMTfraction_DAY.xls	3_VMTfraction_HOUR.xls
MV_RMP_DA2040.csv	MV_RMP_OG2040.csv	MV_RMP_SC2040.csv	MV_RMP_SL2040.csv
MV_RMP_WE2040.csv	MV_Road_WTDA2040.csv	MV_Road_WTOG2040.csv	MV_Road_WTSC2040.csv
MV_Road_WTSL2040.csv	MV_Road_WTWE2040.csv	MV_Speed_DA2040.csv	MV_Speed_OG2040.csv
MV_Speed_SC2040.csv	MV_Speed_SL2040.csv	MV_Speed_WE2040.csv	MV_VMTxVeh_DA2040_WT.csv
MV_VMTxVeh_OG2040_WT.csv	MV_VMTxVeh_SC2040_WT.csv	MV_VMTxVeh_SL2040_WT.csv	MV_VMTxVeh_WE2040_WT.csv
Summary_ALL2040.csv	Summary_DA2040.csv	Summary_OG2040.csv	Summary_SC2040.csv
Summary_SL2040.csv	Summary_WE2040.csv		






























































The input files listed above are read into the MOVES program as database files. The input database folders in Table 6c below with the naming convention “conf13_*****w_in” contain the database files used for each county and year modeled using MOVES for this conformity analysis.

Table 6c
MOVES Data – Input Database Folders

_MySQL_data library			
Includes: 1 location			
data (68)			
C:\MySQL			
_CONF12	conf13_da2016w_in	conf13_to2009w_in	sl_summer_out
_Conf12a	conf13_da2020w_in	conf13_to2016w_in	SUPER_CDM
_JUNK	conf13_da2030w_in	conf13_to2020w_in	test
_MAJOR_MYSQL_FILES	conf13_da2040w_in	conf13_to2030w_in	UTdaily_MOVESdb20120410
_NOIM	conf13_og2009w_in	conf13_to2040w_in	UTdaily_Nov2010_MOVES2010_0830
_OG1990	conf13_og2016w_in	conf13_we2009w_in	UTAH_MOD_MOVESDB_FILES_1110.zip
_OLD	conf13_og2020w_in	conf13_we2016w_in	Workstation024.err
_PM25_SIP	conf13_og2030w_in	conf13_we2020w_in	Workstation024.pid
_RATES	conf13_og2040w_in	conf13_we2030w_in	
_RTP40w_Round2	conf13_out	conf13_we2040w_in	
_RTP40w_Round3	conf13_sc2009w_in	movesdb20100830	
_TEST	conf13_sc2016w_in	movesdb20120410	
_UTdailyMVdb_1010	conf13_sc2020w_in	movesexecution	
2019wd_cng_out	conf13_sc2030w_in	movesworker	
conf13_be2009w_in	conf13_sc2040w_in	mysql	
conf13_be2016w_in	Conf13_SL2009w_in	performance_schema	
conf13_be2020w_in	Conf13_SL2016w_in	RTP16w_DA_in	
conf13_be2030w_in	Conf13_SL2020w_in	rtp16w_out	
conf13_be2040w_in	Conf13_SL2030w_in	RTP16w_SL_in	
conf13_da2009w_in	Conf13_SL2040w_in	RTP16w_WE_in	











































































Each input database folder contains a number of MySQL database files for each county and year to be modeled. Table 6d below is a sample of the database files for Salt Lake County for the year 2009.

Table 6d
MOVES Data – Input Database Files

_MySQL_data library		
Conf12a_SL2009w_in		
 auditlog.frm	 imcoverage.frm	 zonemonthhour.MYD
 auditlog.MYD	 imcoverage.MYD	 zonemonthhour.MYI
 auditlog.MYI	 imcoverage.MYI	 zoneroadtype.frm
 avgspeeddistribution.frm	 monthvmtfraction.frm	 zoneroadtype.MYD
 avgspeeddistribution.MYD	 monthvmtfraction.MYD	 zoneroadtype.MYI
 avgspeeddistribution.MYI	 monthvmtfraction.MYI	
 county.frm	 roadtype.frm	
 county.MYD	 roadtype.MYD	
 county.MYI	 roadtype.MYI	
 dayvmtfraction.frm	 roadtypedistribution.frm	
 dayvmtfraction.MYD	 roadtypedistribution.MYD	
 dayvmtfraction.MYI	 roadtypedistribution.MYI	
 db.opt	 sourcetypeageddistribution.frm	
 fuelformulation.frm	 sourcetypeageddistribution.MYD	
 fuelformulation.MYD	 sourcetypeageddistribution.MYI	
 fuelformulation.MYI	 sourcetypeyear.frm	
 fuelsupply.frm	 sourcetypeyear.MYD	
 fuelsupply.MYD	 sourcetypeyear.MYI	
 fuelsupply.MYI	 state.frm	
 fuelsupplyyear.frm	 state.MYD	
 fuelsupplyyear.MYD	 state.MYI	
 fuelsupplyyear.MYI	 year.frm	
 hourvmtfraction.frm	 year.MYD	
 hourvmtfraction.MYD	 year.MYI	
 hourvmtfraction.MYI	 zone.frm	
 hpmsvtypeyear.frm	 zone.MYD	
 hpmsvtypeyear.MYD	 zone.MYI	
 hpmsvtypeyear.MYI	 zonemonthhour.frm	






































Output from the MOVES model is stored in the “conf13_out” database folder as shown in Table 6e below. All MOVES runs for each county and year combination for this conformity analysis are stored in the “conf13_out” database separated by a unique run number identifier.

Table 6e
MOVES Data – Output Database Files

_MySQL_data library		
conf12a_out		
 activitytype.frm	 conf12a_xroad_outdecode.MYD	 movesrun.MYD
 activitytype.MYD	 conf12a_xroad_outdecode.MYI	 movesrun.MYI
 activitytype.MYI	 conf12a_xroad_outheader.frm	 movestablesused.frm
 bundletracking.frm	 conf12a_xroad_outheader.MYD	 movestablesused.MYD
 bundletracking.MYD	 conf12a_xroad_outheader.MYI	 movestablesused.MYI
 bundletracking.MYI	 db.opt	 movesworkersused.frm
 conf12a_outbody.frm	 decodedmovesactivityoutput.frm	 movesworkersused.MYD
 conf12a_outbody.MYD	 decodedmovesactivityoutput.MYD	 movesworkersused.MYI
 conf12a_outbody.MYI	 decodedmovesactivityoutput.MYI	 rateperdistance.frm
 conf12a_outdecode.frm	 decodedmovesoutput.frm	 rateperdistance.MYD
 conf12a_outdecode.MYD	 decodedmovesoutput.MYD	 rateperdistance.MYI
 conf12a_outdecode.MYI	 decodedmovesoutput.MYI	 rateperprofile.frm
 conf12a_outheader.frm	 movesactivityoutput.frm	 rateperprofile.MYD
 conf12a_outheader.MYD	 movesactivityoutput.MYD	 rateperprofile.MYI
 conf12a_outheader.MYI	 movesactivityoutput.MYI	 ratepervehicle.frm
 conf12a_xrates_outbody.frm	 moveserror.frm	 ratepervehicle.MYD
 conf12a_xrates_outbody.MYD	 moveserror.MYD	 ratepervehicle.MYI
 conf12a_xrates_outbody.MYI	 moveserror.MYI	 start_emissions.frm
 conf12a_xrates_outdecode.frm	 moveseventlog.frm	
 conf12a_xrates_outdecode.MYD	 moveseventlog.MYD	
 conf12a_xrates_outdecode.MYI	 moveseventlog.MYI	
 conf12a_xrates_outheader.frm	 movesoutput.frm	
 conf12a_xrates_outheader.MYD	 movesoutput.MYD	
 conf12a_xrates_outheader.MYI	 movesoutput.MYI	
 conf12a_xroad_outbody.frm	 movesrates.frm	
 conf12a_xroad_outbody.MYD	 movesrates.MYD	
 conf12a_xroad_outbody.MYI	 movesrates.MYI	
 conf12a_xroad_outdecode.frm	 movesrun.frm	

Each county and year scenario to be run in MOVES requires a command file or MOVES Run Specification (MRS) file which is identified by the “MRS” file extension. The command files used for this conformity analysis are listed in Table 6f.

Table 6f
MOVES Data – Run Specification Files

Conform library	
Conf13_MRS	
 Conf13_20_30.bat	 Conf13_SL2016w.MRS
 Conf13_ALL.bat	 Conf13_SL2020w.MRS
 Conf13_BE2009w.MRS	 Conf13_SL2030w.MRS
 Conf13_BE2016w.MRS	 Conf13_SL2040w.MRS
 Conf13_BE2020w.MRS	 Conf13_TO2009w.MRS
 Conf13_BE2030w.MRS	 Conf13_TO2016w.MRS
 Conf13_BE2040w.MRS	 Conf13_TO2020w.MRS
 Conf13_DA2009w.MRS	 Conf13_TO2030w.MRS
 Conf13_DA2016w.MRS	 Conf13_TO2040w.MRS
 Conf13_DA2020w.MRS	 Conf13_WE2009w.MRS
 Conf13_DA2030w.MRS	 Conf13_WE2016w.MRS
 Conf13_DA2040w.MRS	 Conf13_WE2020w.MRS
 Conf13_OG2009w.MRS	 Conf13_WE2030w.MRS
 Conf13_OG2016w.MRS	 Conf13_WE2040w.MRS
 Conf13_OG2020w.MRS	
 Conf13_OG2030w.MRS	
 Conf13_OG2040w.MRS	
 Conf13_SC2009w.MRS	
 Conf13_SC2016w.MRS	
 Conf13_SC2020w.MRS	
 Conf13_SC2030w.MRS	
 Conf13_SC2040w.MRS	
 Conf13_SL2009w.MRS	

Road Dust Estimates

In January 2011, the EPA released new guidance for estimating dust emissions from paved roads. These guidelines are published in Chapter 13.2.1 of the AP-42 document. The new formula is

$$E = k (sL)^{0.91} \times (W)^{1.02}$$

where: E = particulate emission factor (grams/mile),
 k = particle size multiplier for particle size range and units of interest (for PM₁₀, k=1.0 and for PM_{2.5} k=0.25),
 sL = road surface silt loading (grams per square meter - g/m²), and
 W = average weight (tons) of the vehicles traveling the road.

Based on vehicle type counts on roads in the WFRC region, average vehicle weights for local roads, arterials, and freeways are 1.95, 3.05, and 3.25 tons respectively. The silt load (sL) factor varies by highway functional class and by traffic volume. The default silt load factors found in Table 13.2.1-2 of the AP-42 document are summarized below.

Traffic Volume	Functional Class	Silt Load (grams/meter²)
500-5,000	local roads	0.200
5,000-10,000	arterial roads	0.060
limited access	freeways	0.015

A precipitation reduction factor is also applied to the above equation using the following expression:

$$(1 - P/4N)$$

Where: P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period, and
 N = number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly).

The AP-42 guidance recommends a value of 90 precipitation days per year for the Wasatch Front region. Using these values, the precipitation reduction factor yields a value of 0.9384. Combined with the basic road dust emission rate, the net PM_{2.5} and PM₁₀ road dust factors by highway functional class are as follows:

Functional Class	PM₁₀ Road Dust Rate (grams/mile)	PM_{2.5} Road Dust Rate (grams/mile)
local roads	0.429	0.107
arterials	0.226	0.057
freeways	0.068	0.017

D. Conformity Determination

The following conformity findings for the Amended 2011-2040 Regional Transportation Plan for the Wasatch Front are based on the transportation systems and planning assumptions described in this report and the EPA approved vehicle emissions model (MOVES).

Salt Lake City CO Conformity

The carbon monoxide maintenance plan for Salt Lake City was approved by EPA effective September 30, 2005 as recorded in the Federal Register (Vol. 70, No. 146, August 1, 2005). The maintenance plan defines a motor vehicle emission budget for the years 2005 and 2019 of 278.62 tons/day. Table 7 below demonstrates that projected mobile source emissions are within the emission budget defined in the maintenance plan for the 2019 budget year. The other years listed in Table 7 are in accordance with requirements of the Conformity Rule (40 CFR Part 93) as noted in the table.

From this demonstration it is concluded that the Amended RTP conforms to the applicable controls and goals of the State Implementation Plan (Maintenance Plan) for Carbon Monoxide in Salt Lake City.

Table 7

Salt Lake City - CO Conformity Determination

	<i>b</i>	<i>a</i>	<i>b</i>	<i>b</i>	<i>c</i>
Year	2012	2019	2020	2030	2040
Budget[#] (tons/day)	278.62	278.62	278.62	278.62	278.62
<i>emission rate (grams/mile)</i>	12.54	9.84	9.58	8.85	9.14
<i>seasonal VMT</i>	6,592,823	7,259,681	7,370,154	8,441,427	9,144,309
Projection* (tons/day)	91.15	78.75	77.82	82.36	92.16
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass	Pass

a - budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

[#] Federal Register Vol. 70 No. 146, August 1, 2005, Table V-2.

* Projection = Emission Rate x seasonal VMT, then divide by 453.5 to convert to pounds, then divide by 2,000 to convert to tons.

Ogden CO Conformity

The carbon monoxide maintenance plan for Ogden City was approved by EPA effective November 14, 2005 as recorded in the Federal Register (Vol. 70, No. 177, September 14, 2005). The maintenance plan defines a motor vehicle emission budget for the years 2005 and 2021 of 75.36 and 73.02 tons/day respectively. Table 8 below demonstrates that projected mobile source emissions are within the emission budget defined in the maintenance plan for the 2021 budget year. The other years listed in Table 8 are in accordance with requirements of the Conformity Rule (40 CFR Part 93) as noted in the table.

From this demonstration it is concluded that the Amended 2011-2040 RTP conforms to the applicable controls and goals of the State Implementation Plan (Maintenance Plan) for Carbon Monoxide in Ogden City.

Table 8

**Ogden City - CO
Conformity Determination**

	<i>b</i>	<i>a</i>	<i>b</i>	<i>b</i>	<i>c</i>
Year	2012	2020	2021	2030	2040
Budget (tons/day)	75.36	75.36	73.02	73.02	73.02
<i>emission rate (grams/mile)</i>	16.45	12.71	12.59	11.63	11.90
<i>seasonal VMT</i>	1,565,100	1,761,726	1,785,593	2,000,391	2,213,951
Projection* (tons/day)	28.38	24.69	24.79	25.66	29.03
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass	Pass

a - budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

Federal Register Vol. 70 No. 177, September 14, 2005, Table V-2.

** Projection = Emission Rate x seasonal VMT, then divide by 453.5 to convert to pounds, then divide by 2,000 to convert to tons.*

Ogden PM10 Conformity

Ogden City was designated a PM₁₀ non-attainment area in August of 1995 based on PM₁₀ violations in 1993 or earlier. Since a PM₁₀ SIP for Ogden has not yet been approved by EPA, it must be demonstrated that Ogden PM₁₀ emissions are either less than 1990 emissions or less than “no-build” emissions. The analysis years 2012, 2015, 2025, and 2030 were selected in accordance with the requirements of 40 CFR Section 93.119(e).

PM₁₀ emissions are present in two varieties referred to as primary and secondary PM₁₀. Primary PM₁₀ consists mostly of fugitive road dust but also includes particles from brake wear and tire wear and some “soot” particles emitted directly from the vehicle tailpipe. The methods defined in the January 2011 version of the EPA publication known as “AP-42” were used to estimate dust from paved roads. Secondary PM₁₀ consists of gaseous tailpipe emissions that take on a particulate form through subsequent chemical reactions in the atmosphere. Nitrogen oxides are the main component of secondary PM₁₀ emissions with sulfur oxides a distant second.

As summarized in Tables 9a and 9b, emission estimates for the Amended 2011-2040 RTP satisfy the “Build < 1990” test for secondary PM₁₀ (NO_x precursors) and primary PM₁₀ (direct tailpipe particulates and road dust) in Ogden City. The 1990 emission estimates based on the Mobile6.2 vehicle emissions model for the 2003 conformity analysis have been updated for this conformity analysis using the MOVES model and the January 2011 AP-42 road dust methodology for consistency with current emission modeling requirements. Specifically, the NO_x precursor budget (1990 emission estimate) changes from 4.57 tons/day to 6.92 tons/day, and the direct PM₁₀ budget (1990 estimate) changes from 2.28 tons/day to 1.09 tons/day. The 1990 primary PM₁₀ estimate for Ogden City includes emissions from the unpaved access road to the Ogden landfill which was closed in 1998.

For projections of primary PM₁₀ emissions, no credit was taken for a number of programs adopted since Ogden City last violated the PM₁₀ standard. These particulate reducing programs include covered load ordinances, increased frequency of street sweeping, and reduced application of deicing and skid resistant materials (salt and sand). Documentation of these programs has been provided by Ogden City but the actual benefits of these programs are not included in the emission projections below. Other areas that have estimated the benefit of these programs have found a silt load reduction of over 30% for effective street sweeping programs and a 5% silt load reduction when limiting the amount of sand and salt applied to the roads. Ogden City has also implemented a number of specific projects that have a positive effect in reducing particulate emissions including park and ride lots, storm water improvements, shoulder widening and edge striping, and addition of curb and gutter on several projects.

From this demonstration it is concluded that the RTP conforms under the Emission Reductions Criteria for areas without motor vehicle emissions budgets for PM₁₀ in Ogden City.

Table 9a
Ogden City - PM10 (NO_x Precursor)
Conformity Determination

	<i>d</i>	<i>b</i>	<i>b</i>	<i>c</i>
Year	2015	2020	2030	2040
1990 Emissions (tons/day)	6.92	6.92	6.92	6.92
<i>emission rate (grams/mile)</i>	<i>1.60</i>	<i>1.04</i>	<i>0.72</i>	<i>0.71</i>
<i>seasonal VMT</i>	<i>1,634,320</i>	<i>1,761,726</i>	<i>2,000,391</i>	<i>2,213,951</i>
Projection* (tons/day)	2.89	2.02	1.60	1.72
Conformity (Projection < 1990 Emissions?)	Pass	Pass	Pass	Pass

a - budget year, *b* - 10-year rule, *c* - last year of Plan, *d* - no budget 5-year rule

* Projection = Emission Rate x seasonal VMT, divided by 453.5 to convert to pounds, divided by 2,000 to convert to tons.

Table 9b
Ogden City - PM10 (Primary Particulates)**
Conformity Determination

Year	<i>d</i> 2015	<i>b</i> 2020	<i>b</i> 2030	<i>c</i> 2040
1990 Emissions (tons/day)	1.09	1.09	1.09	1.09
<i>emission rates (grams/mile)</i>				
<i>exhaust particulates - (Ec, Oc, SO4)</i>	0.0667	0.0445	0.0316	0.0304
<i>brake particulates</i>	0.0362	0.0369	0.0385	0.0401
<i>tire particulates</i>	0.0083	0.0083	0.0085	0.0086
<i>road dust particulates</i>	0.2644	0.2627	0.2605	0.2586
<i>seasonal VMT</i>	1,634,320	1,761,726	2,000,391	2,213,951
Projection* (tons/day)	0.68	0.68	0.75	0.82
Conformity (Projection < 1990 Emissions?)	Pass	Pass	Pass	Pass

** Includes road dust, elemental carbon, organic carbon, gasoline exhaust particulates, tire wear, and brake wear.

a - budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

* Projection = Emission Rate x seasonal VMT, divided by 453.5 to convert to pounds, divided by 2,000 to convert to tons.

Salt Lake County PM10 Conformity

The PM₁₀ SIP for Salt Lake County does not define a budget beyond the year 2003. Therefore, conformity tests are required only for analysis years which are identified in accordance with 40 CFR 93.118. All analysis years after 2003 must meet the 2003 budgets for primary particulates and secondary particulates (see the discussion above under Ogden PM₁₀ Conformity for an explanation of primary and secondary PM₁₀ emissions). The State air quality rule R307-310 allows a portion of the surplus primary PM₁₀ budget to be applied to the secondary PM₁₀ budget for conformity purposes as seen for the year 2015 in Table 10 below. For the analysis years 2020, 2030, and 2040, no budget adjustments were necessary.

Table 10
Salt Lake County - PM10 Budgets
Direct (Dust) and Precursor (NOx) PM10 Emission Budgets

Year	(tons/day)			
2015	2020	2030	2040	
Total PM10 Budget[#]	72.60	72.60	72.60	72.60
<i>Direct PM10 Budget to be Traded</i>	10.00	0.00	0.00	0.00
Direct PM10 Budget	30.30	40.30	40.30	40.30
NOx Precursor PM10 Budget	42.30	32.30	32.30	32.30

Table 11a and Table 11b below demonstrate that projected mobile source emissions are within the emission budget defined in the SIP. The years listed in Table 10a and Table 10b are in accordance with requirements of the Conformity Rule (40 CFR Part 93) as noted in the tables.

From this demonstration it is concluded that the RTP conforms to the applicable controls and goals of the State Implementation Plan for PM₁₀ in Salt Lake County.

Table 11a
Salt Lake County - PM₁₀ (NO_x Precursor)
Conformity Determination

Year	^b 2015	^b 2020	^b 2030	^c 2040
Budget[#] (tons/day)	42.30	32.30	32.30	32.30
<i>emission rate (grams/mile)</i>	1.11	0.72	0.52	0.50
<i>seasonal VMT</i>	28,969,518	31,957,837	38,124,961	44,585,580
Projection* (tons/day)	35.40	25.39	21.92	24.77
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass

a- budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

[#] WFRC Memo to Jeff Houk of EPA, April 15, 1994.

* Projection = Emission Rate x seasonal VMT, divided by 453.5 to convert to pounds, divided by 2,000 to convert to tons.

Table 11b
Salt Lake County - PM₁₀ (Primary Particulates)**
Conformity Determination

Year	^b 2015	^b 2020	^b 2030	^c 2040
Budget[#] (tons/day)	30.30	40.30	40.30	40.30
<i>emission rates (grams/mile)</i>				
<i>exhaust particulates - (Ec, Oc, SO₄)</i>	0.0758	0.0582	0.0478	0.0473
<i>brake particulates</i>	0.0244	0.0250	0.0260	0.0257
<i>tire particulates</i>	0.0069	0.0069	0.0070	0.0069
<i>road dust particulates</i>	0.2064	0.2073	0.2026	0.1928
<i>seasonal VMT</i>	28,969,518	31,957,837	38,124,961	44,585,580
Projection* (tons/day)	10.01	10.48	11.91	13.40
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass

** Includes road dust, elemental carbon, organic carbon, gasoline exhaust particulates, tire wear, and brake wear.

[#] WFRC Memo to Jeff Houk of EPA, April 15, 1994.

a- budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

* Projection = Emission Rate x seasonal VMT, divided by 453.5 to convert to pounds, divided by 2,000 to convert to tons.

Salt Lake PM_{2.5} Conformity**(Includes Davis, Salt Lake, and portions of Weber, Tooele, and Box Elder Counties)**

Davis, Salt Lake, and portions of Weber, Tooele, and Box Elder Counties have been designated as non-attainment areas under the new PM_{2.5} standard (35 µg/m³) that was established in 2006. Work has begun on a PM_{2.5} section of the State Implementation Plan which will establish a motor vehicle emission budget for emissions associated with PM_{2.5}. Until the PM_{2.5} SIP is completed and approved by EPA, PM_{2.5} interim conformity requirements apply. EPA interim conformity for PM_{2.5} emissions requires that future NO_x emissions (a precursor to PM_{2.5}) and primary particulate emissions not exceed 2008 levels.

Table 12a below demonstrates that projected mobile source emissions of NO_x (a precursor to PM_{2.5} emissions) in the five-county PM_{2.5} non-attainment area are less than 2008 NO_x emissions. Table 12b below demonstrates that direct particle emissions of PM_{2.5} in the five-county PM_{2.5} non-attainment area are also less than 2008 direct particle emissions. Direct particle emissions include exhaust emissions of elemental carbon, organic carbon, and sulfates (SO₄); and mechanical emissions from brake wear and tire wear.

From this demonstration it is concluded that the RTP conforms under the interim conformity guidelines for PM_{2.5} areas without an approved motor vehicle emissions budget for the Salt Lake PM_{2.5} non-attainment area.

Table 12a
Salt Lake Area[#] - PM_{2.5} (NO_x Precursor)
Conformity Determination

	<i>b</i>	<i>b</i>	<i>b</i>	<i>c</i>
Year	2015	2020	2030	2040
2008 Emissions (tons/day)	105.88	105.88	105.88	105.88
<i>emission rate (grams/mile)</i>	<i>1.27</i>	<i>0.83</i>	<i>0.58</i>	<i>0.56</i>
<i>seasonal VMT</i>	<i>47,502,009</i>	<i>52,606,877</i>	<i>62,376,743</i>	<i>72,768,084</i>
Projection* (tons/day)	66.52	47.90	40.19	44.98
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass

[#] Salt Lake PM_{2.5} Non-Attainment Area includes: Davis, Salt Lake, and portions of Weber, Box Elder and Tooele Counties.

a - budget year, *b* - 10-year rule, *c* - last year of Plan, *d* - no budget 5-year rule

* Projection = Emission Rate x seasonal VMT, then divide by 453.5 to convert to pounds, then divide by 2,000 to convert to tons.

Table 12b
Salt Lake Area[#] - PM_{2.5} (Direct PM Emissions^{})**
Conformity Determination

	<i>b</i>	<i>b</i>	<i>b</i>	<i>c</i>
Year	2015	2020	2030	2040
2008 Emissions (tons/day)	8.19	8.19	8.19	8.19
<i>emission rate (grams/mile)</i>	<i>0.14</i>	<i>0.12</i>	<i>0.10</i>	<i>0.10</i>
<i>seasonal VMT</i>	<i>47,502,009</i>	<i>52,606,877</i>	<i>62,376,743</i>	<i>72,768,084</i>
Projection* (tons/day)	7.11	6.77	7.13	8.13
Conformity (Projection < Budget?)	Pass	Pass	Pass	Pass

Salt Lake PM_{2.5} Non-Attainment Area includes: Weber, Davis, Salt Lake, and portions of Box Elder and Tooele Counties.

a- budget year, b - 10-year rule, c - last year of Plan, d - no budget 5-year rule

** Projection = Emission Rate x seasonal VMT, divided by 453.5 to convert to pounds, divided by 2,000 to convert to tons.*

*** Direct PM for interim conformity includes road dust, gasoline particulates, elemental carbon, organic carbon, SO₄, brake wear, and tire wear.*

Salt Lake and Davis County Ozone Conformity

The 1-hour ozone standard was revoked on June 19, 2005. Therefore, a conformity analysis under the 1-hour ozone standard in Salt Lake and Davis Counties is no longer required.

The current 8-hour ozone standard is 75 ppb. All counties within the Wasatch Front area are in attainment of the current 8-hour ozone standard.

Appendix – 1

Definition of Regionally Significant Projects

**Process for Determining Regionally Significant Facilities
for Purposes of Regional Emissions Analysis (see CFR 93.105.2.c.1.ii)**

Background: 40 FR 93.101 defines “regionally significant project” and associated facilities for the purpose of transportation conformity. The federal definition does not specifically include minor arterials. The following definitions and processes will be used by the Wasatch Front Regional Council (WFRC) and Mountainlands Association of Governments (MAG) in consultation with DAQ, UDOT, UTA, FHWA, FTA, and EPA to determine which facilities shall be considered regionally significant for purposes of regional emissions analysis. It is the practice of the MPO to include minor arterials and collectors in the travel model for the purpose of accurately modeling regional VMT and associated vehicle emissions. The inclusion of minor arterials and collectors in the travel model, however, does not identify these facilities as regionally significant.

1. Any new or existing facility with a functional classification of principal arterial or higher on the latest UDOT Functional Classification Map (currently found at <http://www.dot.utah.gov/index.php/m=c/tid=1228>) shall be considered regionally significant.
2. Any fixed guide-way transit service including light rail, commuter rail, or portions of bus rapid transit that involve exclusive right-of-way shall be considered regionally significant.
3. As traffic conditions change in the future, the MPO's - in consultation with DAQ, UDOT, FHWA, and EPA (and UTA and FTA in cases involving transit facilities) - will consider 1) the relative importance of minor arterials serving major activity centers, and 2) the absence of principal arterials in the vicinity to determine if any minor arterials in addition to those listed in Exhibit A should be considered as regionally significant for purposes of regional emissions analysis.

Exhibit A
Minor Arterials Determined to be Regionally Significant
for Purposes of Regional Emissions Analysis

In consultation with DAQ, UDOT, FHWA, and EPA; and based on inspection and engineering judgment of current traffic conditions; and based on application of the “Process for Determining Regionally Significant Facilities for Purposes of Regional Emissions Analysis” agreed upon by the aforementioned agencies; the WFRC and MAG designate the following minor arterials as regionally significant.

Salt Lake County

300 West/Beck Street: 600 South to I-15
U-111: SR-201 to New Bingham Highway
New Bingham Highway: U-111 to 9000 South

Davis County

Syracuse Road: I-15 west to Antelope Island
SR-108 (2000 West): Syracuse Road to Weber County line

Weber County

SR-108 (3500 West): Davis County line to Midland Drive
SR-108 (Midland Drive): 3500 West to Hinckley Drive
SR-79 (Hinckley Drive): SR-108 to I-15

Utah County

Redwood Road: Salt Lake County line to Highway-73

**Process for Determining Significant Change in Design Concept and Scope
for Purposes of Regional Emissions Analysis (see CFR 93.105.2.c.1.ii)**

Changes to regionally significant projects may or may not necessitate a new regional emissions analysis. The following definitions and processes will be used to determine what changes to project concept and scope are to be considered significant or not for purposes of regional emissions analysis.

1. Adding or extending freeway auxiliary lanes or weaving lanes between interchanges is not considered a significant change in concept and scope since these lanes are not normally included in the travel model.
2. Adding or extending freeway auxiliary/weaving lanes from one interchange to a point beyond the next interchange is considered a significant change in concept and scope.
3. A change to a regionally significant project defined in the Regional Transportation Plan that does not change how the project is defined in the travel model is not considered a significant change in concept and scope. These changes include but are not limited to lane or shoulder widening, cross section (other than the number of through lanes), alignment, interchange configuration, intersection traffic control, turn lanes, continuous or center turn lanes, and storage lanes.
4. A change to a regionally significant project defined in the Regional Transportation Plan that does alter the number of through lanes, lane capacity, or speed classification as defined in the travel model is considered a significant change in concept and scope.
5. Advancing or delaying the planned implementation of a regionally significant project that does not result in a change in the transportation network described in the travel model for any horizon year (as defined in CFR 93.101) is not considered a significant change in concept and scope.
6. Advancing or delaying the planned implementation of a regionally significant project that does result in a change in the transportation network described in the travel model for any horizon year (as defined in CFR 93.101) is considered a significant change in concept and scope.
7. Project changes not addressed in the above statements will be decided on a case by case basis through consultation by representatives from DAQ, WFRC, MAG, UDOT, UTA, FHWA, FTA, and EPA.

Appendix-2

Highway and Transit Projects Amended 2011-2040 RTP

Salt Lake/West Valley and Ogden/Layton Areas

2013 Amended RTP HIGHWAY PROJECTS LIST**Project Amendments to the 2011-2040 RTP****Project Description****Weber County**

Pioneer Road – SR126 to 4700 West – *Marriott-Slaterville has requested this project be amended into Phase 1 of the RTP. Marriott-Slaterville has identified operational improvements regarding this section of the facility.*

Funding: Potential for Weber County corridor preservation funds and County 1/4c Local Option Sales Tax

RTP Amendment: Include the project in Phase 1 of the Plan. (This project is not currently in the RTP).

Adams Avenue – US-89 Washington Blvd to Washington Terrace City Limits – *Washington Terrace has requested this project be amended into Phase 1 of the RTP. This project will convert the facility from 2 to 4 lanes to accommodate increasing demand.*

Funding: STP Funds already programmed for reconstruction (\$4.3M)

RTP Amendment: Move the project from Phase 2 to Phase 1.

4000 South (SR-37) – 5100 West to 1900 West (SR-126) – *UDOT has requested this project be amended into Phase 1 of the RTP. This project will convert the facility from 2 to 4 lanes to accommodate increasing demand.*

Funding: House Bill 377 adopted in the 2013 Utah State Legislative session programmed \$15M for this project and Weber County has programmed \$10M for this project.

RTP Amendment: Move the project from Phase 2 to Phase 1.

Salt Lake County

Bangerter Highway and Redwood Road Interchange – *UDOT has requested this project be amended into Phase 1 of the RTP. This project would construct a grade separated interchange, improving traffic flow on Bangerter and Redwood Road. Environmental analysis would be conducted in 2013 with anticipated construction in 2014.*

Funding: House Bill 377 adopted in the 2013 Utah State Legislative session programmed \$42M for this project.

RTP Amendment: Move the project from Phase 3 to Phase 1.

ID#	PROJECT	DESCRIPTION	PHASE	
Salt Lake County, East-West Facilities				
S-1	Sports Complex Boulevard (2400 North) I-215 East Frontage Road to Redwood Road	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.5 miles / Local Bike Class: None	1
S-2	700 South / 500 South 5600 West to 2700 West	Widening: 2 to 4 lanes ROW: 2007 - 50 ft / 2040 - 99 ft	COL / 3.6 miles / Local Bike Class: 2	3
S-3	California Avenue Mountain View Corridor to 4800 West	Widening: 2 to 4 lanes ROW: 2007 - 110 ft / 2040 - 110 ft	MA / 1 miles / Local Bike Class: Priority 2	3
S-4	I-80 1300 East to I-215 (East)	Widening: 6 to 8 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 3.5 miles / UDOT Bike Class: Priority 1	2
S-5	I-80 I-215 (East) to Summit County Line	Widening: 3 EB to 4 EB lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 11 miles / UDOT Bike Class: 3	3
S-6	2100 South I-15 to 1300 East	Operational	MA / 2.7 miles / Local Bike Class: 2	1
S-7	SR-201 I-80 (West) to SR-111 Bypass	Widening: 4 to 6 lanes ROW: 2007 - 300 ft / 2040 - 300 ft	FWY / 6.6 miles / UDOT Bike Class: Priority 1	3
S-8	SR-201 SR-111 Bypass to Mountain View Corridor	Widening: 4 to 6 lanes ROW: 2007 - 300 ft / 2040 - 300 ft	FWY / 4 miles / UDOT Bike Class: Priority 1	2
S-9	SR-201 Mountain View Corridor to I-15	Widening: 6 to 6+HOT lanes ROW: 2007 - 300 ft / 2040 - 300 ft	FWY / 7 miles / UDOT Bike Class: None	2
S-10	Parkway Boulevard (2700 South) 7200 West to 5600 West	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 86 ft	COL / 2 miles / Local Bike Class: 2	3
S-11	3300 South / 3500 South I-215 (West) to Highland Drive	Operational	PA / 2.7 miles / UDOT Bike Class: 1, 2, and None	1
S-12	3500 South SR-111 Bypass to 7200 West	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	PA / 1.3 miles / Local Bike Class: 2 and 3	3
S-13	3500 South 7200 West to Mountain View Corridor	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	PA / 1.7 miles / Local Bike Class: None	2
S-14	3500 South Mountain View Corridor to 4000 West	Widening: 2/4 to 6 lanes ROW: 2007 - 80 ft / 2040 - 113 ft	PA / 2.3 miles / UDOT Bike Class: None	1
S-15	4100 South SR-111 to Mountain View Corridor	Widening: 2 to 4 lanes ROW: 2007 - 76 ft / 2040 - 99 ft	MA / 4.3 miles / Local Bike Class: Priority 2	3
S-16	4700 South 6400 West to 4000 West	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 110 ft	PA / 2.3 miles / Local Bike Class: 2	2
S-17	4700 South 4000 West to 2700 West	Widening: 4 to 6 lanes ROW: 2007 - 110 ft / 2040 - 110 ft	PA / 1.5 miles / Local Bike Class: 3	1
S-18	4500 South / 4700 South Redwood Road to I-15	Widening: 4 to 6 lanes ROW: 2007 - 150 ft / 2040 - 150 ft	PA / 2 miles / UDOT Bike Class: 3 and None	3
S-19	4500 South 900 East to 2300 East	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 110 ft	PA / 2.2 miles / UDOT Bike Class: 2 and 3	3
S-20	5400 South SR-111 to Mountain View Corridor	Widening: 2 to 4 lanes ROW: 2007 - 70 ft / 2040 - 99 ft	MA / 2.4 miles / UDOT Bike Class: Priority 2	2
S-21	5400 South SR-111 to Mountain View Corridor	Widening: 4 to 6 lanes ROW: 2007 - 70 ft / 2040 - 123 ft	MA / 2.4 miles / UDOT Bike Class: Priority 2	3
S-22	5400 South Mountain View Corridor to Bangerter Highway	Widening: 4 to 6 lanes ROW: 2007 - 65 ft / 2040 - 110 ft	MA / 2.5 miles / UDOT Bike Class: Priority 2 and 3	1
S-23	5400 South 5600 West to Bangerter Highway	Operational	MA / 2.3 miles / UDOT Bike Class: Priority 2 and 3	1
S-24	5400 South Redwood Road to I-15	Operational	MA / 2 miles / UDOT Bike Class: Priority 3 and None	1
S-25	6200 South SR-111 to Mountain View Corridor	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 1.6 miles / Local Bike Class: 1 and 2	1
S-27	6200 South Mountain View Corridor to 5600 West	Widening/NC: 2/0 to 4 ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 0.3 miles / Local Bike Class: 2	1
S-28	7000 South Bangerter Highway to Redwood Road	Widening: 3 to 4 lanes ROW: 2007 - 56 ft / 2040 - 99 ft	MA / 1.9 miles / Local Bike Class: 2	2
S-29	7000 South / 7200 South Redwood Road to Bingham Junction Boulevard	Widening: 4 to 6 lanes ROW: 2007 - 90 ft / 2040 - 123 ft	MA / 2 miles / UDOT Bike Class: 1 and 2	3
S-30	7000 South / 7200 South Bingham Junction Boulevard to I-15	Widening: 4 to 6 lanes ROW: 2007 - 90 ft / 2040 - 123 ft	MA / 0.6 miles / UDOT Bike Class: 1	1
S-31	Fort Union Boulevard Union Park Boulevard to 3000 East	Operational	MA / 2.8 miles / Local Bike Class: 2	1
S-32	7800 South SR-111 to New Bingham Highway	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 120 ft	MA / 3.7 miles / Local Bike Class: Priority 2	1
S-34	9000 South SR-111 to 5600 West	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	PA / 1.7 miles / Local Bike Class: 2	1
S-35	9000 South 5600 West to Bangerter Highway	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 2.5 miles / UDOT Bike Class: 2	3
S-36	9000 South Bangerter Highway to I-15	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 4 miles / UDOT Bike Class: 1 and 2	2
S-37	10200 South SR-111 to Mountain View Corridor	Widening: 2 to 4 lanes ROW: 2007 - 82 ft / 2040 - 110 ft	COL / 2.6 miles / Local Bike Class: 2	1
S-38	10400 South / 10800 South SR-111 to Mountain View Corridor	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 2 miles / Local Bike Class: None	2
S-39	10400 South / 10800 South Mountain View Corridor to 4800 West	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 1.2 miles / Local Bike Class: 1 and None	1
S-40	10600 South / 10400 South Bangerter Highway to I-15	Operational	MA / 4.2 miles / UDOT Bike Class: 2 and None	1
S-41	10600 South 1300 East to Highland Drive	Widening: 2 to 4 lanes ROW: 2007 - 86 ft / 2040 - 86 ft	MA / 0.9 miles / Local Bike Class: 1	1
S-42	11800 South SR-111 to 5600 West	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	MA / 2.4 miles / Local Bike Class: Priority 2	2

ID#	PROJECT	DESCRIPTION	PHASE
S-43	11400 South 11800 South / 5600 West to Valdania Street (5200 West)	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 110 ft	MA / 1 miles / Local Bike Class: Priority 2
S-45	11400 South 1300 East to Highland Drive	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 99 ft	MA / 1.2 miles / Local Bike Class: Priority 3 and None
S-46	Herriman Parkway (12600 South) 8000 West to 6000 West	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	PA / 1.5 miles / Local Bike Class: 1 or 2
S-47	12600 South Mountain View Corridor to Bangerter Highway	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 1.6 miles / Local Bike Class: Priority 2
S-48	12300 South / 12600 South Redwood Road to 700 East	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 2 miles / UDOT Bike Class: Priority 2
S-49	Riverton Boulevard 4570 West to 13400 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 89 ft	COL / 0.6 miles / Local Bike Class: None
S-50	13400 South 8000 West to Mountain View Corridor	Widening/NC: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	COL / 3 miles / Local Bike Class: 2 and 3
S-51	13400 South Mountain View Corridor to Bangerter Highway	Widening: 4 to 6 lanes ROW: 2007 - 66 ft / 2040 - 106 ft	COL / 1.7 miles / Local Bike Class: 2
S-52	Juniper Crest 4800 West to Mountain View Corridor	New Construction: 0 to 6 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 1 miles / Local Bike Class: 2
S-53	Juniper Crest / 14400 South Mountain View Corridor to 3600 West	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 0.9 miles / Local Bike Class: Priority 2 and 3
S-54	Traverse Ridge Road Highland Drive to Mike Weir Drive	Widening: 2 to 4 lanes ROW: 2007 - 89 ft / 2040 - 99 ft	COL / 1.3 miles / Local Bike Class: 2
S-55	Porter Rockwell Road Redwood Road to 14600 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 167 ft	PA / 3 miles / Local Bike Class: Priority 1 and 2
Salt Lake County, North-South Facilities			
S-56	SR-111 Bypass SR-201 to SR-111	Widening/NC: 0/2 to 4 lanes ROW: 2007 - 55 ft / 2040 - 150 ft	PA / 2.5 miles / UDOT Bike Class: 1 and None
S-57	SR-111 5400 South to 11800 South	Widening: 2 to 4 lanes ROW: 2007 - 106 ft / 2040 - 106 ft	PA / 8.5 miles / Local-UDOT Bike Class: Priority 2
S-58	8000 West 11800 South to 13400 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 106 ft	COL / 1.8 miles / Local Bike Class: None
S-59	7200 West SR-201 to 3500 South	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 86 ft	MA / 2.5 miles / Local Bike Class: 3
S-61	Mountain View Corridor SR-201 to 4100 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 328 ft	PA / 3 miles / UDOT Bike Class: Priority 1 & None
S-62	Mountain View Corridor 4100 South to 5400 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 328 ft	PA / 2.2 miles / UDOT Bike Class: Priority 1
S-63	Mountain View Corridor 5400 South to Redwood Road	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 328 ft	PA / 14.4 miles / UDOT Bike Class: Priority 1 & None
S-64	Mountain View Corridor Redwood Road to Utah County Line	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 328 ft	PA / 2.9 miles / UDOT Bike Class: Priority 1
S-66	Mountain View Corridor SR-201 to 4100 South	Widening & Interchanges: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 3 miles / UDOT Bike Class: Priority 1 & None
S-67	Mountain View Corridor 4100 South to 5400 South	Widening & Interchanges: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 2.2 miles / UDOT Bike Class: Priority 1
S-68	Mountain View Corridor 5400 South to 9000 South	Widening & Interchanges: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 4.5 miles / UDOT Bike Class: Priority 1 and None
S-69	Mountain View Corridor 9000 South to 10200 South	Widening & Interchanges: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 1.5 miles / UDOT Bike Class: Priority 1 and None
S-70	Mountain View Corridor 10200 South to Redwood Road	New Construction & Ints: 0 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 8.4 miles / UDOT Bike Class: Priority 1 & None
S-71	Mountain View Corridor Redwood Road to Utah County Line	Widening & Interchanges: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 2.9 miles / UDOT Bike Class: None
S-72	Mountain View Corridor SR-201 to Utah County Line	Widening: 6 to 6+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 22.5 miles / UDOT Bike Class: Priority 1 & None
S-73	5600 West I-80 to SR-201	Widening: 2 to 4 lanes ROW: 2007 - 86 ft / 2040 - 120 ft	MA / 3.1 miles / UDOT Bike Class: Priority 2
S-74	5600 West 2700 South to 6200 South	Operational	PA / 5 miles / Local-UDOT Bike Class: 2
S-75	5600 West 6200 South to New Bingham Highway	Widen/ NC: 0/2 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 3.1 miles / Local Bike Class: 2
S-76	5600 West 6200 South to New Bingham Highway	Operational	MA / 3.1 miles / Local Bike Class: 2
S-77	5600 West New Bingham Highway to Old Bingham Highway	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	COL / 1.5 miles / Local Bike Class: 2
S-78	5600 West Old Bingham Highway to 10400 South / 10800 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 1.7 miles / Local Bike Class: None
S-79	5600 West 11800 South to 13100 South	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 3.2 miles / Local Bike Class: 2
S-80	5600 West Connection 5600 West to 11800 South	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.7 miles / Local Bike Class: 2 and None
S-81	4800 West SR-201 to Lake Park Boulevard (2700 South)	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 0.9 miles / Local Bike Class: Priority 3
S-82	4800 West Skye Drive to Mountain View Corridor	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 2.7 miles / Local Bike Class: Priority 2 and None
S-83	4570 West 12600 South to 13400 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 89 ft	COL / 1 miles / Local Bike Class: None
S-84	4200 West / Riverton Boulevard 13400 South to 14400 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 89 ft	COL / 1.5 miles / Local Bike Class: None
S-85	4150 West 12600 South to Riverton Boulevard	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.6 miles / Local Bike Class: None
S-86	3600 West 13400 South to 14400 South	Widening: 2 to 4 lanes ROW: 2007 - 73 ft / 2040 - 89 ft	COL / 1.3 miles / Local Bike Class: Priority 3

ID#	PROJECT	DESCRIPTION	PHASE
S-87	3200 West California Avenue to 1820 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 99 ft	COL / 0.7 miles / Local Bike Class: 2
S-88	3200 West 1820 South to Parkway Boulevard (2700 South)	Widening: 2 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	COL / 1.3 miles / Local Bike Class: 2
S-89	I-215 2100 North to I-80	Widening: 6 to 8 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 3.3 miles / UDOT Bike Class: None
S-90	I-215 Frontage Road 2700 South to 4100 South	New Construction: 0 to 1 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 2.1 miles / Local Bike Class: None
S-91	Redwood Road I-215 (North) to 1000 North	Widening: 2 to 4 lanes ROW: 2007 - 110 ft / 2040 - 110 ft	MA / 3 miles / UDOT Bike Class: 2
S-92	Redwood Road SR-201 to 4700 South	Operational	PA / 3.9 miles / UDOT Bike Class: 1, 2, and None
S-93	Redwood Road 9000 South to Bangerter Highway	Widening: 4 to 6 lanes ROW: 2007 - 66 ft / 2040 - 123 ft	PA / 6 miles / UDOT Bike Class: Priority 2 and None
S-94	Redwood Road 9000 South to 11400 South	Operational	PA / 3 miles / UDOT Bike Class: Priority 2 and None
S-95	Redwood Road 12600 South to Bangerter Highway	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	PA / 1.5 miles / UDOT Bike Class: Priority 2
S-96	Redwood Road Bangerter Highway to Porter Rockwell Road	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 2.7 miles / UDOT Bike Class: Priority 2
S-97	1200 West 3100 South to 3300 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 0.5 miles / Local Bike Class: 3
S-98	Bingham Junction Boulevard 7800 South to 8400 South	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	MA / 2.8 miles / Local Bike Class: 2
S-99	Galena Park Boulevard 12300 South to 13490 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 89 ft	COL / 1.8 miles / Local Bike Class: 1 and 3
S-100	Lone Peak Parkway 11400 South to 12300 South	Widening: 2 to 4 lanes ROW: 2007 - 65 ft / 2040 - 99 ft	COL / 1.2 miles / Local Bike Class: 2
S-101	Lone Peak Parkway 12300 South to Bangerter Highway	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 99 ft	COL / 2 miles / Local Bike Class: 2
S-103	I-15 Collectors (Monroe Street) 10000 South to 10600 South	Collector/Distributor: 0 to 1 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.7 miles / Local Bike Class: None
S-104	I-15 12300 South to Bangerter Highway	Widening: 7+HOV to 8+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 1.6 miles / UDOT Bike Class: None
S-105	I-15 Bangerter Highway to Utah County Line	Widening: 6/7+HOV to 8+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 3.9 miles / UDOT Bike Class: None
S-106	I-15 Bangerter Highway to Utah County Line	Widening: 8+HOV to 10+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 3.9 miles / UDOT Bike Class: None
S-107	Cottonwood Street 4500 South to Vine Street	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 89 ft	COL / 0.9 miles / Local Bike Class: None
S-108	State Street 600 South to I-215	Operational	MA / 8.6 miles / UDOT Bike Class: None
S-109	State Street I-215 to 12300 South	Operational	MA / 7.2 miles / UDOT Bike Class: None
S-110	State Street 6200 South to 9000 South	Widening: 4 to 6 lanes ROW: 2007 - 100 ft / 2040 - 110 ft	MA / 3.3 miles / UDOT Bike Class: None
S-111	900 East 3300 South to 4500 South	Operational	COL / 1.7 miles / Local Bike Class: Priority 2
S-112	900 East / 700 East Fort Union Boulevard to 9400 South	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 3 miles / UDOT Bike Class: Priority 2 and 3
S-113	700 East 11400 South to 12300 South	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 110 ft	PA / 1.2 miles / UDOT Bike Class: Priority 2
S-114	Union Park Boulevard / 1300 East Fort Union Boulevard to 7800 South	Operational	MA / 1.2 miles / Local Bike Class: 1 and None
S-115	Highland Drive Murray Holladay Boulevard to Van Winkle Expressway	Operational	PA / 2 miles / Local Bike Class: None
S-116	2000 East Fort Union Boulevard to 9400 South	Widening: 4 to 6 lanes ROW: 2007 - 106 ft / 2040 - 123 ft	PA / 3.1 miles / Local Bike Class: Priority 2
S-117	Highland Drive 9400 South to 9800 South	Widening: 2 to 4 lanes ROW: 2007 - 106 ft / 2040 - 114 ft	PA / 0.5 miles / Local Bike Class: Priority 2
S-118	Highland Drive 9800 South to Draper City Limit	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 114 ft	PA / 2.8 miles / Local Bike Class: Priority 2
S-119	Highland Drive Draper City Limit to 14600 South	Widening: 2 to 4 lanes ROW: 2007 - 106 ft / 2040 - 114 ft	PA/MA / 5.8 miles / Local Bike Class: Priority 2
S-120	Highland Drive Connection Traverse Ridge Road to 13800 South	Widening: 2 to 4 lanes ROW: 2007 - 106 ft / 2040 - 114 ft	PA / 1.8 miles / Local Bike Class: 2 and None
S-121	500 South / Foothill Drive 1300 East to 2300 East	Operational	PA / 2.4 miles / UDOT Bike Class: 2 and 3
S-122	Foothill Boulevard 2300 East to I-80	Widening: 4 to 6 lanes ROW: 2007 - 110 ft / 2040 - 110 ft	PA / 2.4 miles / UDOT Bike Class: Priority 1 and 2
Salt Lake County, Spot Facilities			
S-123	SR-201 Interchange @ I-80	Upgrade	FWY / UDOT Bike Class: Priority 2
S-124	SR-201 Interchange @ SR-111 Bypass	New Construction	FWY / UDOT Bike Class: Priority 3
S-125	SR-201 Interchange @ 8400 West	New Construction	FWY / UDOT Bike Class: Priority 3
S-126	SR-201 Interchange @ 7200 West	New Construction	FWY / UDOT Bike Class: Priority 3
S-127	SR-201 Interchange @ I-215	Upgrade	FWY / UDOT Bike Class: None
S-128	SR-111 Rail Road Structure @ 4300 South	Widening: 2 to 4 lanes	PA / UDOT Bike Class: Priority 2

ID#	PROJECT	DESCRIPTION	PHASE
S-130	5600 West Rail Road Crossing @ 750 South	New Construction: 2 to 4 lanes	PA / UDOT Bike Class: Priority 2
S-131	4800 West Overpass @ SR-201	New Construction: 0 to 2 lanes	COL / Local Bike Class: Priority 3
S-133	Bangerter Highway Interchange @ SR-201	Upgrade	FWY / UDOT Bike Class: None
S-140	Bangerter Highway Interchange @ 6200 South	New Construction	FWY / UDOT Bike Class: 2
S-141	Bangerter Highway Interchange @ 7000 South	New Construction	FWY / UDOT Bike Class: 2
S-142	Bangerter Highway Interchange @ 7800 South	New Construction	FWY / UDOT Bike Class: Priority 2
S-143	Bangerter Highway Interchange @ 9000 South	New Construction	FWY / UDOT Bike Class: 2
S-144	Bangerter Highway Interchange @ 9800 South	New Construction	FWY / UDOT Bike Class: Priority 2
S-145	Bangerter Highway Interchange @ 10400 South	New Construction	FWY / UDOT Bike Class: 2
S-146	Bangerter Highway Interchange @ 11400 South	New Construction	FWY / UDOT Bike Class: Priority 2
S-147	Bangerter Highway Interchange @ 12600 South	New Construction	FWY / UDOT Bike Class: Priority 2
S-148	Bangerter Highway Interchange @ 13400 South	New Construction	FWY / UDOT Bike Class: 2
S-149	Bangerter Highway Interchange @ 2700 West	New Construction	FWY / UDOT Bike Class: None
S-150	Bangerter Highway Interchange @ Redwood Road	New Construction	FWY / UDOT Bike Class: Priority 2
S-151	Bangerter Highway Interchange @ 600 West	New Construction	FWY / UDOT Bike Class: None
S-152	Bangerter Highway Interchange @ I-15	Upgrade	FWY / UDOT Bike Class: None
S-154	I-215 Interchange @ 5400 South	New Construction	FWY / UDOT Bike Class: Priority 3
S-155	I-215 Interchange @ Redwood Road (South)	Upgrade	FWY / UDOT Bike Class: None
S-156	I-15 Interchange @ 100 South (HOV Ramps)	New Construction: 0 to 2 lanes	FWY / UDOT Bike Class: None
S-157	I-15 Interchange @ I-215 (South)	Upgrade	FWY / UDOT Bike Class: None
S-158	13800 South Overpass @ I-15	New Construction: 0 to 2 lanes	COL / Local Bike Class: Priority 2
S-160	I-15 Interchange @ 14600 South	Upgrade	FWY / UDOT Bike Class: Priority 2
S-161	I-80 Interchange @ I-215 / Foothill Drive	Upgrade	FWY UDOT Bike Class: 3
S-163	Avalanche Snow Shed Little Cottonwood Canyon Road @ Whitepine Chutes	New Construction	MA UDOT Bike Class: 2
Davis County, East-West Facilities			
D-1	1800 North West Davis Corridor to 2000 West	Widening: 2 to 4 lanes ROW: 2007 - 80 ft / 2040 - 99 ft	MA / 2 miles / UDOT Bike Class: Priority 2
D-2	1800 North 2000 West to SR-126	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	MA / 2 miles / UDOT Bike Class: Priority 2
D-3	SR-193 Extension West Davis Corridor to 2000 West	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 2.2 miles / UDOT Bike Class: Priority 2
D-4	SR-193 Extension 2000 West to State Street	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 110 ft	MA / 2.9 miles / UDOT Bike Class: Priority 2
D-6	SR-193 I-15 to US-89	Operational	MA / 5 miles / UDOT Bike Class: Priority 2
D-7	Syracuse Road (SR-127) West Davis Corridor to 2000 West	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	MA / 1 miles / UDOT Bike Class: Priority 2
D-8	Antelope Drive Oak Forest Drive (2500 East) to US-89	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	MA / 0.3 miles / Local Bike Class: Priority 2
D-9	Gordon Avenue (1000 North) Fairfield Road to 1600 East	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 86 ft	COL / 0.7 miles / Local Bike Class: None
D-10	Gordon Avenue (1000 North) 1600 East to US-89	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 1.3 miles / Local Bike Class: None
D-11	Hill Field Road Extension 3650 West (Layton) to 2200 West (Layton)	Widening: 2 to 4 lanes ROW: 2007 - 60 ft / 2040 - 110 ft	MA / 1.5 miles / Local Bike Class: 2
D-12	Layton Parkway West Davis Corridor to Flint Street	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	MA / 2.6 miles / Local Bike Class: None
D-13	200 North (Kaysville) West Davis Corridor to I-15	Widening: 2 to 4 lanes ROW: 2007 - 60 ft / 2040 - 99 ft	MA / 2.1 miles / Local Bike Class: Priority 2
D-14	2600 South / 1100 North Redwood Road to I-15	Operational	MA / 1.4 miles / Local Bike Class: Priority 2
D-15	Center Street Redwood Road to US-89	Operational	COL / 1.1 miles / Local Bike Class: Priority 1
Davis County, North-South Facilities			
D-16	West Davis Corridor Weber County Line to Syracuse Road	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 320 ft	FWY / 4.8 miles / UDOT Bike Class: Priority 1
D-17	West Davis Corridor Syracuse Road to I-15 / US-89 / Legacy Parkway	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 320 ft	FWY / 11.8 miles / UDOT Bike Class: Priority 1

ID#	PROJECT	DESCRIPTION	PHASE
D-18	West Davis Corridor Weber County Line to Syracuse Road	Corridor Preservation ROW: 2007 - 0 ft / 2040 - 320 ft	FWY / 4.8 miles / UDOT Bike Class: Priority 1
D-19	3000 West 6000 South (Weber County) to 2300 North	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 75 ft	COL / 0.5 miles / Local Bike Class: Priority 2
D-20	2000 West (SR-108) Weber County Line to Syracuse Road (SR-108)	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	MA / 4.4 miles / UDOT Bike Class: Priority 2
D-21	2000 West Syracuse Road (SR-108) to West Davis Corridor	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	COL / 1.5 miles / Local Bike Class: Priority 2
D-22	3650 West (Layton) 700 North to Gentile Street	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.7 miles / Local Bike Class: None
D-23	2700 West (Layton) Gordon Avenue to Layton Parkway	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 99 ft	COL / 1.8 miles / Local Bike Class: 2
D-24	Redwood Road 500 South to 2600 South	Widening: 2 to 4 lanes ROW: 2007 - 100 ft / 2040 - 110 ft	MA / 1.7 miles / UDOT Bike Class: Priority 2
D-25	I-15 Weber County Line to Hill Field Road (SR-232)	Widening: 6 to 6+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 6.3 miles / UDOT Bike Class: None
D-26	I-15 US-89 (Farmington) to I-215	Widening: 8 to 8+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 10.6 miles / UDOT Bike Class: None
D-28	US-89 I-84 to Antelope Drive	Widening: 4 to 6 lanes ROW: 2007 - 120 ft / 2040 - 150 ft	FWY / 3.2 miles / UDOT Bike Class: Priority 2
D-29	US-89 Antelope Drive to I-15 (Farmington)	Widening: 4 to 6 lanes ROW: 2007 - 120 ft / 2040 - 150 ft	FWY / 7.4 miles / UDOT Bike Class: Priority 2
Davis County, Spot Facilities			
D-30	1800 North Overpass @ 500 West Rail Road Crossing	New Construction: 2 to 4 lanes	MA / UDOT Bike Class: Priority 2
D-31	I-15 Interchange @ 1800 North	New Construction	FWY / UDOT Bike Class: Priority 2
D-32	I-15 Interchange @ 650 North	Upgrade	FWY / UDOT Bike Class: None
D-33	I-15 Interchange @ Syracuse Road	Upgrade	FWY / UDOT Bike Class: Priority 2
D-35	I-15 Interchange @ Hill Field Road	Upgrade	FWY / UDOT Bike Class: None
D-36	I-15 Interchange @ Shepard Lane	New Construction	FWY / UDOT Bike Class: None
D-37	I-15 Interchange @ Parrish Lane	Upgrade	FWY / UDOT Bike Class: Priority 2
D-38	I-15 Interchange @ 400 North / 500 West	Upgrade	FWY / UDOT Bike Class: None
D-39	I-15 Interchange @ 500 South	Upgrade	FWY / UDOT Bike Class: Priority 2
D-40	I-15 Interchange @ 2600 South	Upgrade	FWY / UDOT Bike Class: Priority 2
D-41	2600 South / 1100 North @ 1150 West Rail Road Crossing	New Construction	MA / Local Bike Class: Priority 2
D-42	Legacy Parkway Interchange @ Center Street	New Construction	FWY / UDOT Bike Class: Priority 1
D-45	US-89 Interchange @ Antelope Drive	New Construction	FWY / UDOT Bike Class: Priority 2
D-46	US-89 Interchange @ Gordon Avenue	New Construction	FWY / UDOT Bike Class: Priority 2
D-47	US-89 Interchange @ Oakhills Drive (SR-109)	New Construction	FWY / UDOT Bike Class: Priority 2
D-48	US-89 Interchange @ 400 North (Fruit Heights)	New Construction	FWY / UDOT Bike Class: Priority 2
D-49	Nicholl's Road Overpass @ US-89	New Construction: 0 to 2 lanes	COL / Local Bike Class: None
Weber County, East-West Facilities			
W-1	Skyline Drive (North) US-89 to 450 East	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 3.6 miles / Local Bike Class: Priority 3
W-2	Skyline Drive (North) 450 East to 2600 North	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	COL / 3.1 miles / Local Bike Class: Priority 3
W-3	1700 North US-89 to 400 East	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 1.2 miles / Local Bike Class: 1
W-4	Larsen Lane US-89 / Wall Avenue to 400 East	Widening: 2 to 4 lanes ROW: 2007 - 60 ft / 2040 - 89 ft	MA / 0.5 miles / Local Bike Class: None
W-5	Pioneer Road (400 North) I-15 to 1200 West	Re-stripe: 2 to 4 lanes ROW: 2007 - 110 ft / 2040 - 110 ft	COL / 1 miles / Local Bike Class: Priority 2
W-5a	Pioneer Road SR-126 (1900 West) to SR-134 (4700 West)	Re-align ROW: 2007 - 110 ft / 2040 - 110 ft	COL / 2.5 miles / Local Bike Class: Priority 2
W-6	1200 South SR-67 (North Legacy Corridor) to 4700 West	Widening: 2 to 4 lanes ROW: 2007 - 55 ft / 2040 - 110 ft	COL / 2.1 miles / UDOT Bike Class: Priority 2
W-7	1200 South 4700 West to I-15	Widening: 2 to 4 lanes ROW: 2007 - 92 ft / 2040 - 110 ft	PA / 4.8 miles / UDOT Bike Class: Priority 2
W-8	20th Street Wall Avenue to Harrison Boulevard	Operational	MA / 1.6 miles / Local Bike Class: None
W-9	21st Street Wall Avenue to Adams Avenue	Operational	COL / 0.6 miles / Local Bike Class: None
W-10	24th Street I-15 to Lincoln Avenue	Widening: 2 to 4 lanes ROW: 2007 - 86 ft / 2040 - 110 ft	MA / 1.6 miles / UDOT Bike Class: Priority 3
W-11	2550 South I-15 to 3500 West	Widening: 2 to 4 lanes ROW: 2007 - 60 ft / 2040 - 86 ft	COL / 3 miles / Local Bike Class: Priority 3

ID#	PROJECT	DESCRIPTION	PHASE
W-12	Country Hills Drive Adams Avenue to Gramercy Avenue	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	MA / 1 miles / Local Bike Class: Priority 2
W-13	4000 South (SR-37) SR-67 (North Legacy Corridor) to 1900 West (SR-126)	Widening: 2 to 4 lanes ROW: 2007 - 86 ft / 2040 - 110 ft	MA / 3.9 miles / UDOT Bike Class: Priority 3
W-14	Midland Drive (SR-108) 3500 West to 1900 West (SR-126)	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	MA / 2.9 miles / UDOT Bike Class: Priority 3
W-16	Riverdale Road (SR-26) 1900 West (SR-126) to I-84	Widening: 4 to 6 lanes ROW: 2007 - 99 ft / 2040 - 120 ft	PA / 1 miles / UDOT Bike Class: 3
W-17	5600 South / 5500 South 5900 West (Hooper) to 3500 West	Widening: 2 to 4 lanes ROW: 2007 - 68 ft / 2040 - 86 ft	MA / 3.1 miles / UDOT Bike Class: Priority 3
W-18	5600 South 3500 West to 1900 West (SR-126)	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 99 ft	MA / 2 miles / UDOT Bike Class: Priority 2 and 3
Weber County, North-South Facilities			
W-19	SR-67 (North Legacy Corridor) I-15 (North) to 4000 South	Corridor Preservation ROW: 2007 - 0 ft / 2040 - 220 ft	FWY / 15.6 miles / UDOT Bike Class: Priority 1
W-20	SR-67 (North Legacy Corridor) 4000 South to Davis County Line	Corridor Preservation ROW: 2007 - 0 ft / 2040 - 220 ft	FWY / 3.3 miles / UDOT Bike Class: Priority 1
W-21	SR-67 (North Legacy Corridor) 4000 South to 5500 South	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 220 ft	FWY / 2.5 miles / UDOT Bike Class: Priority 1
W-22	SR-67 (North Legacy Corridor) 5500 South to Davis County Line	New Construction: 0 to 4 lanes ROW: 2007 - 0 ft / 2040 - 220 ft	FWY / 0.8 miles / UDOT Bike Class: Priority 1
W-23	4700 West 1200 South to 4000 South	Widening: 2 to 4 lanes ROW: 2007 - 82 ft / 2040 - 110 ft	MA / 3.8 miles / Local Bike Class: None
W-24	4700 West 4600 South to 4800 South	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 66 ft	COL / 0.3 miles / Local Bike Class: None
W-25	3500 West 1200 South to Midland Drive	Operational	COL / 4.6 miles / Local Bike Class: Priority 3
W-26	3500 West (SR-108) Midland Drive to Davis County Line	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 110 ft	MA / 1.6 miles / UDOT Bike Class: Priority 3
W-27	1900 West / 2000 West (SR-126) 2700 North to 1200 South	Widening: 2 to 4 lanes ROW: 2007 - 66 ft / 2040 - 120 ft	MA / 4.3 miles / UDOT Bike Class: Priority 3
W-28	1900 West (SR-126) Riverdale Road to 5600 South	Widening: 4 to 6 lanes ROW: 2007 - 100 ft / 2040 - 113 ft	MA / 0.4 miles / UDOT Bike Class: Priority 3
W-29	I-15 Box Elder County Line to 2700 North	Widening: 4 to 6 lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 2.2 miles / UDOT Bike Class: None
W-30	I-15 I-84 to Davis County Line	Widening: 6 to 6+HOV lanes ROW: 2007 - 328 ft / 2040 - 328 ft	FWY / 2.8 miles / UDOT Bike Class: None
W-31	600 West Elberta Drive to 2600 North	Operational	COL / 0.9 miles / Local Bike Class: None
W-32	Adams Avenue US-89 / Washington Boulevard to Washington Terrace City Limits	Widening: 2 to 4 lanes ROW: 2007 - 86 ft / 2040 - 99 ft	MA / 0.6 miles / Local Bike Class: 2
W-33	450 East / 400 East 3300 North to 2600 North	Widening: 2 to 4 lanes ROW: 2007 - 68 ft / 2040 - 89 ft	COL / 0.8 miles / Local Bike Class: 3
W-34	Monroe Boulevard 3100 North to 1300 North	New Construction: 0 to 2 1/4 lanes ROW: 2007 - 0 ft / 2040 - 86 ft	MA / 2.3 miles / Local Bike Class: 3 and None
W-35	Harrison Boulevard 2600 North to 12th Street	Operational	PA / 3.8 miles / Local Bike Class: Priority 3
W-36	Harrison Boulevard 12th Street to Country Hills Drive	Operational	PA / 4.7 miles / UDOT Bike Class: Priority 2 & None
W-37	Harrison Boulevard Country Hills Drive to US-89	Widening: 4 to 6 lanes ROW: 2007 - 99 ft / 2040 - 123 ft	PA / 4.8 miles / UDOT Bike Class: Priority 2
W-38	US-89 Harrison Boulevard to I-84	Widening: 4 to 6 lanes ROW: 2007 - 120 ft / 2040 - 120 ft	FWY / 2 miles / UDOT Bike Class: Priority 2
W-39	Skyline Drive 1. Fern Drive / 2. Ogden City Limits to 1. 4600 South / 2. Eastwood Boulevard	New Construction: 0 to 2 lanes ROW: 2007 - 0 ft / 2040 - 80 ft	COL / 0.6 miles / Local Bike Class: Priority 3
Weber County, Spot Facilities			
W-41	I-15 Interchange @ 24th Street	Upgrade	FWY / UDOT Bike Class: Priority 3
W-42	I-15 Interchange @ Riverdale Road (SR-26)	Upgrade	FWY / UDOT Bike Class: 3
W-43	I-15 Interchange @ 5600 South	Upgrade	FWY / UDOT Bike Class: 2
W-44	US-89 Interchange @ I-84	Upgrade	FWY / UDOT Bike Class: Priority 2

2040 RTP TRANSIT PROJECT LIST

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
Phase 1			
North Ogden - Salt Lake (First of Three Phases)			
<i>North Ogden - Ogden Intermodal Center - Ogden CBD - Newgate Mall - Riverdale - Clearfield - Hill Air Force Base - Layton FrontRunner Station - Farmington FrontRunner Station - Centerville - Bountiful - Woods Cross - North Salt Lake - Salt Lake Central - Downtown Salt Lake City</i>			
Bus Rapid Transit	Corridor Preservation	4400 S. (Roy)	Davis County Line
Bus Rapid Transit	Corridor Preservation	Davis County Line	651 N./SR-126
Bus Rapid Transit	Bus Rapid Transit	HAFB West Gate	200 N./SR-126
Bus Rapid Transit	Enhanced Bus (BRTI)	200 N./SR-126	Clearfield FrontRunner
Rail/Bus Rapid Transit	Enhanced Bus (BRTI)	Main St/Parrish Lane	3800 S. Bountiful/US-89
Rail/Bus Rapid Transit	Bus Rapid Transit	3800 S. Bountiful/US-89	US-89/Eagleridge Dr
Ogden - Weber State University (First of Two Phases)			
<i>Ogden Intermodal Center - Ogden - South Ogden - Weber State University - McKay Dee Hospital</i>			
Streetcar	Enhanced Bus (BRTI)	Ogden Intermodal Center	Washington/27th St
Streetcar	Bus Rapid Transit	Washington/27th St	Washington/36th St
Streetcar	Enhanced Bus (BRTI)	Washington/36th St	Harrison Boulevard/Edvalson
Streetcar	Bus Rapid Transit	Harrison Boulevard/Edvalson Ave	McKay-Dee Hospital
West Davis - West Weber			
<i>Ogden Intermodal Center - Ogden CBD - Newgate Mall - Riverdale - Roy FrontRunner Station - West Haven - Clinton - West Point - Syracuse - Clearfield - Hill Airforce Base - Layton FrontRunner Station</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	3500 W./Midland Dr	Davis County Line
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Weber County Line	2000 W./Antelope Dr
Ogden Valley Park-And-Ride			
<i>Near Pineview Dam</i>			
Park-and -Ride	Park-and-ride	Near Pineview Dam	
Falcon Hill - Hill AFB West Transit Center			
<i>Falcon Hill - Hill AFB West Gate</i>			
Transit Hub	Transit Hub	New Hill AFB West Gate	
Salt Lake City - Foothill Drive - Wasatch Drive (First of Three Phases)			
<i>Salt Lake Central - Salt Lake City - University of Utah - Medical Center - Research Park - Parley's Canyon - Interstate 215 - Cottonwood Corporate Center - Big Cottonwood Canyon - Little Cottonwood Canyon</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	Salt Lake Central	Medical Dr./ Research Rd
Bus Rapid Transit	Bus Rapid Transit	Medical Dr./ Research Rd	New Rd at Wakara Way
Bus Rapid Transit	Enhanced Bus (BRTI)	New Rd at Wakara Way	Arapeen Dr/Chipeta Way
Park City			
<i>Salt Lake Central - 200 South - University of Utah - Medical Center - Foothill - Interstate 80 - Summit County Line</i>			
Enhanced Bus (BRTI)	Operations only	Salt Lake Central	Summit County Line
State (First of Three Phases)			
<i>Salt Lake Central - Capitol - South Salt Lake - Millcreek - Murray FrontRunner Station - Midvale - Sandy/South Jordan FrontRunner Station - Draper FrontRunner Station</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	200 S./State St	State St/Winchester St
Bus Rapid Transit	Enhanced Bus (BRTI)	State St/Winchester St	9000 S.
Bus Rapid Transit	Enhanced Bus (BRTI)	9000 S.	Draper FrontRunner
Redwood (First of Three Phases)			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - West Valley - Taylorsville - West Jordan - South Jordan - Riverton - Draper FrontRunner Station</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	N. Temple/Redwood Rd	SR-201
Bus Rapid Transit	Enhanced Bus (BRTI)	SR-201	4700 S.
Bus Rapid Transit	Enhanced Bus (BRTI)	4700 S.	9000 S.
Bus Rapid Transit	Corridor Preservation	9000 S.	12600 S.
Bus Rapid Transit	Corridor Preservation	12600 S./Redwood Rd	12300 S./Pony Express

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
Draper Line North Segment			
<i>10000 South TRAX Station - 12600 South TRAX Station</i>			
Light Rail	Light Rail	10000 S. TRAX Station	12600 S. TRAX
5600 West (First of Two Phases)			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - International Center - West Valley - Kearns - West Jordan - Daybreak Station</i>			
Rail/Bus Rapid Transit	Corridor Preservation	Salt Lake International Airport	5600 W./2700 S.
Rail/Bus Rapid Transit	Bus Rapid Transit	5600 W./2700 S.	5600 W./6200 S.
Rail/Bus Rapid Transit	Corridor Preservation	5600 W./6200 S.	11800 S.
200 South Streetcar			
<i>Salt Lake Central - Downtown Salt Lake – Harmons Grocery</i>			
Streetcar	Streetcar	600 W./200 S.	200 S./200 East
Sugarhouse			
<i>Sugarhouse - South Salt Lake – North/South TRAX Line</i>			
Streetcar	Streetcar	2100 S. TRAX	Highland Dr/Sugarmont
3900/3500 South (First of Three Phases)			
<i>East Millcreek - Holladay - Millcreek - South Salt Lake - West Valley West Bench</i>			
Bus Rapid Transit	Bus Rapid Transit	3500 S./3600 W.	3500 W./6000 W.
Taylorsville Murray, Central Segment (First of Two Phases)			
<i>Downtown Murray - Murray FrontRunner Station - Sorensen Research Park - SLCC Redwood Campus</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	Box Elder St/4800 S.	SLCC Redwood Campus
Taylorsville Murray, West Valley Extension (First of Two Phases)			
<i>Salt Lake Community College Redwood Campus - American Express - West Valley Intermodal Center</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	4500 S./Redwood Rd	W. Valley Intermodal Ctr
West Bench, Daybreak Segment			
<i>Daybreak – 8400 West</i>			
Corridor Preservation	Corridor Preservation	Daybreak S. Station	11400 S./8400 W.
Phase 2			
Ogden - Pleasant View Frequency Improvements			
<i>Downtown Ogden - Pleasant View</i>			
Commuter Rail	Commuter Rail	Ogden Intermodal Center	Pleasant View FrontRunner
Ogden - Weber State University (Second of Two Phases)			
<i>Ogden Intermodal Center - Ogden - South Ogden - Weber State University - McKay Dee Hospital</i>			
Streetcar	Streetcar	Ogden Intermodal Center	Washington/27th St
Streetcar	Streetcar	Washington/27th St	Washington/36th St
Streetcar	Streetcar	Washington/36th St	Harrison/Edvalson Av
Streetcar	Streetcar	Harrison Boulevard/Edvalson Av	McKay-Dee Hospital
North Ogden - Salt Lake (Second of Three Phases)			
<i>North Ogden - Ogden Intermodal Center - Ogden CBD - Newgate Mall - Riverdale - Roy FrontRunner Station - West Haven - Clinton - West Point - Syracuse - Clearfield - Hill Air Force Base - Layton FrontRunner Station - Farmington FrontRunner Station - Centerville - Bountiful - Woods Cross - North Salt Lake - Salt Lake Central - Downtown Salt Lake</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	2700 N./Washington Boulevard	12th St/Washington Boulevard
Bus Rapid Transit	Bus Rapid Transit	12th St/Washington Boulevard	Ogden Intermodal Ctr
Bus Rapid Transit	Enhanced Bus (BRTI)	Washington Boulevard/36th St	4400 S./UP-HAFB ROW
Bus Rapid Transit	Bus Rapid Transit	4400 S./UP-HAFB ROW	Davis County Line
Bus Rapid Transit	Bus Rapid Transit	Davis County Line	HAFB West Gate
Bus Rapid Transit	Bus Rapid Transit	200 N./State St	Clearfield FrontRunner
Bus Rapid Transit	Enhanced Bus (BRTI)	Clearfield FrontRunner	Farmington FrontRunner
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Farmington FrontRunner	Parrish Lane/Main St
Rail/Bus Rapid Transit	Bus Rapid Transit	1500 S./Main St	3800 S. Bountiful/US-89
Rail/Bus Rapid Transit	Bus Rapid Transit	US-89/Eagleridge Dr	Salt Lake County Line
Rail/Bus Rapid Transit	Bus Rapid Transit	Salt Lake County Line	Salt Lake Intermodal Center
Hill AFB South Transit Center			

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
<i>Hill AFB South Gate</i>			
Transit Hub	Transit Hub		
Antelope Drive Park-And-Ride			
<i>Antelope Dr/US-89</i>			
Park-and -Ride	Park-and-Ride		
North Redwood (First of Two Phases)			
<i>East Bountiful - West Bountiful - Woods Cross FrontRunner Station - N. Salt Lake - North Temple - Downtown Salt Lake</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	500 S./Orchard Dr	500 S./Redwood Rd
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	500 S./Redwood Rd	2600 S. Redwood Rd
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	2600 S. Redwood Rd	Salt Lake County Line
Salt Lake City - Foothill Drive - Wasatch Drive (Second of Three Phases)			
<i>Salt Lake Central - Salt Lake City - University of Utah - Medical Center - Research Park - Parley's Canyon - Interstate 215 - Cottonwood Corporate Center - Big Cottonwood Canyon - Little Cottonwood Canyon</i>			
Bus Rapid Transit	Bus Rapid Transit	Salt Lake Central	200 S./200 East
Bus Rapid Transit	Bus Rapid Transit	200 East/200 S.	Medical Dr./Research Rd
Bus Rapid Transit	Bus Rapid Transit	New Rd/Wakara Way	Arapeen Dr/Chipeta Way
Bus Rapid Transit	Enhanced Bus (BRTI)	Arapeen Dr/Chipeta Way	I-80/I-215/Foothill Dr
State (Second of Three Phases)			
<i>Salt Lake Central - Capitol - South Salt Lake - Millcreek - Murray FrontRunner Station - Midvale - Sandy/South Jordan FrontRunner Station - Draper FrontRunner Station</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	200 S./300 W.	600 S./State St
Bus Rapid Transit	Bus Rapid Transit	600 S./State St	Interstate 80
Bus Rapid Transit	Bus Rapid Transit	Interstate 80	Winchester St
Redwood (Second of Three Phases)			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - West Valley - Taylorsville - West Jordan - South Jordan - Riverton - Draper FrontRunner Station</i>			
Bus Rapid Transit	Bus Rapid Transit	SR-201	5400 S.
Bus Rapid Transit	Bus Rapid Transit	5400 S.	9000 S.
Bus Rapid Transit	Bus Rapid Transit	9000 S.	12600 S.
Bus Rapid Transit	Enhanced Bus (BRTI)	12600 S./Redwood Rd	12300 S./Pony Express Rd
University to Salt Lake Central			
<i>Medical Center - University of Utah - Salt Lake Downtown West - Salt Lake Central</i>			
Light Rail	Light Rail	400 S./Main St	Salt Lake Central
3900/3500 South (Third of Four Phases)			
<i>East Millcreek - Holladay - Millcreek - South Salt Lake - West Valley West Bench</i>			
Bus Rapid Transit	Bus Rapid Transit	3500 W./6000 W.	3500 S./9200 W.
Bus Rapid Transit	Enhanced Bus (BRTI)	Millcreek TRAX	3900 S./Highland Dr
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	3900 S./Highland Dr	3900 S./Wasatch Dr
Taylorsville Murray, Holladay Extension			
<i>Downtown Murray - Holladay - Wasatch Drive</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Box Elder St/4800 S.	3900 S./Wasatch Dr
Taylorsville Murray Central Segment (Second of Two Phases)			
<i>Downtown Murray - Murray FrontRunner Station - Sorensen Research Park - SLCC Redwood Campus</i>			
Bus Rapid Transit	Bus Rapid Transit	Box Elder St/4800 S.	Murray-Taylorsville Rd/500 W.
Bus Rapid Transit	Bus Rapid Transit	Murray-Taylorsville Rd/500 W.	Murray-Taylorsville/Redwood
Taylorsville Murray West Valley Extension (Second of Two Phases)			
<i>Salt Lake Community College Redwood Campus - American Express - West Valley Intermodal Center</i>			
Bus Rapid Transit	Bus Rapid Transit	4500 S./Redwood Rd	4400 S./Constitution
5400 South (First of Two Phases)			
<i>Murray FrontRunner Station - Taylorsville - Kearns - USANA Amphitheater - West Bench</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	Murray Boulevard/Vine St	5400 S./6400 W.
Bus Rapid Transit	Bus Rapid Transit	5400 S./6400 W.	5400 S./7200 W.
7000 South/7800 South (First of Two Phases)			
<i>Murray FrontRunner Station - Bingham Junction - Jordan Landing - West Bench</i>			

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
Enhanced Bus (BRTI)	Corridor Preservation	State St/7200 S.	Redwood Rd/7000 S.
Enhanced Bus (BRTI)	Corridor Preservation	Redwood Rd/7000 S.	Bangerter Highway/7000 S.
12300/12600 South (First of Three Phases)			
<i>Draper TRAX Station - Draper FrontRunner Station - Riverton - Herriman - Daybreak TRAX Station</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	Daybreak S. TRAX	Redwood Rd/12600 S.
Bus Rapid Transit	Enhanced Bus (BRTI)	700 East	Draper TRAX
Bus Rapid Transit	Enhanced Bus (BRTI)	700 East	Pony Express Rd
Bus Rapid Transit	Corridor Preservation	700 East	Pony Express Rd
Salt Lake Downtown Bus Transit Center			
<i>200 South ./ State Street</i>			
Transit Hub	Transit Hub	200 S./State St	
East Airport Transit Hub			
<i>1950 West Redwood Road Airport TRAX Line Station</i>			
Transit Hub	Transit Hub	1950 W. Redwood Rd	
Interstate-80 Transit Only Ramps			
<i>About 900 West / Interstate 80</i>			
Transit Only Ramps	Transit Only Ramps	Near 900 W. and 200 S.	
Phase 3			
Pleasant View – Brigham City			
<i>Downtown Ogden - Box Elder County Line</i>			
Mode Undetermined	Corridor Preservation	Pleasant View FrontRunner	Box Elder County Line
West Weber/West Davis (Second of Two Phases)			
<i>Ogden Intermodal Center - Ogden CBD - Newgate Mall - Riverdale - Roy FrontRunner Station - West Haven - Clinton - West Point - Syracuse - Clearfield - Hill Air Force Base - Layton FrontRunner Station</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	4400 S./UP-HAFB Rail Line	3500 W./Midland Dr
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	2000 W./Antelope Dr	Hill Field Rd/Main St.
Ogden Circulator			
<i>Ogden Intermodal Center - Downtown Ogden</i>			
Mode Undetermined	Streetcar	25th/Washington	20th/Lincoln
Mode Undetermined	Streetcar	20th/Lincoln	20th/Washington
Mode Undetermined	Streetcar	20th/Washington	23rd/Washington
North Ogden – Salt Lake (Third of Three Phases)			
<i>North Ogden - Ogden Intermodal Center - Ogden CBD - Newgate Mall - Riverdale - Roy FrontRunner Station - West Haven - Clinton - West Point - Syracuse - Clearfield - Hill Air Force Base - Layton FrontRunner Station - Farmington FrontRunner Station - Centerville - Bountiful - Woods Cross - North Salt Lake - Salt Lake Central - Downtown Salt Lake</i>			
Bus Rapid Transit	Bus Rapid Transit	Washington Boulevard/36th St	4400 S./UP-HAFB ROW
Bus Rapid Transit	Bus Rapid Transit	Clearfield FrontRunner	Farmington FrontRunner
North Redwood (Second of Two Phases)			
<i>East Bountiful - West Bountiful - Woods Cross FrontRunner Station - North Salt Lake - North Temple - Downtown Salt Lake</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Davis County Line	N. Temple/Redwood Rd
Salt Lake City - Foothill Drive - Wasatch Drive			
<i>Salt Lake Central - Salt Lake City - University of Utah - Medical Center - Research Park - Parley's Canyon - Interstate 215 - Cottonwood Corporate Center - Big Cottonwood Canyon - Little Cottonwood Canyon</i>			
Bus Rapid Transit	Bus Rapid Transit	Arapeen Dr/Chipeta Way	I-80/I-215/Foothill Dr.
Bus Rapid Transit	Bus Rapid Transit	I-215 Ramp/3300 S.	I-215 Ramp/3900 S.
Mode Undetermined	Bus Rapid Transit	6200 S./Interstate 215	Little Cottonwood Canyon
1300 East (North)			
<i>Medical Center - University of Utah - Sugar House - Millcreek - Holladay - Murray - Fort Union - Cottonwood Heights – Midvale - Fashion Place West TRAX Station</i>			
Bus Rapid Transit	Enhanced Bus (BRTI)	1300 East/200 S.	Ft Union Boulevard/Union Park
1300 East (South)			
<i>Murray FrontRunner Station - Fashion Place West TRAX Station - Midvale - Fort Union - Cottonwood Heights - Sandy – Draper</i>			
Bus Rapid Transit	Bus Rapid Transit	Ft Union Boulevard/Union Park Av	1000 East Pioneer Rd
700 East			

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
<i>Salt Lake Central – South Salt Lake - Millcreek - Murray - Holladay - Cottonwood Heights - Fort Union</i>			
Bus Rapid Transit	Bus Rapid Transit	200 S./200 East	Highland/Ft Union Boulevard
State (Third of Three Phases)			
<i>Salt Lake Central - Capitol - South Salt Lake - Millcreek - Murray FrontRunner Station - Midvale - Sandy/South Jordan FrontRunner Station - Draper FrontRunner Station</i>			
Bus Rapid Transit	Bus Rapid Transit	9000 S.	Draper FrontRunner
Draper South Segment			
<i>Salt Lake Central - South Salt Lake - Millcreek - Murray FrontRunner Station - Midvale - Sandy - Draper - Utah County Line</i>			
Light Rail	Light Rail	Draper TRAX	14600 S./Interstate 15
Light Rail	Light Rail	14600 S./Interstate 15	Utah County Line
Redwood (Third of Three Phases)			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - West Valley - Taylorsville - West Jordan - South Jordan - Riverton - Draper FrontRunner Station</i>			
Bus Rapid Transit	Bus Rapid Transit	200 S./600 W.	Transit Ramp to I-80
Bus Rapid Transit	Bus Rapid Transit	I-80/Redwood Rd	East Airport Hub
Bus Rapid Transit	Bus Rapid Transit	I-80/Redwood Rd	SR-201/Redwood Rd
Bus Rapid Transit	Bus Rapid Transit	12600 S./Redwood Rd	12300S/Pony Exp Rd
5600 West (Second of Two Phases)			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - International Center - West Valley - Kearns - West Jordan - Daybreak Station</i>			
Rail/Bus Rapid Transit	Bus Rapid Transit	East Airport Hub	N. Temple/I-80
Rail/Bus Rapid Transit	Bus Rapid Transit	I-80/Wright Brothers Dr	2700 S./5600 W.
Rail/Bus Rapid Transit	Bus Rapid Transit	6200 S./5600 W.	11800 S.
Sugarhouse, Westminster Segment			
<i>Westminster College - Sugarhouse – South Salt Lake – North/South TRAX Line</i>			
Streetcar	Streetcar	Highland Dr/Sugarmont Dr	1700 S./1100 East
Parkway			
<i>Downtown Salt Lake - Salt Lake Central - Interstate 80 - Airport East Hub - Decker Lake - Lake Park - West Valley City – Kearns</i>			
Bus Rapid Transit	Bus Rapid Transit	Redwood Rd/Parkway Boulevard	5600 W./Parkway Boulevard
3900/3500 South (Forth of Four Phases)			
<i>East Millcreek - Holladay - Millcreek - South Salt Lake - West Valley West Bench</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	9200 W./3500 S.	Little Valley
Bus Rapid Transit	Bus Rapid Transit	3500 S./Constitution Boulevard	3500 S./Redwood Rd
Bus Rapid Transit	Bus Rapid Transit	3500 S./Redwood Rd	Millcreek TRAX
Bus Rapid Transit	Bus Rapid Transit	Millcreek TRAX	3900 S./Highland Dr
5400 South (Second of Two Phases)			
<i>Murray FrontRunner Station - Taylorsville - Kearns - USANA Amphitheater - West Bench</i>			
Bus Rapid Transit	Bus Rapid Transit	Murray Boulevard/Vine St	7200 W.
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	7200 W.	8400 W.
Fort Union			
<i>Big Cottonwood Canyon - Cottonwood Corporate Center - Fort Union - Midvale - Fashion Place West TRAX Station</i>			
Mode Undetermined	Bus Rapid Transit	State St/Fort Union Boulevard	Little Cottonwood Canyon
7000 South/7800 South (Second of Two Phases)			
<i>Murray FrontRunner Station - Bingham Junction - Jordan Landing - West Bench</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	State St/7200 S.	Redwood Rd/7000 S.
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Redwood Rd/7000 S.	Bangerter Highway/7000 S.
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Bangerter Highway/7000 S.	8400 W./7800 S.
9000 South			
<i>Sandy/South Jordan FrontRunner Station - Mid-Jordan TRAX Station</i>			
Bus Rapid Transit	Bus Rapid Transit	9000 S./State St	9000 S./Redwood Rd
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	9000 S./Redwood Rd	Mid-Jordan TRAX
9400 South			
<i>Mouth of Little Cottonwood Canyon - Sandy - Sandy/South Jordan FrontRunner Station</i>			
Mode Undetermined	Bus Rapid Transit	9400 S./State St	Little Cottonwood Canyon

PROJECT		LOCATION	
Needed Mode	Funded Mode	From	To
10200/10400 South			
<i>South Jordan FrontRunner Station - Daybreak TRAX Station</i>			
Enhanced Bus (BRTI)	Enhanced Bus (BRTI)	Jordan Gateway/S Jordan Parkway	Daybreak North TRAX
12300/12600 South (Third of Three Phases)			
<i>Draper TRAX Station - Draper FrontRunner Station - Riverton - Herriman - Daybreak TRAX Station</i>			
Bus Rapid Transit	Bus Rapid Transit	Daybreak S. TRAX	Redwood Rd/12600 S.
Bus Rapid Transit	Bus Rapid Transit	700 East	Draper TRAX
5400 South Redwood Rd Park-And-Ride			
<i>5400 South/Redwood Rd</i>			
Park- and-Ride	Park-and-Ride	5400 S./Redwood Rd	
3100 South/5600 West Park-And-Ride			
<i>3100 South/5600 West</i>			
Park-and-Ride	Park-and-Ride	3100 S./5600 W.	
6200 South/5600 West Park-And-Ride			
<i>6200 South/5600 West</i>			
Park-and-Ride	Park-and-Ride	6200 S./5600 W.	
5400 South/5600 West Park-And-Ride			
<i>5400 South/5600 West</i>			
Park-and-Ride	Park-and-Ride	5400 S./5600 W.	
Fort Union Transit Center			
<i>Union Park Avenue/Fort Union Boulevard</i>			
Transit Hub	Transit Hub	Union Park Ave/Ft Union Boulevard	
Little Cottonwood Canyon Park-And-Ride			
<i>Wasatch Boulevard - Mouth of Little Cottonwood Canyon</i>			
Park-and-Ride	Park-and -Ride	Little Cottonwood Canyon	
Big Cottonwood Canyon Park-And-Ride			
<i>Wasatch Boulevard - Mouth of Big Cottonwood Canyon</i>			
Park-and-Ride	Park-and-Ride	Big Cottonwood Canyon	

Appendix-3

Box Elder County Highway and Transit Projects 2040 RTP

Box Elder County

Box Elder County
Air Quality Conformity Regionally Significant Project List
Draft March 30, 2011

Project Name and Location	Improvement Type	Time
UDOT Region 1		
I-15 at MP 362.0 US-91, (1100 South Brigham City) STIP CD	Interchange Upgrade	2011-2020
*SR-30 I-15 to SR-38 (Collinston) MP 90.7 to 95.1	Widening	2010-2020
*SR-30 MP 95 to 108	Planning Study	2010-2020
*SR-30 MP 90.7 to MP 107.6, from SR-38 to Cache MPO Boundary at 1900 West	Widening	2021-2030
SR-13 MP 2.9 to 5.7, from SR-38 Junction to I-15	Widening	2020-2030
SR-240 MP 0.1 to MP 1.2, from I-15 to SR-38	Widening	2020-2030
US-89 at MP 435 US-90 (Brigham City)	Interchange Upgrade	2020-2030
I-15 MP 351.5 to MP 362, from Box Elder/Weber CL to Brigham City south Interchange	Widening/Safety /Rest area	2031-2040
Local Government		
6800 West (Iowa String Road) from SR-38 to I-84	Widening	2031-2040
10400 North (Rocket Road) from I-84 to 5200 West (SR-13)	Widening	2031-2040

**These projects are outside the PM_{2.5} non-attainment area.*

Appendix-4
Highway and Transit Projects
2040 RTP
Tooele County

TOOELE VALLEY LONG RANGE PLAN 2007 -2030 PROJECTS

ID	STREET TO - FROM	PROJECT TYPE	LENGTH (MILES)	2030 FUNCTIONAL CLASS	BIKE CLASS	2006 LANE	2030 LANE	2006 ROW (FT.)	2030 RO (FT.)	PHASE 1=2007-2020 2=2021-2030	SPONSOR	PHASE COST
1	Additional I-80 Interchange I-80	New Construction	0.0	Interchange	0	0	0	0	0	1	UDOT	\$47,900,000
2	Additional I-80 Access Road I-80 - SR-36	New Construction	1.0	Principal Arterial	0	0	4	0	200	1	UDOT	\$15,000,000
3	I-80 Additional I-80 Interchange - SR-201	Widening	4.9	Freeway	0	4	6	375	375	2	UDOT	\$516,200,000
4	SR-138 SR-112 - Mid-Valley Highway	Widening	3.1	Minor Arterial	1	2	4	100	100	1	UDOT	\$29,800,000
5	SR-138 Mid-Valley Highway - SR-36	Widening	5.1	Minor Arterial	1,0	2	4	100	100	2	UDOT	\$78,500,000
6	1000 North SR-112 - SR-36	New Construction	2.4	Minor Arterial	2	0	4	0	66	1	Local	\$18,800,000
7	1000 North SR-36 - Droubay Road	Restripping	1.3	Minor Arterial	2	2	4	66	66	2	Local	\$1,400,000
8	2000 North SR-112 - SR-36	New Construction	3.6	Minor Arterial	0	0	2	0	66	1	Local	\$29,500,000
9	3700 North Mid-Valley Highway - Droubay Road	New Construction	6.5	Minor Arterial	0	0	2	0	66	2	Local	\$81,700,000
10	SR-112 Mid-Valley Highway - Tooele Blvd.	Widening	3.3	Principal Arterial	0	2	4	100	100	1	UDOT	\$31,800,000
11	Mid-Valley Highway SR-36 - I-80	Corridor Preservation	11.7	Freeway	0	0	4	0	200	1	UDOT	\$12,300,000
12	Mid-Valley Highway SR-36 - I-80	New Construction	11.7	Principal Arterial	0	0	4	0	200	1	UDOT	\$193,600,000
13	Mid-Valley Highway SR-36 - I-80	New Construction	11.7	Freeway	0	0	4	0	200	2	UDOT	\$442,500,000
14	Tooele Blvd SR-36 - 1000 North/SR-36	New Construction	4.1	Minor Arterial	0	0	4	0	84	1	Local	\$38,300,000
15	SR-36 South Depot Entrance - 500 South	Widening	2.4	Principal Arterial	1	2	4	100	100	1	UDOT	\$19,900,000
16	SR-36 Stockton - South Depot Entrance	Widening	3.3	Minor Arterial	1	2	4	100	100	2	UDOT	\$57,800,000
17	400 West 1000 North - 3700 North	New Construction	2.7	Minor Arterial	0	0	2	0	66	1	Local	\$21,200,000
18	1200 West 1000 North - 3700 North	New Construction	2.7	Minor Arterial	0	0	2	0	66	1	Local	\$21,200,000