

access 2050

Enhancing Mobility for Southern Nevada Residents



REGIONAL TRANSPORTATION PLAN

for

SOUTHERN NEVADA

2021 - 2050

AMENDMENT 21-31

2 Projects Listed

XS20220038 (Ver 1) 21-31	STA	ATUS New Proj	ect				LOCAL
Name: I-515/Sahara Ir	nterchange	Study-FUTURE PROJECT						
Scope: Feasibility Stud	ly for a new	interchange at the I-515 at Sahara						
		 -515 Freeway serving Sunrise Manor res of adding a new interchange 	idents and busin	nesses and acc	essing the South	ern Nevada Free	way system, the	study
Project Type: Environme	ental	AQ: Exempt, O	ther - Engineer	ing studies.			тс	M: No NDOT: District 1
County: Clark		Limits: From to of Distance (mile)						
	FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL	
	2025	Local Fund	\$2,300,000	\$0	\$0	\$0	\$2,300,000	
		2021-2025 TOTAL	\$2,300,000	\$0	\$0	\$0	\$2,300,000	
		ALL YEARS TOTAL	\$2,300,000	\$0	\$0	\$0	\$2,300,000	
MPO RTCSNV (N/A)						Lead Agency Clar	k County	

RTCSNV Project Listing

Transportation Improvement Program Fiscal Year 2021 - 2025

2 Projects Listed

CL20220006 (Ver 1)) 21-31	ST.		STATE							
Name: SR 593, WIDEN	N TROPICA	NA AVENUE EASTBOUND AND WEST	BOUND FROM	B LANES TO 4	LANES INCLUI	DING TURN PO	CKETS				
Scope: WIDEN TROPIC	CANA AVE	NUE EASTBOUND AND WESTBOUND	FROM 3 LANES	TO 4 LANES I	INCLUDING TU	RN POCKETS					
Project Type: Capacity		AQ: Non-Exempt Tcm: Yes NDOT: District									
County: Clark	Limits: From POLARIS AVE to VALLEY VIEW BLVD of Distance (mile) 0 Milepost begins at 0 ends at 0										
	FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL				
	2022	State Gas Tax	\$210,000	\$10,000	\$10,000,000	\$0	\$10,220,000				
		2021-2025 TOTAL	\$210,000	\$10,000	\$10,000,000	\$0	\$10,220,000				
	ALL YEARS TOTAL \$210,000 \$10,000 \$10,000,000 \$0 \$10,220,0										
MPO RTCSNV (N/A)						Lead Agency Ne	vada DOT				

RTCSNV Project Listing



access 2050

Enhancing Mobility for Southern Nevada Residents



SOUTHERN NEVADA 2021 - 2050

Amendment 21-31
Transportation Conformity Report



AIR QUALITY CONFORMITY TECHNICAL REPORT FOR ACCESS 2050 (2021-2050 RTP/TIP) AMENDMENT 21-31

Access 2050 (2021-2050 RTP/TIP) Amendment 21-31 adds two new projects sponsored by Nevada Department of Transportation (NDOT). The projects are located within Hydrographic Basin 212, which geographically encompasses the Las Vegas Valley. Under National Ambient Air Quality Standards (NAAQS), this area is designated as nonattainment for ozone, maintenance for Particulate Matter 10 (PM₁₀) and Carbon Monoxide (CO), and attainment or otherwise unclassifiable for other pollutants. Transportation conformity requirements apply to all Non-Exempt highway and transit projects in nonattainment and maintenance areas defined by NAAQS.

The below listed projects are included in Amendment 21-31. Project XS20220038 is an Exempt project and project CL20220006 is a Non-Exempt project that is subject to transportation conformity requirements and is included in the travel demand model (TDM) for modeling:

XS20220038 I-515/SAHARA INTERCHANGE STUDY, FEASIBILITY STUDY FOR A NEW INTERCHANGE AT THE I-515 AT SAHARA CL20220006 SR 593, WIDEN TROPICANA AVENUE EASTBOUND AND WESTBOUND FROM 3 LANES TO 4 LANES

CL20220006 is a new construction project. It will widen Tropicana Avenue eastbound and westbound from 3 lanes to 4 lanes, including turn pockets, from Polaris Ave to Valley View Blvd. The construction completes in 2025.

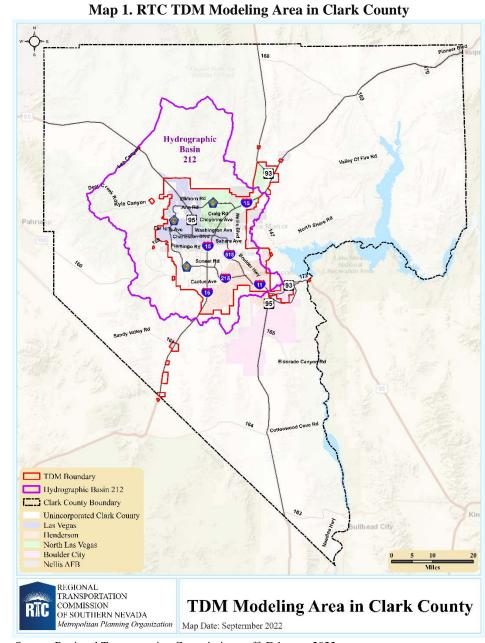
The project list, along with planning assumptions, was submitted to Air Quality Working Group (AQWG) on August 10, 2022 to initiate Air Quality Conformity Consultation process. AQWG consists of representatives from Environmental Protection Agency (EPA) Region 9, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), NDOT, Clark County Department of Environment and Sustainability, and local jurisdictions. This technical report provides the conformity test results and is provided to the AQWG for their review and comments.

This technical report contains the emission test results only. For easier referencing and comparison with the full Access 2050 technical report, this document keeps the same section titles, section numbers and table numbers as those in <u>ACCESS 2050 APPENDIX E - TRAVEL DEMAND MODEL METHODOLOGY AND AIR QUALITY CONFORMITY ANALYSIS</u>.

Clark County Air Quality Area Status

Currently, the area defined as Hydrographic Basin 212 in the Las Vegas Valley is designated as ozone nonattainment, and attainment but still maintenance for pollutants CO and PM10. This area is re-designated as ozone nonattainment by EPA with 2015 Ozone NAAQS on June 4, 2018, from previous ozone attainment designation by EPA with 1978 8-hour Ozone Standard on December 20, 2012. So the conformity determination applies for all three pollutants.

Map 1 on the next page shows the Clark County boundary, RTC Transportation Analysis Zones (TAZ) boundary, road networks, and the air pollutants study boundaries – boundaries of Hydrographic Basin 212 for CO and PM₁₀ attainment/maintenance area and Ozone nonattainment area.



Source: Regional Transportation Commission staff, February 2022

Travel Demand Modeling and Air Emission Modeling Methodology and Assumptions

Travel Demand Model (TDM) Modeling Horizon Years

The RTC TDM generates vehicle miles traveled (VMT) estimates which are used as one of the inputs for the air emission model, MOVES for Conformity Determinations. The construction completion year for the subject Non-Exempt project in this amendment is 2025, so there is no need to run TDM prior to the year 2025. The TDM is run for future horizon years 2030, 2040, and 2050 to produce the VMT estimates for the MOVES model. The 2020 and 2022 modeled VMT and emissions are carried over from Access 2050 Amendment 21-22.

Emission Model, Model Inputs, Methods, and Modeling Years

This amendment uses MOVES3 for transportation conformity. The EPA developed a Motor Vehicle Emission Simulator model (MOVES3) and announced that MOVES3 will be used as the latest EPA emission model in new regional emissions analysis. EPA announced the effective date of MOVES3 for State Implementation Plans (SIPs) and transportation conformity analysis is January 7, 2021, with a two-year transportation conformity grace period that ends on January 9, 2023. After that, MOVES3 will need to be used as the latest EPA emissions model in both regional emissions analysis and hotspot analysis for transportation conformity analyses outside of California.

Division of Air Quality (DAQ) of Clark County Department of Environment and Sustainability compiled recent local input files for MOVES to develop ozone budgets for the State Implementation Plan (SIP) revision "Revision to Motor Vehicle Emissions Budgets (MVEBs) for the 1997 Ozone NAAQS". EPA approved the revision on November 9, 2021. The revision and the new ozone budgets developed in this revision became effective on November 9, 2021. RTC received the local input files on Aug 9, 2021. RTC used these along with other MOVES3 default inputs for running MOVES3 for this amendment.

TransCAD is a transportation planning software designed to store, display, manage, and analyze transportation data. RTC runs TransCAD TDM model to produce VMT estimates for all horizon years to reflect the impacts of the projects in Amendment 21-31, and the TDM model outputs for emission model are formatted for MOVES3. MOVES3 is run for 2030, 2040 and 2050. MVOES3 produces ozone and CO emission estimates. The PM_{10} emission estimate is VMT based calculation applying the PM_{10} emission factors, and the estimate includes all the sources from construction, wind erosion, vehicle, and roadway.

As a standard practice in Conformity Analysis for Access 2050, the modeled VMTs were adjusted with the base year traffic volumes from Highway Performance Management System (HPMS). The HPMS provides the data that reflects the extent, use, condition, and performance of the public roads. The TDM modeled VMTs were factored by HPMS adjustment factors to match the HPMS VMTs. The ozone budgets are for the entire Clark County, and the ozone conformity analysis includes the emissions sourced from its entirety. The RTC TDM models only the areas of the Las Vegas Valley (see MAP 1 on previous page). Map 1 shows the Clark County boundary and the RTC TDM modeling area boundary which covers only the Las Vegas Valley. The HPMS data shows that about 7% of VMT in Clark County are generated in areas outside Las Vegas Valley. Therefore an additional 7% of modeled VMT are added to account for the VMTs within Clark County but outside the TDM areas. These estimated VMTs are included in the final input for MOVES3.

Land Use

There are no land use updates from Access 2050 Amendment 21-22. So the same Planning Variable (PV) inputs used for Access 2050 Amendment 21-22 are used for this amendment. All other modeling assumptions and methodologies remain unchanged.

Motor Emission Budgets for Pollutants

For ozone, PM₁₀ and CO subject to Air Quality Determination, Motor Vehicle Emissions Budgets (MVEBs) and budget years are the same as those used in previous Air Quality Conformity for Access 2050 Amendment 21-22. On November 9, 2021, EPA approved Clark County's *Revision to Motor Vehicle Emissions Budgets (MVEBs) for the 1997 Ozone NAAQS*. The revision revised 2022 Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) MVEBs for Clark County. The revised MVEBs became effective on November 9, 2021. These new MVERs were used in previous Amendment 21-22, and are used for this Amendment 21-31 as well. The table below from the revision is provided here for convenient reference.

New Table 45. NOx and VOC MVEBs for Clark County in the Revision for the 1997 Ozone NAAQS.

Year	NOx MVEBs (tpd)	VOC MVEBs (tpd)
2022 - Maintenance	32.16	23.92

Source: Table 3-1. NOx and VOC MVEBs for Clark County, Revision to Motor Vehicle Emissions Budgets for the 1997

Ozone NAAQS. Clark County. EPA approved on November 9, 2021

Note: tpd = tons per day

CONFORMITY DETERMINATION

This section describes the conformity determination findings for Access 2050 (RTP/TIP 2021-2050) Amendment 21-31. The PM_{10} , CO, and Ozone emission estimates are all within the emission budgets, and the Air Conformity is met for all pollutants for all future horizon years.

CO Emission Summary

MOVES3 modeled CO emissions for the month of January are used for the determination. New Table 39 below shows the emissions are all under the budgets.

New Table 39. Net CO Emissions (RTP/TIP Amendment 21-31, August 2022)

MOVES Results All Facilities	Total CO Emissions (tons/day)				
MOVES Results All Facilities	2030	2040	2050		
TOTAL CO Emissions	114.8	88.6	99.7		
Budgets	704	704	704		

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

PM₁₀ Emission Summary

PM₁₀ emissions are calculated using the same methods in Access 2050 Conformity process as the total emissions of construction, wind erosion, vehicle, and roadway. The TDM modeled VMTs are factored by HPMS adjustment factors to match the HPMS VMTs. As stated in the above sections, 2020 TDM model is not run, the same 2020 VMTs from the previous conformity analysis are used for this amendment. New Table 40 presents PM₁₀ roadway emissions. Emissions from highway construction and wind erosion are included in New Table 43, and the final total PM₁₀ emissions are presented in New Table 44. It is noted that original tables 41 and 42 in ACCESS 2050 APPENDIX E - TRAVEL DEMAND MODEL METHODOLOGY AND AIR QUALITY CONFORMITY ANALYSIS are not included in this document because that two tables just present the PM₁₀ roadway emission factors and vehicle emissions which are included in the total emission calculations presented in New Table 44. Year 2023 is PM₁₀ budget year, and a determination must be made for an emission budget year. The emissions for year 2023 are interpolated from 2020 and 2030 emission results. The PM₁₀ emissions from roadway construction and wind erosion are much higher for 2030 than that for 2040 and 2050 as there are fewer Non-Exempt projects after 2030. New Table 44 demonstrates the final total PM₁₀ emissions that are all under the approved budgets.

New Table 40. PM₁₀ Roadway Analysis for Horizon Years (RTP/TIP Amendment 21-31, August 2022)

2	2006	2030	2040	2050				
Facility Type	Adjusted 2020 AAWDVMT	Adjusted 2030 AAWDVMT	Adjusted 2040 AAWDVMT	Adjusted 2050 AAWDVMT	PM10 Emission Factors (g/v-m)	Paved Road Emissions (kg/day)	Paved Road Emissions (kg/day)	Paved Road Emissions (kg/day)
External connectors	297,088	294,654	313,609	346,517	1.22	359	383	423
System Ramps	992,012	1,255,094	1,438,493	1,601,788	1.225	1,537	1,762	1,962
Minor Arterials	5,340,324	6,416,456	7,167,922	8,717,275	1.22	7,828	8,745	10,635
Major Arterials	14,208,791	15,823,682	17,140,460	20,048,457	0.761	12,042	13,044	15,257
Ramps	1,559,595	1,756,981	1,899,243	2,068,612	1.225	2,152	2,327	2,534
Interstates	9,932,626	10,680,226	11,816,040	13,158,113	0.066	705	780	868
Freeways	6,523,137	8,299,800	9,468,099	11,316,966	0.066	548	625	747
Beltway	157,027	100	100	100	0.066	0	0	0
Collectors	3,179,195	2,802,219	3,138,955	3,870,365	1.225	3,433	3,845	4,741
Centroid connectors	3,504,129	3,896,461	4,335,701	5,163,352	3.671	14,304	15,916	18,955
Other Local Roads	81,502	90,712	99,459	120,172	3.671	333	365	441
HOV Lanes	1,433,038	1,797,802	1,955,162	2,090,938	0.066	119	129	138
Public Transit Bus	57,433	74,663	89,595	107,515	3.671	274	329	395
Intra-zonal	426,885	587,298	500,180	587,226	3.671	2,156	1,836	2,156
DAILY TOTALS	47,692,781	53,776,148	59,363,018	69,197,395		45,790	50,086	59,252
Convert to US (tons/day)							0.001102	0.001102
PM ₁₀ Emissions (tons/day)	50.5	55.19	65.30					
Mobile Source PM ₁₀ Emis	sions Budgets fo	or the Las Vega	ns Valley			141.41	141.41	141.41

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

AAWDVMT = Average Annual Week Day Vehicle Miles Traveled. g/v-m = gram per vehicle mile. Transit Daily Miles is calculated by the RTC Transit Department.

New Table 43. PM₁₀ Emissions from Highway Construction and Wind Erosion (RTP/TIP Amendment 21-31 August 2022)

SOUDCE	2	020	2030		2040		2050	
SOURCE		Lane	Link	Lane	Link	Lane	Link	Lane
CONSTRUCTION								
Construction Miles	0.0	0.0	198.3	1047.4	60.7	285.0	9.9	41.5
Horizon Year Total Projects								
Number of months in Horizon Year		1		120		120		120
Estimated Acreage		0		1523		415		60
Emissions Factors (tons/acre/mon)		0.42		0.42		0.42		0.42
PM ₁₀ Vehicle Emission (tons/day)		0.00		21.04		5.72		0.83
Best Practices Reduction (%)		68%		68%		68%		68%
Net PM ₁₀ Emissions (tons/day)		0		6.732		1.832		0.2665
WIND EROSION								
Estimated Acreage		0		1523		415		60
Erosion Rate (tons/acre/day) 35% of site		0.0008		0.00076		0.0008		0.00076
65% of site		0.0198		0.0198		0.0198		0.0198
PM10 Emissions (tons/day)		0.00		11.31		3.08		0.45
Sections 90-94 Reduction (%)		71%		71%		71%		71%
Net PM ₁₀ Emissions (tons/day)		0.00		3.28		0.892		0.1298

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

New Table 44. Total Daily PM₁₀ Mobile Source Emissions for Horizon Years (RTP/TIP Amendment 21-31 August 2022)

SOURCE (tons/day)	2023	2030	2040	2050
Paved Road Dust	46.65	50.47	55.19	65.30
Vehicle Emissions	1.41	1.52	1.67	1.94
Highway Construction	2.02	6.73	1.83	0.27
Windblown Construction Dust	0.98	3.28	0.89	0.13
Total PM ₁₀ Mobile Source Emissions	51.06	62.00	59.59	67.64
BUDGET	141.41	141.41	141.41	141.41

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

Note: 2023 emissions are interpolated from 2020 and 2030 emissions

Ozone Conformity Determination

The MOVES3 model is used for the Ozone Conformity analysis. All inputs and assumptions are the same as those for the CO emission tests. The modeled VMTs are adjusted with the base year traffic volumes from HPMS, and then used as the input into the MOVES model to produce Ozone emissions. The MOVES model is run for the month of July to estimate peak ozone emission. The final NOx and VOC emissions from MOVES3 for

Clark County are presented in New Table 46. New Table 46 demonstrates that the ozone conformity test results for all horizon years are below the emission budgets, and therefore satisfy the ozone conformity requirements.

New Table 46. Ozone Conformity Test Summary (RTP/TIP Amendment 21-31 August 2022)

	NOx (tons/day)		NOx (tons/day)		ns/day)	Conformita
Year	Emissions	Emissions Budget	Conformity Requirement	Emissions	Emissions Budget	Conformity Requirement
2022	20.97	32.16	Satisfied	16.33	23.92	Satisfied
2030	11.83	32.16	Satisfied	11.04	23.92	Satisfied
2040	10.01	32.16	Satisfied	9.50	23.92	Satisfied
2050	11.75	32.16	Satisfied	8.87	23.92	Satisfied

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

Final Conformity Determination

The sole and small Non-Exempt project included in this amendment has almost no impact on regional air quality, as the above test results demonstrated that there is almost no emission increase for horizon years. In conclusion, New Table 47 below demonstrates that the emissions from all three pollutants, PM_{10} , CO, and Ozone (NOx and VOC) are all below the emission budgets. The determination is made that the 2021-2050 RTP/TIP Amendment 21-31 meets all Air Quality Conformity requirements.

New Table 47. Conformity Test Summary (RTP/TIP Amendment 21-31 August 2022)

	CO (tons/day)	Conformity	PM ₁₀ (to	Camfa	
Year	Emissions	Emissions Budget		Emissions	Emissions Budget	Conformity Requirement
2023				51.06	141.41	Satisfied
2030	114.79	704	Satisfied	62.00	141.41	Satisfied
2040	88.58	704	Satisfied	59.59	141.41	Satisfied
2050	99.66	704	Satisfied	67.64	141.41	Satisfied
	NOx	(tons/day)	C6	VOC (to	C 6 '4	
Year	Emissions	Emissions Budget	Conformity Requirement	Emissions	Emissions Budget	Conformity Requirement
2022	20.97	32.16	Satisfied	16.33	23.92	Satisfied
2030	11.83	32.16	Satisfied	11.04	23.92	Satisfied
2040	10.01	32.16	Satisfied	9.50	23.92	Satisfied
2050	11.75	32.16	Satisfied	8.87	23.92	Satisfied

Source: RTP/TIP Amendment 21-31. Regional Transportation Commission staff, August 2022

PUBLIC NOTICE •

Notice of Public Comment Period for

Amendment 21-31 to the Access 2050 Regional Transportation Plan

The Regional Transportation Commission of Southern Nevada (RTC) is seeking public comment on Amendment 21-31 to the 2021-2050 Regional Transportation Plan (RTP) and 2021-2025 Transportation Improvement Program (TIP). The TIP document reflects the transportation improvement priorities in the first five years of the RTP. Federal regulations require the RTP and TIP to be amended when there are major adjustments to program elements. Project sponsors requested this amendment to add new projects and modify existing projects and funds.

RTC has determined that the changes requested by the project sponsors to the RTP meet air quality requirements. Project details and the air quality conformity determination will be available at www.rtcsnv.com during a 30-day public comment period from Wednesday, October 12, 2022, to Thursday, November 10, 2022. Staff will also be available to provide information and receive comments at the following public meeting:

Executive Advisory Committee Meeting

Thursday, October 27, 2022 9:15 a.m. - 10:30 a.m.

RTC Admin Building, Room 108 600 S. Grand Central Parkway, Las Vegas, NV 89106

Please visit www.rtcsnv.com for updated meeting details.

Submit comments/questions by 5 p.m. **November 10, 2022:**

Attn: Sue Christiansen

Email: ChristiansenS@rtcsnv.com

Phone: 702-676-1891 TDD: 702-676-1834

Mail to: RTC of Southern Nevada

600 S. Grand Central Parkway, Las Vegas, NV 89106

For more information visit: www.rtcsnv.com



• NOTICIA PÚBLICA •

Aviso de Período de Comentarios Públicos para la Enmienda 21-31 al Plan de Transporte Regional de Accesso 2050

La Comisión Regional de Transporte del Sur de Nevada (RTC) solicita comentarios públicos sobre la Enmienda 21-31 al Plan de Transporte Regional (RTP) 2021-2050 y el Programa de Mejora del Transporte (TIP) 2021-2025. El documento TIP refleja las prioridades de mejora del transporte en los primeros cinco años del RTP. Las reglamentaciones federales exigen que se modifiquen el RTP y el TIP cuando se realicen ajustes importantes en los elementos del programa. Los patrocinadores de proyectos solicitaron esta enmienda para agregar nuevos proyectos y modificar proyectos y fondos existentes.

RTC ha determinado que los cambios solicitados por los patrocinadores del proyecto al RTP cumplen con los requisitos de calidad del aire. Los detalles del proyecto y la determinación de la conformidad con la calidad del aire estarán disponibles en www.rtcsnv.com durante un período de comentarios públicos de 30 días desde el miércoles 12 de octubre de 2022 hasta el jueves 10 de noviembre de 2022. El personal también estará disponible para proporcionar información y recibir comentarios en la siguiente reunión pública:

Executive Advisory Committee Meeting

jueves, 27 de octubre de 2022 9:15 a.m. - 10:30 a.m.

RTC Admin Building, Room 108 600 S. Grand Central Parkway, Las Vegas, NV 89106

Visité www.rtcsnv.com para obtener detalles actualizados de la reunión.

Envíe comentarios/preguntas antes de las 5 p.m. 10 de noviembre de 2022:

Atención: Sue Christiansen

Correo electrónico: ChristiansenS@rtcsnv.com

Teléfono: 702-676-1891 TDD: 702-676-1834

Envíe por correo a: RTC of Southern Nevada

600 S. Grand Central Parkway, Las Vegas, NV 89106



