To:	Regional Transportation Commission of Southern Nevada
From:	City of Henderson, Nevada
Copy to:	Nevada Department of Transportation
Subject:	Consultation on Project-Level Conformity Assessment for the I-215 Beltway Widening Project
Date:	November 30, 2023

1. Introduction

The City of Henderson (City) proposes to widen the Interstate 215 Bruce Woodbury Beltway (I-215) from Pecos Road to Stephanie Street in the City of Henderson, Clark County, Nevada. This section of I-215 freeway is one of the primary east-west freeway corridors in the Las Vegas Valley and connects the City of Henderson to the rest of the Las Vegas Valley. The I-215 Beltway Widening Project (Project) involves widening of I-215, ramp reconstruction, and local road improvements to the interchanges with I-215 at Pecos Road/St. Rose Parkway and Green Valley Parkway. The Project would also reconstruct ramps at the Valle Verde Drive and Stephanie Street interchanges. Figure 1-1 shows the Project location and study area.

The Project is being completed with funding from Clark County. However, because I-215 is within Nevada Department of Transportation (NDOT) right-of-way, an NDOT encroachment permit is required to construct the improvements. The interstate system is under the jurisdiction of the Federal Highway Administration (FHWA) providing a federal nexus to prepare an environmental document to comply with the National Environmental Policy Act of 1969 (NEPA). Thus, in compliance with NEPA, the City is preparing documentation to evaluate the potential environmental impacts of the project. This technical memorandum presents a discussion of the Project's air quality conformity at a project-level.

2. Project Description

I-215 serves as an important connection between the City of Henderson and the surrounding Las Vegas metropolitan area. The Pecos Road/St. Rose Parkway and Green Valley Parkway interchanges with I-215 provide access to and from the residential and commercial developments at the west edge of the City. Clark County and the City have experienced significant population growth over the last decade. Between 2010 and 2020, Clark County's population grew by over 300,000 residents (an increase of about 20 percent) and the City's population grew by over 60,000 residents (an increase of about 25 percent) (U.S. Census Bureau 2010 and 2020). The regional population is projected to continue to grow.

This segment of I-215 currently experiences congestion due to existing roadway deficiencies and the regional population growth, which has increased current traffic volumes that exceed the roadway's capacity. In addition, existing roadway deficiencies result in increased travel time and contribute to accidents. By 2050, if no improvements are made on I-215 in the Project area, severe congestion with average speeds of less than 15 miles per hour is expected in both the morning and afternoon peak periods in some areas.

The proposed Project would widen I-215 from Pecos Road to Stephanie Street, improve interchanges and ramps, and construct a pedestrian bridge over Green Valley Parkway near Village Walk Drive. The purpose of the Project is to eliminate existing roadway deficiencies and provide transportation improvements to serve existing and future traffic demand.

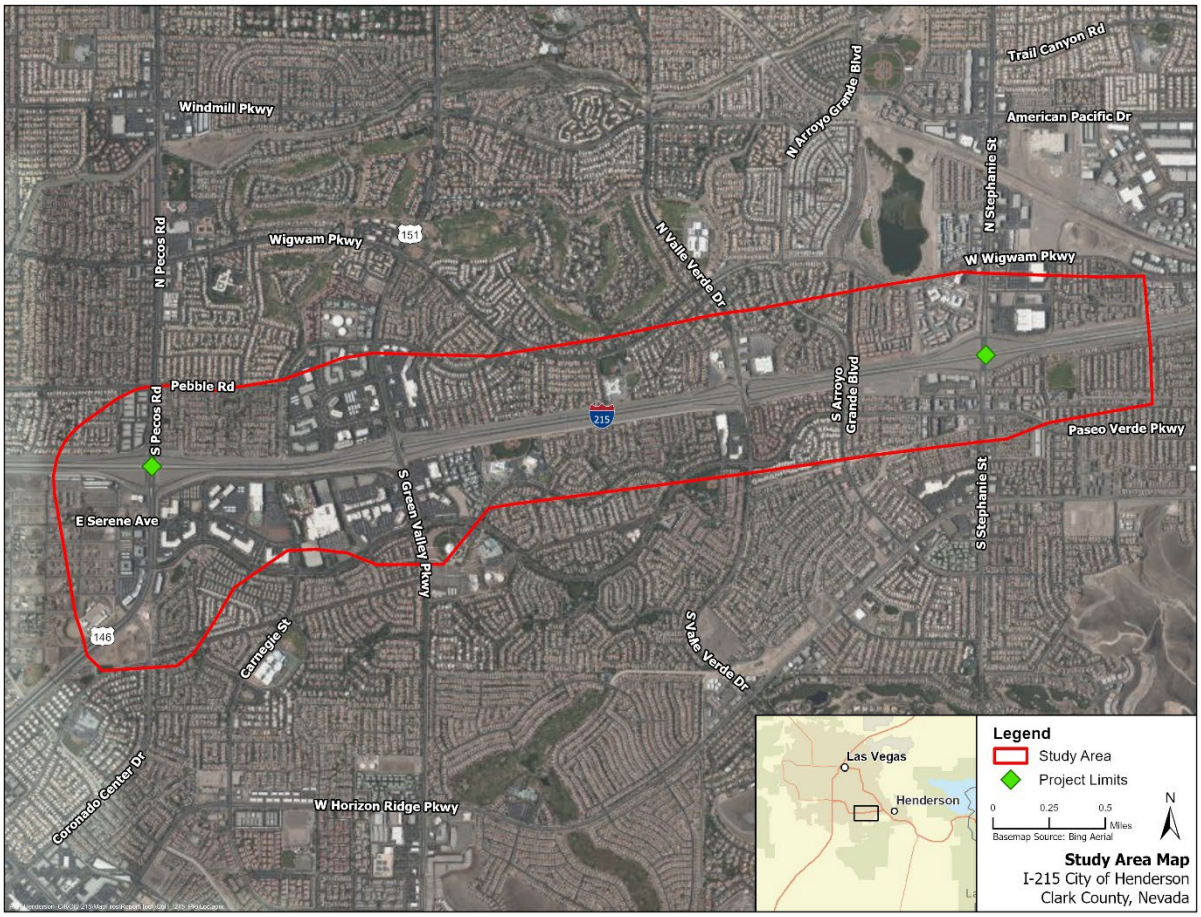


Figure 1-1. Study Area

3. Alternatives Evaluated

Two alternatives were evaluated for impacts, the No Action Alternative and the Preferred Alternative, described in Sections 3.1 and 3.2, respectively.

3.1 No Action Alternative Description

Under the No Action Alternative, none of the improvements included under the Preferred Alternative would be implemented. Only routine maintenance would be performed on I-215. Other planned transportation improvement projects in the area could still move forward. While this alternative would not fulfill the Project's purpose and need, it is included in the analysis as a baseline for comparison.

3.2 Preferred Alternative Description

The Preferred Alternative would widen I-215 with two additional through lanes in each direction (initially four lanes and at ultimate buildout, five lanes in each direction for a total of ten lanes) and an auxiliary lane between each interchange on I-215 from Pecos Road to Stephanie Street. This configuration is consistent with the improvements identified as part of the Henderson (I-11/I-515/I-215) Interchange project located adjacent to the east limit of this study. See Attachment A for a map of the Preferred Alternative.

Other improvements are described as follows:

- Pecos Road/St. Rose Parkway Interchange
  - Eastbound I-215 exit ramp: Construct additional right-turn lane to St. Rose Parkway for a total of two right-turn lanes.
  - Eastbound I-215 entrance ramp: The movement from northbound St. Rose Parkway to the entrance ramp will be free flow. This eastbound entrance ramp will have four receiving lanes: two from the northbound to eastbound movement and two from the southbound to eastbound movement Eventually, two of the four lanes will drop before merging onto the freeway as a two-lane ramp.
  - Westbound I-215 exit ramp: Widen to two lanes and construct additional left-turn lane, resulting in three left-turn lanes.
  - Along St. Rose Parkway extending to south of the St. Rose Parkway/Paseo Verde Parkway intersection: Extend the northbound outside lane to provide more capacity for vehicles turning right to the I-215 eastbound entrance ramp.
- Green Valley Parkway Interchange
  - Reconstruct interchange as a diverging diamond interchange. Does not require widening of the existing bridge.
  - Reconfigure all ramps to allow for the diverging diamond interchange.
  - Construct one extra approach lane on each exit ramp for a total of two eastbound and two westbound lanes on- and off-ramps.
  - Construct a pedestrian bridge over Green Valley Parkway near Village Walk Drive to remove the east-west at-grade crosswalks (across Green Valley Parkway), enhancing safety for vulnerable road users and improving traffic operations.
- Valle Verde Drive interchange
  - Widen off-ramps from I-215 to two lanes.
- Stephanie Street interchange
  - Widen westbound entrance ramp and eastbound exit ramps to two lanes.

Additionally, the Preferred Alternative would:

- Reconstruct bike trails affected by the Project.
- Reconstruct sound walls and storm drainage facilities, such as storm drain inlets and pipes.
- Construct other ancillary roadway improvements to improve the safety of users of I-215 such as outside shoulders, barrier rails, and retaining walls, as well as pavement markings.
- Install traffic control devices and modify bridge underdeck and ramp lighting.
- Not require any new right-of-way (ROW) along I-215 and all proposed work along I-215 would occur within existing NDOT ROW.[1]
- Not convert any existing land uses.

4. Project Conformity Demonstration Methodologies

Transportation conformity requirements apply to highway and transit projects in nonattainment and maintenance areas of the national ambient air quality standards (NAAQS). The proposed Project is in Hydrographic Area 212

[1] Approximately 1.43 acres of ROW would be required along Green Valley Parkway and up to 0.26 acre of ROW along St. Rose Parkway. These are both City of Henderson streets.

within the Las Vegas Valley. The area is classified as in nonattainment for ozone, and in maintenance for PM_{10} and carbon monoxide (CO). It is unclassifiable/attainment for other pollutants under NAAQS (EPA 2023). Therefore, the Project is subject to transportation conformity requirements for ozone, PM_{10}, and CO. The conformity of the Project needs to be demonstrated at both regional and project levels.

4.1 Regional Conformity

Regional conformity of a project is demonstrated by the project's inclusion in the latest conforming regional transportation plan (RTP) and the Transportation Improvement Program (TIP). If the design concept, scope, and "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and TIP, then the project meets regional conformity requirements for project-level conformity demonstration. The Project is in the Regional Transportation Commission of Southern Nevada's (RTCSNV's) *Access 2050: Regional Transportation Plan for Southern Nevada 2021-2050 Amendment 21-40* (Project Number CL20200152, RTCSNV 2023) and NDOT's 2023 *Statewide Transportation Improvement Program* (STIP, NDOT 2023). *Access 2050 (2021-2050 RTP/TIP) Amendment 21-40 Transportation Conformity Report* concludes that the amendment satisfies the regional conformity requirements (RTCSNV 2023). The Project has been included in the regional modeling and was evaluated for regional impacts to demonstrate that it meets the planning and regional requirements for conformity and is consistent with local air quality planning efforts.

4.2 PM_{10} Hot-Spot Analysis

The City evaluated the Project's potential to cause localized PM_{10} impacts and concluded the Project is unlikely to cause new violations of the PM_{10} NAAQS. The evaluation followed the criteria listed in *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas* (EPA 2021a). According to this guidance, the first step in the PM_{10} hot-spot evaluation is to determine if the Project is a Project of Air Quality Concern (POAQC). Projects that are not a POAQC do not require a detailed PM_{10} hot-spot analysis because, in general, they would not substantially affect ambient PM_{10} concentrations and are unlikely to cause or contribute to new or continued localized violation of the NAAQS.

The U.S. Environmental Protection Agency (EPA) specified in *Code of Federal Regulations* (CFR) Title 40, Section 93.123(b)(1) that POAQC are certain highway and transit projects that involve significant levels of diesel vehicle traffic, such as major highway projects and projects at congested intersections that handle significant diesel traffic, or any other project that is identified in the particulate matter less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$) or PM_{10} State Implementation Plan as a localized air quality concern. The City conducted a preliminary evaluation of the Project in accordance with the criteria below following the EPA guidance.

Criterion #1: New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles.

The Project would widen I-215 from Pecos Road to Stephanie Street, improve interchanges and ramps, and construct a pedestrian bridge. Based on the traffic data, the City determined that the Project would not cause a significant increase in diesel vehicles in the study area.

A traffic analysis was performed for the Project. Figures showing the locations of freeway segments and summaries of the annual average daily traffic (AADT) and diesel truck percentages on these segments in the study area are included in Attachment B. A segment-by-segment comparison of the total vehicle AADT and diesel truck AADT on the I-215 mainline are summarized in Table 4-1.

Table 4-1. Comparisons of Diesel Truck AADT in 2050 for the No Action and Preferred Alternative

	2050 No Action Alternative			2050 Preferred Alternative			Preferred Alternative vs. No Action Alternative	
I-215 Mainline Segment	**Total AADT**	**Truck AADT**	**Truck%**	**Total AADT**	**Truck AADT**	**Truck%**	**Truck AADT Increase**	**Truck Increase**
West of Eastern Ave.	212,000	6,464	3.0%	212,000	6,464	3.0%	0	0.0%
At Easter Ave.	177,000	6,459	3.6%	177,000	6,459	3.6%	0	0.0%
Easter Ave. to St. Rose Parkway/Pecos Road	212,,000	6,360	3.0%	211,000	6,435	3.0%	75	1.2%
At St. Rose Parkway/Pecos Road	191500	6,511	3.4%	191,500	6,415	3.4%	-96	-1.5%
St. Rose Parkway/Pecos Road to Green Valley Parkway	239,000	6,453	2.7%	246,000	6,516	2.7%	63	1.0%
At Green Valley Parkway	206,500	6,394	3.2%	216,000	6,472	3.2%	78	1.2%
Green Valley Parkway to Valley Verde Drive	253,000	6,448	2.6%	253,000	6,448	2.6%	0	0.0%
At Valley Verde Drive	225,000	6,410	2.9%	225,000	6,410	2.9%	0	0.0%
Valley Verde Drive to Stephanie Street	237,000	6,515	2.8%	237,000	6,515	2.8%	0	0.0%
At Stephanie Street	195,000	6,435	3.3%	195,000	6,435	3.3%	0	0.0%
Stephanie Street to Gibson Road	219,000	6,459	3.0%	219,000	6,459	3.0%	0	0.0%
East of Gibson Road	185,000	6,470	3.6%	185,000	6,470	3.6%	0	0.0%

The Project is not expected to induce additional diesel traffic to the Project area. Overall diesel truck percentages are relatively low in the study area. Percentages of diesel trucks range from 2.6 percent to 3.6 percent of overall vehicles under the No Action Alternative in 2050. The diesel truck percentages on I-215 segments of the Preferred Alternative would remain the same as the No Action Alternative.

There would be no significant increase in diesel truck traffic on I-215 in the study area. Diesel truck AADT would be higher on some freeway segments and lower on other segments, depending on how the traffic flow would be redistributed after the highway modification. However, the overall diesel traffic changes in the study area would be minimal. On I-215 mainline segments within the study area, the diesel vehicle increases under the Preferred Alternative number less than 100 trucks, or a 1.2 percent increase compared to the No Action Alternative. Therefore, the Project would not cause a significant increase in diesel vehicles in the study area.

Criterion #2: Projects affecting intersections that are at a level of service D, E, or F with a significant number of diesel vehicles, or those that will change to level of service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.

The Project would reduce congestion in the study area by providing additional travel lanes and improvements to the interchanges and ramps. The added lanes would increase travel speed and reduce congestion and the idling of vehicles on the freeway and at nearby intersections. The Project would reduce the number of intersections operating at level of service (LOS) F in the study area from three under the No Action Alternative to one under the Preferred Alternative. Traffic conditions at intersections with LOS D or worse under the No Action Alternative would have similar or improved LOS/delay under the Preferred Alternative. Intersection traffic volumes, LOS, and

delays during morning and afternoon peak hours for each alternative are listed in Attachment C, Peak Hour Intersection Traffic Conditions.

The diesel truck percentages I-215 range from 2.6 to 3.7 percent for both the No Action and Preferred alternatives. Diesel truck percentages on local streets and intersections are expected to be lower. The Preferred Alternative is not expected to induce additional diesel vehicle traffic into the study area; therefore, the Project would not cause significant increases in diesel vehicle traffic at LOS D, E, or F intersections.

Criterion #3: New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.

No new bus or rail terminals would be constructed under the Project.

Criterion #4: Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.

No bus or rail terminals would be expanded under the Project.

Criterion #5: Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The study area was not identified in the region's PM_{10} State Implementation Plan as a site of possible violation of PM_{10}.

In summary, although the Project is in a maintenance area for PM_{10}, the City determined that the Project would not be a POAQC based on the EPA criteria discussed above. Therefore, the Project is not expected to cause or contribute to new localized PM_{10} violations. The Project would meet the conformity requirements of 40 CFR 93.116 without a quantitative PM_{10} hot-spot analysis upon concurrence with this determination by the interagency consultation.

4.3 Carbon Monoxide (CO) Hot-Spot Analysis

The purpose of the CO hot-spot analysis is to evaluate whether the Project would cause localized increases of CO concentrations that violate NAAQS due to traffic delays at affected intersections.

The traffic conditions at the affected intersections of the Project were compared to the intersections modeled in Clark County's CO State Implementation Plan (Clark County 2000) and the criteria in the FHWA' *2023 Carbon Monoxide Categorical CO Hot Spot Finding* (CO Categorical Finding) to determine if quantitative CO modeling is required. The CO Maintenance Plan demonstrated attainment to CO NAAQS with a peak hour volume of 6,539 vehicles per hour (vph) at the intersection of Eastern Avenue and Charleston Boulevard. LOS information was not available in the maintenance plan, and a LOS D was assumed for this intersection. Therefore, intersections with peak hour traffic volume lower than the 6,539 vph and at LOS D or better operations are not anticipated to cause violations to the CO NAAQS. In addition, the intersections within the range of the CO Categorical Finding would not require quantitative CO modeling. Intersections that are not screened out using the county's maintenance plan and the FHWA's CO Categorical Finding would trigger quantitative CO modeling. Based on the traffic information in Attachment C, CO hot-spot modeling will be conducted for the following intersections for the No Action Alternative and the Preferred Alternative in 2050:

- I-215 Westbound Ramp at Pecos Road
- St. Rose Parkway at Paseo Verde Parkway
- I-215 Ramps at Green Valley Parkway

CO emission factors will be obtained using the MOVES3 model, and the air dispersion modeling of CO will be performed using CAL3QHC. The CO modeling will follow the *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (EPA 1992) and EPA's *Using MOVES3 in Project-Level Carbon Monoxide Analyses* (EPA 2021b) . The modeling results will be compared to the NAAQS to demonstrate that the Project will not cause violations to the CO NAAQS.

5. Summary

In this memorandum, the City provided the methodologies of project-level conformity demonstration for the I-215 Beltway Widening Project. The City concluded that the Project is not a POAQC; therefore, a quantitative PM_{10} hot-spot analysis is not required for the Project according to 40 CFR 93.116. The City requests concurrence by the interagency consultation that the Project is not a POAQC for the PM_{10} project-level conformity demonstration. Once approved, the conclusion of the interagency consultation will be documented in the environmental documentation for the Project.

A CO hot-spot analysis will be conducted at selected intersections to demonstrate project-level conformity following EPA guidance.

6. References

Clark County. 2000. *Carbon Monoxide State Implementation Plan*, Appendix E, Supplemental Technical Support Documentation.

Federal Highway Administration (FHWA). 2023. *2023 Carbon Monoxide Categorical CO Hot Spot Finding*.

Nevada Department of Transportation (NDOT). 2023. 2023 Statewide Transportation Improvement Program. https://estip.nevadadot.com/project_info?project_id=1034084&version=3&view_type=FED&fromPage=%26end_page=

Regional Transportation Commission of Southern Nevada (RTCSNV). 2021. *Access 2050: Regional Transportation Plan for Southern Nevada 2021 -2050*.

Regional Transportation Commission of Southern Nevada (RTCSNV). 2023. *Amendment 21-40 to the Access 2050 Regional Transportation Plan*. https://www.rtcsnv.com/projects-initiatives/wp-content/uploads/sites/4/2023/06/Amenement-21-40-to-the-Accesss-2050-RTPRevised.pdf)

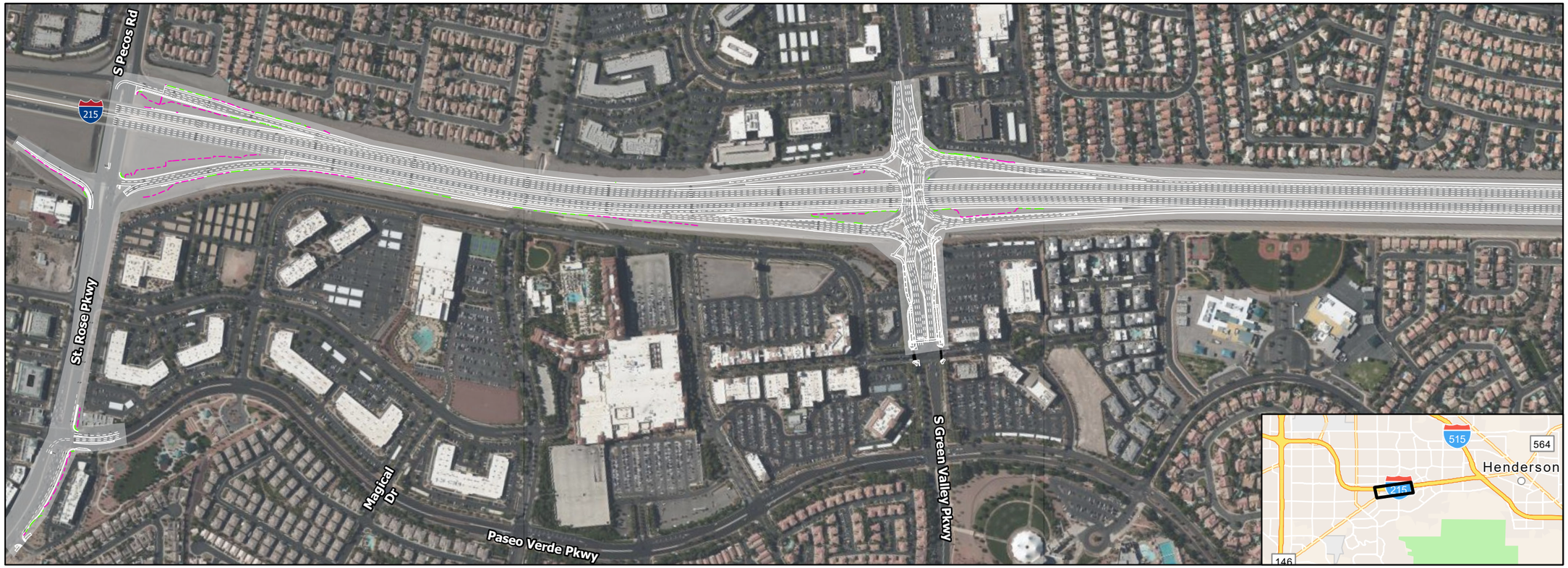
U.S. Environmental Protection Agency (EPA). 1992. *Guideline for Modeling Carbon Monoxide from Roadway Intersections*.

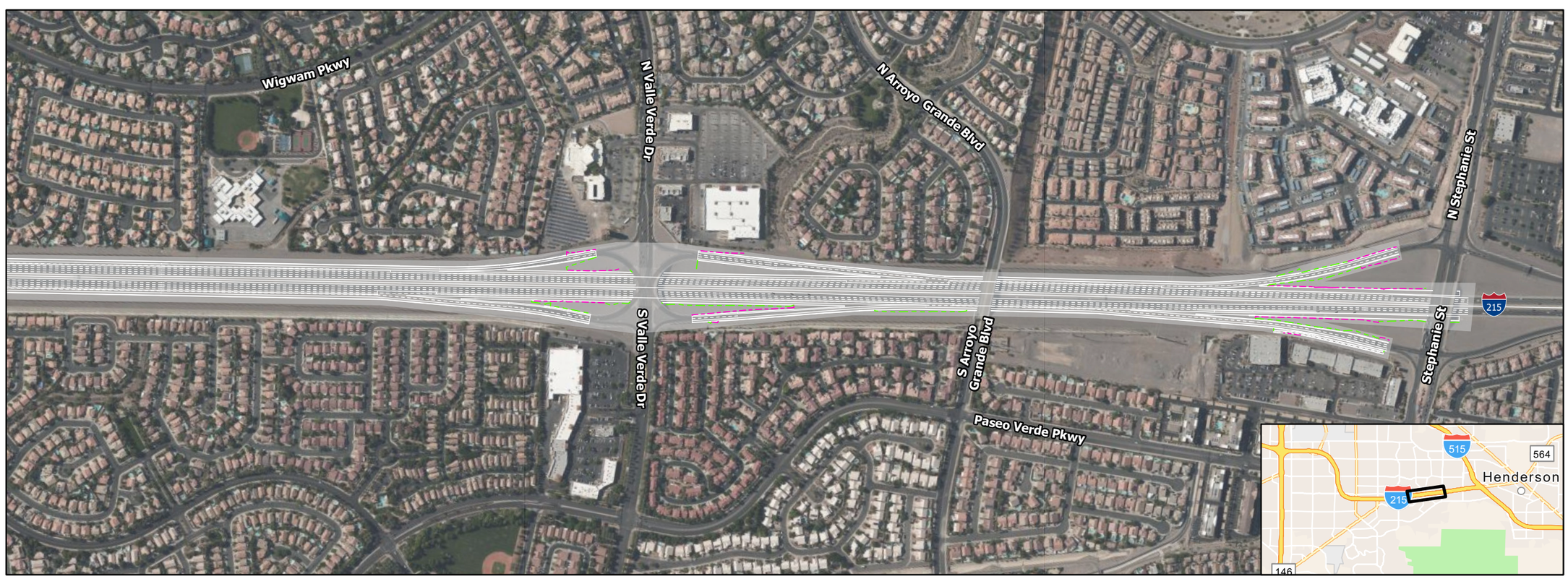
U.S. Environmental Protection Agency (EPA). 2021a. *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*.

U.S. Environmental Protection Agency (EPA). 2021b. *Using MOVES3 in Project-Level Carbon Monoxide Analyses*. December.

U.S. Environmental Protection Agency (EPA). 2023. *EPA Greenbook: Nevada Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants*. Accessed February 28, 2023. https://www3.epa.gov/airquality/greenbook/anayo_nv.html.

Attachment A
Map of Preferred Alternative





Legend

- Proposed Roadway
- Proposed Cut
- Proposed Fill

N

0 500 1,000 Feet

Basemap Source: Bing Aerial

Preferred Alternative
I-215 City of Henderson
Clark County, Nevada

Attachment B
Annual Average Daily Traffic and Truck Percentages

Summary of I-215 Mainline AADT

West Bound

I-215 Mainline	2050 No Action			2050 Preferred Alternative		
Segment	Total AADT	Truck AADT	Truck%	Total ADT	Truck ADT	Truck%
West of Eastern Ave.	108,000	3,240	3.0%	108,000	3,240	3.0%
Easter Ave	90,500	3,258	3.6%	90,500	3,258	3.6%
Easter Ave. to St. Rose Parkway/Pecos Road	106,000	3,180	3.0%	106,000	3,180	3.0%
St. Rose Parkway/Pecos Road	95,500	3,247	3.4%	95,500	3,247	3.4%
St. Rose Parkway/Pecos Road to Green Valley Parkway	118,000	3,186	2.7%	120,000	3,240	2.7%
Green Valley Parkway	99,500	3,184	3.2%	104,000	3,224	3.1%
Green Valley Parkway to Valley Verde Drive	123,000	3,198	2.6%	123,000	3,198	2.6%
Valley Verde Drive	110,000	3,190	2.9%	110,000	3,190	2.9%
Valley Verde Drive to Stephanie Street	116,000	3,248	2.8%	116,000	3,248	2.8%
Stephanie Street	97,000	3,201	3.3%	97,000	3,201	3.3%
Stephanie Street to Gibson Road	108,000	3,240	3.0%	108,000	3,240	3.0%
East of Gibson Road	90,000	3,240	3.6%	90,000	3,240	3.6%

East Bound

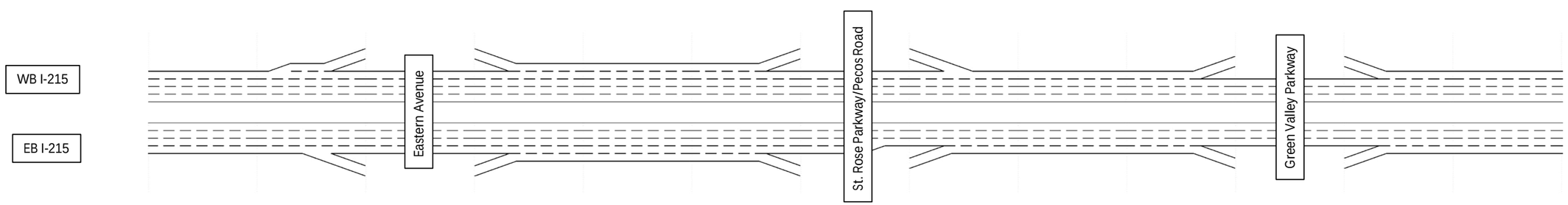
I-215 Mainline	2050 No Action			2050 Preferred Alternative		
Segment	Total AADT	Truck AADT	Truck%	Total ADT	Truck ADT	Truck%
West of Eastern Ave.	104,000	3,224	3.1%	104,000	3,224	3.10%
Easter Ave	86,500	3,201	3.7%	86,500	3,201	3.70%
Easter Ave. to St. Rose Parkway/Pecos Road	106,000	3,180	3.0%	105,000	3,255	3.10%
St. Rose Parkway/Pecos Road	96,000	3,264	3.4%	96,000	3,168	3.30%
St. Rose Parkway/Pecos Road to Green Valley Parkway	121,000	3,267	2.7%	126,000	3,276	2.60%
Green Valley Parkway	107,000	3,210	3.0%	112,000	3,248	2.90%
Green Valley Parkway to Valley Verde Drive	130,000	3,250	2.5%	130,000	3,250	2.50%
Valley Verde Drive	115,000	3,220	2.8%	115,000	3,220	2.80%
Valley Verde Drive to Stephanie Street	121,000	3,267	2.7%	121,000	3,267	2.70%
Stephanie Street	98,000	3,234	3.3%	98,000	3,234	3.30%
Stephanie Street to Gibson Road	111,000	3,219	2.9%	111,000	3,219	2.90%
East of Gibson Road	95,000	3,230	3.4%	95,000	3,230	3.40%

Total on I-215 (East and West Bound)

I-215 Mainline	2050 No Action			2050 Preferred Alternative			Preferred Alternative vs. No Action	
Segment	Total AADT	Truck AADT	Truck%	Total ADT	Truck ADT	Truck%	Truck ADT Increase	Truck Increase %
West of Eastern Ave.	212,000	6,464	3.0%	212,000	6,464	3.0%	0	0.0%
Easter Ave	177,000	6,459	3.6%	177,000	6,459	3.6%	0	0.0%
Easter Ave. to St. Rose Parkway/Pecos Road	212,000	6,360	3.0%	211,000	6,435	3.0%	75	1.2%
St. Rose Parkway/Pecos Road	191,500	6,511	3.4%	191,500	6,415	3.3%	-96	-1.5%
St. Rose Parkway/Pecos Road to Green Valley Parkway	239,000	6,453	2.7%	246,000	6,516	2.6%	63	1.0%
Green Valley Parkway	206,500	6,394	3.1%	216,000	6,472	3.0%	78	1.2%
Green Valley Parkway to Valley Verde Drive	253,000	6,448	2.5%	253,000	6,448	2.5%	0	0.0%
Valley Verde Drive	225,000	6,410	2.8%	225,000	6,410	2.8%	0	0.0%
Valley Verde Drive to Stephanie Street	237,000	6,515	2.7%	237,000	6,515	2.7%	0	0.0%
Stephanie Street	195,000	6,435	3.3%	195,000	6,435	3.3%	0	0.0%
Stephanie Street to Gibson Road	219,000	6,459	2.9%	219,000	6,459	2.9%	0	0.0%
East of Gibson Road	185,000	6,470	3.5%	185,000	6,470	3.5%	0	0.0%

Year 2050 No-Action Alternative

Year 2050 AM Demand Volume (vph)	8,360	1,330	7,030	1,180	8,210	800	7,410	1,730	9,130	1,420	7,720	1,830	9,550
Year 2050 PM Demand Volume (vph)	7,560	1,280	6,280	1,390	7,670	1,050	6,620	1,920	8,530	1,110	7,420	1,360	8,780
Year 2050 AADT (vpd)	108,000	17,000	90,500	18,000	106,000	13,500	95,500	24,500	118,000	18,500	99,500	23,500	123,000
Daily Diesel Truck Percent	3.0%		3.6%		3.0%		3.4%		2.7%		3.2%		2.6%

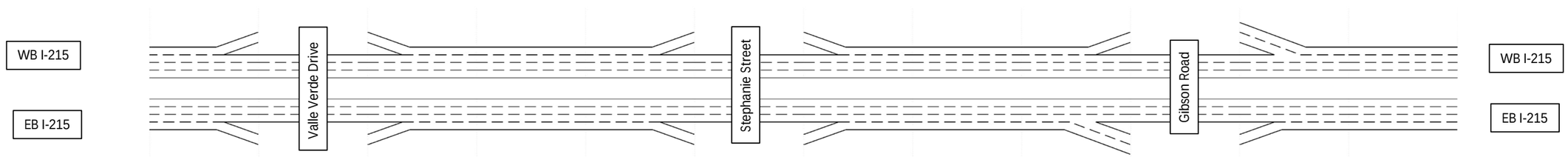


Year 2050 AM Demand Volume (vph)	6,620	1,360	5,260	1,290	6,550	750	5,800	2,160	7,960	1,350	6,610	1,000	7,610
Year 2050 PM Demand Volume (vph)	8,040	1,350	6,700	1,550	8,240	800	7,450	1,940	9,380	1,060	8,320	1,780	10,100
Year 2050 AADT (vpd)	104,000	17,500	86,500	20,000	106,000	10,500	96,000	28,000	121,000	17,500	107,000	23,000	130,000
Daily Diesel Truck Percent	3.1%		3.7%		3.0%		3.4%		2.7%		3.0%		2.5%

Legend: On/Off ramp

Year 2050 No-Action Alternative

Year 2050 AM Demand Volume (vph)	1,030	8,520	520	9,040	1,530	7,510	850	8,360	1,390	6,970	420	7,390
Year 2050 PM Demand Volume (vph)	650	8,140	670	8,800	1,810	6,990	880	7,880	1,340	6,540	450	6,990
Year 2050 AADT (vpd)	13,500	110,000	8,600	116,000	23,500	97,000	11,500	108,000	18,000	90,000	5,800	95,000
Daily Diesel Truck Percent		2.9%		2.8%		3.3%		3.0%		3.6%		3.4%

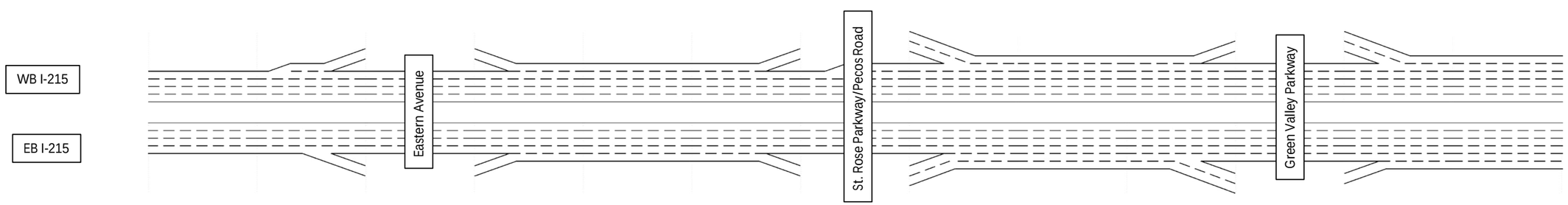


Year 2050 AM Demand Volume (vph)	560	7,050	470	7,520	1,280	6,240	750	6,990	1,150	5,830	710	6,550
Year 2050 PM Demand Volume (vph)	1,180	8,920	500	9,420	1,840	7,590	1,010	8,590	1,230	7,360	650	8,010
Year 2050 AADT (vpd)	15,000	115,000	6,400	121,000	23,500	98,000	13,000	111,000	16,000	95,000	9,100	103,000
Daily Diesel Truck Percent		2.8%		2.7%		3.3%		2.9%		3.4%		3.1%

Legend: On/Off ramp

Year 2050 Build Alternative

Year 2050 AM Demand Volume (vph)	8,360	1,330	7,030	1,170	8,200	780	7,410	1,920	9,330	1,240	8,090	1,460	9,550
Year 2050 PM Demand Volume (vph)	7,560	1,280	6,280	1,320	7,600	980	6,620	2,080	8,700	1,130	7,570	1,210	8,780
Year 2050 AADT (vpd)	108,000	17,000	90,500	17,000	106,000	12,500	95,500	27,000	120,000	16,000	104,000	19,000	123,000
Daily Diesel Truck Percent	3.0%		3.6%		3.0%		3.4%		2.7%		3.1%		2.6%

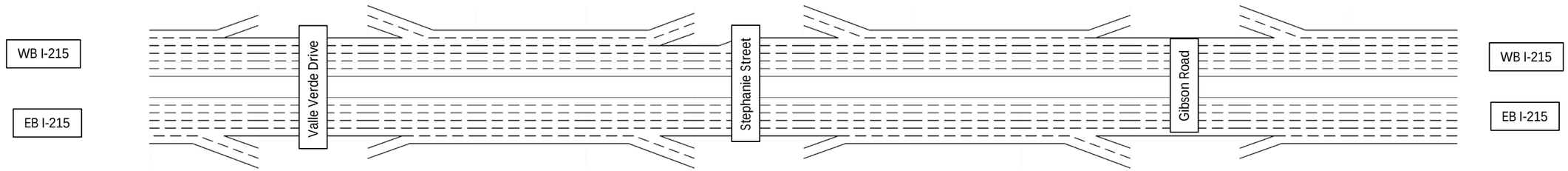


Year 2050 AM Demand Volume (vph)	6,620	1,360	5,260	1,280	6,540	750	5,800	2,170	7,960	1,350	6,610	1,000	7,610
Year 2050 PM Demand Volume (vph)	8,040	1,350	6,700	1,480	8,180	710	7,470	2,290	9,760	1,080	8,680	1,420	10,100
Year 2050 AADT (vpd)	104,000	17,500	86,500	19,000	105,000	9,700	96,500	29,500	126,000	17,500	112,000	18,500	130,000
Daily Diesel Truck Percent	3.1%		3.7%		3.1%		3.3%		2.6%		2.9%		2.5%

Legend: On/Off ramp

Year 2050 Build Alternative

Year 2050 AM Demand Volume (vph)	1,030	8,520	520	9,040	1,530	7,510	850	8,360	1,390	6,970	420	7,390
Year 2050 PM Demand Volume (vph)	650	8,140	670	8,800	1,810	6,990	880	7,880	1,340	6,540	450	6,990
Year 2050 AADT (vpd)	13,500	110,000	8,600	116,000	23,500	97,000	11,500	108,000	18,000	90,000	5,800	95,000
Daily Diesel Truck Percent		2.9%		2.8%		3.3%		3.0%		3.6%		3.4%



Year 2050 AM Demand Volume (vph)	560	7,050	470	7,520	1,280	6,240	750	6,990	1,150	5,830	710	6,550
Year 2050 PM Demand Volume (vph)	1,180	8,920	500	9,420	1,840	7,590	1,010	8,590	1,230	7,360	650	8,010
Year 2050 AADT (vpd)	15,000	115,000	6,400	121,000	23,500	98,000	13,000	111,000	16,000	95,000	9,100	103,000
Daily Diesel Truck Percent		2.8%		2.7%		3.3%		2.9%		3.4%		3.1%

Legend: On/Off ramp

Attachment C
Peak Hour Intersection Traffic Conditions

Intersection Traffic Conditions

		AM			PM		
	Intersection	**LOS**	**Delay**	**Volume**	**LOS**	**Delay**	**Volume**
2050 No Action	3. Pecos Road/Pebble Road	C	25.9	--	C	34.1	--
	4. Pecos Road/I-215 WB	C	34.4	--	F	85.4	5880
	5. Pecos Road/I-215 EB	C	26.5	--	D	42.8	7500
	6. St. Rose Parkway/Serene Avenue	--	--	--	--	--	--
	7. St. Rose Parkway/Paseo Verde Parkway	F	117.9	7050	F	145.8	8240
	10. Green Valley Parkway/Corporate Circle North	C	22.7	--	D	38.5	4090
	11. Green Valley Parkway/Corporate Circle South	--	--	--	--	--	--
	12. I-215 EB & Green Valley Parkway & I-215 WB	E	67.7	6790	F	93	7350
	121. Green Valley Parkway/I-215 WB	--	--	--	--	--	--
	13. Green Valley Parkway/Village Walk Drive	C	28.3	--	E	68	5810
	122. Green Valley Parkway	--	--	--	--	--	--
	123. Green Valley Parkway & I-215 WB	--	--	--	--	--	--
	124. I-215 EB	--	--	--	--	--	--
	125. Green Valley Parkway	--	--	--	--	--	--
	126. I-215 EB & Green Valley Parkway	--	--	--	--	--	--
2050 Preferred Alternative	3. Pecos Road/Pebble Road	C	22.4	--	C	34.3	--
	4. Pecos Road/I-215 WB	C	30.6	--	E	55.2	5980
	5. Pecos Road/I-215 EB	B	15	--	C	27.1	--
	6. St. Rose Parkway/Serene Avenue (Unsignalized)	--	--	--	--	--	--
	7. St. Rose Parkway/Paseo Verde Parkway	D	38.5	6840	F	106.6	8160
	10. Green Valley Parkway/Corporate Circle North	B	15.8	--	D	36.5	4020
	11. Green Valley Parkway/Corporate Circle South (Unsignalized)	--	--	--	--	--	--
	12. I-215 EB & Green Valley Parkway & I-215 WB	--	--	--	--	--	--
	121. Green Valley Parkway/I-215 WB	A	7.1	--	A	2.5	--
	13. Green Valley Parkway/Village Walk Drive	B	12.4	--	C	26.2	--
	122. Green Valley Parkway	B	10.7	--	B	15.4	--
	123. Green Valley Parkway & I-215 WB	B	13.2	--	E	56.2	2620
	124. I-215 EB	B	12.2	--	A	5.9	--
	125. Green Valley Parkway	B	14.3	--	D	48.1	3360
	126. I-215 EB & Green Valley Parkway	A	3.5	--	B	13.3	--