Appendix A – Traffic Study

TRAFFIC AND SAFETY NEEDS

Before any traffic and safety improvements can be planned, the need for such improvements must be established. The following sections of this report examine the existing transportation system within the study area to identify any deficiencies stemming from traffic and safety operations and to evaluate existing and future needs.

The identified needs, which were established based on an evaluation of existing and future traffic operations, historical crashes, and other considerations, will lay the foundation for the development of solutions that are in line with the study goals and the overarching goals established in the Arkansas Long Range Intermodal Transportation Plan (LRITP).

TRAFFIC AND SAFETY BACKGROUND

The Northwest Arkansas National (XNA) Airport generates significant traffic, and access to this hub is provided by Highway 264 to the south and Highway 12 to the north. Both corridors are classified as minor arterials and are winding, narrow, mostly two-lane highways. Due to a lack of connectivity between Interstate 49 and the XNA Airport, motorists traveling along these routes use local roads to ultimately travel north or south along Interstate 49 resulting in misdirection, longer travel times, and delay.

The primary study area for the new connector road, shown in **Figure 1**, is bounded by Highway 12 to the west and Springdale Northern Bypass to the east and encompasses the area south of XNA Airport, including Highway 264.



Figure 1: Primary Study Area

The impact of a new connector road will affect the traffic and safety operations for a much larger area which extends up to Bentonville, as shown in **Figure 2**. For that reason, the following corridors within the area were identified for analysis:

- Interstate 49 from the Washington County Line to Highway 72
- Highway 12 from Highway 264 to Highway 71B (SE Walton Boulevard)
- **Highway 62** from Interstate 49 to Highway 94
- Highway 71B (W Walnut Street) from N 8th Street to Interstate 49
- Highway 71B (Walton Boulevard) from Interstate 49 to NW A Street
- Highway 102 from Pleasant Valley Road to Interstate 49
- Highway 112 from Washington County Line to Highway 12 (SW Regional Airport Boulevard)
- **Highway 264** from Bloomington Street to Highway 12
- Highway 279 from SW Regional Airport Boulevard to Highway 102 (W Centerton Boulevard)
- Highway 612 Section 2 from Log Mile 0.00-4.47
- Airport Boulevard from the Airport Entrance to Highway 264
- **SW I Street** from Highway 71B (SE Walton Boulevard) to Highway 12 (SW Regional Airport Boulevard)
- **Regional Avenue** from Highway 12 to Airport Boulevard

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Figure 2: Extended Study Area



SAFETY AND SECURITY

SAFETY

In order to evaluate safety performance, the historical crashes occurring within the extended study area were collected for the five most recent complete years of available data (2013-2017). Generally, crash patterns on these corridor are typical of State highways in Arkansas: in urban areas, where traffic volumes are high, the frequency of rear-end crashes tends to increase due to proliferation of access points; and in the more rural areas, there is a higher incidence of single-vehicle (run-off-road) crashes.

Crash rates for total crashes and KA crashes were calculated for contiguous segments with similar

KA Crashes are defined as either fatal or serious injury crashes.

geometric, developmental, and other characteristics along the study routes and compared to the statewide averages for similar facilities. Crash rates were calculated as follows:

Crash Rate (R) = (C * 10⁶)/(V*365*N*L)

- R = Roadway crash rate expressed as crashes per Million Vehicle-Miles (MVM) of travel
- C = Total number of roadway crashes in the study period
- V = Traffic volumes using Average Annual Daily Traffic volumes
- N = Number of years of data
- L = Length of the roadway segment in miles

Similarly, the formula for KA Crash Rate is $(C * 10^8)/(V*365*N*L)$ resulting in the KA crash rate expressed as crashes per 100 MVM of travel.

Where possible, individual segments were grouped together to eliminate having one crash result in a poor crash rate ratio. This ratio of crash rates to statewide average crash rates was calculated as follows:

Crash Rate Ratio = R/Arkansas Statewide Crash Rate

• R = Roadway crash rate expressed as crashes per MVM of travel or 100 MVM of travel for KA

Figures 3 and 4 present crash rate ratios for all crash severities as well as KA crashes only along the corridors. Locations highlighted in red or orange have higher historical crash rates than statewide averages for similar facilities, whereas locations highlighted in yellow or green have similar or lower historical crash rates than statewide average for similar facilities. As shown, the highest crash rate ratios were observed along Highway 102 followed by Highway 71B. It should be noted that no crash data was available for Highway 612. **Appendix A – Safety Analysis** provides additional information on the crash rates and crash rate ratios.

Over 170 KA crashes were recorded along the study corridor from 2013-2017. Of those crashes, the majority were either single vehicle or rear end crashes. KA crash locations by crash manner are shown in **Figure 5**.

Figure 3: Crash Rate Ratios for All Severity Crashes



Figure 4: Crash Rate Ratios for KA Crashes



Figure 5: Crash Manner for KA Crashes



Contributing factors resulting in various crash types include:

- Single Vehicle Crashes Generally caused by distracted driving (e.g., texting while driving), inclement weather, speeding, mechanical error, avoiding a vehicle, object, or animal, intoxicated driving, and/or sun glare.
- Rear End Crashes Generally caused by driving in heavy traffic conditions, distracted driving, and other similar conditions to those causing single vehicle crashes.
- Angle Crashes Generally caused by left-turn conflicts at intersections or driveways or cross-street traffic not yielding to the main lane traffic.
- Head-On Crashes Generally caused by drivers crossing the centerline, ignoring traffic signs and signals, and other similar conditions to those causing single vehicle crashes.
- Sideswipe Crashes Generally caused by drivers failing to check blind spots before changing lanes, drivers drifting into other lanes while distracted, intoxicated drivers weaving in and out of lanes, and drivers reacting to a road hazard by overcorrecting their steering wheel.

SECURITY

Enhance resiliency is a study goal related to ensuring security of the transportation system. Resilience is the ability of the transportation system to recover and regain functionality after a major disruption or disaster. For this study, resiliency was evaluated by identifying failure critical infrastructure along the corridor and determining if failures at these locations would result in a significant increase in travel distance. Locations which tend to flood were also noted. Highway 112 has notable flooding tendencies, particularly on the segment just north of the Springdale Northern Bypass which provides access to

XNA Airport. Highway 264 also has several locations which are prone to flooding, necessitating road closures on both the east and west sides of the south airport entrance.

MOBILITY AND SYSTEM RELIABILITY

CONNECTIVITY

Connectivity refers to the number of links in a transportation network and how directly travelers can reach their destinations. As connectivity increases, travel distances decrease and route options increase.

The concept of connectivity primarily relates to developed areas, where the design of local street networks can have a significant impact not only on trip lengths, but also on overall network performance. In addition, connectivity improvements can have a significant impact on local travel patterns.

The proposed XNA Connector should reduce the overall trip length/duration for regional movements as well as remove XNA traffic from streets that serve local traffic, which improves safety and efficiency for all road users.

RECURRING DELAY

In order to quantify the recurring delay of each corridor segment or intersection, the *Highway* Capacity Manual (HCM) methodology was utilized. qualitatively The НСМ describes operating conditions within a traffic stream or at an intersection using a concept known as Level of Service (LOS). LOS is typically designated into six categories. These range from LOS A indicating free-flow, low density, or nearly negligible delay conditions to LOS F where demand exceeds capacity and large queues are experienced. A graphical representation of LOS is presented in Figure 6.



Volume Development

The volume and classification count data collected annually shown in **Figure 7** were used to develop the design hourly volumes used in the operational analysis of the corridors. For the intersection analysis, existing turning movement counts from ARDOT, XNA, and the City of Bentonville were utilized. For the 2040 analysis, the traffic volumes were projected using the annual growth rates (AGR) noted in **Appendix B – Traffic Forecast**. Growth rates along each corridor are shown in **Figure 8**.

Figure 7: 2018 and 2040 No-Action ADT



Figure 8: Annual Growth Rates



LOS Methodology

For the initial screening process, a generalized LOS tool was used. For the final evaluation, the corridors were analyzed using the *Highway Capacity Software (HCS7)* for all locations except where signalized intersections were spaced so closely that the corridor no longer operated as uninterrupted flow. For the areas with several major intersections, *Synchro* software was utilized to model the network and determine corridor LOS. The results are summarized by corridor in the following subsections. Detailed reports from the *HCS* and *Synchro* analyses are provided in **Appendix C – Traffic Analysis**.

For freeway, highway, and ramp segments, LOS is based on density which is measured in passenger cars per mile per lane (pc/mi/ln). For Class II two-lane highways, the LOS is based on percent time spent following (PTSF). For Class III highways, the LOS is based on percent of free flow speed (PFFS). **Table 1** depicts the LOS thresholds for these segment types as stated in the *HCM 6th Edition*, pp. 12-19 and 15-8.

Level of	Description	Freeway or Multilane Highway	Class II Two-Lane Highway	Class III Two-Lane Highway
Service		Density (pc/mi/ln)	PTSF (%)	PFFS (&)
А	Free flow	0 to 11	0 to 40	> 91.7
В	Slight restriction of free flow	> 11 to 18	> 40 to 55	> 83.3 to 91.7
С	Restriction to free flow	> 18 to 26	> 55 to 70	> 75.0 to 83.3
D	Noticeable restriction, declining speeds	> 26 to 35	> 70 to 85	> 67.7 top 75.0
E	No gaps in traffic, volatile speeds	> 35 to 45	> 85	<u><</u> 66.7
F	Breakdown, large queues, recurring congestion	> 45 or Demand > Capacity	Demand > Capacity	Demand > Capacity

Table 1: LOS Thresholds from HCM

In order to quantify the operational conditions of intersections within the study corridors, *Synchro 10* software along with its companion *SimTraffic* software were used to analyze

the expected delays and LOS based on the *HCM* methodology and *SimTraffic* microsimulation methodology. **Table 2** describes the LOS thresholds for signalized intersections (*HCM 6*th *Edition*, pg. 19-16) and unsignalized intersections (pp. 20-6, 21-8, and 22-9).

Level of	Description	Control Delay Rnage (sec/veh)		
Service	Description	Signalized	Unsignalized	
А	Usually no conflicting traffic	0 to 10	0 to 10	
В	Occasionally some delay due to conflicting traffic	> 10 to 20	> 10 to 15	
С	Dleay noticeable, but not inconveniencing	> 20 to 35	> 15 to 25	
D	Delay noticeable and irratating, increased likelihood of risk-taking	> 35 to 55	> 25 to 35	
E	Delay approaches tolerance leve, risk-taking behavior likely	> 55 to 80	> 35 to 50	
F	Delay exceeds tolerance level, high likelihood of risk-taking	> 80	> 50	

Table 2: Intersection Level of Service Thresholds

LOS Analysis Results

The extended study area passes through both rural and urbanized areas. The threshold for acceptable traffic conditions in rural areas is LOS C, and for urban areas is LOS D. **Figures 9 and 10** present LOS graphically for both the years 2018 and 2040. In 2018, much of the extended study area corridors operate at LOS C or better except for a few notable areas identified below.

- Interstate 49
 - Washington County Line to Highway 264 LOS E
 - Highway 264 to Highway 71B LOS D
- Highway 12
 - o Mill Dam Road to CR 576– LOS D
 - Highway 112/SW I Street to Highway 71B (SE Walton Boulevard)– LOS F
- Highway 62
 - I-49 SB Ramp to I-49 NB Ramp LOS F

- Highway 71B
 - 46th Street to I-49 LOS D
 - I-49 Ramps to Airport Road/SE 28th Street LOS F
 - Airport Road/SE 28th Street to SW Commerce Drive LOS D
 - SW Commerce Drive to Highway 72 (W Central Avenue) LOS F
- Highway 102
 - N Vaughn Road to Highway 102Spur/S Fish Hatchery Road LOS D
 - SW Elm Tree Road to SW "I Street LOS D
 - SW I Street to Highway 71B (Walton Boulevard) LOS E
 - Highway 71B (Walton Boulevard) to SE J Street LOS F
 - SE J Street to SE Moberly Lane LOS E
 - SE Moberly Lane to I-49 SB Ramp LOS F
- Highway 112
 - Washington County Line to Highway 12 (SW Regional Airport Boulevard) –
 LOS E
- Highway 264
 - Bloomington Street to Belview LOS F
 - Mill Dam Road to Airport Boulevard LOS D
- SW I Street
 - Highway 71B to Highway 12 (SW Regional Airport Boulevard) LOS D

In 2040, traffic conditions are anticipated to worsen at these and other areas along the study corridor. The exception to this worsening is along Highway 112 which will be widened from two lanes to four lanes.

- Interstate 49
 - Washington County Line to Highway 102/Highway 62 LOS F

- Highway 12
 - Regional Avenue to Mill Dam Road LOS D
 - Mill Dam Road to CR 576– LOS E
 - County Road 576 to Highway 71B (SE Walton Boulevard) LOS F
- Highway 62
 - I-49 SB Ramp to I-49 NB Ramp LOS F
- Highway 71B
 - N 8th Street to Dixieland Road LOS D
 - 46th Street to Airport Road/SE 28th Street LOS F
 - Airport Road/SE 28th Street to SW Commerce Drive LOS E
 - SW Commerce Drive to Highway 72 (W Central Avenue) LOS F
- Highway 102
 - N Vaughn Road to Highway 102Spur/S Fish Hatchery Road LOS E
 - SW Elm Tree Road to I-49 SB Ramp LOS F
- Highway 112
 - Washington County Line to Highway 12 (SW Regional Airport Boulevard) -

LOS B

- Highway 264
 - Bloomington Street to Belview LOS F
 - Belview Road to S Rainbow Road LOS E
 - S Rainbow Road to Mill Dam Road LOS D
 - Mill Dam Road to Airport Boulevard LOS E
- Airport Boulevard
 - Airport Entrance to Highway 264 LOS F
- SW I Street
 - Highway 71B to Highway 12 (SW Regional Airport Boulevard) LOS F

Figure 9: 2018 Level of Service



Figure 10: 2040 Level of Service



NON-RECURRING DELAY

Reliability refers to the dependability of travel times. Even if a highway performs well on a typical day, unpredictable events such as weather and crashes may occasionally affect performance. Travel time reliability is an increasing concern of commuters, shippers, and other travelers who depend on predictable service for timely arrival or delivery.

Reliability was reviewed for the extended study area corridors using one year of data from the 2018 National Performance Management Research Data Set (NPMRDS) and typical day data from Google Maps. The 2018 NPMRDS was used to estimate peak-hour travel speeds for the corridors on the National Highway System. **Figures 11 and 12** show the results of the NPMRDS data. Travel speeds 20 mph or more below posted speeds were detected at the following locations:

- I-49 Pleasant Grove Road to Hwy 71B (Northbound)
- I-49 Hwy 71B to New Hope Road (Southbound)
- Highway 62 I-49 Southbound Ramps to Highway 94
- Highway 71B N 8th Street (Rogers) to Hwy 72 (Bentonville)

Non-National Highway System routes that were flagged as having delay from the Google Maps are identified below:

- Highway 102 Highway 279 to I-49 Southbound Ramps
- Highway 12 SW Windmill Road to SW Runway Drive
- Highway 12 County Road 576 to Highway 71B
- Highway 112 Brown Road to Highway 264 (Healing Springs Road)
- Highway 112 Wallis Road to Chapell
- Highway 112 SW H Street/Elk Road to Highway 12

- Highway 264 (W Monroe Avenue) Bloomington Street (Lowell) to Center Corner Drive
- Highway 264 (Healing Springs Road) Highway 112 to Farrar Road
- Highway 612 Westbound Exit Ramp to Highway 112

Figure 11: AM Peak Travel Speed



Figure 12: AM Peak Travel Speed



ACCESS MANAGEMENT

Access management refers to methods that promote the safe and efficient movement of people and goods by reducing roadway conflicts at street intersections and driveways. Effective access management preserves the functional needs of the roadway while providing reasonable access to property.

Efforts to manage access in the study area include the following:

• The June 2015 *Highway 112 Corridor Study, Benton and Washington Counties* recommended widening Highway 112 to four lanes and access management strategies such as raised medians, better driveway spacing, and deceleration lanes.

As new projects occur in the extended study area, more access management projects are anticipated. Given the intended function of the proposed XNA connector, a relatively high degree of control of access is desirable.

TRAFFIC AND SAFETY ANALYSIS

The *Purpose and Need* identified the transportation issues within the study area. Based on stakeholder/public input and the information in the *Purpose and Need*, the study team developed three alternatives to address the transportation issues in the study area. The traffic and safety performance of each of these Alternatives compared to the 2040 No-Action Alternative is discussed throughout the following sections.

ALTERNATIVES

NEW LOCATION ALTERNATIVE

This alternative would consist of a four-lane divided highway and would be constructed on new alignment from Highway 264 to Highway 612 (Springdale Northern Bypass). The New Location Alternative is shown in green in **Figure 1**.

PARTIAL NEW LOCATION ALTERNATIVE

This alternative would follow existing Highway 264 from Airport Boulevard to Mill Dam Road/Colonel Meyers Road and then continue south on new alignment to Highway 112 at the Wagon Wheel Road intersection. The typical section would consist of a four-lane divided highway with a raised median. **Figure 1** displays this corridor in purple.

IMPROVE EXISTING ALTERNATIVE

This alternative would follow existing Highway 264 to Highway 112 and continue south to Highway 612 (Springdale Northern Bypass). The typical section would consist of 4 lanes divided with a raised median This alternative is shown in orange in **Figure 1**.



Figure 1: Alternative Alignments

SAFETY

The safety impacts of each Alternative were evaluated qualitatively by comparing the relative values of applicable Crash Modification Factors (CMFs) of each to the No-Action Alternative. It should be noted that this is a simplified method and only provides the potential percent change in crashes and not the change in the number of crashes. A detailed evaluation would require a more rigorous method.

The Crash Modification Factors Clearinghouse was used as the resource to search and determine applicable CMFs. After comparing the design features of the Action and No-Action Alternatives including the number of lanes, lane widths, shoulder widths, median widths, and type of access, the following applicable CMFs were considered:

- Convert two-lane roadway to four-lane divided roadway (CMF ID 7566)
- Convert median width from 10 feet to 60 feet (CMF ID 4548)
- Convert median width from 10 feet to 70 feet (CMF ID 5292)
- Increase lane width (CMF ID 3936)
- Change right shoulder width from x to y (CMF ID 3012)
- Change driveway density from x to y driveway per mile (CMF ID 2459)

Multiple CMFs were combined to represent the overall safety impact of each alternative. **Table 1** displays the safety impact of the Action Alternatives compared to the No-Action Alternative and the estimated percent change in crashes. As shown, the New Location Alternative provides the highest reduction in crashes when compared to the No-Action Alternative.

Alternatives	Location	Total Length	Safety Impact Relative to No-Action	
		(mines)	CMF	Reduction
New Location Alternative	New connector - Hwy 264 to Hwy 612	4.60	0.121	87.90%
	Hwy 612 - New connector to Hwy 112	4.00		
Partial New	Hwy 264 -Mill Dam Rd to Airport Blvd		0.238	76.16%
Location	New connector - Hwy 264 to Hwy 112	4.34		
Alternative	Hwy 112 (S Main St) - Hwy 612 to Wagon Wheel Road			
	Hwy 264 (Healing Springs Rd) - Hwy 112 (Main St) to Mill Dam Rd		0.246	75.45%
Improve Existing	Hwy 264 -Mill Dam Rd to Airport Blvd	6.62		
Alternative	Hwy 112 (S Main St) - Hwy 612 to Hwy 264 (E Lowell Ave)	0.03		
	Hwy 112 (S Main St) - Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)			
	Hwy 264 (Healing Springs Rd) - Hwy 112 (Main St) to Mill Dam Rd		4.0	0.0%
No-Action	Hwy 264 -Mill Dam Rd to Airport Blvd	6.62		
Alternative	Hwy 112 (S Main St) - Hwy 612 to Hwy 264 (E Lowell Ave)	0.03	1.0	
	Hwy 112 (S Main St) - Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)			

Table 1: Relative Comparison of Design Alternatives using CMFs

MOBILITY AND SYSTEM RELIABILITY

CONNECTIVITY

From a connectivity standpoint, each of the Action Alternatives will reduce the overall trip duration for regional movements. Additionally, the New Location Alternative and the Partial New Location Alternative will reduce the travel length as well as remove some of the XNA traffic from streets that serve local traffic, which improves safety and efficiency for all road users.

The vehicle miles travelled (VMT), vehicle hours traveled (VHT) and travel time were all derived from the NARTS TDM. All values are measured from Airport Boulevard at Highway 264 to the Westbound ramp at the Highway 112/Highway 612 interchange. **Table 2** below shows the results for each Alternative and the comparison with the 2040 No-Action Alternative. Although the VMT is lowest for the 2040 Partial New Location Alternative due to the length of the route, the VHT and travel times are lowest for the 2040 New Location Alternative. All three Action Alternatives perform better than the No-Action Alternative with regards to travel times.

Table 2: Travel Comparison

Alternative	Length (miles)	VMT	VHT	AM Travel Time (Min)	PM Travel Time (Min)
2040 No-Action	6.63	87,818	1,835	8.19	8.80
2040 New Location Alternative	4.60	86,544	1,248	4.99	5.04
2040 Partial New Location Alternative	4.34	64,926	1,392	5.76	5.97
2040 Improve Existing Alternative	6.63	92,042	1,750	7.47	7.66

VOLUME DEVELOPMENT

The volume development for the Alternatives is described in **Appendix B** – **Traffic Forecast. Figures 2-9** on the following pages show the AM and PM Peak Hour volumes in the primary study area as well as the ADT in the Extended study area.



Figure 2: Existing Peak Hour Traffic Volumes (Primary Study Area)



Northwest Arkansas National Airport Access Study (F) Alternatives Analysis Report



Figure 4: 2040 New Alilgnment Alternative Peak Hour Traffic Volumes (Primary Study Area)

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Figure 5: 2040 Partial New Alignment Alternative Peak Hour Traffic Volumes (Primary Study Area)



Figure 6: 2040 Improve Existing Alternative Peak Hour Traffic Volumes (Primary Study Area)



Figure 7: ADT – 2040 No-Action vs. New Location Alternative (Extended Study Area)



Figure 8: ADT – 2040 No-Action vs. Partial New Location Alternative (Extended Study Area)



Figure 9: ADT – 2040 No-Action vs. Improve Existing Alternative (Extended Study Area)

RECURRING DELAY

The recurring delay of each corridor segment or intersection in each Action Alternative was quantified in the same manner as the Existing and 2040 No-Action.

LOS Analysis Results

For the Extended Study Area, the percent change in ADT from the 2040 No-Action for each of the Alternatives was minimal. Therefore, analyses of the Action Alternatives outside the Primary Study Area were not performed. More detail on the traffic operations for the primary study area as well as the extended study area is provided in **Appendix C** – **Traffic Analysis**.

As shown in **Figure 10**, the Action Alternatives in the Primary Study Area corridors (Highway 12, Highway 112, Highway 264, and Highway 612) operate at or better than the No-Action Alternative except for Highway 264 east of Highway 112. For the Partial New Alignment Alternative and the Improve Existing Alternative, this segment of Highway 264 operates at LOS E compared to LOS D in the No-Action scenario.

At the Primary Study Area intersections (Highway 264 at Airport Boulevard and at Mill Dam Road/Colonel Myers Road, and Highway 112 at Highway 264 (Healing Springs Road), Highway 264 (Lowell Avenue), Wagon Wheel Road, Highway 612 WB Ramp, and Highway 612 EB Ramp) signalization was added where needed in all 2040 Alternatives. The results indicate that the intersections will operate at the same or better LOS for each Action Alternative when compared to the No-Action Alternative except for the Highway 112 at Wagon Wheel Road intersection where volumes for all but the Partial New Alignment Alternative likely would not warrant a signal in the future.

Figure 10: Level of Service



ACCESS MANAGEMENT

Access management refers to methods that promote the safe and efficient movement of people and goods by reducing roadway conflicts at street intersections and driveways. Effective access management preserves the functional needs of the roadway while providing reasonable access to property.

Efforts to manage access in the study area include the following:

• The June 2015 *Highway 112 Corridor Study, Benton and Washington Counties* recommended widening Highway 112 to four lanes and access management strategies such as raised medians, better driveway spacing, and deceleration lanes.

Given the intended function of the proposed XNA connector, a relatively high degree of control of access is desirable. As shown in **Figure 11**, the typical section for the New Location Alternative would be a divided highway and the typical sections for the Partial New Location Alternative and the Improve Existing Alternative will include a curb and gutter section with a raised median.





Northwest Arkansas National Airport Access Study (F) BENTON COUNTY

APPENDIX A – SAFETY ANALYSIS



Prepared by Garver for the Arkansas Department of Transportation and the Northwest Arkansas National Airport In cooperation with the Federal Highway Administration

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CRASH RATES

Rates for total crashes and KA crashes were computed for the corridor segments within the study area and compared to the statewide average for similar facilities. Locations highlighted in red or orange have higher historical crash rates than Statewide averages for similar facilities, whereas locations highlighted in yellow or green have similar or lower historical crash rates than statewide average for similar facilities. The results are shown in the following subsections. Note that no crash data was available for Highway 612.

INTERSTATE 49 – WASHINGTON COUNTY LINE TO HIGHWAY 72

As shown in **Table A-1**, no significantly elevated crash rates or KA crash rates were noted along Interstate 49.

					Total C	rashes			KA Crashes			
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
					I-49)						
1-49	29	74.16 - 75.21	92,000	355	2.01	1.20	1.67	5	2.83	3.94	0.72	
1-49	29	75.21 - 77.93	79,000	381	0.97	1.20	0.81	16	4.09	3.94	1.04	
1-49	29	77.93 - 80.05	79,000	358	1.17	1.20	0.97	14	4.57	3.94	1.16	
1-49	29	80.05 - 82.00	79,205	333	1.18	1.20	0.98	13	4.61	3.94	1.17	
1-49	29	82.00 - 83.16	82,000	215	1.24	1.20	1.03	11	6.34	3.94	1.61	
1-49	29	83.16 - 84.29	82,000	153	0.91	1.20	0.76	6	3.56	3.94	0.90	
1-49	29	84.29 - 85.85	69,358	164	0.83	1.20	0.69	10	5.05	3.94	1.28	
1-49	29	85.74 - 88.08	50,721	167	0.77	0.81	0.95	2	0.92	3.16	0.29	

Table A-1: Interstate 49 Crash Rate Ratios

HIGHWAY 12 – HIGHWAY 264 TO HIGHWAY 71B

As shown in **Table A-2**, no elevated crash rates or KA crash rates were noted along Highway 12.

			-		Total C	rashes		KA Crashes				
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
					Hwy	12						
Hwy 12	2	7.94 - 12.77	3,742	33	1.00	2.48	0.40	0	0.00	9.55	0.00	
Hwy 12	2	12.77 - 13.93	7,600	16	0.99	2.48	0.40	1	6.22	9.55	0.65	
Hwy 12	2	13.93 - 17.81	10,335	50	0.68	2.48	0.28	1	1.37	9.55	0.14	
Hwy 12	2	17.81 - 20.50	26,947	709	5.35	3.98	1.35	2	1.51	7.88	0.19	

Table A-2: Highway 12 Crash Rate Ratios

HIGHWAY 62 – INTERSTATE 49 SB RAMP TO HIGHWAY 94

As shown in **Table A-3**, the crash rate along Highway 62 is similar to the statewide average crash rate, and the KA crash rate is lower than the statewide average KA crash rate for similar highway facilities.

			Total Crashes					KA Crashes				
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
Hwy 62												
Hwy 62	2	0.00 - 3.09	28,628	746	4.63	3.98	1,16	11	6.82	7.88	0.87	

Table A-3: Highway 62 Crash Rate Ratios

HIGHWAY 71B – N 8TH STREET TO NW A STREET

As shown in **Table A-4**, the segment of Highway 71B from Interstate 49 to Highway 12/ SW Regional Airport Boulevard (LM 0.00-1.48) has a crash rate ratio more than double the statewide average. Highway 71B is a multilane highway with a two-way left turn lane (TWLTL), numerous intersections both signalized and unsignalized, and driveways. Congestion, signal timing issues, and lack of access management are possible contributing factors to the high crash rates within this segment.

					Total C	rashes		KA Crashes				
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
					Hwy 7	71B						
Hwy 71B	18B	8.58 - 11.80	27,920	1000	6.09	3.98	1.53	11	6.70	7.88	0.85	
Hwy 71B	19B	0.00 - 1.48	38,391	998	9.62	3.98	2.42	8	7.71	7.88	0.98	
Hwy 71B	19B	1.48 - 4.20	26,569	946	7.22	3.98	1.82	5	3.82	7.88	0.48	

Table A-4: Highway 71B Crash Rate Ratios

HIGHWAY 102 – HIGHWAY 279 TO INTERSTATE 49 SB RAMP

As shown in **Table A-5**, the segment of Highway 102 from Highway 71B/ Walton Boulevard to Interstate 49 Southbound Ramps (LM 4.00-5.88) has double the statewide average crash rate for similar highway facilities. This segment is a multilane highway with a TWLTL, several intersections, and several driveways. Congestion, signal timing issues, and lack of access management are possible contributing factors to the high crash rates within this segment.

Table A-5:	Highway	102	Crash	Rate	Ratios
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					Total C	rashes	-	KA Crashes				
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
					Hwy ′	102						
Hwy 102	2	9.04 - 11.36	9,750	153	3.70	2.48	1.49	7	16.93	9.55	1.77	
Hwy 102	3	0.00 - 2.02	26,223	343	3.55	3.98	0.89	5	5.17	7.88	0.66	
Hwy 102	3	2.02 - 4.00	32,057	396	3.43	3.98	0.86	7	6.06	7.88	0.77	
Hwy 102	3	4.00 - 5.88	31,169	858	8.01	3.98	2.01	7	6.53	7.88	0.83	

HIGHWAY 112 – WASHINGTON COUNTY LINE TO HIGHWAY 12

As shown in **Table A-6**, no significantly elevated crash rates or KA crash rates were noted along Highway 112.

					Total C	rashes		KA Crashes					
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²		
Hwy 112													
Hwy 112	2	0.00 - 3.49	10,149	108	1.67	2.48	0.67	6	9.29	9.55	0.97		
Hwy 112	2	3.49 - 3.85	14,000	19	2.07	2.48	0.83	0	0.00	9.55	0.00		
Hwy 112	2	3.85 - 6.42	9,466	39	0.88	2.48	0.35	1	2.25	9.55	0.24		
Hwy 112	2	6.42 - 8.75	8,244	96	2.74	2.48	1.10	2	5.72	9.55	0.60		
Hwy 112	2	8.75 - 9.22	8,100	17	2.36	4.35	0.54	0	0.00	4.84	0.00		

 Table A-6: Highway 112 Crash Rate Ratios

HIGHWAY 264 – BLOOMINGTON STREET TO HIGHWAY 12

As shown in **Table A-7**, the crash rate for the segment of Highway 264 between Interstate 49 and Goad Springs Road (LM 0.74-1.01) is over twice the statewide average for similar highways. Congestion and signal timing issues may be contributing factors to this elevated crash rate.

Table A-7: Highway 264 Crash Rate Ratios

					Total C	tal Crashes KA Crashes					
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²
					Hwy 2	264					
Hwy 264	2	0.00 - 0.74	25,252	198	5.85	3.98	1.47	2	5.90	7.88	0.75
Hwy 264	2	0.74 - 1.01	26,000	75	5.75	2.48	2.31	1	7.66	9.55	0.80
Hwy 264	2	1.01 - 7.35	7,132	257	1.67	2.48	0.67	17	11.04	9.55	1.16

HIGHWAY 279 – SW REGIONAL AIRPORT BOULEVARD TO HIGHWAY 102

As shown in **Table A-8**, no elevated crash rates were noted along Highway 279 from SW Regional Airport Boulevard to Highway 102.

					Total C	rashes		KA Crashes				
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²	
Hwy 279												
Hwy 279	0	0.00 - 3.02	4,100	19	0.84	2.48	0.34	0	0.00	9.55	0.00	

 Table A-8: Highway 279 Crash Rate Ratios

NON-HIGHWAY CRASHES

Segments of Airport Boulevard, SW I Street, and Regional Avenue were evaluated as shown in **Table A-9**, and no significantly elevated crash rates were noted along these routes.

					Total C	rashes		KA Crashes						
Route	Section	Log Miles	Weighted ADT	Number of Crashes	Crash Rate (per MVM) ¹	Statewide Average (per MVM) ¹	Crash Rate Ratio ²	Number of Crashes	Crash Rate (per 100 MVM) ¹	Statewide Average (per 100 MVM) ¹	Crash Rate Ratio ²			
Airport Blvd														
Airport Blvd	1	0.00 - 0.68	3,400	0	0.00	2.48	0.00	0	0.00	9.55	0.00			
					SW I	St								
SW I St	1	0.00 - 0.70	12,000	70	4.57	2.48	1.84	0	0.00	9.55	0.00			
SW I St	1	0.70 - 2.19	14,000	53	1.39	3.98	0.35	0	0.00	7.88	0.00			
	Regional Ave													
Regional Ave	2&3	0.00 - 0.60	4,400	6	0.29	2.48	0.12	0	0.00	9.55	0.00			

Table A-9: Non-Highway Crash Rate Ratios

Northwest Arkansas National Airport Access Study (F) BENTON COUNTY

APPENDIX B – TRAFFIC FORECAST



Prepared by Garver for the Arkansas Department of Transportation and the Northwest Arkansas National Airport In cooperation with the Federal Highway Administration

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TRAFFIC FORECAST METHODOLOGY

The Arkansas Department of Transportation (ARDOT) proposes to perform an Environmental Assessment (EA) for a connector road from the Springdale Northern Bypass (SNB) to the Northwest Arkansas National Airport (XNA) in Benton County. Alliance Transportation Group, Inc. (ATG) assisted Garver, LLC (Garver) in forecasting the 2040 No Action traffic volumes and the Action Alternative traffic volumes as part of the Environmental Assessment.

This report describes the methods used for the traffic forecast and the results of the forecast. The first method utilized to project 2040 No-Action traffic volumes was the trend function in *Excel*. This method utilizes historic data and is based on the equation y=mx+b, where y represents the traffic volume and x represents the year. For these calculations, the true "b" value was selected.

The Northwest Arkansas Travel Demand Model (NWA TDM) was the other tool used to develop the traffic forecast for 2040 No-Action volumes as well as the three Action Alternative volumes. The NWA TDM was thoroughly reviewed and updated to ensure the forecasting reliability for the XNA connector alternatives. A 2010 scenario, a 2040 No-Action scenario, and three Action Alternative scenarios were performed using the NWA TDM. The modeled volumes were used in the development of the growth rates between 2010 and 2040 for study corridors.

EXISTING VOLUMES

The existing volumes were determined based on Average Daily Traffic (ADT) volumes available on the ARDOT website and turning movement count data provided by XNA, ARDOT, and the City of Bentonville. **Tables B-1** through **B-11** show the historical data available on the study corridors. Several stations had intermittent time frames of missing data. In instances where one or two years of data was missing, the average of the year before and the year after was used to fill in the missing data point. Filled in data points are shown in red.

Approach	Washington County Line to Wagon Wheel Rd	Wagon Wheel Rd and Hwy 264 (at Hwy 612)	Hwy 264 to Pleasant Grove Rd	Pleasant Grove Rd to Promenade Blvd	Promenade Blvd to New Hope Rd to Hwy 12	New Hope Rd to Hwy 71B	Hwy 71B to Hwy 102/Hwy 62	Hwy 102/Hwy 62 to Hwy 72
Station	041935	040509	040090	040530	040086	040070	040432	040251
1998	37,000	35,000	36,000		32,000	37,000	27,000	20,000
1999	42,000	42,000	39,000		36,000	39,000	37,000	25,000
2000	43,000	53,000	41,000		47,000	40,000	35,000	28,000
2001	51,000	49,000	43,000		48,000	46,000	41,000	28,000
2002	55,000	50,000	47,000		49,000	48,000	37,000	30,000
2003	56,000	53,000	50,000		51,000	55,000	44,000	31,000
2004	63,300	52,100	63,200		50,900	58,800	46,400	35,800
2005	66,100	63,700	64,800		60,800	58,500	50,300	39,700
2006	66,300	64,700	62,400		58,400	61,500	48,300	34,300
2007	65,500	63,900	66,000	62,500	60,700	66,000	52,800	38,500
2008	63,000	62,000	64,000	63,000	63,000	66,000	54,000	39,000
2009	64,000	63,000	65,000	64,000	63,000	67,000	55,000	39,000
2010	69,000	69,000	69,000	69,000	69,000	70,000	58,000	42,000
2011	72,000	71,000	71,000	71,000	71,000	72,000	60,000	42,000
2012	71,000	71,000	71,000	72,000	73,000	73,000	60,000	44,000
2013	77,000	74,500	74,500	75,500	76,500	76,500	56,000	44,000
2014	74,000	78,000	78,000	79,000	80,000	80,000	60,000	49,000
2015	76,000	75,000	74,000	76,000	76,000	77,000	64,000	47,000
2016	76,000	78,000	77,000	78,000	80,000	80,000	64,000	48,000
2017	78,000	78,000	77,000	78,000	80,000	80,000	64,000	51,000
2018	92,000	79,000	79,000	79,000	82,000	82,000	69,000	51,000

Table B-1: Historical ADT on Interstate 49

Approach	Hwy. 264 to NW Corner of XNA	NW Corner of XNA to Regional Ave	Regional Ave to SW Regional Airport Blvd	Vaughn Rd to Mill Dam Rd	Mill Dam Rd to CR 576	CR 576 to SW Bright Rd	SW Bright Rd to Hwy 112/SW I St	Hwy 112/SW I St to SW Rainbow Ln	SW Rainbow Ln to Hwy 71B (SE Walton Blvd)
Station	040009	040159	040114	040115	040116	040117	040010	040011	040012
1998	1,600						3,600		5,400
1999	1,600						5,300	7,400	7,200
2000	1,900						6,800	8,800	6,800
2001	1,800						8,000	9,400	9,500
2002	2,100						8,000	600	10,000
2003	2,200						9,300	10,000	11,000
2004	2,400						11,500	10,900	11,800
2005	2,600						13,200	14,900	14,300
2006	3,300		6,000	5,600	7,900	12,100	15,500	19,400	16,800
2007	2,700		5,700	5,600	8,000	11,700	15,600	20,100	19,400
2008	2,600	2,800	5,300	5,200	7,900	13,000	16,000	21,000	20,000
2009	2,700	3,300	6,000	6,400	9,100	15,000	20,000	21,000	19,000
2010	2,700	2,700	5,700	6,200	8,400	13,000	18,000	22,000	20,000
2011	2,400	2,800	5,600	5,600	8,300	12,000	18,000	2,000	16,000
2012	2,800	2,900	5,700	6,200	8,800	14,000	20,000	21,000	19,000
2013	300	3,200	5,900	6,700	9,200	14,000	22,000	17,000	18,000
2014	3,100	1,800	6,500	6,200	9,200	14,000	22,000	21,000	18,000
2015	3,200	3,400	6,400	7,000	10,000	14,000	23,000	23,000	20,000
2016	3,500	3,200	6,900	6,800	9,900	15,000	23,000	25,000	21,000
2017	3,900	4,000	7,100	7,700	11,000	18,000	28,000	28,000	23,000
2018	3,700	3,900	7,600	8,100	13,000	23,000	32,000	29,000	24,000

Table B-2: Historical ADT on Highway 12

Approach	I-49 SB Ramp to west of I-49 NB Ramp	I-49 NB Ramp to east of Dixieland Road	East of Dixieland Road to Hwy. 94
Station	040136	040422	040423
1998		23,000	20,000
1999		20,000	20,000
2000		24,000	18,000
2001		24,000	19,000
2002		27,000	21,000
2003		27,000	20,000
2004		29,500	22,400
2005		31,900	24,600
2006		33,800	25,700
2007		31,000	24,000
2008	38,000	30,000	22,000
2009	39,000	31,000	24,000
2010	39,000	29,000	23,000
2011	37,000	28,000	23,000
2012	40,000	30,000	23,000
2013	38,000	31,000	24,000
2014	35,000	29,000	22,000
2015	35,000	28,000	23,000
2016	37,000	26,000	22,000
2017	38,000	28,000	23,000
2018	37,000	30,000	25,000

Table B-3: Historical ADT on Highway 62

Approach	N 8th St to Dixieland Rd	Dixieland Rd to N 34th St	N 34th St to N 46th St	N 46th St to I-49	I-49 to SE Dodson Rd/SE J St	E Dodson Rd/SE J St to Hwy 12 (SW Regional Airport Blvd)	Hwy 12 (SW Regional Airport Blvd) to SW Rainbow Ln	SW Rainbow Ln to Airport Rd/SE 28th St	Airport Rd/SE 28th St to SW Commerce Dr	SW Commerce Dr to Hwy 102 (SW 14th St)	SW 8th St to SW I St
Station	040413	040137	040414	040139	040200	040201	040202	040203	040204	040205	040206
1998			22,000		21,000	14,000	14,000	15,000	16,000	14,000	19,000
1999	17,000		23,500		22,000	17,000	13,000	15,000	17,000	15,000	20,000
2000	18,000		23,500		18,000	18,000	12,000	15,000	18,000	16,000	20,000
2001	21,000		25,000		23,000	18,500	18,000	15,000	19,000	18,000	21,000
2002	23,000		26,000		23,000	19,000	13,000	15,000	21,000	20,000	21,000
2003	25,000		26,000		24,000	20,000	13,000	15,000	20,000	20,000	21,000
2004	23,400		28,400		24,500	21,300	12,400	16,000	18,400	22,700	24,500
2005	23,200		26,500		29,000	25,600	15,350	18,750	22,850	20,400	25,800
2006	27,200		29,600		33,500	29,900	18,300	21,500	27,300	25,700	29,800
2007	24,900		30,000		35,250	31,300	19,900	23,600	28,100	26,700	32,800
2008	23,000	27,000	30,000	32,000	35,250	34,000	21,000	24,000	29,000	27,000	30,900
2009	24,000	27,000	30,000	31,000	37,000	32,000	19,000	23,000	28,000	26,000	29,000
2010	24,000	27,000	28,000	31,000	38,000	34,000	21,000	24,000	30,000	28,000	27,000
2011	22,000	26,000	28,000	30,000	37,000	33,000	21,000	24,000	29,000	26,000	28,000
2012	23,000	27,000	29,000	30,000	37,000	35,000	21,000	24,000	30,000	27,000	28,000
2013	23,000	28,000	27,000	32,000	35,000	36,000	20,000	23,000	29,000	27,000	26,000
2014	23,000	29,000	28,000	34,000	38,000	32,000	19,000	22,000	27,000	26,000	27,000
2015	24,000	27,000	31,000	31,000	37,000	35,000	22,000	25,000	31,000	29,000	27,000
2016	24,000	27,000	31,000	30,000	37,000	36,000	20,000	25,000	29,000	29,000	27,000
2017	25,000	28,000	32,000	32,000	39,000	37,000	21,000	23,000	28,000	26,000	24,000
2018	24,000	29,000	30,000	34,000	40,000	38,000	21,000	24,000	29,000	27,000	26,000

Table B-4: Historical ADT on Highway 71B

Approach	Hwy. 279 to N Vaughn Rd.	N Vaughn Rd to Hwy. 102 Spur/S Fish Hatchery Rd.	Hwy. 102 Spur/S Fish Hatchery Rd. to SW Tater Black Rd	SW Tater Black Rd. to SW Elm Tree Rd.	SW Elm Tree Rd. to SW I St.	SW I St. to Hwy. 71B (Walton Blvd.)	Hwy. 71B (Walton Blvd. to SW A St.)	SW A St. to SE J St.	SE J St. to SE Moberly Ln.	SE Moberly Ln to I-49 SB Ramp
Station	040056	040057	040127	040128	040215	040132	040214	040216	040217	040174
1998	5,600	6,900			9,200		9,400			
1999	6,200	7,900			11,000		13,000	15,000	21,000	
2000	6,300	7,600			13,000		13,000	18,000	21,000	
2001	6,000	7,800			15,000		15,000	19,000	22,000	
2002	6,200	8,000			15,000		18,000	21,000	25,000	
2003	5,000	8,300			16,000		19,000	22,000	26,000	
2004	6,900	8,800			19,900		19,600	26,900	29,600	
2005	7,700	9,300			20,200		22,400	25,900	31,700	
2006	8,700	10,500			22,300		24,900	28,500	33,000	
2007	6,800	8,100			21,100		22,000	25,600	29,900	
2008	6,400	8,500	15,000	18,000	22,000	19,000	21,000	26,000	30,000	36,000
2009	6,600	8,800	15,000	16,000	25,000	17,000	26,000	26,000	31,000	37,000
2010	7,200	9,300	16,000	18,000	25,000	18,000	22,000	27,000	32,000	37,000
2011	7,100	9,600	18,000	20,000	28,000	27,000	24,000	27,000	30,000	34,000
2012	6,200	9,200	18,000	23,000	28,000	27,000	24,000	29,000	32,000	37,000
2013	7,300	9,100	18,000	20,000	26,000	25,000	26,000	28,000	31,000	33,000
2014	7,300	11,000	21,000	25,000	32,000	31,000	25,000	27,000	29,000	34,000
2015	8,200	11,000	23,000	29,000	34,000	31,000	28,000	30,000	31,000	35,000
2016	8,000	11,000	25,000	29,000	35,000	30,000	27,000	29,000	32,000	35,000
2017	7,900	11,000	24,000	29,000	32,000	29,000	27,000	29,000	30,000	35,000
2018	8,400	12,000	25,000	30,000	33,000	29,000	28,000	30,000	32,000	35,000

Table B-5: Historical ADT on Highway 102

	Approach	Washington County Line to Marchant Rd/Carrie Smith Rd	Marchant Rd/Carrie Smith Rd to Hwy 264 (E Lowell Ave)	Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)	Hwy 264 (Healing Spirngs Rd) to Sands Rd	Sands Rd to CR 46 (W Haxton Rd)	CR 46 (W Haxton Rd) to Chattin Cir	Ch 12
ĺ	Station	041681	040160	040059	040060	040061	040171	r -
	1998	3,300		4,800	2,300	2,400		
	1999	3,000		5,800	2,600	2,500		
	2000	3,300		6,100	2,500	2,500		
	2001	3,450		5,800	2,900	2,500		
	2002	3,450		5,800	2,700	2,400		
	2003	3,600		6,000	2,700	2,400		
	2004	5,800		6,400	4,700	3,100		
	2005	5,700		7,900	4,300	4,200		
	2006	6,100		8,900	4,400	4,800		
	2007	6,400		8,200	4,400	4,700		
	2008	6,000	4,300	8,000	4,400	4,300	3,600	
	2009	6,000	5,000	9,100	4,500	5,000	3,800	
	2010	6,000	4,500	7,900	4,100	4,600	4,200	
	2011	5,800	4,600	7,700	5,000	4,800	4,400	
	2012	6,400	5,500	8,700	5,700	5,700	5,100	
	2013	6,900	5,900	6,700	6,650	6,600	5,600	
	2014	8,200	6,900	11,000	7,600	7,500	6,700	
	2015	9,300	8,300	12,000	8,700	7,900	7,900	
	2016	10,000	9,400	15,000	11,000	9,500	10,000	
	2017	10,000	9,100	14,000	11,000	9,800	10,000	
	2018	11,000	10,000	14,000	10,000	9,500	8,800	

Table B-6: Historical ADT on Highway 112

ttin Cir to Hwy (SW Regional irport Blvd)
040062
2,400
2,450
2,500
2,500
2,400
2,400
2,500
3,800
4,300
4,400
4,000
4,800
4,100
4,300
5,000
5,800
6,600
7,400
8,500
8,600
8,100

Approach	Bloomington St to I-49	l-49 to Goad Springs Rd	Goad Springs Rd to Belview Rd	Belview Rd to S Rainbow Rd	S Rainbow Rd to Hwy 112	Hwy 112 (Main St) to Mill Dam Rd	Mill Dam Rd to Airport Blvd	Airport Blvd to Hwy 12
Station	040103	040155	040104	040154	040072	040172	040073	040156
1998	18,000		4,200		2,800		2,100	
1999	18,000		5,400		4,000		3,500	
2000	20,000		4,900		4,100		3,700	
2001	19,000		6,600		3,900		3,700	
2002	20,000		6,500		3,800		3,500	
2003	21,000		7,200		4,200		3,500	
2004	21,800		7,000		4,200		4,200	
2005	22,400		7,900		5,400		4,600	
2006	23,000		8,400		6,200		4,700	
2007	20,900		8,300		5,300		4,600	
2008	20,000	23,000	8,200	5,400	5,000	5,400	4,300	2,000
2009	22,000	24,000	10,000	6,700	6,000	6,500	4,600	2,500
2010	21,000	23,000	8,900	5,800	5,200	5,400	5,000	2,100
2011	19,000	20,000	9,700	6,400	5,300	4,800	4,500	1,800
2012	21,000	23,000	11,000	6,900	6,100	5,800	4,700	2,200
2013	20,000	21,000	10,000	7,100	6,850	6,000	5,100	2,500
2014	22,000	24,000	11,000	8,800	7,600	6,800	5,800	2,300
2015	22,000	22,000	13,000	9,600	8,100	7,100	5,800	2,600
2016	24,000	25,000	13,000	11,000	8,800	8,500	6,900	2,800
2017	25,000	25,000	13,000	10,000	8,800	7,700	6,600	3,000
2018	25,000	26,000	13,000	9,500	7,400	8,000	7,400	3,300

Table B-7: Historical ADT on Highway 264

Table B-8: Historical ADT on Highway 279

Approach	SW Regional Airport Blvd to Hubber Rd/Holloway Rd	Hubber Rd/Holloway Rd to Hwy 102 (W Centerton Blvd)
Station	040075	040076
1998	1,300	1,400
1999	1,300	1,400
2000	1,900	2,000
2001	2,000	2,300
2002	1,700	2,100
2003	2,100	1,800
2004	2,400	2,800
2005	3,000	3,100
2006	2,900	3,000
2007	2,600	2,900
2008	2,400	2,400
2009	2,500	2,600
2010	2,700	2,800
2011	2,700	2,600
2012	2,600	2,600
2013	2,700	2,700
2014	2,900	3,100
2015	3,500	3,500
2016	3,600	3,600
2017	3,850	3,850
2018	4,100	4,100

Table B-9: Historical ADT on Airport Boulevard

Approach	Airport Entrance to Hwy 264
Station	040181
1998	
1999	
2000	
2001	
2002	
2003	
2004	
2005	
2006	
2007	
2008	3,600
2009	3,200
2010	3,400
2011	3,500
2012	3,600
2013	3,500
2014	4,200
2015	3,700
2016	3,800
2017	3,000
2018	3,400

Approach	Hwy 71B (Walton Blvd) to Hwy 102 (SW 14th St)	Hwy 102 (SW 14th St) to Hwy 12 (SW Regional Airport Blvd)	
Station	040237	040238	
1998	4,100	1,100	
1999	4,300	1,400	
2000	4,200	1,200	
2001	4,000	1,600	
2002	4,500	1,800	
2003	4,600	1,700	
2004	5,100	2,000	
2005	3,000	3,500	
2006	8,700	4,600	
2007	9,250	3,700	
2008	9,800	4,100	
2009	9,000	3,700	
2010	8,200	3,900	
2011	9,400	5,150	
2012	11,000	6,400	
2013	11,000	9,600	
2014	12,000	11,000	
2015	12,000	12,000	
2016	11,000	12,000	
2017	11,000	12,000	
2018	12,000	14,000	

Table B-10: Historical ADT on SW I Street

Table B-11: Historical ADT on Regional Avenue

Approach	Regional Ave from Hwy. 12 to Airport Blvd
Station	040173
1998	
1999	
2000	
2001	
2002	
2003	
2004	
2005	
2006	
2007	
2008	3,200
2009	2,900
2010	3,200
2011	3,100
2012	3,200
2013	3,500
2014	3,500
2015	3,800
2016	4,000
2017	3,700
2018	4,400

TRAVEL DEMAND MODEL

Travel Demand Models (TDMs) are tools used to help understand how changes to a transportation system, combined with population growth and land use changes over time, might affect travel patterns in a given area in a specified future year. The NWA TDM was used as the tool for forecasting traffic of the XNA Connector alternatives.

The most up-to-date NWA TDM was obtained from the Northwest Arkansas Regional Planning Commission (NWARPC). The NWA TDM is a four-step model covering Benton County, Washington County, and a small portion of MacDonald County with a base year of 2010 and a forecast year of 2040. The 2040 NWA model network reflects the roadway projects included in the NWARPC 2040 Metropolitan Transportation Plan (MTP).

The NWA TDM includes three time periods, as shown in **Table B-12**. The NWA TDM has passenger and truck components that allow the forecasting of both passenger and truck volumes on roadways.

Time Period	Count Station ID
AM Peak	6:00am – 9:00am
PM Peak	3:00pm – 6:00pm
	12:00am – 6:00am,
Off Peak	9:00am – 3:00pm,
	6:00pm – 12:00am

Table B-12: NWA TDM Time Periods

The NWA TDM was used to run a 2010 (base year) scenario, a 2040 No-Action scenario, and three 2040 Build alternative scenarios. These scenarios were used to develop growth

rates from 2010 to 2040 on Highway 264 and Highway 112 and to guide the development of 2040 traffic volumes on the new alternative roadway segments.

The NWA TDM's inputs were thoroughly reviewed to ensure that the model accurately represents the 2010 land use and roadway conditions within the project area, and that the model reasonably forecasts land use and roadway traffic in 2040. The NWA TDM's base year validation was reviewed and improved to increase the model's forecasting reliability. Input revisions were carried through to all modeled scenarios to ensure consistency.

The following sections describe how the NWA TDM was reviewed and updated to forecast traffic for the XNA Connector alternatives.

NWA TDM REVIEW AND UPDATES

The basic building blocks of a TDM are two geographic layers: the transportation system network layer and the traffic analysis zone (TAZ) layer. The network layer represents the transportation system, including different categories of roads (such as freeways, arterials, collectors, ramps, etc.) in a region. The TAZ layer stores land use information of a region. A TAZ is a basic geographical unit that links land uses with the transportation system.

This section describes the review and updates of the two geographic layers, the land use inputs, and the validation improvement for the NWA TDM. This section also lists the assumptions for coding the three alignment alternatives in the NWA TDM's network.

GEOGRAPHIC LAYERS

The NWA TDM's TAZ structure was reviewed and found to be adequate for the desired level of detail along the XNA Connector alternatives. No changes were made to the existing TAZ structure.

The NWA TDM adopts a multi-year master roadway network that includes roadways for both 2010 and 2040. For any scenario run using the NWA TDM, the master network is used to create a separate network for the scenario. The master network was reviewed and updated to ensure revisions were applied to the networks for all scenarios. Roadway alignments and attributes (such as number of lanes and functional class) near XNA were reviewed. Minor coding errors including link connectivity, two missing intersections, and the directionality of a ramp were fixed. The north entrance to XNA from Regional Avenue that was not previously coded was added to the master network. The centroid connectors of TAZs near XNA were also adjusted to better reflect zonal traffic loading to the network.

The NWA TDM master roadway network reflects the roadway projects included in the NWARPC 2040 MTP. Two projects that directly impact the XNA Connector analysis are: 1) Springdale Northern Bypass (SNB) extension from Highway 112 to Highway 412 and 2) widening Highway 112 from one lane per direction to two lanes per direction from Regional Airport Boulevard in the City of Bentonville to Howard Nickell Road in the City of Fayetteville. Being fiscal constraint projects, these two projects are included in the 2040 No-Action and all three alternatives scenarios.

LAND USE INPUT

Land use inputs, or population and employment, of the TAZs in a TDM decide the magnitude and locations of travel demand generated in a region. As part of the base year validation review, the 2010 zonal population and employment near XNA were reviewed based on the 2010 Census data and Google Earth aerial images. The 2010 Census data

and Google Earth aerial images confirmed the NWA TDM's inputs reasonably represent the 2010 land use conditions.

The 2040 land use inputs of the NWA TDM were reviewed to ensure the model incorporated a reasonable 2040 land use forecast for the XNA Connector analysis. For the purpose of summarizing statistics, an XNA project area was defined by the limits of Highway 102 in the north, US 412 in the south, IH49 in the east, and a line about four miles west of the XNA airport.

Table B-13 presents the 2010 and 2040 population and employment along with the corresponding 2010 to 2040 compound annual growth rates (CAGR) for the model area, Benton County, and the XNA project area.

Variables	NWA Region	Benton County	XNA Project Area
2010 Population	436,166	223,400	37,754
2040 Population	841,332	425,863	139,143
2010-2040 Population CAGR	2.2%	2.2%	4.4%
2010 Employment	187,116	91,638	17,619
2040 Employment	339,285	204,137	40,796
2010-2040 Employment CAGR	2.0%	2.7%	2.8%

Table B-13: NWA TDM Population and Employment Overview

The NWA TDM forecasts that the entire NWA region and Benton County have a 2% population growth rate between 2010 and 2040. This trend is consistent with the population projection for the NWA region and Benton County by the Arkansas Economic Development Institute (AEDI)¹. The NWA TDM forecasts that the NWA region has a 2% employment growth rate and Benton County has a 3% employment growth rate between 2010 and 2040. This trend is reasonable based on the historical growth between 2002 and 2012 calculated using the Economic Census data provided by the Arkansas State Data

¹ The AEDI population projection data was downloaded from <u>https://aedi.ualr.edu/index.php?id=939</u>.
Center². The NWA TDM's forecast shows that the XNA project area has a higher population growth than the other regions.

The available recent local land use plans from cities near XNA³ were downloaded and reviewed to evaluate the future land use input near XNA in the NWA TDM. The NWARPC staff was also consulted regarding the development near XNA. The review of the local land use plans and the information obtained from the NWARPC staff confirmed the NWA TDM reasonably reflected the future land use plan near XNA. **Figure B-1** and **Figure B-2** present the TAZ population and employment changes near XNA between 2010 and 2040, respectively.

 ² The Economic Census data was downloaded from <u>http://arstatedatacenter.youraedi.com/economic-census/</u>.
 ³ Only City of Bentonville and City of Rogers have recently updated land use plans. The 2018 City of Bentonville Community Plan was downloaded from <u>http://www.bentonvillear.com/258/City-Plans</u>. The 2019 City of Rogers Comprehensive Growth Plan was downloaded from <u>https://rogersar.gov/1165/Plans-Manuals-Ordinances</u>.







Figure B-2: 2010 to 2040 NWA TDM Employment Change by TAZ

The NWA TDM includes the XNA airport as a special generator with average daily flights as the input variable. The special generator input used for 2010 was 50 average daily flights. The 2010 special generator value and the trip rate were confirmed to be reasonable based on the 2010 annual enplanement data and comparisons between traffic counts and modeled volumes near XNA. The special generator input used for 2040 was 73 average daily flights, which indicated a 1.3% CAGR. To evaluate this forecasted airport growth, historical XNA annual enplanement data and the XNA master construction plan were obtained from XNA staff. Historical annual enplanement and planned 2034 enplanement are presented in **Table B-14**.

Years	Annual Enplanement	Data Source
2000	367,157	
2010	570,625	XNA Airport Enplanement Data
2018	788,261	
2034	1,300,000	XNA Master Construction Plan

Table B-14: XNA Annual Enplanement

For the past 18 years, the XNA enplanement increased by a 4.3% CAGR. The airport is planning that the enplanement will increase with a 3.2% CAGR between 2018 and 2034. Based on this information, the 1.3% CAGR of average daily flights used by the NWA TDM is believed to be relatively low and was, therefore, adjusted to 3%. This adjustment changed the 2040 airport special generator input from 73 to 120 daily flights. With this adjustment, the NWA TDM produced around 10,000 daily vehicle trips in the airport TAZ, which was a reasonable result compared to the planned 2034 enplanement.

VALIDATION IMPROVEMENT

As described in the NWA TDM Validation Memo⁴, the published NWA TDM was previously validated for each of the model steps. The total modeled volume for the NWA TDM shows a 93% comparison to the total traffic counts. The total modeled volume for the XNA project area shows a comparison of 99% to the total traffic counts, with a 26% RMSE. Count comparisons for nine available 2010 count locations near the XNA airport on Regional Avenue, Airport Boulevard, and between XNA and SNB on Highway 264 and Highway 112 are provided in this report to demonstrate the NWA TDM's performance for modeling roadway volumes near the XNA airport. **Figure B-3** shows these nine count locations, and **Table B-15** presents the count comparisons before and after the network corrections and adjustments.

⁴ The NWA TDM Validation Memo was included in the model package provided by NWARPC.



Figure B-3: Count Comparison Locations

Count Station ID	Count Location	2010	Model Results Before Adjustment		Model Results After Adjustment	
		AADT⁵	Volumes	% of Count	Volumes	% of Count
040181	Airport Blvd.	3,400	3,871	114%	3,089	91%
040173	Regional Ave.	3,200	3,466	108%	3,253	102%
040156	Hwy 264 W. of Airport Blvd.	2,100	2,784	133%	2,389	114%
040073	Hwy 264 E. of Airport Blvd.	5,000	6,257	125%	6,031	120%
040172	Hwy 264 W. of Hwy 112	5,400	2,496	46%	4,545	84%
040059	Hwy 112 S. of Hwy 264	7,900	6,545	83%	6,733	85%
040160	Hwy 112 N. of SNB	4,500	7,048	157%	5,371	119%
041681	Hwy 112 S. of SNB	6,000	9,210	156%	6,036	101%
040060	Hwy 112 N. of Hwy 264	4,100	8,597	210%	6,285	153%

Table B-15:Count Comparison near XNA

The comparison in **Table B-15** shows that the network corrections and centroid connector adjustments significantly improved the NWA TDM's performance for modeling roadway volumes near XNA. The modeled volumes are within 10% of the counts on Airport Boulevard (count station 040181) and Regional Avenue (count station 040173), which indicates that the NWA TDM accurately represents traffic entering/leaving the airport.

ALTERNATIVE CODING ASSUMPTIONS

The three Action Alternatives were coded in the master roadway network. Coding alternatives in the master roadway network ensures the XNA Connector is the only difference between the alternative scenarios. **Table** B-16 **B-16** describes the coding assumptions of the three alternatives.

⁵ The 2010 AADT data was downloaded from ARDOT Traffic Count Website: <u>https://www.arkansashiqhways.com/System Info and Research/traffic info/traffic map.aspx</u>

Alternatives	Functional Class (FHWA Definition)	Number of Lanes	Posted Speed	Lane Width	Right Shoulder Width ⁶	Divided/ Undivided	Access Point/Intersections
New Alignment	Rural Principal Arterial	2 lanes per direction	70 mph	12 feet	10 feet	Divided	1) New alignment, 2) Ramp access to Highway 264, and 3) Ramp access to Springdale Northern Bypass.
Partial New Alignment	Urban Principal Arterial	2 lanes per direction	45 mph	12 feet	1.5-foot cub and gutter (no shoulder)	Divided	 New alignment between XNA and Brush Arbor Road, 2) Existing alignment (with improvement) of Highway 264 between Brush Arbor Road and Colonel Meyers Road, 3) New alignment between Highway 264 and Highway 112, and 4) At-grade intersections at Highway 112.
Improve Existing	Rural Principal Arterial	2 lanes per direction	50 mph	12 feet	6 feet	Divided	Widen Highway 264 and Highway 112.

Table B-16: NWA TDM Coding Assumptions for the Three Alternatives

The NWARPC 2040 MTP includes two projects that directly impact the XNA Connector analysis: the SNB extension from Highway 112 to Highway 412, and the widening of Highway 112 from one lane per direction to two lanes per direction from Regional Airport Boulevard to Howard Nickell are included in the 2040 No-Action and all the three Action Alternative scenarios.

⁶ The NWA TDM requires right shoulder width as an input for capacity estimation.

NWA TDM TRAFFIC FORECAST

The NWA TDM modeled volumes were used to develop the growth rates between 2010 and 2040 for Highway 112 and Highway 246 and to guide the development of forecast traffic volumes for the new alternative roadway segments. As listed in **Table B-12**, the AM peak period is three hours, stretching from 6:00 am to 9:00 am. Likewise, the PM peak period includes the hours between 3:00 pm and 6:00 pm. Modeled volumes reported in this section are all rounded to the nearest hundred.

Note that the modeled results are provided for planning purposes and to assist in visualizing conceptual outcomes of proposed improvements in the corridor and should not be used for design work or investment decisions on specific project improvements.

2040 NO-ACTION ALTERNATIVE

The 2040 No-Action Alternative includes roadway projects from the NWARPC 2040 MTP and excludes the XNA connector improvements on the existing facilities and new alignment alternatives. It should be noted that Highway 112 is coded as a 2-lane per direction facility as part of the 2040 MTP projects.

Table B-17 presents the 2010 to 2040 CAGR on Highway 264 and Highway 112 from theNo-Action scenario.

Count Station	Count Location	24-Hour CAGR	AM Period CAGR	PM Period CAGR	24-Hour Truck CAGR
040073	Hwy 264 E. of Airport Blvd.	2.4%	2.0%	1.8%	1.8%
040172	Hwy 264 W. of Hwy 112	2.8%	2.9%	2.8%	0.8%
040059	Hwy 112 S. of Hwy 264	3.3%	2.9%	2.6%	3.3%
040160	Hwy 112 N. of SNB	4.8%	4.3%	3.6%	5.3%

Table B-17: 2010-2040 CAGR on Hwy. 264 and Hwy. 112 (2040 No-Action Alt.)

2040 NEW ALIGNMENT ALTERNATIVE

The 2040 New Alignment Alternative was coded as a rural principal arterial with fully controlled access.

Figure B-4 shows New Alignment Alternative as coded in the NWA TDM 2040 network. **Table B-18** presents the 2010 to 2040 CAGR on Highway 264 and Highway 112 with the XNA Connector New Alignment Alternative in place. **Table B-19** presents the 2040 modeled volumes on the main section of the New Alignment Alternative.

Table B-18: 2010-2040 CAGR on Hwy. 264 and Hwy. 112 (2040 New Alignment Alt.)

Count Station	Count Location	24-Hour CAGR	AM Period CAGR	PM Period CAGR	24-Hour Truck CAGR
040073	Hwy 264 E. of Airport Blvd.	-0.1%	-0.3%	-0.4%	-2.9%
040172	Hwy 264 W. of Hwy 112	2.3%	2.6%	2.6%	-1.2%
040059	Hwy 112 S. of Hwy 264	2.9%	2.5%	2.2%	2.7%
040160	Hwy 112 N. of SNB	3.9%	3.3%	2.8%	3.9%

Table B-19: 2040 Modeled Volumes on New Alignment Alternative Main Section

Direction	24-Hour Volume	AM Period Volume	PM Period Volume	24-Hour Truck Volume
Northbound	7,000	1,700	1,900	1,500
Southbound	7,400	1,300	2,300	1,600

The modeled volumes for New Alignment Alternative ramps at Highway 264 and SNB are shown in **Figure B-5** through **Figure B-10**.

Figure B-4: XNA Connector New Alignment Alternative in the 2040 Roadway Network

Figure B-5: 2040 New Alignment Alternative Daily Ramp Volumes (at Highway 264)

Figure B-6: 2040 New Alignment Alternative AM Period Ramp Volumes (at Highway 264)

Figure B-7: 2040 New Alignment Alternative PM Period Ramp Volumes (at Highway 264)

Figure B-8: 2040 New Alignment Alternative Daily Ramp Volumes (at SNB)

Figure B-9: 2040 New Alignment Alternative AM Period Ramp Volumes (at SNB)

Figure B-10: 2040 New Alignment Alternative PM Period Ramp Volumes (at SNB)

2040 PARTIAL NEW ALIGNMENT ALTERNATIVE

The 2040 Partial New Alignment Alternative was coded as an urban principal arterial with partially controlled access. Partial New Alignment Alternative includes improvement to a portion of Highway 264 and construction of a new roadway with alignment between Highway 264 and Highway 112. **Figure B-11** shows Partial New Alignment Alternative as coded in the NWA TDM 2040 network. **Table B-20** presents the 2010 to 2040 CAGR on Highway 264 and Highway 112 with the XNA Connector Partial New Alignment Alternative in place. **Table B-21** presents the 2040 modeled volumes on the new alignment of the Partial New Alignment Alternative.

「able B-20: 2010-2040 CAGR on Hwy	. 264 and Hwy. 112 (2040	Partial New Alignment Alt.)
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Count Station	Count Location	24-Hour CAGR	AM Period CAGR	PM Period CAGR	24-Hour Truck CAGR
040073	Hwy 264 E. of Airport Blvd.	2.8%	2.4%	2.2%	3.0%
040172	Hwy 264 W. of Hwy 112	2.4%	2.5%	2.6%	-0.2%
040059	Hwy 112 S. of Hwy 264	2.9%	2.6%	2.1%	2.8%
040160	Hwy 112 N. of SNB	5.3%	4.5%	4.1%	6.3%

Table B-21: 2040 Modeled Volumes on Partial New Alignment Alternative New Alignment

Direction	24-Hour Volume	AM Period Volume	PM Period Volume	24-Hour Truck Volume
Northbound	4,800	1,200	1,500	1,100
Southbound	5,300	900	1,800	1,200

Figure B-11: XNA Connector Partial New Alignment Alternative in the 2040 Roadway Network

2040 IMPROVE EXISTING ALTERNATIVE

Improve Existing Alternative widens the existing Highway 112 and Highway 264 roadways. **Table B-22** presents the 2010 to 2040 CAGR on Highway 264 and Highway 112 with the improvement to the two roadways.

Table B-22: 2010-2040 CAGR on Hwy	. 264 and Hwy. 112	2 (2040 Improve E	Existing Alt.)
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Count Station	Count Location	24-Hour CAGR	AM Period CAGR	PM Period CAGR	24-Hour Truck CAGR
040073	Hwy 264 E. of Airport Blvd.	2.5%	2.1%	2.0%	1.9%
040172	Hwy 264 W. of Hwy 112	2.7%	2.7%	2.5%	0.8%
040059	Hwy 112 S. of Hwy 264	3.7%	3.4%	3.0%	3.6%
040160	Hwy 112 N. of SNB	5.0%	4.5%	3.8%	5.5%

2040 TRAFFIC FORECAST RESULTS

NO-ACTION ALTERNATIVES

For the final annual growth rates (AGR) along the corridors, an average of the two methods for each individual segment was calculated. At locations where a negative growth rate was calculated from either the Trend function or the TDM, a 0.00% AGR was assumed prior to averaging. Once theses averages were calculated, the individual segments were grouped into logical segments and weighted averages based on volumes were then determined. **Tables B-23** through **B-33** reflect the results of the 2040 forecasts. Table locations where a 0.00% AGR was assumed in place of negative growth rates are highlighted in yellow.

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used
	Washington Co	unty Line to W	agon Wheel Ro			Promenade Blv	d to New Hope	e Rd to Hwy 12	
2018		92,	000		2018		82,	000	
AGR (%)	1.60%	0.54%	1.07%	1.05%	AGR (%)	2.38%	1.15%	1.77%	1.75%
2040	130,474	103,488	116,000	116,000	2040	137,556	105,494	121,000	120,000
	Wagon Wheel	Rd and Hwy 26	4 (at Hwy 612)			New I	lope Rd to Hw	y 71B	
2018		79,0	000		2018		82,	000	
AGR (%)	2.16%	0.52%	1.34%	1.35%	AGR (%)	2.36%	1.04%	1.70%	1.70%
2040	126,538	88,471	106,000	106,000	2040	137,082	102,982	119,000	119,000
	Hwy 264	to Pleasant G	rove Rd		Hwy 71B to Hwy 102/Hwy 62				
2018		79,	000		2018	69,000			
AGR (%)	2.32%	1.03%	1.68%	1.70%	AGR (%)	2.06%	1.34%	1.70%	1.70%
2040	130,939	98,942	114,000	114,000	2040	108,044	92,390	100,000	100,000
	Pleasant Gr	ove Rd to Prom	enade Blvd		Hwy 102/Hwy 62 to Hwy 72				
2018		79,0	000		2018		51,	000	
AGR (%)	1.85%	0.89%	1.37%	1.35%	AGR (%)	2.23%	1.84%	2.04%	2.05%
2040	118,115	96,050	107,000	106,000	2040	82,929	76,214	79,500	79,500

Table B-23: 2040 Traffic	Forecast on	Interstate 49
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Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used
	Hwy. 26	4 to NW Corner	r of XNA			CR S	576 to SW Brigh	nt Rd	
2018		3,7	00		2018		23,	000	
AGR (%)	1.42%	1.99%	1.71%	1.70%	AGR (%)	1.34%	3.81%	2.58%	2.40%
2040	5,047	5,712	5,400	5,400	2040	30,815	52,392	40,000	39,000
	NW Corne	er of XNA to Reg	gional Ave			SW Brigh	nt Rd to Hwy 11	2/SW I St	
2018		3,9	00		2018				
AGR (%)	1.59%	3.35%	2.47%	2.40%	AGR (%)	2.47%	3.32%	2.89%	3.00%
2040	5,521	8,052	6,700	6,600	2040	54,708	65,614	60,000	61,500
	Regional Ave	to SW Regiona			Hwy 112/S	W I St to SW R	ainbow Ln		
2018	7,600				2018	29,000			
AGR (%)	1.35%	2.58%	1.96%	2.40%	AGR (%)	2.48%	3.48%	2.98%	3.00%
2040	10,200	13,302	11,500	13,000	2040	49,716	61,500	55,500	55,500
	Vaugl	hn Rd to Mill Da	am Rd			SW Rainbow Li	n to Hwy 71B (SE Walton Blvd)
2018		8,1	00		2018		24,	000	
AGR (%)	1.71%	3.14%	2.42%	2.40%	AGR (%)	2.60%	3.61%	3.11%	3.00%
2040	11,762	15,987	13,500	13,500	2040	42,246	52,327	47,000	46,000
	Mill	Dam Rd to CR	576						
2018		13,	000						
AGR (%)	1.57%	3.14%	2.36%	2.40%					
2040	18,331	15,987	21,500	22,000					

Table B-24: 2040 Traffic Forecast on Highway 12

Table B-25: 2040 Traffic Forecast on Highway 62

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used		
	I-49 SB Ran	np to west of I-4	9 NB Ramp		East of Dixieland Road to Hwy. 94						
2018		37,	000		2018		25,	000			
AGR (%)	-0.71%	-0.44%	0.00%	0.05%	AGR (%)	-0.03%	1.75%	0.87%	1.15%		
2040	31,655	33,604	37,000	37,500	2040	24,809	36,595	30,500	32,000		
	I-49 NB Ram	p to east of Div	tieland Road								
2018		30,	000								
AGR (%)	0.88%	1.83%	1.36%	1.15%							
2040	36,410	44,743	40,500	38,500							

Note: The AGR% used for I-49 SB Ramp to the west of I-49 NB Ramp was based on the adjacent Highway 102 segment

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used		
	N 8tl	h St to Dixielan	d Rd		Hwy	12 (SW Region	al Airport Blvd) to SW Rainbo	w Ln		
2018		24,0	000		2018		21,	000			
AGR (%)	0.88%	1.54%	1.21%	1.10%	AGR (%)	2.05%	-0.65%	0.70%	1.10%		
2040	29,132	33,572	31,500	30,500	2040	32,851	18,189	24,500	26,500		
	Dixie	land Rd to N 34	lth St		SW Rainbow Ln to Airport Rd/SE 28th St						
2018		29,	000		2018		24,	000			
AGR (%)	0.43%	1.51%	0.97%	1.10%	AGR (%)	2.24%	0.07%	1.15%	1.10%		
2040	31,873	40,329	36,000	37,000	2040	30,500					
	N 3	4th St to N 46th	n St		Airport Rd/SE 28th St to SW Commerce Dr						
2018		30,	000		2018		29,000				
AGR (%)	1.25%	1.42%	1.34%	1.10%	AGR (%)	2.32%	1.10%				
2040	39,436	40,939	40,000	38,000	2040	37,000					
		N 46th St to I-49)			SW Commerce	e Dr to Hwy 10	2 (SW 14th St)			
2018		34,0	000		2018 27,000						
AGR (%)	0.22%	1.62%	0.92%	1.10%	AGR (%)	2.37%	0.27%	1.32%	1.10%		
2040	35,718	48,378	41,500	43,500	2040	45,208	28,620	36,000	34,500		
	I-49 to \$	SE Dodson Rd/	SE J St			SV	8th St to SW	St			
2018		40,0	000		2018		26,	000			
AGR (%)	2.29%	0.78%	1.53%	1.65%	AGR (%)	1.61%	0.21%	0.91%	1.10%		
2040	65,787	47,469	56,000	57,500	2040	36,945	27,238	31,500	33,000		
E Dods	on Rd/SE J St	to Hwy 12 (SW	Regional Airpo	ort Blvd)					ł		
2018		38,	000								
AGR (%)	2.60%	0.87%	1.73%	1.65%							
2040	66,785	46,015	55,500	54,500							

Table B-26: 2040 Traffic Forecast on Highway 71B

Table B-27: 2040 Traffic Forecast on Highway 102

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used
	Hwy.	279 to N Vaugh	ın Rd.			SW I St. to	Hwy. 71B (Wa	alton Blvd.)	
2018		8,4	.00		2018		29,	000	
AGR (%)	0.97%	0.52%	0.74%	1.05%	AGR (%)	3.48%	2.06%	2.77%	2.45%
2040	10,385	9,405	9,900	10,500	2040	61,564	53,000	49,500	
N V	aughn Rd to H	wy. 102 Spur/S	Fish Hatchery	Rd.		Hwy. 71B	(Walton Blvd. t	o SW A St.)	
2018		12,0	000		2018		28,	000	
AGR (%)	1.17%	1.39%	1.28%	1.05%	AGR (%)	2.39%	1.04%	1.72%	1.30%
2040	15,512	16,253	16,000	15,000	2040	47,092	35,191	40,500	37,000
Hwy. 102 Spur/S Fish Hatchery Rd. to SW Tater Black Rd						SN	A St. to SE J	St.	
2018	25,000				2018	30,000			
AGR (%)	3.27%	0.97%	2.12%	2.45%	AGR (%)	1.86%	0.65%	1.25%	1.30%
2040	50,745	30,922	39,500	42,500	2040	44,971	34,576	39,500	40,000
	SW Tater Bla	ack Rd. to SW E	Elm Tree Rd.			SE J S	St. to SE Mobe	rly Ln.	
2018		30,	000		2018		32,	000	
AGR (%)	3.49%	1.14%	2.32%	2.45%	AGR (%)	1.45%	0.64%	1.04%	1.30%
2040	63,864	38,468	49,500	51,000	2040	43,881	36,846	40,000	42,500
	SW El	m Tree Rd. to S	WISt.			SE Mobe	rly Ln to I-49 S	SB Ramp	
2018		33,	000		2018	35,000			
AGR (%)	2.95%	1.99%	2.47%	2.45%	AGR (%) -0.64% 0.08% 0.04%				0.05%
2040	62,595	50,879	56,500	56,000	2040	30,364	35,635	35,500	35,500

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used		
Washi	ngton County I	Line to Marchar	nt Rd/Carrie Sn	hith Rd	Sands Rd to CR 46 (W Haxton Rd)						
2018		11,0	000		2018	9,500					
AGR (%)	2.23%	4.30%	3.27%	3.50%	AGR (%)	3.34%	3.50%				
2040	17,881	27,758	22,500	23,500	2040	19,500	20,000				
March	ant Rd/Carrie	Smith Rd to Hw	y 264 (E Lowe	ll Ave)	CR 46 (W Haxton Rd) to Chattin Cir						
2018		10,0	000		2018		8,800				
AGR (%)	3.95%	4.83%	4.39%	3.50%	AGR (%)	4.90%	3.86%	4.38%	3.50%		
2040	23,471	28,199	25,500	21,500	2040	25,224	20,259	22,500	19,000		
Hwy 2	64 (E Lowell A	ve) to Hwy 264	(Healing Spirn	gs Rd)	Chattin Cir to Hwy 12 (SW Regional Airport Blvd)						
2018		14,0	000		2018		8,1	00			
AGR (%)	2.07%	3.29%	2.68%	3.50%	AGR (%)	2.82%	4.47%	3.65%	3.50%		
2040	21,969	28,544	25,000	30,000	2040	14,933	21,203	18,000	17,500		
	Hwy 264 (Hea	ling Spirngs Ro	d) to Sands Rd								
2018		10,	000								
AGR (%)	2.83%	3.80%	3.32%	3.50%							
2040	18,471	22,728	20,500	21,500							

Table B-28: 2040 Traffic Forecast on Highway 112

Table B-29: 2040 Traffic Forecast on Highway 264

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used	
	Bloo	omington St to	I-49			S Rai	nbow Rd to Hw	ry 112		
2018		25,	000		2018		7,4	100		
AGR (%)	0.60%	2.17%	1.39%	1.45%	AGR (%)	2.91%	2.25%	2.58%	2.50%	
2040	28,539	40,134	34,000	34,500	2040	13,908	12,064	13,000	12,500	
	I-49 t	o Goad Spring	s Rd		Hwy 112 (Main St) to Mill Dam Rd					
2018		26,	000		2018		8,0	000		
AGR (%)	0.75%	2.36%	1.55%	1.45%	AGR (%)	2.76%	2.80%	2.78%	2.50%	
2040	30,636	43,391	36,500	35,500	2040	14,572	14,683	14,500	14,000	
	Goad Sp	rings Rd to Be	lview Rd			Mill Da	m Rd to Airpo	rt Blvd		
2018		13,	000		2018	7,400				
AGR (%)	2.56%	3.63%	3.10%	3.40%	AGR (%)	1.71%	2.42%	2.07%	2.50%	
2040	22,674	28,509	25,500	27,000	2040	10,743	12,527	11,500	12,500	
	Belviev	v Rd to S Raint	oow Rd			Airp	ort Blvd to Hw	y 12		
2018		9,5	00		2018		3,3	800		
AGR (%)	3.90%	3.65%	3.78%	3.40%	AGR (%)	2.33%	3.10%	2.72%	2.50%	
2040	22,065	20,903	21,500	20,000	2040	5,483	6,462	6,000	5,700	

Table B-30: 2040 Traffic Forecast on Highway 279

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used	
SW	Regional Airpo	rt Blvd to Hubb	er Rd/Hollowa	y Rd	Hubber Rd/Holloway Rd to Hwy 102 (W Centerton Blvd)					
2018		4,1	00		2018	4,100				
AGR (%)	1.84% 2.14% 1.99% 2.00%				AGR (%)	1.69% 2.34% 2.01% 2.0				
2040	6,125	6,530	6,300	6,300	2040	5,929	6,816	6,400	6,300	

Table B-31: 2040 Traffic Forecast on Airport Boulevard

Method	Trend	NARTS	Average	Used	Method	Trend	Calculated	NARTS	Average	Used
	Airpor	t Entrance to H	wy 264							
2018		3,4	100							
AGR (%)	0.30%	3.08%	1.69%	3.10%						
2040	3,635	6,626	4,900	6,700						

Method	Trend	NARTS	Average	Used	Method	Trend	NARTS	Average	Used		
Н	wy 71B (Waltor	n Blvd) to Hwy	102 (SW 14th S	it)	Hwy 102 (SW 14th St) to Hwy 12 (SW Regional Airport Blvd)						
2018		12,	000		2018	14,000					
AGR (%)	3.06%	2.49%	2.78%	2.90%	AGR (%)	2.91%	3.02%	2.96%	2.90%		
2040	23.311	20.596	22.000	22,500	2040	26.302	26.917	26,500	26,500		

Table B-32: 2040 Traffic Forecast on SW I Street

Table B-33: 2040 Traffic Forecast on Regional Avenue

Method	Trend	NARTS	Average	Used	Method	Trend	Calculated	NARTS	Average	Used
	Regional Ave	from Hwy. 12 t	o Airport Blvd							
2018		4,4	400							
AGR (%)	1.97%	2.91%	2.45%	2.45%						
2040	6,765	4,428	7,500	7,500						

ACTION ALTERNATIVES

For the Action Alternatives, the 2040 No-Action volumes were multiplied by the percent change in volume based on the NARTS TDM and are shown in **Table B-34**.

Conidar Location AT Knmpg fram. 50, Action			2040 No- Action	2040 New Altern	Location ative	2040 Pai Location A	rtial New Alternative	2040 Improve Existing Alternative	
I-0 Wagen Week Raten Hwy 244 lat Hwy 812 100.00 98.95% 100.000 100.005 100.000 100.005 I-49 Hwy 244 la Phasamat Group R1 114.000 99.31% 113.000 99.85% 110.000 99.85% 110.000 99.85% 110.000 99.85% 100.005 79.850 99.85% 100.005 79.850 99.85% 100.005 79.850 99.85% 100.005 79.850 99.85% 179.500 99.85% 179.500 99.85% 179.500 99.85% 170.000 99.85% 179.500 99.85% 150.00 100.95% 125.00 100.95% 125.00 100.95% 125.00 100.95% 125.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 135.00 100.05% 15.200 100.05% 15.200 100.05% 15.200 100.05% 15.200 100.05% 15.00 100.05% 15.00 100.05% 15	Corridor	Location	ADT	% Change from No- Action	ADT	% Change from No- Action	ADT	% Change from No- Action	ADT
149 Hwy 264 (p Resamt Grow Ed 11400 99.7% 11400 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 114000 99.80% 110000% 75.50 99.80% 110000% 75.50 99.80% 110000% 75.50 99.80% 110000% 75.50 99.80% 110000% 75.50 99.80% 110000 99.85% 15000 11116% 67.00 99.80% 110000% 15.50 Hwy 12 Ragrad Ach Bit Mi Dam Rd 15.50 101.44% 15.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05% 55.50 100.05%<	I-49	Wagon Wheel Rd and Hwy 264 (at Hwy 612)	106,000	98.98%	105,000	100.00%	106,000	100.00%	106,000
I+49 Hey Yills hey 102Hey 22 100.001 99.85% 100.000 99.85% 100.000 99.85% 100.005 99.85% 100.005 99.85% 100.005 99.85% 100.005 99.85% 100.005 99.85% 100.005 99.85% 100.005 6.800 Hay 12 NM Camer d XMA Regional Axpot Biud 13.00 116.85% 15.00 100.85% 15.00 100.05% 5.200 Hay 12 Ma Dam Rei D C F 576 22.00 96.05% 22.00 90.25% 52.00 100.05% 52.00 Hay 12 CA T576 DS M Boyth Pd AI 360.00 96.95% 52.00 90.75% 52.50 100.00% 52.500 Hay 12 SW Bright Rd to Hey 112SW 151 55.00 99.75% 52.500 100.00% 57.500 90.00% 55.500 90.00% 55.500 100.00% 57.500 90.00% 55.500 100.00% 55.500 100.00% 57.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00%	1-49	Hwy 264 to Pleasant Grove Rd	114,000	99.31%	113,000	99.77%	114,000	99.66%	114,000
I+4 Hwy 12 WW Commer of XNA to Regional Avec 95.00 96.95% 79.500 100.00% 79.500 96.85% 79.500 Hwy 12 Regional Ave to SW Regional Avec 65.00 105.05% 7.000 101.16% 6.700 100.00% 53.000 98.15% 13.000 Hwy 12 Varaghe Rid to MB Dam Rd 13.000 165.95% 17.000 98.31% 37.000 98.15% 33.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 19.000% 57.000 100.05% 57.000 19.000% 57.000 100.05%	1-49	Hwy 71B to Hwy 102/Hwy 62	100,000	99.63%	99,500	99.88%	100,000	99.88%	100,000
Hwy 12 NV Come of XM to Regional Arep table 6.600 103.8% 7.000 101.95% 6.200 90.00% 6.800 Hwy 12 Regional Aree to SW Regional Amport Blod 13.000 116.95% 15.000 101.95% 13.000 99.15% 13.000 99.15% 13.000 99.15% 13.000 99.15% 13.000 99.5% 22.000 100.05% 13.200 100.05% 13.200 100.05% 13.200 100.05% 13.200 100.05% 13.200 100.05% 52.000 99.15% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 52.000 100.05% 51.000 100.05% 51.000 100.05% 51.000 100.05% 51.000 100.05% 57.000 100.05% 51.000 100.05% 57.000 100.05% 51.000 100.05% 57.000 100.05% 57.000 100.05% 57.000 100.05% 57.000 100.05% 57.000 100.05% 57.000 100.05% 57.000 100.05% 57.000	I-49	Hwy 102/Hwy 62 to Hwy 72	79,500	99.69%	79,500	100.00%	79,500	99.85%	79,500
Hwy 12 Regional Aves to SW Regional Algord Bird 13.000 116.95% 15.000 101.95% 13.000 9615% 13.000 Hwy 12 Variagin Ref 0 Mil Dam Rd to Kir Dam Rd 13.000 96.95% 21.000 100.02% 22.000 100.02% 22.000 100.02% 22.000 100.02% 22.000 100.02% 22.000 100.02% 22.000 100.02% 22.000 100.02% 52.000 199.75% 52.500 100.02% 55.500 Hwy 12 SW Rainbow Lin Uhry 718 [EE Walton Birkh) 55.00 199.72% 55.500 190.00% 57.000 190.00% 57.000 190.00% 57.000 190.00% 57.000 190.00% 57.000 190.00% 57.000 190.00% 55.000 100.07% 55.000 100.07% 55.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.0	Hwy 12	NW Comer of XNA to Regional Ave	6,600	105.81%	7,000	101.16%	6,700	100.00%	6,600
Hwy 12 Vaugen Red to MI Dam Rd 19.00 10.044% 13.00 100.00% 13.500 100.00% 13.500 Hwy 12 MI Dam Rd to CR 576 22.00 95.05% 21.000 100.82% 25.000 100.00% 32.000 Hwy 12 GK 76 for SW Bingt Rd to Hwy 112/SW 151 55.00 99.75% 55.00 99.75% 55.00 99.75% 55.00 100.00% 51.000 Hwy 12 SW Rathow Ln to Hwy 718 (SE Wathon Blud) 51.000 100.00% 51.000 100.00% 51.000 Hwy 718 E Doden RATEL 31 to Hwy 12 (SW Regonal Appot Blud) 54.00 99.44% 57.500 100.00% 55.000 99.75% 55.00 99.44% 55.000 100.02% 55.000 99.75% 55.000 90.02% 55.000 90.02% 55.000 90.02% 55.000 100.02% 55.000 90.02% 55.000 90.02% 55.000 100.02% 55.000 100.02% 55.000 100.02% 55.000 100.02% 55.000 100.02% 55.000 100.02% 55.000 <	Hwy 12	Regional Ave to SW Regional Airport Blvd	13,000	116.95%	15,000	101.69%	13,000	99.15%	13,000
Hwy 12 MB am Rd to CR 576 22.000 95.05% 21.000 90.21% 22.000 100.00% 22.000 Hwy 12 CR 576 to SW Bright Rd 93.000 96.95% 57.000 98.31% 57.000 98.01% 55.000 100.00% 55.000 Hwy 12 SW Bright Rd I Hwy 1156W ISI to SW Brahew Ln 55.000 99.75% 55.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 55.000 Hwy 718 L49 to SE Dodon R45E 24 to Hwy 12 (SW Haigh and build 25.000 98.67% 30.000 100.27% 30.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100.03% 54.500 100	Hwy 12	Vaughn Rd to Mill Dam Rd	13,500	101.44%	13,500	100.00%	13,500	100.00%	13,500
Hwy 12 CR 576 to SW Bright Rd 38.000 96.95% 37.000 96.31% 37.500 100.00% 58.000 Hwy 12 SW Bright Rd to Hwy 112SW 11 St 55.500 99.50% 52.000 99.75% 55.500 Hwy 12 SW Ranbow Ln D Hwy 718 (SE Wann BwL) 51.000 100.00% 51.000 100.20% 55.500 Hwy 718 Leb otsen Dadvan Appet BwL 54.500 99.15% 57.000 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 55.500 100.00% 25.500 100.25% 37.000 100.25% 37.000 100.25% 37.000 100.25% 37.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 33.000 100.05% 35.000 100.05% 35.000 100.05% <t< td=""><td>Hwy 12</td><td>Mill Dam Rd to CR 576</td><td>22,000</td><td>95.08%</td><td>21,000</td><td>100.82%</td><td>22,000</td><td>100.00%</td><td>22,000</td></t<>	Hwy 12	Mill Dam Rd to CR 576	22,000	95.08%	21,000	100.82%	22,000	100.00%	22,000
Hwy 12 SW Bright Rd to Hwy 112/SW I St 52.00 99.75% 52.00 99.75% 52.00 100.00% 55.00 Hwy 12 Hwy 112/SW Rathow Ln 65.500 99.72% 55.00 99.47% 55.00 100.00% 51.00 Hwy 12 SW Rathow Lin Io Hwy 718 E Dodson Rd/SE J St 57.500 99.11% 57.000 100.00% 57.000 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 99.44% 57.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 37.500 100.24% 55.500 100.00% 55.500 100.00% 55.000 100.24% 55.000 100.00% 55.000 </td <td>Hwy 12</td> <td>CR 576 to SW Bright Rd</td> <td>38,000</td> <td>96.95%</td> <td>37,000</td> <td>98.31%</td> <td>37,500</td> <td>100.00%</td> <td>38,000</td>	Hwy 12	CR 576 to SW Bright Rd	38,000	96.95%	37,000	98.31%	37,500	100.00%	38,000
Hwy 12 Hwy 12 SW 13 to SW Ranbow Ln 55,500 99,72% 55,500 99,44% 55,000 100,00% 51,000 Hwy 718 SW Ranbow Ln to Hwy 718 (SE Waton Bwd) 51,000 100,00% 51,000 100,00% 51,000 100,00% 51,000 100,00% 55,500 99,44% 57,500 99,44% 57,500 99,44% 57,500 99,44% 57,500 99,45% 57,500 99,45% 57,500 99,45% 57,500 99,45% 57,500 99,04% 55,000 100,07% 53,050 100,05% 53,050 100,02% 33,050 100,27% 33,050 100,27% 33,000 100,27% 33,000 100,27% 33,000 100,02% 33,000 100,27% 33,000 100,02% 53,000 100,02% 53,000 100,02% 53,000 100,02% 53,000 100,02% 33,000 100,02% 33,000 100,02% 33,000 100,02% 33,000 100,02% 33,000 100,02% 55,000 100,00% 55,000 100,00% 55,000 100	Hwy 12	SW Bright Rd to Hwy 112/SW I St	52,500	99.50%	52,000	99.75%	52,500	100.00%	52,500
Hwy 12 SW Rainbow Ln to Hwy 718 (SE Walton Bivd) 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 51.000 100.00% 57.000 99.34% 57.000 99.34% 55.000 100.00% 57.000 99.34% 55.000 100.00% 57.000 99.34% 55.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 57.000 100.00% 37.000 100.03% 37.000 100.03% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% 37.000 100.00% </td <td>Hwy 12</td> <td>Hwy 112/SW I St to SW Rainbow Ln</td> <td>55,500</td> <td>99.72%</td> <td>55,500</td> <td>99.44%</td> <td>55,000</td> <td>100.28%</td> <td>55,500</td>	Hwy 12	Hwy 112/SW I St to SW Rainbow Ln	55,500	99.72%	55,500	99.44%	55,000	100.28%	55,500
Hwy 71B L49 to SE Dadson Rd/SE J St 57,500 99.18% 57,000 100.00% 57,500 99.84% 57,500 Hwy 71B E Dadson Rd/SE J St to Hwy 12 (SW Regonal Arpot Blvd) 54,500 99.82% 52.000 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 52.500 100.03% 33.500 100.24% 37.000 100.02% 33.000 100.24% 37.000 100.02% 33.000 100.24% 37.000 100.02% 33.000 100.02% 33.000 100.02% 33.000 100.02% 33.000 100.02% 33.000 100.02% 35.000 100.00% 55.000 100.00% 55.000 100.00% 55.000 100.00% 55.000 100.00% 55.000 100.00% 55.000 100.00% 45.000 100.00% 45.000 100.00% 45.000 100.00% 45.000 100.00% 35.000 100.00% 35.0	Hwy 12	SW Rainbow Ln to Hwy 71B (SE Walton Blvd)	51,000	100.00%	51,000	100.00%	51,000	100.00%	51,000
Hwy 71B E Dotson Rd/SE J St to Hwy 12 (SW Regional Aippot Blvd) 54,500 99.31% 54,000 100.17% 54,500 100.00% 54,500 Hwy 71B SW Rahow Ln Abort Blvd (Jo SW Rahow Ln 25,500 99.22% 25,000 100.24% 26,500 100.24% 26,500 100.24% 26,500 100.24% 26,500 100.24% 30,500 100.05% 25,500 Hwy 71B Arpot Rd/SE 28h St to SW Commerce Dr 37,000 100.44% 34,500 97.7% 34,500 97.7% 34,500 97.7% 34,500 97.7% 34,500 97.7% 34,500 100.05% 55,000 100.07% 55,000 100.07% 55,000 100.07% 55,000 100.07% 56,000 100.07% 36,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 46,500 100.07% 45,500 1	Hwy 71B	I-49 to SE Dodson Rd/SE J St	57,500	99.18%	57,000	100.00%	57,500	99.84%	57,500
Hwy 71B Hwy 71B SW Regional Alport Bvol (b SW Rainbow Ln 26,500 98,28% 26,000 100.34% 26,500 100.05% 26,500 Hwy 71B SW Rainbow Ln to Aport RMSE 28h St 30,500 98,67% 30,000 100.07% 37,000 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 30,500 100.27% 33,000 100.17% 33,000 100.17% 33,000 100.17% 33,000 100.17% 33,000 100.17% 33,000 100.07% 53,000 100.07% 55,000 100.07% 55,000 100.07% 65,000 100.07% 45,500 Hwy 102 SW Bm Tree Rd. to SW 151 55,000 100.27% 47,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 100.07% 45,500 <	Hwy 71B	E Dodson Rd/SE J St to Hwy 12 (SW Regional Airport Blvd)	54,500	99.31%	54,000	100.17%	54,500	100.00%	54,500
Hwy 71B SW Rahow Ln to Aipot Rd/SE 28th St 30,500 98,67% 30,000 100.27% 30,500 100.53% 30,500 Hwy 71B Aipot Rd/SE 28th St 05 W Commerce Dr 37,000 100.97% 37,500 100.00% 37,000 100.27% 34,500 100.48% 34,500 100.48% 34,500 99,76% 34,500 99,76% 34,500 100.45% 37,000 100.57% 35,500 100.07% 35,500 100.07% 35,500 100.07% 35,500 100.07% 35,500 100.07% 55,500 100.07% 45,500	Hwy 71B	Hwy 12 (SW Regional Airport Blvd) to SW Rainbow Ln	26.500	98.28%	26.000	100.34%	26,500	100.00%	26.500
Hwy 71B Airport Rd/SE 28th St to SW Commerce Dr 37,000 100.97% 37,500 100.00% 37,000 100.24% 37,000 Hwy 71B SW Commerce Dr to Hwy 102 (SW 14th St) 34,500 100.48% 34,500 99,75% 34,500 100.00% 33,000 100.00% 33,000 100.00% 55,000 100.00% 50,000 100.00% 50,000 100.00% 50,000 100.00% 50,000 100.00% 50,000 100.00% 50,000 100.00% 56,000 100.00% 56,000 100.00% 49,000 100.00% 49,000 100.00% 49,000 100.00% 49,000 100.00% 49,000 100.00% 40,000 100.00% 40,000 100.00% 40,000 100.00% 40,000 100.00% 37,000 100.00% 40,000 100.00% 42,500 100.47% 42,500 100.00% 37,500 100.00% 37,500 100.00% 37,500 100.00% 37,500 100.00% 37,500 100.00% 37,500 100.00% 37,500 100.00% 37,50	Hwy 71B	SW Rainbow Ln to Airport Rd/SE 28th St	30,500	98.67%	30.000	100.27%	30,500	100.53%	30.500
Hwy 71B SW Commerce Dr to Hwy 102 (SW 14th St) 34,500 100.45% 34,500 192.76% 34,500 130.001 Hwy 71B B (S Waton Bkrd) - Hwy 102 (SW 14th St) to Hwy 72 (W Cemi 33.000 100.15% 33.000 100.00% 33.000 Hwy 102 SW Tater Black Rd. to SW Eim Tree Rd. 51.000 97.44% 49.500 99.04% 55.000 100.00% 65.000 Hwy 102 SW Eim Tree Rd. to SW 151 55.000 100.00% 49.500 100.00% 49.500 Hwy 102 SW 151. to Hwy, 71B (Waton Bkrd. to SW A St.) 37.000 97.87% 39.000 100.37% 49.500 100.00% 49.500 Hwy 102 SE J St. to SE J St. 40.000 100.37% 42.500 100.47% 42.500 100.07% 42.500 Hwy 102 SE Moberly Lin 42.950 100.37% 42.500 100.07% 35.500 100.00% 35.500 Hwy 102 SE Moberly Lin to 149 SB Ramp 37.500 100.30% 35.500 100.00% 35.500 Hwy 12 Harap to eastof Dixeland Rada <	Hwy 71B	Airport Rd/SE 28th St to SW Commerce Dr	37.000	100.97%	37.500	100.00%	37.000	100.24%	37.000
Hwy 71B B (S Waton Bivd) - Hwy 102 (SW 14th St) to Hwy 72 (V Cent 33,000 100.15% 33,000 100.09% 33,000 Hwy 102 SW Tater Black Rd to SW Em Tree Rd. 51,000 97,44% 49,500 90,04% 50,500 100.00% 51,000 Hwy 102 SW Em Tree Rd. to SW 15t. 56,000 92,23% 55,500 100.00% 56,000 100.00% 49,500 Hwy 102 SW 15t. to Hwy. 71B (Waton Blvd.) 49,500 98,61% 36,500 100.28% 37,000 100.00% 49,500 Hwy 102 SW A5t. to SE J St. 40,000 97,87% 39,000 100.28% 37,000 100.00% 42,500 Hwy 102 SE Moberly Ln 42,500 100.47% 42,500 100.04% 35,500 Hwy 62 I-49 SB Ramp to west of I-49 NB Ramp 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100	Hwy 71B	SW Commerce Dr to Hwy 102 (SW 14th St)	34.500	100.48%	34,500	99.76%	34,500	99.76%	34,500
Hwy 102 SW Tater Black Rd. to SW Em Tree Rd. 51,000 97.44% 49,500 99.04% 50,500 100.00% 51,000 Hwy 102 SW Em Tree Rd. to SWI SL 56,000 199.23% 55,500 100.00% 56,000 Hwy 102 SWI SL to Hwy. 71B (Waton Bud.) 49,500 98.53% 49,000 100.00% 49,500 Hwy 102 Hwy. 71B (Waton Bud. to SW A SL) 37.000 98.63% 49,000 100.00% 49,500 Hwy 102 SW A SL to SE J SL 40,000 97.87% 39.000 100.28% 37.000 Hwy 102 SE J SL to SE Moberly Ln. 42.500 100.47% 42.500 100.00% 42.500 Hwy 102 SE Moberly Ln to H49 SB Ramp to east of Divelent Ramp 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 1	Hwy 71B	B (S Walton Blvd) - Hwy 102 (SW 14th St) to Hwy 72 (W Centr	33.000	100.15%	33.000	100.15%	33.000	100.00%	33.000
Hwy 102 SW Eim Tree Rd. to SW I St. 56,000 99.23% 55,500 100.00% 56,000 100.00% 56,000 Hwy 102 SW I St. to Hwy. 71B (Walton Blvd.) 49,500 98.53% 49,000 100.37% 49,500 100.00% 49,500 Hwy 102 Hwy. 71B (Walton Blvd.) 49,500 98.01% 39,000 100.37% 40,000 49,500 Hwy 102 SW A St. to SE J St. 40,000 97.87% 39,000 100.37% 40,000 42,500 100.00% 42,500 Hwy 102 SE J. St. SE Moberly Ln. 42,500 100.47% 42,500 100.00% 35,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30% 37,500 100.30%	Hwy 102	SW Tater Black Rd, to SW Elm Tree Rd.	51.000	97.44%	49.500	99.04%	50,500	100.00%	51.000
Hwy 102 SW I St. to Hwy. 71B (Walton Bivd.) 49,500 98,53% 49,000 100,37% 49,500 100,00% 49,500 Hwy 102 Hwy. 71B (Walton Bivd. to SW A St.) 37,000 98,01% 36,500 100,28% 37,000 100,00% 49,500 Hwy 102 SW A St. to SE J St. 40,000 97,77% 30,000 100,47% 42,500 100,00% 42,500 Hwy 102 SE J St. to SE Moberly Ln. 42,500 100,07% 42,500 100,00% 35,500 100,00%	Hwy 102	SW Elm Tree Rd. to SW I St.	56.000	99.23%	55,500	100.00%	56,000	100.00%	56.000
Hwy 102 Hwy 21R (Waton Bivd. ISW A St.) 37,000 98,01% 65,600 100.28% 37,000 100.00% 37,000 Hwy 102 SW A St. to SE J St. 40,000 97,87% 33,000 100.47% 42,500 100.47% 42,500 100.47% 42,500 100.00% 40,000 Hwy 102 SE J St. to SE Moberly Ln. 42,500 100.47% 42,500 100.47% 42,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 35,500 100.00% 36,500 100.00% 36,500 100.00% 38,500 100.00% 38,500 100.00% 36,500 100.00% 36,500 100.00% 36,500	Hwy 102	SW I St. to Hwy, 71B (Walton Blvd.)	49.500	98.53%	49.000	100.37%	49,500	100.00%	49.500
Hwy 102 SWA St. to SE J St. 40,000 100,033 41,000 100,035 41,000 Hwy 102 SE J St. to SE Moberly Ln. 42,500 100,47% 42,500 100,47% 42,500 100,07% 42,500 Hwy 102 SE J St. to SE Moberly Ln to 1.49 SB Ramp 35,500 100,73% 36,000 100,48% 35,500 100,00% 35,500 Hwy 62 149 SB Ramp to west of 149 NB Ramp 37,500 100,00% 38,600 100,00% 38,500 100,00% 38,500 Hwy 62 149 NB Ramp to east O Dividend Road 38,500 100,00% 38,500 100,00% 38,500 Hwy 112 Washington County Line to Marchant Rd/Carrie Smith Rd 23,500 116,98% 27,500 104,43% 25,500 101,89% 22,500 Hwy 112 Hwy 264 (Healing Spings Rd) 20,000 96,48% 19,500 93,78% 20,000 96,89% 21,000 Hwy 112 CR 46 (W Haxton Rd) Chatin Cir 19,000 96,23% 18,500 94,34% 18,000 102,52% 19,500	Hwy 102	Hwy 71B (Walton Blvd to SW A St)	37 000	98.01%	36,500	100.28%	37 000	100.00%	37 000
Hwy 102 SE J St. to SE Moberly Ln. 42,500 100.47% 42,500 100.47% 42,500 100.00% 42,500 Hwy 102 SE Moberly Ln to 149 SB Ramp 35,500 100.73% 36,000 100.47% 42,500 100.00% 35,500 Hwy 62 149 SB Ramp to east of Dialeand Road 35,500 100.03% 37,500 100.00% 38,500 101.85% 24,000 104.95% 22,500 Hwy 112 Hwy 264 (Ealowell Ave) to Hwy 264 (Eawell Ave) 21,500	Hwy 102	SW A St. to SE J St.	40.000	97.87%	39.000	100.53%	40.000	100.00%	40.000
Hwy 102 SE Moberly Ln to 1-49 SR Ramp 11:00 10:00	Hwy 102	SE J St. to SE Moberly I n	42 500	100 47%	42 500	100 47%	42 500	100.00%	42 500
Hwy foz L49 SB Ramp to west of L49 NB Ramp 37,500 100.00% 38,000 100.00% 38,500 100.00% 37,500 100.00% 38,500 Hwy f62 L49 NB Ramp to east of Dixelend Road 38,500 100.00% 12,43% 33,500 Hwy 112 Hwy 264 (Healing Spirngs Rd) 30,000 90.40% 27,000 89.27% 12,000 160.01% 20,000 100.01% 12,43% 33,500 Hwy 112 Sands Rt to CR 46 (W Haxton Rd) 10 Cottattin Cir 19,000 96.23% 18,500 94.34% 18,000 102.52%	Hwy 102	SE Moberly Ln to 1-49 SB Ramp	35 500	100 73%	36,000	100 48%	35 500	100.00%	35,500
Hury 62 14-9 kB Ramp to east of Dixieland Road 38,500 100.00% 33,500 101.18% 24,000 104.95% 22,500 112 Hwy 264 (E Lowell Ave) to Hwy 264 (E Lowell Ave) to Hwy 264 (Lewell Ave) to Hwy 264 (Healing Spings Rd) 20,000 96.48% 19,500 94.37% 19,000 101.01% 20,000 104.95% 21,000 101.01% 20,000 104.95% 21,000 101.01% 20,000 101.01% 20,000 102.52% 19,500 100.00% 34,500 100.00% 34,500 100.00% 34,500	Hwy 62	I-49 SB Ramp to west of I-49 NB Ramp	37 500	100.90%	38,000	100.30%	37 500	100.30%	37 500
Hwy 112 Washington County Line to Marchant Rd/Carrie Smith Rd 1020000 1020000 10200	Hwy 62	I-49 NB Ramp to east of Dixieland Road	38,500	100.00%	38,500	100.00%	38 500	100.00%	38,500
Hwy 112 Machant Rd Carlie Smith Rd to Hwy 264 (E Lowell Ave) 21,000 160,001 21,000 100,104 24,000 104,95% 22,000 Hwy 112 Hwy 264 (E Lowell Ave) to Hwy 264 (E Lowell Ave) 21,500 76,13% 16,500 112,16% 24,000 104,95% 22,500 Hwy 112 Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spings Rd) 30,000 90,40% 27,000 89,27% 27,000 112,43% 33,500 Hwy 112 Hwy 264 (Healing Spings Rd) to Sands Rd 21,500 95,85% 20,500 93,78% 20,000 96,89% 21,000 Hwy 112 Sands Rd to CR 46 (W Haxton Rd) 20,000 96,48% 19,500 94,97% 19,000 101,01% 20,000 Hwy 112 Chattin Cir to Hwy 12 (SW Regional Airport Blvd) 17,500 96,15% 17,000 102,52% 18,000 Hwy 264 Bloomington St to 1-49 34,500 99,49% 34,500 100,00% 34,500 100,00% 34,500 100,00% 34,500 Hwy 264 Goad Springs Rd 35,500 99,48% 35,	Hwy 112	Washington County Line to Marchant Rd/Carrie Smith Rd	23,500	116 98%	27 500	109 43%	25 500	101 89%	24 000
Hwy 112 Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spings Rd) 30,000 90.40% 27,000 89.27% 27,000 112.43% 33,500 Hwy 112 Hwy 264 (Healing Spings Rd) to Sands Rd 21,000 95.85% 20,000 93.78% 20,000 96.89% 21,000 96.89% 20,000 96.89% 20,000 96.89% 20,000 96.89% 20,000 96.15% 17,000 102.52% 19,500 Hwy 112 CR 46 (W Haxton Rd) to Chattin Cir 19,000 96.15% 17,000 102.52% 19,500 Hwy 264 Bloomington St to 1-49 34,500 99.49% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.47% 27,000 34,500 100.47% 27,000 34,500 100.47% 27,000 34,500 100.47% 27,000 34,500 100.47% 27,000 34,500 100.47% 27,000 34,500 100.47% 27,000 <	Hwy 112	Marchant Rd/Carrie Smith Rd to Hwy 264 (F Lowell Ave)	21,500	76 13%	16 500	112 16%	24,000	104.95%	22,500
Hwy 112 Hwy 264 (Healing Spirings Rd) to Sands Rd 21,000 93.78% 20,000 96.88% 17,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 18,000 102.52% 12,000 102.52% 12,0	Hwy 112	Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)	30,000	90.40%	27 000	89.27%	27,000	112 43%	33,500
Hwy 112 Sands Rd to CR 46 (W Haxton Rd) 20,000 96.48% 19,500 94.97% 19,000 101,01% 20,000 Hwy 112 CR 46 (W Haxton Rd) to Chattin Cir 19,000 96.48% 19,500 94.37% 18,000 102,52% 19,500 Hwy 112 Chattin Cir to Hwy 12 (SW Regional Airport Blvd) 17,500 100.00% 17,500 96.48% 19,500 94.34% 18,000 102,52% 19,500 Hwy 112 Chattin Cir to Hwy 12 (SW Regional Airport Blvd) 17,500 100.00% 17,500 96.48% 17,500 90.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 34,500 100.00% 35,500 100.017% 35,500 100.017% <td< td=""><td>Hwy 112</td><td>Hwy 264 (Healing Spirngs Rd) to Sands Rd</td><td>21 500</td><td>95.85%</td><td>20,500</td><td>93 78%</td><td>20,000</td><td>96.89%</td><td>21,000</td></td<>	Hwy 112	Hwy 264 (Healing Spirngs Rd) to Sands Rd	21 500	95.85%	20,500	93 78%	20,000	96.89%	21,000
Hwy 112 Called 10 to Gr (1) (Hatton Rd) to Chattin Cir 19,000 96.23% 18,500 94.34% 18,000 102.52% 19,500 Hwy 112 Chattin Cir to Hwy 12 (SW Regional Airport Blvd) 17,500 100.00% 17,500 96.15% 17,000 102.52% 19,500 Hwy 264 Bioomington St to 1-49 34,500 99.49% 34,500 100.00% 35,500 100.17% 35,500 100.17% 35,500 100.01% 27,000 100.14% 25,500 98.59%	Hwy 112	Sands Rd to CR 46 (W Haxton Rd)	20,000	96.48%	19,500	94 97%	19,000	101 01%	20,000
Hwy 112 Chatter (Hranden Park House House <thhouse< th=""> <thhouse< th=""> House<</thhouse<></thhouse<>	Hwy 112	CR 46 (W Haxton Rd) to Chattin Cir	19 000	96.23%	18,500	94.34%	18,000	102 52%	19,500
Hwy 112 Order N (2) (1) (2) (1) (2) (1) (2) (1) (2) (1) (2) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	Hwy 112	Chattin Cir to Hwy 12 (SW Regional Airport Blyd)	17,500	100.00%	17,500	96 15%	17,000	102.52%	18,000
Hwy 264 I-49 to Goad Springs Rd 35,500 99.48% 35,500 99.83% 35,500 100.07% 27,000 Hwy 264 Goad Springs Rd to Belview Rd 27,000 94.84% 25,500 98.59% 26,500 100.47% 27,000 Hwy 264 Belview Rd to S Rainbow Rd 20,000 88.24% 17,500 96.47% 19,500 103.53% 20,500 Hwy 264 S Rainbow Rd to Hwy 112 12,500 86.49% 11,000 95.95% 12,000 108.11% 13,500 Hwy 264 Hwy 112 (Main St) to Mill Dam Rd 14,000 87.38% 12,000 88.35% 12,500 98.06% 13,500 Hwy 264 Hwy 112 (Main St) to Mill Dam Rd 14,000 87.38% 12,000 88.35% 12,500 98.06% 13,500 Hwy 264 Mill Dam Rd to Airport Blvd 12,500 65.00% 8,100 113.01% 14,000 101.63% 12,500 Hwy 612 Highway 612 - Interstate 49 to Highway 112 20,000 109.55% 22,000 101.01% 20,000 101.01% </td <td>Hwy 264</td> <td>Bloomington St to I-49</td> <td>34 500</td> <td>99.49%</td> <td>34 500</td> <td>100.00%</td> <td>34 500</td> <td>100.00%</td> <td>34 500</td>	Hwy 264	Bloomington St to I-49	34 500	99.49%	34 500	100.00%	34 500	100.00%	34 500
Hwy 264 Goad Springs Rd to Belview Rd 27,000 94.84% 25,500 98.59% 26,500 100.47% 27,000 Hwy 264 Belview Rd to S Rainbow Rd 20,000 88.24% 17,500 96.47% 19,500 100.47% 27,000 Hwy 264 Belview Rd to S Rainbow Rd 20,000 88.24% 17,500 96.47% 19,500 103.53% 20,500 Hwy 264 S Rainbow Rd to Hwy 112 12,500 86.49% 11,000 95.95% 12,000 108.11% 13,500 Hwy 264 Hwy 112 (Main St) to Mill Dam Rd 14,000 87.38% 12,000 88.35% 12,500 98.06% 13,500 Hwy 264 Mill Dam Rd to Airport Blvd 12,500 65.00% 8,100 113.01% 14,000 101.63% 12,500 Hwy 264 Airport Blvd to Hwy 12 5,700 128.33% 7,300 116.67% 6,700 100.00% 5,700 Hwy 612 Highway 612 - Interstate 49 to Highway 112 20,000 109.55% 22,000 101.01% 20,000 101.01%	Hwy 264	I-49 to Goad Springs Rd	35,500	99.48%	35,500	99.83%	35 500	100.17%	35,500
Hwy 264 Belview Rd to S Rainbow Rd 20,000 88.24% 17,500 96.47% 19,500 103.53% 20,000 Hwy 264 S Rainbow Rd to Hwy 112 12,500 86.49% 11,000 95.95% 12,000 108.11% 13,500 Hwy 264 S Rainbow Rd to Hwy 112 12,500 86.49% 11,000 95.95% 12,000 108.11% 13,500 Hwy 264 Hwy 112 (Main St) to Mill Dam Rd 14,000 87.38% 12,000 88.35% 12,500 98.06% 13,500 Hwy 264 Mill Dam Rd to Airport Blvd 12,500 65.00% 8,100 113.01% 14,000 101.63% 12,500 Hwy 264 Airport Blvd to Hwy 12 5,700 128.33% 7,300 116.67% 6,700 100.00% 5,700 Hwy 612 Highway 612 - Interstate 49 to Highway 112 20,000 109.55% 22,000 101.01% 20,000 101.01% 20,000 101.01% 20,000 101.01% 20,000 101.01% 20,000 101.01% 20,000 101.01% 20,000 <td>Hwy 264</td> <td>Goad Springs Rd to Belview Rd</td> <td>27 000</td> <td>94 84%</td> <td>25,500</td> <td>98.59%</td> <td>26 500</td> <td>100.17%</td> <td>27 000</td>	Hwy 264	Goad Springs Rd to Belview Rd	27 000	94 84%	25,500	98.59%	26 500	100.17%	27 000
Hwy 204 Deficient Not to or family 104 20,000 30,247/8 11,000 30,477/8 10,000 100,000 1	Hwy 264	Belview Rd to S Rainhow Rd	20,000	88 24%	17 500	96.47%	19 500	103 53%	20,500
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Hwy 612 Highway 612 - Highway 112 to Proposed XNA Connector 20,000 159.60% 31,500 100.51% 20,000 101.01% 20,000 6,700 100.00% 6,700 100.00% 6,700 100.00% 22,500 100.05% 22,500 100.05% <	Hwy 612	Highway 612 - Interstate 49 to Highway 112	20,000	109 55%	22 000	101.01%	20,000	98.99%	19,500
High viz	Hwy 612	Highway 612 - Highway 112 to Proposed XNA Connector	20,000	159 60%	31 500	100.51%	20,000	101 01%	20,000
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Step 1 Direct Liftence of Hwy 204 0,700 110.35% 7,400 100.00% 0,700 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 2,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00% 7,500 100.00%	Airport Blud	Airport Entrance to Hwy 264	6 700	110 30%	7 400	100.01%	6 700	100.00%	6 700
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	Regional Ave	Regional Ave from Hwy 12 to Airport Blvd	7 500	110.39%	8,300	100.00%	7 500	100.02%	7 500

Table 34: ADT Percent Change Compared to 2040 No-Action

PEAK HOUR VOLUMES

Unique to this project is the shift in directional volumes that occur during the AM and PM peak periods. Currently, the primary direction of travel in the AM is toward the south and in the PM toward the north. Due to a higher growth rate of employment generators north of the project compared to south of the project, the 2040 volumes show the primary direction of travel in the AM is toward the north and in the PM toward the south. Because of this change in direction, 2040 peak hour volumes in the primary study area included the anticipated growth rates and the directional change.

Northwest Arkansas National Airport Access Study (F) BENTON COUNTY

APPENDIX C – TRAFFIC ANALYSIS

Prepared by Garver for the Arkansas Department of Transportation and the Northwest Arkansas National Airport In cooperation with the Federal Highway Administration

This report was funded in part by the Federal Highway Administration, U.S. Department of Transportation. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

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LEVEL OF SERVICE (LOS)

For the evaluation of the study corridors, a generalized LOS tool developed by ARDOT using the methods in the latest edition of the *Highway Capacity Manual 6th Edition (HCM)* was utilized to perform

Acceptability ratios, or volume/LOS thresholds, are used to determine the acceptability of operations. A ratio less than 1 is acceptable. A ratio greater than 1 is unacceptable.

an initial screening of the corridors for current and projected traffic conditions. After the screening process, more detailed LOS analyses were performed using either *Highway Capacity Software (HCS)* or *Synchro* software. The results of the *HCS/Synchro* analyses were then compared to the results of the ARDOT LOS screening tool and any conflicting results were reconciled. The results are described by route in the following subsections.

Operational analyses of the Primary Study Area intersections were conducted using *Synchro* and its companion software *SimTraffic* software according to the *HCM* methodology and *SimTraffic* microsimulation methodology. Microsimulation allows the user to analyze intersection operations both individually and in context of the entire study network. Additionally, microsimulation gives the user a powerful visualization tool to trace any sources of vehicle delay and queuing as well as the opportunity to perform multiple simulation runs with varying traffic loading within the peak hour to account for the expected variability within a system. This variation also accounts for the various types of drivers (aggressiveness, gap acceptance tolerance) and vehicles (performance on grades, general acceleration /deceleration). Finally, micro-simulation provides the best means to demonstrate the impacts of queues on nearby intersections.

INTERSTATE 49 – WASHINGTON COUNTY LINE TO HIGHWAY 72

The initial screening indicated LOS C or better for most of the corridor except for the first segment from the Washington County Line to Wagon Wheel Road which showed LOS D with an acceptability ratio greater than 0.90. Additionally, the segments between Promenade Boulevard and Highway 71B also showed LOS D for existing conditions. For the 2040 No-Action initial screening, the entire route showed LOS E/F with acceptability ratios greater than 1.00.

For a more detailed analysis of Interstate 49 (I-49) corridor, the freeway facility module of *HCS* was used to determine the LOS along the corridor. As shown in **Table C-1**, the two southern most segments of I-49 are currently operating below an acceptable LOS with LOS E occurring from the Washington County Line to Highway 264. By the year 2040, the corridor is expected to deteriorate to LOS F from the Washington County Line to Highway 102/Highway 62 with only the northernmost segment from Highway 102/Highway 62 to Highway 72 operating at an acceptable LOS.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Washington County Line to Wagon Wheel Rd	74.16	75.21	92,000	E	1.05%	116,000	F
Wagon Wheel Rd and Hwy 264 (at Hwy 612)	75.21	77.93	79,000	E	1.35%	106,000	F
Hwy 264 to Pleasant Grove Rd	77.93	80.05	79,000	D	1.70%	114,000	F
Pleasant Grove Rd to Promenade Blvd	80.05	82.00	79,000	D	1.35%	106,000	F
Promenade Blvd to New Hope Rd to Hwy 12	82.00	83.16	82,000	D	1.75%	120,000	F
New Hope Rd to Hwy 71B	83.16	84.29	82,000	D	1.70%	119,000	F
Hwy 71B to Hwy 102/Hwy 62	84.29	85.85	69,000	В	1.70%	100,000	F
Hwy 102/Hwy 62 to Hwy 72	85.74	88.08	51,000	С	2.05%	79,500	С

Table C-1: Existing and 2040 No-Action LOS Results on the Interstate 49 Corridor

Table C-2 summarizes the corridor LOS results for the Action Alternatives. As shown, the 2040 Action Alternatives will not have an impact on the traffic operation of I-49 when compared to the 2040 No-Action Alternative.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Washington County Line to Wagon Wheel Rd	99.46%	115,000	F	100.00%	116,000	F	99.73%	116,000	F
Wagon Wheel Rd and Hwy 264 (at Hwy 612)	98.98%	105,000	F	100.00%	106,000	F	100.00%	106,000	F
Hwy 264 to Pleasant Grove Rd	99.31%	113,000	F	99.77%	114,000	F	99.66%	114,000	F
Pleasant Grove Rd to Promenade Blvd	99.10%	105,000	F	99.74%	106,000	F	99.61%	106,000	F
Promenade Blvd to New Hope Rd to Hwy 12	98.91%	119,000	F	99.76%	120,000	F	99.76%	120,000	F
New Hope Rd to Hwy 71B	99.19%	118,000	F	99.88%	119,000	F	99.88%	119,000	F
Hwy 71B to Hwy 102/Hwy 62	99.63%	99,500	F	99.88%	100,000	F	99.88%	100,000	F
Hwy 102/Hwy 62 to Hwy 72	99.69%	79,500	С	100.00%	79,500	С	99.85%	79,500	С

Table C-2: 2040 Action Alternatives LOS Results on the Interstate 49 Corridor

HIGHWAY 12 – HIGHWAY 264 TO HIGHWAY 71B

The LOS Tool indicated possible performance issues from Mill Dam Road to Highway 71B (SE Walton Boulevard) with LOS D in the rural arterial portion from Mill Dam Road to County Road 576 with an acceptability ratio greater than 1.00 and LOS D, E, and F in the urban arterial portion from SW Bright Road to Highway 71B (Walton Boulevard). By 2040, the LOS D, E, and F results extend from Regional Avenue to Highway 71B (Walton Boulevard) with acceptability ratios above 1.00.

For the detailed analysis, the sections of Highway 12 from Highway 264 to County Road 576 were analyzed using the two-lane highway module of *HCS*. The sections of Highway 12 from County Road 576 to Highway 71B (Walton Boulevard) were analyzed using *Synchro*. These results demonstrate barely adequate LOS D conditions from Mill Dam Road to County Road 576 and failing LOS from Highway 112/SW I Street to Highway 71B (Walton Boulevard) in 2018. As traffic demands grow, these facilities will fail to provide adequate service with LOS D, E, and F from Regional Avenue to Highway 71B. **Table C-3** shows the results of the existing 2018 and future 2040 LOS.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Hwy. 264 to NW Corner of XNA	7.94	11.76	3,700	А	1.70%	5,400	В
NW Corner of XNA to Regional Ave	11.76	12.77	3,900	А	2.40%	6,600	В
Regional Ave to SW Regional Airport Blvd	12.77	13.93	7,600	С	2.40%	13,000	D
Vaughn Rd to Mill Dam Rd	13.93	15.64	8,100	С	2.40%	13,500	D
Mill Dam Rd to CR 576	15.64	17.81	13,000	D	2.40%	22,000	E
CR 576 to SW Bright Rd	17.81	18.28	22,500	С	2.40%	38,000	F
SW Bright Rd to Hwy 112/SW I St	18.28	19.79	27,500	С	3.00%	52,500	F
Hwy 112/SW I St to SW Rainbow Ln	19.79	20.42	29,000	F	3.00%	55,500	F
SW Rainbow Ln to Hwy 71B (SE Walton Blvd)	20.42	20.50	26,500	F	3.00%	51,000	F

Table C-3: Existing and 2040 No-Action LOS Results on the Highway 12 Corridor

Table C-4 shows the *HCS* LOS results for the Action Alternatives for Highway 12 from Highway 264 to County Road 576. These segments show no change from the 2040 No-Action Alternative. The segments of Highway 12 from County Road 576 to Highway 71B (Walton Boulevard) were analyzed using *Synchro* for the 2040 No-Action and were not reevaluated based on the minimal difference in volumes from the 2040 No-Action scenario.

Table C-4: 2040 Action Alternatives LOS Results on the Highway 12 Corridor

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Hwy. 264 to NW Corner of XNA	91.49%	4,900	В	95.74%	5,200	В	97.87%	5,300	В
NW Corner of XNA to Regional Ave	105.81%	7,000	В	101.16%	6,700	В	100.00%	6,600	В
Regional Ave to SW Regional Airport Blvd	116.95%	15,000	D	101.69%	13,000	D	99.15%	13,000	D
Vaughn Rd to Mill Dam Rd	101.44%	13,500	D	100.00%	13,500	D	100.00%	13,500	D
Mill Dam Rd to CR 576	95.08%	21,000	E	100.82%	22,000	E	100.00%	22,000	E
CR 576 to SW Bright Rd	96.95%	37,000		98.31%	37,500		100.00%	38,000	
SW Bright Rd to Hwy 112/SW I St	99.50%	52,000	F based on	99.75%	52,500	F based on	100.00%	52,500	F based on
Hwy 112/SW I St to SW Rainbow Ln	99.72%	55,500	No-Action	99.44%	55,000	No-Action	100.28%	55,500	No-Action
SW Rainbow Ln to Hwy 71B (SE Walton Blvd)	100.00%	51,000		100.00%	51,000		100.00%	51,000	

HIGHWAY 62 – INTERSTATE 49 SB RAMP TO HIGHWAY 94

The LOS Tool showed inadequate LOS F with an acceptability ratio of greater than 1.00 for the westernmost portion of Highway 62 through the I-49 interchange area. By 2040,

the LOS F results extend to Dixieland Road, and the segment from east of Dixieland Road to Highway 94 shows LOS D.

For the detailed analysis, the segment of Highway 62 from the I-49 Southbound Ramps to west of the I-49 Northbound ramps was analyzed using *Synchro*. The results show LOS F for this segment. Due to the lack of turning movement volumes, the multilane highway module of *HCS* was used to analyze Highway 62 from the I-49 Northbound ramps through Highway 94. The results for this portion of Highway 62 show adequate performance through 2040. These results are shown in **Table C-5**.

 Table C-5: Existing and 2040 No-Action LOS Results on Highway 62

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
I-49 SB Ramp to west of I-49 NB Ramp	0.00	0.11	37,000	F	0.00%	37,000	F
I-49 NB Ramp to east of Dixieland Road	0.11	3.07	30,000	В	1.15%	38,500	С
East of Dixieland Road to Hwy. 94	3.07	3.09	25,000	В	1.15%	32,000	В

Table C-6 summarizes the corridor *HCS* LOS results for the 2040 Action Alternatives. As shown, the LOS for the Action Alternatives are the same as for the No-Action Alternative. The Action Alternatives will have an insignificant impact on the traffic volumes (less than 1% variation) when compared to the 2040 No-Action Alternative. Thus, the interchange segment was not re-evaluated using *Synchro* for the Action Alternatives.

Table C-6: 2040 Action Alternative	s LOS Results on Highway 62
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Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
I-49 SB Ramp to west of I-49 NB Ramp	100.90%	38,000	F No-Action	100.30%	37,500	F No-Action	100.30%	37,500	F No-Action
I-49 NB Ramp to east of Dixieland Road	100.00%	38,500	С	100.00%	38,500	С	100.00%	38,500	С
East of Dixieland Road to Hwy. 94	100.00%	32,000	В	100.00%	32,000	В	100.00%	32,000	В
HIGHWAY 71B – N 8TH STREET TO HIGHWAY 72

The LOS Tool indicated possible performance issues with LOS D for a few segments of Highway 71B between N 46th Street and SE Dodson Road/SE J Street and between Airport Road/SE 28th Street and Highway 102/SW 14th Street. By 2040, the LOS Tool indicated LOS D, E, and F conditions from Dixieland Road through Highway 72/W Central Avenue except for the segment from Highway 12/SW Regional Airport Boulevard to SW Rainbow Lane. Most of these segments also showed an acceptability ratio greater than 1.00.

For the more detailed analysis, the multilane highway module of *HCS* was used to analyze Highway 71B from N 8th Street through N 46th Street. *Synchro* was used to analyze Highway 71B from I-49 through Highway 72/W Central Avenue. The LOS Tool was used for the segment from N 46th Street to I-49 due to lack of data for modeling this segment. The results show LOS D and F conditions from N 46th Street through Highway 72/W Central Avenue in 2018 and LOS E and F conditions in 2040. By 2040, the segment from N 8th Street to Dixieland Road also deteriorates to LOS D. These results are shown in **Table C-7**.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
N 8th St to Dixieland Rd	8.58	9.59	24,000	С	1.10%	30,500	D
Dixieland Rd to N 34th St	9.59	10.87	29,000	В	1.10%	37,000	С
N 34th St to N 46th St	10.87	11.75	30,000	В	1.10%	38,000	С
N 46th St to I-49	11.75	11.80	34,000	D	1.10%	43,500	F
I-49 to SE Dodson Rd/SE J St	0.00	0.80	40,000	F	1.65%	57,500	F
E Dodson Rd/SE J St to Hwy 12 (SW Regional Airport Blvd)	0.80	1.48	38,000	F	1.65%	54,500	F
Hwy 12 (SW Regional Airport Blvd) to SW Rainbow Ln	1.48	1.62	21,000	F	1.10%	26,500	F
SW Rainbow Ln to Airport Rd/SE 28th St	1.64	2.00	24,000	F	1.10%	30,500	F
Airport Rd/SE 28th St to SW Commerce Dr	2.00	2.68	29,000	D	1.10%	37,000	E
SW Commerce Dr to Hwy 102 (SW 14th St)	2.68	2.99	27,000	F	1.10%	34,500	F
B (S Walton Blvd) - Hwy 102 (SW 14th St) to Hwy 72 (W Centr	2.99	4.20	26,000	F	1.10%	33,000	F

Table C-7: Existing and 2040 No-Action LOS Results on Highway 71B

Table C-8 shows the *HCS* LOS results for the Action Alternatives for Highway 71B from N 8th Street through N 46th Street. The LOS for the Action Alternatives are the same as for the No-Action Alternative. The segments of Highway 71B from I-49 through Highway 72/W Central Avenue were analyzed using *Synchro* for the Future No-Action and were not re-evaluated based on the minimal difference in volumes from the 2040 No-Action scenario. The segment from N 46th Street to I-49 utilized the LOS Tool to determine the results.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
N 8th St to Dixieland Rd	99.75%	30,500	D	99.75%	30,500	D	99.75%	30,500	D
Dixieland Rd to N 34th St	100.16%	37,000	С	100.32%	37,000	С	100.48%	37,000	С
N 34th St to N 46th St	99.80%	38,000	С	100.00%	38,000	С	100.00%	38,000	С
N 46th St to I-49	100.29%	43,500	F	100.29%	43,500	F	100.15%	43,500	F
I-49 to SE Dodson Rd/SE J St	99.18%	57,000		100.00%	57,500		99.84%	57,500	
E Dodson Rd/SE J St to Hwy 12 (SW Regional Airport Blvd)	99.31%	54,000	F based on	100.17%	54,500	F based on	100.00%	54,500	F based on
Hwy 12 (SW Regional Airport Blvd) to SW Rainbow Ln	98.28%	26,000	No-Action	100.34%	26,500	No-Action	100.00%	26,500	No-Action
SW Rainbow Ln to Airport Rd/SE 28th St	98.67%	30,000		100.27%	30,500		100.53%	30,500	
Airport Rd/SE 28th St to SW Commerce Dr	100.97%	37,500	E No-Action	100.00%	37,000	E No-Action	100.24%	37,000	E No-Action
SW Commerce Dr to Hwy 102 (SW 14th St)	100.48%	34,500	F based on	99.76%	34,500	F based on	99.76%	34,500	F based on
B (S Walton Blvd) - Hwy 102 (SW 14th St) to Hwy 72 (W Centi	100.15%	33,000	No-Action	100.15%	33,000	No-Action	100.00%	33,000	No-Action

Table C-8: 2040 Action Alternatives LOS Results on Highway 71B

HIGHWAY 102 – HIGHWAY 279 TO INTERSTATE 49 SB RAMP

The LOS Tool showed possible performance issues from SW Tater Black Road through SW I Street and from SW A Street through the I-49 Southbound Ramps with LOS D and E conditions. The Section from SE Moberly Lane to the I-49 Southbound Ramps has an acceptability ratio greater than 1.00. By 2040, the LOS Tool showed performance issues throughout most of the Highway 102 study area with LOS E or F and acceptability ratios over 1.00 from Highway 102 Spur/S Fish Hatchery Road to the I-49 Southbound Ramps.

The two-lane highway module of *HCS* was used to analyze Highway 102 from Highway 279 to Main Street, the multilane highway module of *HCS* was used to analyze from Main

Street to SW Tater Black Road, and *Synchro* was used to analyze from SW Tater Black Road to I-49 Southbound Ramps. The results of this analysis, shown in **Table C-9**, reveal unacceptable LOS E/F conditions from SW I Street through I-49 Southbound Ramps, and additional areas with LOS D conditions. By 2040, LOS F conditions prevail from SW Tater Black Road through I-49 Southbound Ramps, and LOS D/E conditions occur from N Vaughn Road to Highway 102 Spur/S Fish Hatchery Road.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Hwy. 279 to N Vaughn Rd.	9.04	10.37	8,400	В	1.06%	10,500	С
N Voucha Ed to Huy, 102 Spur/S Eich Hataban, Ed	10.37	11.30	12,000	С	1.05%	15,000	D
N Vaughin Ru to nwy. 102 Spui/S Fish hatchely Ru.	11.30	11.36	12,000	D	1.05%	15,000	E
Hwy. 102 Spur/S Fish Hatchery Rd. to SW Tater Black Rd	0.00	1.64	25,000	В	2.45%	42,500	С
SW Tater Black Rd. to SW Elm Tree Rd.	1.64	2.02	30,000	С	2.45%	51,000	F
SW Elm Tree Rd. to SW I St.	2.02	3.53	33,000	D	2.45%	56,000	F
SW I St. to Hwy. 71B (Walton Blvd.)	3.53	4.00	29,000	E	2.45%	49,500	F
Hwy. 71B (Walton Blvd. to SW A St.)	4.00	4.17	28,000	F	1.30%	37,000	F
SW A St. to SE J St.	4.17	4.92	30,000	F	1.30%	40,000	F
SE J St. to SE Moberly Ln.	4.92	5.82	32,000	E	1.30%	42,500	F
SE Moberly Ln to I-49 SB Ramp	5.82	5.88	35,000	F	0.05%	35,500	F

Table C-9: Existing and 2040 No-Action LOS Results on Highway 102

Table C-10 summarizes the corridor *HCS* LOS results for the 2040 Action Alternatives. These results demonstrate no change in LOS for the Action Alternatives when compared to the No-Action Alternative. As shown, the Alternatives will not have a significant impact on the traffic volumes (less than 1% variation for the Partial New Alignment and Improve Existing Alternatives and less than 3% for the New Alignment Alternative) when compared to the 2040 No-Action Alternative. Thus, the segments from SW Tater Black Road to the I-49 SB Ramp were not re-evaluated using *Synchro* for the Action Alternatives.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Hwy. 279 to N Vaughn Rd.	103.57%	11,000	С	100.71%	10,500	С	100.00%	10,500	С
N Vouche Dd to Huw, 102 Sour/S Eich Hotoboo, Dd	102.73%	15,500	D	100.00%	15,000	D	100.00%	15,000	D
N vaugini ku to nwy. 102 Spui/S Fish hatchery ku.	102.73%	15,500	E	100.00%	15,000	E	100.00%	15,000	E
Hwy. 102 Spur/S Fish Hatchery Rd. to SW Tater Black Rd	100.09%	42,500	С	99.52%	42,500	С	100.00%	42,500	С
SW Tater Black Rd. to SW Elm Tree Rd.	97.44%	49,500		99.04%	50,500		100.00%	51,000	
SW Elm Tree Rd. to SW I St.	99.23%	55,500		100.00%	56,000		100.00%	56,000	
SW I St. to Hwy. 71B (Walton Blvd.)	98.53%	49,000		100.37%	49,500		100.00%	49,500	
Hwy. 71B (Walton Blvd. to SW A St.)	98.01%	36,500	F based on No-Action	100.28%	37,000	F based on No-Action	100.00%	37,000	F based on No-Action
SW A St. to SE J St.	97.87%	39,000	NO / IOUOII	100.53%	40,000		100.00%	40,000	NO ROLON
SE J St. to SE Moberly Ln.	100.47%	42,500		100.47%	42,500		100.00%	42,500	
SE Moberly Ln to I-49 SB Ramp	100.73%	36,000		100.48%	35,500		100.00%	35,500	

Table C-10: 2040 Action Alternatives LOS Results on Highway 102

HIGHWAY 112 – WASHINGTON COUNTY LINE TO HIGHWAY 12

The LOS Tool showed inadequate performance for all but the northern-most 0.48 miles of this corridor in 2018. Widening from a two-lane highway to a four-lane highway is planned for this corridor. With widening, the LOS Tool showed LOS F conditions and an acceptability ratio greater than 1.00 from Highway 264 (E Lowell Avenue) to Highway 264 (Healing Springs Road) and LOS D conditions from Washington County Line to Marchant Road/Carrie Smith Road.

For the detailed analysis of 2018 existing conditions, the two-lane highway module of *HCS* was used. The results, shown in **Table C-11**, showed LOS E conditions throughout the entire study area. For the detailed analysis of 2040 No-Action conditions, the multilane highway module of *HCS* was used. The results showed acceptable performance throughout the corridor in 2040 with widening.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Washington County Line to Marchant Rd/Carrie Smith Rd	0.00	0.52	11,000	E	3.50%	23,500	В
Marchant Rd/Carrie Smith Rd to Hwy 264 (E Lowell Ave)	0.52	3.49	10,000	E	3.50%	21,500	В
Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)	3.49	3.85	14,000	E	3.50%	30,000	С
Hwy 264 (Healing Spirngs Rd) to Sands Rd	3.85	5.63	10,000	E	3.50%	21,500	В
Sands Rd to CR 46 (W Haxton Rd)	5.63	5.68	9,500	E	3.50%	20,000	В
CR 46 (W Haxton Rd) to Chattin Cir	5.68	6.42	8,800	E	3.50%	19,000	В
Chattin Cir to Huw 12 (SM/ Beginnel Airport Phyd)	6.42	8.75	8,100	E	3.50%	17,500	В
	8.75	9.22	8,100	E	3.50%	17,500	В

Table C-11: Existing and 2040 No-Action LOS Results on Highway 112

Table C-12 summarizes the Highway 112 corridor LOS results for the Action Alternatives. As shown, the LOS for the 2040 Action Alternatives is the same or better than the LOS for the 2040 No-Action Alternative.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Washington County Line to Marchant Rd/Carrie Smith Rd	116.98%	27,500	В	109.43%	25,500	В	101.89%	24,000	В
Marchant Rd/Carrie Smith Rd to Hwy 264 (E Lowell Ave)	76.13%	16,500	А	112.16%	24,000	В	104.95%	22,500	В
Hwy 264 (E Lowell Ave) to Hwy 264 (Healing Spirngs Rd)	90.40%	27,000	В	89.27%	27,000	В	112.43%	33,500	С
Hwy 264 (Healing Spirngs Rd) to Sands Rd	95.85%	20,500	В	93.78%	20,000	В	96.89%	21,000	В
Sands Rd to CR 46 (W Haxton Rd)	96.48%	19,500	В	94.97%	19,000	В	101.01%	20,000	В
CR 46 (W Haxton Rd) to Chattin Cir	96.23%	18,500	В	94.34%	18,000	А	102.52%	19,500	В
Chattin Cista Llux 12 (CM Designal Airport Dhut)	100.00%	17,500	В	96.15%	17,000	В	102.52%	18,000	В
Chattin Cir to Hwy 12 (SW Regional Airport Bivd)	100.00%	17,500	В	96.15%	17,000	В	102.31%	18,000	В

Table C-12: 2040 Action Alternatives LOS Results on Highway 112

Tables C-13 through **C-26** illustrate the Primary Study Area intersection LOS on Highway 112 based upon the *Synchro* results using *HCM* methodology and *SimTraffic* methodology. As part of the 2040 analysis (No-Action and Action Alternatives), signalization was added where needed except at the Wagon Wheel Road intersection where volumes for all but the Partial New Alignment Alternative likely would not warrant a signal in the future. All Action Alternative intersections are shown to meet or exceed the LOS provided in the 2040 No-Action Alternative except for Highway 112 at Wagon

Wheel Road (Improve Existing Alternative) and Highway 612 WB Ramp at Highway 112 (New Location Alternative and Partial New Location Alternative).

					Hwy 11	2 at Hwy 2	64 (Healing	Springs Ro	(k						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
		Delay	9.2		-	-			143.7	-	23.8	-	-	-	15.4
Existing - AM Peak	Stop	v/c	0.148	n/a²	-	-	n/	′a²	0.981	-	0.66	-	-	-	0.981
	Step	LOS	А		-	-			F	-	D	-	-	-	С
		Delay	10.6		-	-			354.1	-	17.8	-	-	-	14.4
Existing - PM Peak	Stop	v/c	0.36	n/a²	-	-	n/	a ²	1.232	-	0.429	-	-	-	1.232
		LOS	В		-	-			F	-	С	-	-	-	В
2040 No. Action AM		Delay	49.6	11	L.8	26.6	46	5.4	47.8	34	.5		55.8		31.2
2040 NO-ACTOR AM Peak	Signal	v/c	0.95	0.	69	0.06	0.	91	0.66	0.0	01		0.34		0.95
. com		LOS	D	1	3	С	[C	D	Þ	1		E		С
2040 No. Action DM		Delay	96.4	8	.5	19.0	48	3.3	47.7	42	.1		57.1		42.2
2040 NO-ACTOR PIN Peak	Signal	v/c	1.08	0.	52	0.03	0.	96	0.36	0.0	06		0.43		1.08
		LOS	F	1	٩	В	[כ	D	ŀ	1		E		D
NowLocation		Delay	31.3	13	3.5	22.5	24	1.6	27.8	11	.1		33.1		20.0
Alternative AM Peak	Signal	v/c	0.8	0.	79	0.06	0.	84	0.52	0.	1		0.11		0.84
Alternative Alvi Peak		LOS	С	1	3	С	(C	С	Þ	1		С		В
Nowlocation		Delay	38.0	5	.9	12.6	23	3.1	34.1	17	.2		37.1		19.2
Alternative PM Peak	Signal	v/c	0.84	0.	51	0.03	0.	87	0.31	0.:	19		0.17		0.87
		LOS	D	1	4	В	(C	С	ŀ	1		D		В
Partial Now Location		Delay	31.0	12	2.8	21.4	2	5	27.8	11	.1		34.4		19.9
Alternative AM Peak	Signal	v/c	0.8	0.	77	0.05	0.	84	0.52	0.:	15		0.27		0.84
/		LOS	С	I	3	С	(C	С	ŀ	1		С		В
Partial Now Location		Delay	38.2	6	.2	13.1	23	3.7	33.3	16	.7		38.0		19.8
Alternative PM Peak	Signal	v/c	0.84	0.	51	0.03	0.	87	0.29	0.:	19		0.35		0.87
		LOS	D	1	4	В	(C	С	Þ	1		D		В
Improvo Existing		Delay	11.0	7	.4	15.3	16	5.8	14.0	9.	5		15.8		11.1
Alternative AM Peak	Signal	v/c	0.38	0.	35	0.43	0.	59	0.18	0.0	07		0.18		0.59
/		LOS	В	1	٩	В	I	3	В	A	1		В		В
Improvo Existing		Delay	10.3	6	.4	6.4	15	5.7	14.1	10	.1		15.5		10.9
Alternative PM Peak	Signal	v/c	0.36	0.	26	0.49	0.	63	0.07	0.0	09		0.2		0.63
		LOS	В	1	4	А	1	3	В	A	1		В		В
¹ Overall v/c ratio used is the n	naximum value o	of all movem	ents												

Table C-13: Hwy 112 at Hwy 264 (Healing Spring Rd) LOS – HCM Methodology

Northwest Arkansas National Airport Access Study (F) Appendix C – Traffic Analysis

					Hwy 112	2 at Hwy 26	4 (Healing	Springs Rd)						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing ANA Dook	Two-Way	Delay	9.0	1.8	1.0	6.5	3.1	2.0	224.7	19.6	59.5	48.8	46.0	17.8	27.9
Existing - Aivi Peak	Stop	LOS	А	А	А	А	А	А	F	С	F	E	E	С	D
Existing - DM Deak	Two-Way	Delay	17.2	2.1	1.6	7.0	7.0	4.4	505.4	65.9	120.3	188.3	232.3	146.4	36.3
Existing - Fivi Feak	Stop	LOS	С	А	А	А	А	А	F	F	F	F	F	F	E
2040 No-Action AM	Signal	Delay	35.8	11.5	10.8	37.8	37.4	23.3	54.1	4.9	9.1	35.0	53.7	18.9	24.5
Peak	Signal	LOS	D	В	В	D	D	С	D	А	А	С	D	В	С
2040 No-Action PM	Signal	Delay	47.0	7.6	5.7	19.6	77.8	70.6	54.6	14.7	36.6	51.6	43.2	16.8	46.6
Peak	Jighai	LOS	D	А	А	В	E	E	D	В	D	D	D	В	D
New Location Alternative AM Peak	Signal	Delay	33.0	11.6	9.3	37.3	23.3	13.8	34.7	3.2	10.2	32.7	34.7	16.7	18.3
	Jigilai	LOS	С	В	А	D	С	В	С	А	В	С	С	В	В
New Location	Signal	Delay	47.5	7.5	6.0	34.5	29.3	23.4	39.1	9.0	16.9	28.8	42.7	14.9	22.8
Alternative PM Peak	Signal	LOS	D	А	А	С	С	С	D	А	В	С	D	В	С
Partial New Location	Signal	Delay	36.7	11.5	9.1	36.4	24.2	11.1	34.5	2.9	10.6	37.7	33.5	18.0	19.3
Alternative AM Peak	Signal	LOS	D	В	А	D	С	В	С	А	В	D	С	В	В
Partial New Location	Signal	Delay	53.1	8.5	6.5	44.1	34.4	29.9	35.3	8.7	18.4	44.6	49.2	17.9	26.5
Alternative PM Peak	Jighai	LOS	D	А	А	D	С	С	D	А	В	D	D	В	С
Improve Existing	Signal	Delay	11.1	7.2	5.2	21.0	13.2	1.5	14.3	8.7	8.0	9.1	12.9	5.2	9.8
Alternative AM Peak	Jiglidi	LOS	В	А	А	С	В	А	В	А	А	А	В	А	А
Improve Existing	Signal	Delay	11.4	6.6	3.8	15.6	14.0	3.3	13.6	10.2	11.0	10.1	12.3	5.2	10.2
Alternative PM Peak	JIBLIA	LOS	В	А	А	В	В	А	В	В	В	В	В	А	В

Table C-14: Hwy 112 at Hwy 264 (Healing Spring Rd) LOS – SimTraffic Methodology

				H۱	wy 112 By	pass at Hw	y 264 (Hea	ling Spring	s Rd)						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
lucran Cristian		Delay	23.9	14	.1	29.6	31	.1	24.2	20.9	19.4		18.1		20.9
Improve Existing Alternative AM Peak	Signal	v/c	0.8	0.5	58	0.7	0.	77	0.39	0.38	0.28		0.2		0.8
		LOS	С	В	5	С	C	2	С	С	В		В		С
		Delay	29.1	11	.5	28.3	30	.5	23.4	23.4	22.8		21.8		22.4
Improve Existing Alternative PM Peak	Signal	v/c	0.84	0.4	13	0.75	0.8	31	0.33	0.35	0.31		0.25		0.84
		LOS	С	В	5	С	C	2	С	С	С		С		С

Table C-15: Hwy 112 Bypass at Hwy 264 (Healing Springs Rd) LOS – HCM Methodology

Table C-16: Hwy 112 Bypass at Hwy 264 (Healing Springs Rd) LOS – SimTraffic Methodology

				н	wy 112 Byj	pass at Hw	y 264 (Hea	ling Spring	s Rd)						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Improve Existing Alternative AM Peak	Signal	Delay	29.6	13.2	8.8	34.4	25.8	9.0	33.4	26.5	8.8	27.3	20.7	14.3	20.2
	Signal	LOS	С	В	А	С	С	А	С	С	А	С	С	В	С
Improve Existing Alternative PM Peak	Signal	Delay	41.5	12.8	9.2	30.0	24.9	14.8	30.8	27.7	15.6	31.0	26.7	16.8	22.2
	Siglial	LOS	D	В	А	С	С	В	С	С	В	С	С	В	С

					-	-	-	-							
	Hwy 112 Bypass at Hwy 264 (Lowell Ave)														
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Improve Existing Signal V/c Alternative AM Peak LOS	Delay	-	26	.3	25.4	16.8	-	-	-	-	29.3	-		21.3	
	Signal	v/c	-	0.8	34	0.89	0.26	-	-	-	-	0.41	-	n/a²	0.89
		LOS	-	c	2	С	В	-	-	-	-	С	-		С
Lucasa Cuistina		Delay	-	28	.0	18.4	11.8	-	-	-	-	18.9	-		19.0
Improve Existing Alternative PM Peak	Signal	v/c	-	0.8	31	0.74	0.57	-	-	-	-	0.25	-	n/a²	0.81
		LOS	-	C	2	В	В	-	-	-	-	В	-		В

Table C-17: Hwy 112 Bypass at Hwy 264 (Lowell Ave) LOS – HCM Methodology

Table C-18: Hwy 112 Bypass at Hwy 264 (Lowell Ave) LOS – SimTraffic Methodology

	Hwy 112 Bypass at Hwy 264 (Lowell Ave)														
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Improve Existing Alternative AM Peak	Signal	Delay	-	31.9	27.4	25.4	6.6	-	-	-	-	31.7	-	7.3	22.8
	Signal	LOS	-	С	С	С	А	-	-	-	-	С	-	А	С
Improve Existing Alternative PM Peak	Signal	Delay	-	31.4	24.8	22.0	11.6	-	-	-	-	21.8	-	8.6	19.0
	Sigligi	LOS	-	С	С	С	В	-	-	-	-	С	-	А	В

					Hwy	/ 112 at Hw	ry 264 (Low	vell Ave)							
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
		Delay	-	13	.0	9.2	2.9	-	-	-	-	24.8	-		9.4
Existing - AM Peak	Signal	v/c	-	0.7	76	0.74	0.41	-	-	-	-	0.63	-	n/a²	0.76
		LOS	-	B	3	А	А	-	-	-	-	С	-		А
		Delay	-	11	.4	7.5	3.7	-	-	-	-	22.5	-		8.9
Existing - PM Peak	Signal	v/c	-	0.7	74	0.48	0.47	-	-	-	-	0.74	-	n/a²	0.74
		LOS	-	B	3	А	А	-	-	-	-	С	-		А
		Delay	-	144	1.9	231.7	16.7	-	-	-	-	239.0	-		150.9
2040 NO-ACTION AM Peak	Signal	v/c	-	1.2	22	1.4	0.46	-	-	-	-	1.42	-	n/a²	1.42
r cuk		LOS	-	F		F	В	-	-	-	-	F	-		E E
2040 No. Action BM		Delay	-	41	.3	129.8	34.5	-	-	-	-	325.4	-		124.8
Peak	Signal	v/c	-	0.8	35	1.19	0.9	-	-	-	-	1.6	-	n/a²	1.6
		LOS	-	C)	F	С	-	-	-	-	F	-		F
Newlocation		Delay	-	21	.6	48.4	3.6	-	-	-	-	44.0	-		23.6
Alternative AM Peak	Signal	v/c	-	0.8	32	0.89	0.3	-	-	-	-	0.85	-	n/a²	0.89
		LOS	-	C	2	D	А	-	-	-	-	D	-		С
Newlocation		Delay	-	14	.6	25.0	5.7	-	-	-	-	27.2	-		13.1
Alternative PM Peak	Signal	v/c	-	0.6	56	0.8	0.59	-	-	-	-	0.83	-	n/a²	0.83
		LOS	-	B	3	С	А	-	-	-	-	С	-		В
Partial New Location		Delay	-	66	.2	64.6	2.7	-	-	-	-	65.6	-		54.4
Alternative AM Peak	Signal	v/c	-	1.0	03	0.97	0.23	-	-	-	-	0.86	-	n/a²	1.03
		LOS	-	E		E	А	-	-	-	-	E	-		D
Partial New Location		Delay	-	12	.8	8.6	6.1	-	-	-	-	24.2	-		10.0
Alternative PM Peak	Signal	v/c	-	0.6	53	0.53	0.61	-	-	-	-	0.82	-	n/a²	0.82
		LOS	-	B	3	А	А	-	-	-	-	С	-		А
Improve Evicting		Delay	31.4	34	.7	23.5	13	8.6	30.5	37	7.0		25.9		26.3
Alternative AM Peak	Signal	v/c	0.69	0.7	77	0.67	0.	19	0.18	0.	75		0.75		0.77
/ iternative / ivi r cak		LOS	С	C	2	С	E	3	С		C		С		С
Improvo Evisting	LOS C Delay 27.				.6	19.6	14	l.0	25.6	30).7		20.0		20.7
Alternative PM Peak	Signal	v/c	0.58	0.6	65	0.58	0.	35	0.18	0.	71		0.67		0.71
		LOS	С	C	2	В	E	3	С		С		В		С
¹ Overall v/c ratio used is the n	naximum value	of all movem	ents												

Table C-19: Hwy 112 at Hwy 264 (Lowell Ave) LOS – HCM Methodology

² Free movement

					Hwy	112 at Hw	y 264 (Low	ell Ave)							
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing ANA Dook	Signal	Delay	-	15.2	8.1	16.2	3.4	-	-	-	-	29	-	4.3	11.3
Existing - Aivi Peak	Signal	LOS	-	В	А	В	А	-	-	-	-	С	-	А	В
Existing - DM Dook	Signal	Delay	-	13.7	7	12.9	3.5	-	-	-	-	41.1	-	16.9	12.7
Existing - Fivi Feak	Signal	LOS	-	В	А	В	А	-	-	-	-	D	-	В	В
2040 No-Action AM	Signal	Delay	-	16.5	4.5	32.4	4	-	-	-	-	799.5	-	797.6	164.8
Peak	Jigilai	LOS	-	В	А	С	А	-	-	-	-	F	-	F	F
2040 No-Action PM	Signal	Delay	-	13.5	4	18.3	5.2	-	-	-	-	475.5	-	442.5	97.7
Peak		LOS	-	В	А	В	А	-	-	-	-	F	-	F	F
New Location	Signal	Delay	-	20.5	15.2	46.3	5.4	-	-	-	-	52.8	-	14.4	21.9
Alternative AM Peak	Jigilai	LOS	-	С	В	D	А	-	-	-	-	D	-	В	С
New Location	Signal	Delay	-	16.5	10.9	36.7	6.9	-	-	-	-	46.8	-	14.9	17
Alternative PM Peak	Jigilai	LOS	-	В	В	D	А	-	-	-	-	D	-	В	В
Partial New Location	Signal	Delay	-	31.1	11.1	42	3.2	-	-	-	-	58.7	-	5.2	29.1
Alternative AM Peak	Jighai	LOS	-	С	В	D	А	-	-	-	-	E	-	А	С
Partial New Location	Signal	Delay	-	14	3.7	17.1	6.7	-	-	-	-	40.3	-	12.4	12.8
Alternative PM Peak	Jighai	LOS	-	В	А	В	А	-	-	-	-	D	-	В	В
Improve Existing	Signal	Delay	30.0	29.4	3.4	28.7	13.3	7.4	31.5	32.5	23.9	32.6	19.3	7.2	22.8
Alternative AM Peak	Jigilai	LOS	С	С	А	С	В	А	С	С	С	С	В	А	С
Improve Existing	Signal	Delay	34.6	29.6	3.7	24.2	15.5	12.3	30.1	29.0	19.2	30.5	19.9	8.4	20.2
Alternative PM Peak	JIBLIA	LOS	С	С	А	С	В	В	С	С	В	С	В	А	С

Table C-20: Hwy 112 at Hwy 264 (Lowell Ave) LOS – SimTraffic Methodology

					Hw	y 112 at W	Wagon W	heel Rd							
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
	T	Delay	-			8.7		-	-	-	-	21.4	-		0.8
Existing - AM Peak	Stop	v/c	-	n/a	a²	0.02	n/a²	-	-	-	-	0.14	-	n/a²	0.14
	otop	LOS	-			А		-	-	-	-	D	-		А
		Delay	-			9.3		-	-	-	-	22.1	-		0.7
Existing - PM Peak	Stop	v/c	-	n/:	a ²	0.03	n/a²	-	-	-	-	0.11	-	n/a²	0.11
	otop	LOS	-			А		-	-	-	-	D	-		А
2040 No. Action ANA	Two Mov	Delay	-			13.6		-	-	-	-	353.5	-		12.2
2040 NO-ACTION AM Peak	Stop	v/c	-	n/:	a ²	0.08	n/a²	-	-	-	-	1.36	-	n/a²	1.36
. cun	otop	LOS	-			В		-	-	-	-	F	-		В
2040 No. Action DM		Delay	-			12.9		-	-	-	-	732.2	-		20.1
2040 NO-ACTION PIVI Peak	Stop	v/c	-	n/:	a²	0.1	n/a²	-	-	-	-	2.05	-	n/a²	2.05
		LOS	-			В		-	-	-	-	F	-		D
Newlection		Delay	-			11.2		-	-	-	-	52.5	-		2.0
Alternative AM Peak	Stop	v/c	-	n/:	a ²	0.05	n/a²	-	-	-	-	0.45	-	n/a²	0.45
,	otop	LOS	-			В		-	-	-	-	F	-		А
Newleastion	Two Mov	Delay	-			10.6		-	-	-	-	44.0	-		1.7
Alternative PM Peak	Stop	v/c	-	n/:	a²	0.06	n/a²	-	-	-	-	0.39	-	n/a²	0.39
	otop	LOS	-			В		-	-	-	-	E	-		А
Partial New Location		Delay	13.9	11	7	22.5	18	3.2	23.5	18.0	18.6		29.8		15.4
Alternative AM Peak	Signal	v/c	0.63	0.	8	0.19	0.	72	0.28	0.03	0.13		0.40		0.8
		LOS	В	E	3	С	E	3	С	В	В		С		С
Dartial Now Lagatian		Delay	46.1	7.	4	13.7	25	5.4	45.4	35.6	38.7		53.0		24.5
Alternative PM Peak	Signal	v/c	0.91	0.4	49	0.15	0.	86	0.58	0.05	0.37		0.48		0.91
,		LOS	D	Д	4	В	(2	D	D	D		D		D
Improve Evicting	Two Mov	Delay	-			14.5		-	-	-	-	570.0	-		19.6
Alternative AM Peak	Stop	v/c	-	n/:	a²	0.1	n/a²	-	-	-	-	1.81	-	n/a¹	1.81
,	otop	LOS	-			В		-	-	-	-	F	-		С
Improvo Evisting		Delay	-			13.6		-	-	-	-	1964.2	-		54.5
Alternative PM Peak	Stop	v/c	-	n/a	a²	0.1	n/a²	-	-	-	-	4.4	-	n/a ¹	4.4
	0.00	LOS	-			В		-	-	-	-	F	-		F
¹ Overall v/c ratio used is the	maximum value o	of all movem	ents												

Table C-21: Hwy 112 at Wagon Wheel Rd LOS – HCM Methodology

² Free movement

					Hw	y 112 at W	Wagon Wl	heel Rd							
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing AM Dook	Two-Way	Delay	-	2.7	2.4	4.3	0.8	-	-	-	-	16.0	-	7.9	2.2
Existing - Aivi Feak	Stop	LOS	-	А	А	А	А	-	-	-	-	С	-	А	А
Existing DM Dook	Two-Way	Delay	-	3.8	2.9	5.7	1.7	-	-	-	-	22.6	-	10.4	3.3
Existing - Fivi Feak	Stop	LOS	-	А	А	А	А	-	-	-	-	D	-	В	А
2040 No-Action AM	Two-Way	Delay	-	11.8	11.1	53.3	3.8	-	-	-	-	574.5	-	519.4	27.6
Peak	Stop	LOS	-	В	В	F	А	-	-	-	-	F	-	F	D
2040 No-Action PM	Two-Way	Delay	-	3.3	3.1	15.1	2.2	-	-	-	-	83.8	-	63.7	4.9
Peak	Stop	LOS	-	А	А	С	А	-	-	-	-	F	-	F	А
New Location	Two-Way	Delay	-	2.0	2.8	8.7	1.0	-	-	-	-	27.7	-	14.5	8.7
Alternative AM Peak	Stop	LOS	-	А	А	А	А	-	-	-	-	D	-	В	А
New Location	Two-Way	Delay	-	2.1	2.9	5.8	1.1	-	-	-	-	32.0	-	14.4	2.2
Alternative PM Peak	Stop	LOS	-	А	А	А	А	-	-	-	-	D	-	В	А
Partial New Location	Signal	Delay	27.3	14.9	11.4	63.0	19.2	6.8	31.9	29.0	13.6	30.9	37.5	22.9	18.2
Alternative AM Peak	Signal	LOS	С	В	В	E	В	А	С	С	В	С	D	С	В
Partial New Location	Signal	Delay	81.6	30.4	24.9	49.1	25.5	15.9	127.8	45.3	33.3	71.6	68.5	48.9	42.3
Alternative PM Peak	Signal	LOS	F	С	С	D	С	В	F	D	С	E	Е	D	D
Improve Existing	Two-Way	Delay	-	3.4	4.2	18.5	1.9	-	-	-	-	122.4	-	139.4	7.2
Alternative AM Peak	Stop	LOS	-	А	А	С	А	-	-	-	-	F	-	F	А
Improve Existing	Two-Way	Delay	-	3.9	3.9	18.1	3.1	-	-	-	-	244.1	-	160.0	8.9
Alternative PM Peak	Stop	LOS	-	А	А	С	А	-	-	-	-	F	-	F	А

Table C-22: Hwy 112 at Wagon Wheel Rd LOS – SimTraffic Methodology

				Hwy 11	2 at Hwy 6	12 (Springo	ale Northe	ern Bypass) WB Ramp	s					
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
	T	Delay	-		-	-		-	-	-	-	31.0	-	11.8	4.3
Existing - AM Peak	Two-way Stop	v/c	-	n/a²	-	-	n/a²	-	-	-	-	0.48	-	0.21	0.48
	5100	LOS	-		-	-		-	-	-	-	D	-	В	А
	T	Delay	-		-	-		-	-	-	-	102.4	-	16.1	21.0
Existing - PM Peak	Two-way Ston	v/c	-	n/a²	-	-	n/a²	-	-	-	-	1.02	-	0.48	1.02
	5100	LOS	-		-	-		-	-	-	-	F	-	С	D
		Delay	4.3	1.7	-	-	5.5	3.8	-	-	-	67.8	-		4.8
2040 NO-Action AIVI Peak	Signal	v/c	0.56	0.44	-	-	0.45	0.13	-	-	-	0.34	-	n/a²	0.83
I Cuk		LOS	А	А	-	-	А	А	-	-	-	E	-		А
2040 No. 4 - 11		Delay	21.4	0.6	-	-	20.9	12.2	-	-	-	51.3	-		16.5
2040 NO-ACTION PIVI Peak	Signal	v/c	0.79	0.5	-	-	0.77	0.21	-	-	-	0.9	-	n/a²	0.9
T Cuk		LOS	С	А	-	-	С	В	-	-	-	D	-		С
		Delay	6.3	2.5	-	-	10.7	8.8	-	-	-	34.6	-		6.3
New Location	Signal	v/c	0.57	0.44	-	-	0.58	0.15	-	-	-	0.67	-	n/a²	0.67
Alternative Alvir eak		LOS	А	А	-	-	В	А	-	-	-	С	-		А
No. 1 contract		Delay	24.2	8.2	-	-	29.4	22.9	-	-	-	35.4	-		22.4
New Location	Signal	v/c	0.9	0.4	-	-	0.81	0.37	-	-	-	0.89	-	n/a²	0.9
Alternative Fivi Feak		LOS	С	А	-	-	С	С	-	-	-	D	-		С
		Delay	8.2	3.1	-	-	9.2	5.9	-	-	-	41.1	-		6.6
Alternative AM Peak	Signal	v/c	0.56	0.61	-	-	0.69	0.08	-	-	-	0.8	-	n/a²	0.8
Alternative Aint car		LOS	А	А	-	-	А	А	-	-	-	D	-		А
		Delay	27.3	33.4	-	-	39.2	22.2	-	-	-	52.8	-		38.4
Alternative PM Peak	Signal	v/c	0.48	0.91	-	-	0.89	0.23	-	-	-	0.96	-	n/a²	0.96
Alternative Fivi Feak		LOS	С	С	-	-	D	С	-	-	-	D	-		D
		Delay	7.4	3.2	-	-	9.2	6.1	-	-	-	42.4	-		6.9
Improve Existing	Signal	v/c	0.51	0.58	-	-	0.68	0.08	-	-	-	0.85	-	n/a²	0.85
Alternative Alvir eak		LOS	А	А	-	-	А	А	-	-	-	D	-		А
		Delay	20.4	9.5	-	-	21.9	11.9	-	-	-	42.8	-		19.2
Alternative PM Poak	Signal	v/c	0.7	0.61	-	-	0.85	0.12	-	-	-	0.9	-	n/a²	0.9
		LOS	С	А	-	-	С	В	-	-	-	D	-		В
¹ Overall v/c ratio used is the $\frac{2}{5}$	maximum value o	of all movem	ents												

Table C-23: Hwy 112 at Hwy 612 WB (Springdale Northern Bypass) Ramps LOS – HCM Methodology

Northwest Arkansas National Airport Access Study (F) Appendix C – Traffic Analysis

				Hwy 11	2 at Hwy 61	L2 (Springd	lale Northe	rn Bypass)	WB Ramp	s					
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Evisting ANA Dook	Two-Way	Delay	-	2.6	-	-	1.1	-	-	-	-	21.4	-	2.7	3.6
Existing - Aivi Feak	Stop	LOS	-	А	-	-	А	-	-	-	-	D	-	А	А
Existing DM Dook	Two-Way	Delay	-	2.7	-	-	1.5	-	-	-	-	89.2	-	4.0	17.6
Existing - Fivi Feak	Stop	LOS	-	А	-	-	А	-	-	-	-	F	-	А	С
2040 No-Action AM	Signal	Delay	19.8	9.6	-	-	6.7	3.3	-	-	-	47.8	-	3.1	9.6
Peak	Signal	LOS	В	А	-	-	А	А	-	-	-	D	-	А	А
2040 No-Action PM	Signal	Delay	27.7	15.2	-	-	19.2	6.5	-	-	-	37.5	-	4.2	14.8
Peak	Signal	LOS	С	В	-	-	В	А	-	-	-	D	-	А	В
New Location	Signal	Delay	17.4	6.8	-	-	9.1	7.8	-	-	-	25.2	-	2.4	9.5
Alternative AM Peak	Signal	LOS	В	А	-	-	А	А	-	-	-	С	-	А	А
New Location	Signal	Delay	33.8	12.8	-	-	28.8	14.1	-	-	-	35.8	-	3.9	22.1
Alternative PM Peak	Signal	LOS	С	В	-	-	С	В	-	-	-	D	-	А	С
Partial New Location	Signal	Delay	19.0	10.5	-	-	7.8	3.5	-	-	-	25.8	-	2.8	9.9
Alternative AM Peak	Signal	LOS	В	В	-	-	А	А	-	-	-	С	-	А	А
Partial New Location	Signal	Delay	40.6	28.6	-	-	27.6	10.7	-	-	-	40.3	-	4.4	28.3
Alternative PM Peak	Signal	LOS	D	С	-	-	С	В	-	-	-	D	-	А	С
Improve Existing	Signal	Delay	21.4	10.6	-	-	8.1	3.7	-	-	-	27.1	-	3.2	10.3
Alternative AM Peak	Signal	LOS	С	В	-	-	А	А	-	-	-	С	-	А	В
Improve Existing	Signal	Delay	41.7	14.4	-	-	19.8	7.1	-	-	-	35.6	-	4.3	18.7
Alternative PM Peak	Sigliai	LOS	D	В	-	-	В	А	-	-	-	D	-	А	В

Table C-24: Hwy 112 at Hwy 612 WB (Springdale Northern Bypass) Ramps LOS – SimTraffic Methodology

				Hwy 11	.2 at Hwy 6	12 (Spring	dale North	ern Bypass	s) EB Ramp	s					
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
	T	Delay	-			11.0		-	-	-	-	-	-	-	2.1
Existing - AM Peak	Ston	v/c	-	n/	a ²	0.32	n/a²	-	-	-	-	-	-	-	0.32
	Stop	LOS	-			В		-	-	-	-	-	-	-	А
	T	Delay	-			9.5		-	-	-	-	-	-	-	1.0
Existing - PM Peak	Two-way Ston	v/c	-	n/	a ²	0.16	n/a²	-	-	-	-	-	-	-	0.16
	5100	LOS	-			А		-	-	-	-	-	-	-	А
2040 No. 4 - 11 414		Delay	-	26.0		43.7	5.2	-	37.3	-	53.0	-	-	-	25.4
2040 NO-ACTION AIVI Peak	Signal	v/c	-	0.83	n/a²	0.92	0.32	-	0.65	-	0.86	-	-	-	0.92
I Cuk		LOS	-	С		D	А	-	D	-	D	-	-	-	С
2040 No. 4 - 11		Delay	-	12.0		8.1	0.5	-	46.0	-	38.2	-	-	-	10.7
2040 NO-ACTION PIVI Peak	Signal	v/c	-	0.56	n/a²	0.41	0.63	-	0.84	-	0.7	-	-	-	0.84
T Cuk		LOS	-	В		А	А	-	D	-	D	-	-	-	В
		Delay	-	27.6		24.4	7.9	-	36.8	-	21.4	-	-	-	26.0
New Location	Signal	v/c	-	0.84	n/a²	0.85	0.16	-	0.89	-	0.33	-	-	-	0.89
Alternative Aim reak		LOS	-	С		С	А	-	D	-	С	-	-	-	С
		Delay	-	19.8		14.1	11.3	-	23.2	-	14.9	-	-	-	26.0
New Location	Signal	v/c	-	0.76	n/a²	0.47	0.57	-	0.87	-	0.25	-	-	-	0.87
Alternative FWFFeak		LOS	-	В		В	В	-	С	-	В	-	-	-	С
		Delay	-	29.2		48.9	3.7	-	60.1	-	37.4	-	-	-	27.0
Alternative AM Peak	Signal	v/c	-	0.92	n/a²	0.92	0.33	-	0.85	-	0.35	-	-	-	0.92
Alternative Aim reak		LOS	-	С		D	А	-	E	-	D	-	-	-	С
		Delay	-	13.4		11.7	9.0	-	30.6	-	23.1	-	-	-	12.8
Partial New Location	Signal	v/c	-	0.74	n/a²	0.43	0.79	-	0.81	-	0.24	-	-	-	0.81
Alternative Fivi Feak		LOS	-	В		В	А	-	С	-	С	-	-	-	В
		Delay	-	21.8		33.5	3.9	-	43.3	-	31.8	-	-	-	20.4
Improve Existing	Signal	v/c	-	0.87	n/a²	0.9	0.32	-	0.82	-	0.34	-	-	-	0.9
Alternative Alvi Feak		LOS	-	С		С	А	-	D	-	С	-	-	-	С
		Delay	-	13.5		10.9	8.5	-	26.4	-	19.5	-	-	-	12.2
Alternative PM Poak	Signal	v/c	-	0.76	n/a²	0.4	0.76	-	0.8	-	0.2	-	-	-	0.8
		LOS	-	В		В	А	-	С	-	В	-	-	-	В
¹ Overall v/c ratio used is the	maximum value o	f all moveme	ents												

Table C-25: Hwy 112 at Hwy 612 EB (Springdale Northern Bypass) Ramps LOS – HCM Methodology

² Free movement

				Hwy 11	2 at Hwy 6	12 (Springe	ale Northe	ern Bypass) EB Ramps	5					
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing AM Dook	Two-Way	Delay	-	5.3	2.9	15.1	3.2	-	-	-	-	-	-	-	6.1
Existing - Aivi Feak	Stop	LOS	-	А	А	С	А	-	-	-	-	-	-	-	А
Existing DM Dook	Two-Way	Delay	-	4.2	2.2	10.6	2.2	-	-	-	-	-	-	-	3.8
Existing - Fivi Feak	Stop	LOS	-	А	А	В	А	-	-	-	-	-	-	-	А
2040 No-Action AM	Signal	Delay	-	30.6	14.6	31.5	12.3	-	32.4	-	7.1	-	-	-	23.1
Peak	Signal	LOS	-	С	В	С	В	-	С	-	А	-	-	-	С
2040 No-Action PM	Signal	Delay	-	16.0	5.1	23.3	16.4	-	29.6	-	13.4	-	-	-	16.7
Peak	Signal	LOS	-	В	А	С	В	-	С	-	В	-	-	-	В
New Location	Signal	Delay	-	33.4	9.4	31.1	12.0	-	31.3	-	30.7	-	-	-	26.8
Alternative AM Peak	Signal	LOS	-	С	А	С	В	-	С	-	С	-	-	-	С
New Location	Signal	Delay	-	24.9	4.7	23.5	17.1	-	22.5	-	20	-	-	-	20.0
Alternative PM Peak	Signal	LOS	-	С	А	С	В	-	С	-	В	-	-	-	В
Partial New Location	Signal	Delay	-	28.0	14.4	32.4	7.4	-	51.1	-	58	-	-	-	25.7
Alternative AM Peak	Signal	LOS	-	С	В	С	А	-	D	-	E	-	-	-	С
Partial New Location	Signal	Delay	-	17.7	6.8	23.6	13.9	-	30.5	-	27.5	-	-	-	17.3
Alternative PM Peak	Signal	LOS	-	В	А	С	В	-	С	-	С	-	-	-	В
Improve Existing	Signal	Delay	-	24.6	9.4	37.7	8.6	-	39.5	-	9.3	-	-	-	20.4
Alternative AM Peak	Signal	LOS	-	С	А	D	А	-	D	-	А	-	-	-	С
Improve Existing	Signal	Delay	-	14.1	3.5	25.9	14.8	-	26.9	-	14.9	-	-	-	15.5
Alternative PM Peak	Signar	LOS	-	В	А	С	В	-	С	-	В	-	-	-	В

Table C-26: Hwy 112 at Hwy 612 EB (Springdale Northern Bypass) Ramps LOS – SimTraffic Methodology

HIGHWAY 264 – BLOOMINGTON STREET TO HIGHWAY

The LOS Tool showed LOS D and F conditions from Bloomington Street through Belview Road with acceptability ratios greater than 1.00 from I-49 to Belview Road in 2018. By 2040, the LOS Tool showed LOS D and F conditions with acceptability ratios greater than 1.00 from Bloomington Street to Airport Boulevard.

For the detailed analysis, *Synchro* was used to analyze the Highway 264 corridor from Bloomington Street to Belview Road, and the two-lane highway module of *HCS* was used to analyze from Belview Road to Highway 12. The results, shown in **Table C-27**, demonstrate unacceptable LOS F conditions from Bloomington Street to Belview Road and LOS D conditions from Mill Dam Road to Airport Boulevard in 2018. By 2040, LOS D, E, and F conditions exist from Bloomington Street to Airport Boulevard.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Bloomington St to I-49	0.00	0.55	25,000	F	1.45%	34,500	F
149 to Good Springs Pd	0.55	0.74	26,000	F	1.45%	35,500	F
1-49 to Goad Spinigs Nu	0.74	1.01	26,000	F	1.45%	35,500	F
Goad Springs Rd to Belview Rd	1.01	1.22	13,000	F	3.40%	27,000	F
Belview Rd to S Rainbow Rd	1.22	3.71	9,500	С	3.40%	20,000	E
S Rainbow Rd to Hwy 112	3.71	5.50	7,400	С	2.50%	12,500	D
Hwy 112 (Main St) to Mill Dam Rd	0.00	3.18	8,000	С	2.50%	14,000	D
Mill Dam Rd to Airport Blvd	3.18	3.80	7,400	D	2.50%	12,500	E
Airport Blvd to Hwy 12	3.80	7.35	3,300	А	2.50%	5,700	В

Table C-27: Existing and 2040 No-Action LOS Results on Highway 264

Table C-28 shows the *HCS* LOS results for the Action Alternatives for Highway 264 from Belview Road to Highway 12. All Action Alternatives result in improved LOS for the segment from Mill Dam Road to Airport Boulevard (from LOS E under No-Action to LOS D under the New Alignment Alternative and LOS A under the Partial New Alignment and the Improve Existing Alternatives). Two of the Action Alternatives (Partial New Alignment and Improve Existing) also result in improved LOS from Airport Boulevard to Highway 12. The segments of Highway 264 from Bloomington Street to Belview Road were analyzed using *Synchro* for the Future No-Action and were not re-evaluated from the 2040 No-Action scenario.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Bloomington St to I-49	99.49%	34,500		100.00%	34,500		100.00%	34,500	
I-49 to Goad Springs Rd	99.48%	35,500	F based on	99.83%	35,500	F based on	100.17%	35,500	F based on No-Action
Goad Springs Rd to Belview Rd	94.84%	25,500		98.59%	26,500		100.47%	27,000	NO / IOIOII
Belview Rd to S Rainbow Rd	88.24%	17,500	E	96.47%	19,500	E	103.53%	20,500	E
S Rainbow Rd to Hwy 112	86.49%	11,000	D	95.95%	12,000	E	108.11%	13,500	E
Hwy 112 (Main St) to Mill Dam Rd	87.38%	12,000	D	88.35%	12,500	D	98.06%	13,500	А
Mill Dam Rd to Airport Blvd	65.00%	8,100	D	113.01%	14,000	А	101.63%	12,500	А
Airport Blvd to Hwy 12	128.33%	7,300	С	116.67%	6,700	А	100.00%	5,700	А

Table C-28: 2040 Action Alternatives LOS Results on Highway 264

Tables C-29 through **C-32** illustrate the Primary Study Area intersection LOS on Highway 264 based upon the *Synchro* results using *HCM* methodology and *SimTraffic* methodology. As part of the 2040 analysis (No-Action and Action Alternatives), signalization was added where needed. All Action Alternative intersections are shown to operate similar to or better than the 2040 No-Action Alternatives.

					Hwy 264	at Mill Da	m Rd/Colo	nel Myers I	Rd						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
		Delay		15.3			14.1								1.1
Existing - AM Peak	Stop	v/c		0.1			0.1			n/a²			n/a²		0.062
		LOS		С			В								А
		Delay		16.5			14.9								1.0
Existing - PM Peak	Stop	v/c		0.1			0.0			n/a²			n/a²		0.068
		LOS		С			В								А
2040 No. Action AM		Delay		36.6			23.6								3.2
Peak	Stop	v/c		0.4			0.2			n/a²			n/a²		0.4
		LOS		E			D								А
2040 No. Action PM		Delay		51.9			38.1								3.3
Peak	Stop	v/c		0.5			0.2			n/a²			n/a²		0.45
		LOS		F			E								А
Newlocation	Two-W/av	Delay		17.0			14.5								1.9
Alternative AM Peak	Stop	v/c		0.2			0.1			n/a²			n/a²		0.16
		LOS		С			В								А
Newlocation		Delay		18.8			17.7								1.4
Alternative PM Peak	Stop	v/c		0.1			0.1			n/a²			n/a²		0.12
		LOS		С			С								А
Partial New Location	Round	Delay		8.4			5.8			5.3			7.4		7.2
Alternative AM Peak	about	v/c		0.5			0.3			0.0			0.4		0.48
		LOS		А			А			А			А		А
Partial New Location	Pound	Delay		6.6			6.8			7.2			7.0		6.8
Alternative PM Peak	about	v/c		0.3			0.4			0.1			0.4		0.43
		LOS		А			А			А			А		А
Improvo Existing		Delay		25.6			20.5								2.4
Alternative AM Peak	Stop	v/c		0.3			0.2			n/a²			n/a²		0.31
		LOS		D			D								А
Improvo Existing		Delay		37.3			27.3								2.4
Alternative PM Peak	Stop	v/c		0.4			0.2			n/a²			n/a²		0.36
		LOS		E			D								А
¹ Overall v/c ratio used is the	maximum value o	of all movem	ents												

Table C-29: Hwy 264 at Mill Dam Rd/Colonel Myers Rd LOS – HCM Methodology

Northwest Arkansas National Airport Access Study (F) Appendix C – Traffic Analysis

					Hwy 264	at Mill Dan	n Rd/Color	nel Myers F	Rd						
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing AM Book	Two-Way	Delay	9.1	0.9	4.7	6.4	9.1	3.2	6.0	4.1	3.0	2.6	2.6	2.5	3.7
Existing - Aivi Peak	Stop	LOS	А	А	А	А	А	А	А	А	А	А	А	А	А
Existing DM Book	Two-Way	Delay	9.8	6.4	5.4	8.1	10.7	3.7	6.3	2.8	2.4	7.5	4.2	3.3	4.1
Existing - Pivi Peak	Stop	LOS	А	А	А	А	В	А	А	А	А	А	А	А	А
2040 No-Action AM	Two-Way	Delay	13.2	18.0	7.9	14.1	11.6	6.5	8.4	4.6	3.6	6.3	4.4	3.7	5.3
Peak	Stop	LOS	В	С	А	В	В	А	А	А	А	А	А	А	А
2040 No-Action PM	Two-Way	Delay	18.2	16.7	7.9	16.5	20.0	6.5	8.3	5.2	4.6	9.2	4.5	4.0	5.8
Peak	Stop	LOS	С	С	А	С	С	А	А	А	А	А	А	А	А
New Location	Two-Way	Delay	9.0	9.4	3.7	6.7	9.9	3.4	4.9	2.1	2.1	3.1	3.0	1.6	3.1
Alternative AM Peak	Stop	LOS	А	А	А	А	А	А	А	А	А	А	А	А	А
New Location	Two-Way	Delay	10.2	11.0	5.3	8.9	12.6	5.2	6.1	2.6	2.4	4.1	3.0	1.3	3.2
Alternative PM Peak	Stop	LOS	В	В	А	А	В	А	А	А	А	А	А	А	А
Partial New Location	Round-	Delay	10.8	4.1	4.1	5.2	0.6	3.3	3.3	5.4	3.2	4.9	4.5	3.2	5.8
Alternative AM Peak	about	LOS	В	А	А	А	А	А	А	А	А	А	А	А	А
Partial New Location	Round-	Delay	8.0	0.9	3.7	4.7	0.9	4.7	3.8	7.6	4.1	4.3	4.5	3.5	4.7
Alternative PM Peak	about	LOS	А	А	А	А	А	А	А	А	А	А	А	А	А
Improve Existing	Two-Way	Delay	11.9	14.4	5.7	11.7	14.0	6.5	5.9	1.9	1.4	1.2	2.3	1.3	3.0
Alternative AM Peak	Stop	LOS	В	В	А	В	В	А	А	А	А	А	А	А	А
Improve Existing	Two-Way	Delay	14.0	18.4	6.1	11.5	14.6	5.5	6.0	2.5	1.9	4.2	2.2	1.2	3.0
Alternative PM Peak	Stop	LOS	В	С	А	В	В	А	А	А	А	А	А	А	А

Table C-30: Hwy 264 at Mill Dam Rd/Colonel Myers Rd LOS – SimTraffic Methodology

						Hwy 264 ai	nd Airport	Blvd							
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
		Delay	-	-	-	13.8	-	8.8	7.5		-	-			5.5
Existing - AM Peak	Stop	v/c	-	-	-	0.336	-	0.016	0.012	n/a²	-	-	n/	′a²	0.336
	otop	LOS	-	-	-	В	-	А	А		-	-			А
		Delay	-	-	-	12.6	-	9.7	7.8		-	-			4.0
Existing - PM Peak	Stop	v/c	-	-	-	0.226	-	0.023	0.01	n/a²	-	-	n/	′a²	0.226
	otop	LOS	-	-	-	В	-	А	А		-	-			А
2040 No. Action AM		Delay	-	-	-	16.4	-		7.6	5.5	-	-	12.4		11.7
Peak	Signal	v/c	-	-	-	0.842	-	n/a²	0.024	0.024	-	-	0.91	n/a²	0.91
		LOS	-	-	-	В	-		А	А	-	-	В		В
2040 No. Action BM		Delay	-	-	-	14.6	-		10.0	9.3	-	-	15.2		13.1
Peak	Signal	v/c	-	-	-	0.83	-	n/a²	0.05	0.48	-	-	0.67	n/a²	0.83
		LOS	-	-	-	В	-		А	А	-	-	В		В
Newlocation		Delay	-	-	-	11.0	-		6.7	6.5	-	-	6.6		7.8
Alternative AM Peak	Signal	v/c	-	-	-	0.74	-	n/a²	0.31	0.33	-	-	0.43	n/a²	0.74
		LOS	-	-	-	В	-		А	А	-	-	А		А
Newlocation		Delay	-	-	-	10.5	-		9.3	9.9	-	-	8.6		9.7
Alternative PM Peak	Signal	v/c	-	-	-	0.79	-	n/a²	0.4	0.5	-	-	0.32	n/a²	0.79
		LOS	-	-	-	В	-		А	А	-	-	А		А
Partial New Location		Delay	-	-	-	14.8	-		8.5	5.4	-	-	10.7		10.4
Alternative AM Peak	Signal	v/c	-	-	-	0.77	-	n/a²	0.11	0.19	-	-	0.49	n/a²	0.77
		LOS	-	-	-	В	-		А	А	-	-	В		В
Partial New Location		Delay	-	-	-	13.2	-		11.5	8.7	-	-	13.6		11.9
Alternative PM Peak	Signal	v/c	-	-	-	0.82	-	n/a²	0.05	0.31	-	-	0.49	n/a²	0.82
		LOS	-	-	-	В	-		В	А	-	-	В		В
Improvo Existing		Delay	-	-	-	14.2	-		8.5	5.2	-	-	10.5		10.2
Alternative AM Peak	Signal	v/c	-	-	-	0.76	-	n/a²	0.1	0.17	-	-	0.46	n/a²	0.76
		LOS	-	-	-	В	-		А	А	-	-	В		В
Improve Existing		Delay	-	-	-	12.6	-		11.2	8.3	-	-	13.1		11.4
Alternative PM Peak	Signal	v/c	-	-	-	0.81	-	n/a²	0.05	0.29	-	-	0.46	n/a²	0.81
		LOS	-	-	-	В	-		В	А	-	-	В		В
¹ Overall v/c ratio used is the	maximum value o	of all movem	ents												

Table C-31: Hwy 264 at Airport Blvd LOS – HCM Methodology

² Free movement

	Hwy 264 and Airport Blvd														
Alternative	Stop Control	Metric	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Overall ¹
Existing AM Book	Two-Way	Delay	-	-	-	15.5	-	2.8	2.8	2.8	-	-	9.0	5.8	7.6
Existing - Aivi Feak	Stop	LOS	-	-	-	С	-	А	А	А	-	-	А	А	А
Existing DM Book	Two-Way	Delay	-	-	-	20.6	-	2.6	13.0	2.8	-	-	12.1	7.6	10.5
Existing - Fivi Feak	Stop	LOS	-	-	-	D	-	А	В	А	-	-	В	А	В
2040 No-Action AM	Signal	Delay	-	-	-	13.5	-	2.6	12.8	7.4	-	-	22.3	8.9	13.0
Peak	Signal	LOS	-	-	-	В	-	А	В	А	-	-	С	А	В
2040 No-Action PM	Signal	Delay	-	-	-	13.2	-	2.9	13.8	10.7	-	-	22.8	7.9	12.7
Peak	Signal	LOS	-	-	-	В	-	А	В	В	-	-	С	А	В
New Location	Signal	Delay	-	-	-	13.2	-	3.0	13.5	6.9	-	-	8.5	5.1	8.6
Alternative AM Peak	Signal	LOS	-	-	-	В	-	А	В	А	-	-	А	А	А
New Location	Signal	Delay	-	-	-	12.4	-	3.8	14.0	10.1	-	-	9.4	4.6	9.2
Alternative PM Peak	Signal	LOS	-	-	-	В	-	А	В	В	-	-	А	А	А
Partial New Location	Signal	Delay	-	-	-	11.9	-	2.5	9.8	5.8	-	-	10.1	5.4	8.2
Alternative AM Peak	Signal	LOS	-	-	-	В	-	А	А	А	-	-	В	А	А
Partial New Location	Signal	Delay	-	-	-	12.4	-	3.2	13.6	9.5	-	-	12.9	5.2	10.0
Alternative PM Peak	Signar	LOS	-	-	-	В	-	А	В	А	-	-	В	А	А
Improve Existing	Signal	Delay	-	-	-	12.5	-	2.8	9.9	5.8	-	-	10.4	5.8	8.6
Alternative AM Peak	Siglidi	LOS	-	-	-	В	-	А	А	А	-	-	В	А	А
Improve Existing	Signal	Delay	-	-	-	12.4	-	3.2	12.0	8.8	-	-	12.1	5.3	9.6
Alternative PM Peak	Signal	LOS	-	-	-	В	-	А	В	А	-	-	В	А	А

Table C-32: Hwy 264 at Airport Blvd LOS – SimTraffic Methodology

HIGHWAY 279 – SW REGIONAL AIRPORT BOULEVARD TO HIGHWAY 102

The LOS Tool showed LOS C conditions throughout the Highway 279 corridor for both 2018 and 2040. For the detailed analysis, the two-lane highway module of *HCS* was utilized. The results, shown in **Table C-33**, demonstrate acceptable LOS throughout the study area both in 2018 and in 2040.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
SW Regional Airport Blvd to Hubber Rd/Holloway Rd	0.00	1.63	4,100	А	2.00%	6,300	В
Hubber Rd/Holloway Rd to Hwy 102 (W Centerton Blvd)	1.63	3.02	4,100	А	2.00%	6,300	В

Table C-33: Existing and 2040 No-Action LOS Results on Highway 279

Table C-34 shows the *HCS* LOS results for the Action Alternatives for Highway 279. All Action Alternatives show the same LOS B conditions throughout the corridor as for the No-Action Alternative.

Table C-34: 2040 Action Alternatives LOS Results on Highway 279

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
SW Regional Airport Blvd to Hubber Rd/Holloway Rd	120.48%	7,600	В	103.61%	6,500	В	100.00%	6,300	В
Hubber Rd/Holloway Rd to Hwy 102 (W Centerton Blvd)	119.32%	7,500	В	102.27%	6,400	В	90.91%	5,700	В

HIGHWAY 612 – INTERSTATE 49 TO HIGHWAY 112

The LOS Tool showed LOS A conditions throughout the Highway 612 corridor both for 2018 and for 2040. For the detailed analysis, the freeway facilities module of *HCS* was utilized. The results, shown in **Table C-35**, reveal acceptable LOS A and LOS B conditions throughout the study area. It should be noted that the segment of Highway 612 from

Highway 112 to west of the Proposed XNA Connector was only analyzed for 2040 because this stretch of Highway 612 has not been constructed.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Highway 612 - Interstate 49 to Highway 112		0.69	7,100	А	4.80%	20,000	В
Highway 612 - Highway 112 to Proposed XNA Connector	4.86	6.00		-	-	20,000	В
Highway 612 - Proposed XNA Connector to the West	6.00	8.00	-	-	-	20,000	В

Table C-35: Existing and 2040 No-Action LOS Results on Highway 612

Table C-36 shows the *HCS* LOS results for the Action Alternatives for Highway 612. All Action Alternatives show the same LOS B conditions throughout the corridor as for the No-Action Alternative.

Table C-36: 2040 Action Alternatives LOS Results on Highway 612

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Highway 612 - Interstate 49 to Highway 112	109.55%	22,000	В	101.01%	20,000	В	98.99%	20,000	В
Highway 612 - Highway 112 to Proposed XNA Connector	159.60%	32,000	В	100.51%	20,000	В	101.01%	20,000	В
Highway 612 - Proposed XNA Connector to the West	106.06%	21,000	В	100.51%	20,000	В	101.01%	20,000	В

AIRPORT BOULEVARD FROM AIRPORT ENTRANCE TO HIGHWAY 264

The LOS Tool showed LOS B/C conditions along Airport Boulevard in 2018 and LOS C conditions in 2040. *Synchro* was used for the detailed analysis. As shown in **Table C-37**, LOS B conditions occur in 2018, but unacceptable LOS F conditions occur in 2040.

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Airport Entrance to Hwy 264	0.00	0.68	3,400	В	3.10%	6,700	F

Table C-37: Existing and 2040 No-Action LOS Results on Airport Boulevard

Table C-38 shows the *HCS* LOS results for the Action Alternatives for Airport Boulevard.All Action Alternatives show notable improvements in LOS over the No-Action Alternative(LOS B compared to LOS F).

Table C-38: 2040 Action Alternatives LOS Results on Airport Boulevard

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Airport Entrance to Hwy 264	110.39%	7,400	В	100.00%	6,700	В	100.00%	6,700	В

SW I STREET – HIGHWAY 71B TO HIGHWAY 12

The LOS Tool showed LOS E/F conditions and acceptability ratios over 1.00 throughout the entire study area in 2018 and in 2040. *Synchro* was utilized for the detailed analysis of this corridor. As shown in **Table C-39**, marginally acceptable LOS D conditions exist in 2018, and unacceptable LOS F conditions exist in 2040 throughout the entire study area.

Table C-39: Existing and 2040 No-Action LOS Results on SW I Street

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Hwy 71B (Walton Blvd) to Hwy 102 (SW 14th St)	0.00	0.70	12,000	D	2.90%	22,500	F
Hwy 102 (SW 14th St) to Hwy 12 (SW Regional Airport Blvd)	0.70	2.19	14,000	D	2.90%	26,500	F

Table C-40 shows the *HCS* LOS results for the Action Alternatives for SW I Street. Due to the minimal difference in volumes from the 2040 No-Action scenario to the Action Alternatives, the SW I Street corridor was analyzed using the *Synchro* model for the Future No-Action scenario and was not re-evaluated for the Action Alternatives.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Hwy 71B (Walton Blvd) to Hwy 102 (SW 14th St)	100.00%	22,500	F No-Action	99.65%	22,500	F No-Action	100.35%	22,500	F No-Action
Hwy 102 (SW 14th St) to Hwy 12 (SW Regional Airport Blvd)	98.56%	26,000	F No-Action	98.56%	26,000	F No-Action	100.72%	26,500	F No-Action

Table C-40: 2040 Action Alternatives LOS Results on SW I Street

REGIONAL AVENUE FROM HIGHWAY 12 TO AIRPORT BOULEVARD

The LOS Tool showed LOS B conditions along Regional Avenue in 2018. In 2040, the LOS Tool showed LOS D and an acceptability ratio over 1.00. The two-lane highway module of *HCS* was utilized for the detailed analysis of Regional Avenue. The results, shown in **Table C-41**, demonstrate acceptable LOS B and LOS C in 2018 and in 2040, respectively.

Table C-41: Existing and 2040 No-Action LOS Results on Regional Avenue

Location	Begin LM	End LM	2018 ADT	2018 LOS	AGR %	2040 No-Action ADT	2040 No-Action LOS
Regional Ave from Hwy. 12 to Airport Blvd	0.00	2.02	4,400	В	2.45%	7,500	С

Table C-42 shows the HCS LOS results for the Action Alternatives for Regional Avenue. AllAction Alternatives show LOS C which is the same as the No-Action scenario.

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
Regional Ave from Hwy. 12 to Airport Blvd	110.39%	8,300	С	100.00%	7,500	С	100.00%	7,500	С

Table C-42: 2040 Action Alternatives LOS Results on Regional Avenue

NEW/PARTIAL NEW ALIGNMENT

The LOS Tool showed LOS A along the New Alignment and LOS B along the Partial New Alignment in 2040. Because this corridor is not yet built, 2018 conditions were not evaluated. The freeway facility module of *HCS* was utilized for the detailed analysis of the

New Alignment, and the multilane highway module of *HCS* was utilized for the analysis of the Partial New Alignment. The results, shown in **Table C-43**, demonstrate acceptable LOS A conditions for both Alignment Alternatives in 2040.

Table C-43: 2040 Action Alternatives LOS Results on New/Partial New Alignment

Location	% Change from No- Action	2040 New Alignment ADT	2040 New Alignment LOS	% Change from No- Action	2040 Partial New Alignment ADT	2040 Partial New Alignment LOS	% Change from No- Action	2040 Improve Existing ADT	2040 Improve Existing LOS
New Alignment (Hwy 264 to Hwy 612)	-	14,500	А	-	-	-	-	-	-
Partial New Alignment (Hwy 264 to Hwy 112)	-	-	-	-	10,100	А	-	-	-