

LSC TRANSPORTATION CONSULTANTS, INC. 2504 East Pikes Peak Avenue, Suite 304 Colorado Springs, CO 80909 (719) 633-2868 FAX (719) 633-5430 E-mail: <u>lsc@lsctrans.com</u> Website: http://www.lsctrans.com

### 11401 E Highway 24 Property Rezone Traffic Impact Study (LSC #S224600) December 16, 2022

#### **Traffic Engineer's Statement**

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



#### **Developer's Statement**

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

12/19

## 11401 E Highway 24 Property Rezone Traffic Impact Study

Prepared for:

Steve Kang 520 Edison St Brush CO, 80723-2011

DECEMBER 16, 2022

LSC Transportation Consultants Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S224600



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December 16, 2022

Steve Kang 520 Edison St Brush CO, 80723-2011

RE: 11401 E Highway 24 Property Rezone Traffic Impact Study El Paso County, CO LSC # S224600

Dear Mr. Kang,

LSC Transportation Consultants, Inc. has prepared this traffic impact for the proposed rezone of the property located southeast of the intersection of US Hwy 24/Falcon Highway in El Paso County, Colorado. The property address is 11401 E HIGHWAY 24 and the El Paso County parcel number is 5313001013. The planned land use for the 14.35-acre site, once rezoned, is mini storage. One access point to Falcon Highway is envisioned for the property. The applicant is not seeking access to US Highway 24.

This report has been prepared for submittal to El Paso County.

#### **REPORT CONTENTS**

The preparation of this report included the following:

- Inventory of existing adjacent and nearby area road system. This included surface conditions, functional classifications, roadway widths, lane configurations, traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary left- and right-turn lanes, intersection sight distances, etc.;
- Morning and late-afternoon peak-hour turning-movement traffic counts at the "study-area" intersection of US Hwy 24/Falcon Highway;
- Review of previously-completed traffic studies in the vicinity of this site, the US 24 Planning & Environmental Linkages Study (PEL), and the US Highway 24 Access Control Plan for information and findings relative to this development. Other recent studies completed in the

area and any applicable data/transferrable information/analysis etc. from previous LSC studies adjacent to the site were also utilized;

- Evaluation of intersection/access sight distance at the likely location of the site access -to Falcon Highway, based on current criteria in the County's *Engineering Criteria Manual (ECM)*;
- Estimates of average weekday and peak-hour trip generation for the anticipated land use of the property, pending rezone approval;
- Estimation of directional distribution of site-generated vehicle trips on the area road system, at the study-area intersections, and at the proposed site-access point;
- Projections of site-generated turning-movement traffic volumes at the following study-area intersections:
  - US Hwy 24/Falcon Highway
  - Falcon Highway/proposed site access
- Estimates of short- and long-term background traffic volumes at the study-area intersections and access points;
- Total traffic (site traffic plus background traffic) projections at the study-area intersections for the short and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes on Falcon Highway at the proposed site access, based on the criteria in the County's *Engineering Criteria Manual;*
- Notice of required participation in the El Paso County Road Impact Fee Program;
- Other recommended improvements/modifications to study-area roads/intersections; and
- Summary of compiled data, analysis, findings, and recommendations.

#### LAND USE AND ACCESS

#### Proposed Land Use

State the size of the proposed project (area/size of building square footage, proposed number of storage units, etc)

Figure 1 shows the site location of the proposed rezone. The property is located on the southeast corner of the US Highway 24/Falcon Highway in El Paso County, Colorado. The 14.35-acre site is identified as El Paso County parcel ID 5313001013. The intended use for the property, once rezoned, is mini storage. A parcel detail is shown in Figure 2.

#### **Proposed Site Access**

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Please revise to mini- warehouse since report is using that land use for calculations.

One access point is needed for the property, The most likely location for the access would be in the northeast corner of the property. The exact access location can be determined at the Site Development Plan stage, but for this rezone report, the estimated location would be 404 feet east of the intersection of US Hwy 24/Falcon Highway (centerline spacing). This access point would be stop-sign controlled on the northbound approach and has been analyzed as a full-movement intersection with Falcon Highway.

#### AND TRAFFIC CONDITIONS hway to state that is 1 shows the roads adjacent to and in the vicinity of

ned/maintained by City.

1 shows the roads adjacent to and in the vicinity of the site. Adjacent roads serving the identified below followed by a brief description of each:

**US Highway (US) 24** extends east/west across Colorado connecting the Buena Vista, Colorado Springs, and Limon areas. US Hwy 24 is planned to be widened to four lanes through the Falcon area and is classified as an Expressway by the Colorado Department of Transportation (CDOT) and the 2016 *El Paso County Major Transportation Corridors Plan (MTCP)*. Adjacent to the site, US Hwy 24 has a posted speed limit of 55 miles per hour (mph). Auxiliary northbound-right and southbound-left turn lanes exist on US Hwy 24 approaching Falcon Highway.

**Falcon Highway** extends east from US Hwy 24 to Ellicott Highway and is classified as a two-lane Minor Arterial on the 2040 El Paso County *MTCP*. Adjacent to the site, the posted speed limit is 45 mph. Currently, the T-intersection of US Hwy 24/Falcon Highway is signalized with auxiliary

turn lanes on US Highv Existing Traffic Volum Existing Traffic Volum

Vehicular-turning-movement counts were conducted at the intersection of OS Hwy 24/Faicon Highway. Figure 2 shows these turning-movement volumes, as well as the average weekday traffic volumes (estimated based on factored peak-hour count data) on the adjacent roadways. Raw count data is attached.

- US Hwy 24/Falcon Highway
  - Tuesday, November 17, 2022 from 6:30 8:30 a.m.
  - o Tuesday, November 17, 2022 from 4:00 6:00 p.m.

#### SIGHT DISTANCE

#### El Paso County Requirements

Update sight distance section to list the Cities criteria. Driveway access permit is through the City.

Access points must meet *Engineering Criteria Manual (ECM)* standards for sight distance. The site-access point is anticipated to be a full-movement, stop-sign-controlled intersection with Falcon Highway. All sight-distance field measurements utilized a driver's-eye height of 3.5 feet and a height of 3.5 feet for vehicles approaching from the east or west.

#### **Entering Sight Distance**

With a 45-mph posted speed limit and minimal vertical curvature on Falcon Highway adjacent to the site, the minimum sight distance for both approaches at the proposed site-access location is 450 feet for passenger vehicles (per Table 2-35 of the County's *Engineering Criteria Manual*). Sight distances from the east at the proposed site-access location exceed the required 50-foot requirement for passenger vehicles, while sight distance is unobstructed to the signalized

US Hwy 24/Falcon Highway intersection looking to the west from the proposed site-access location.

## **TRIP GENERATION** State how the ADT is being calculated using the ITE (i.e. per GFA, net rentable area, storage units, etc).

Estimates of the existing and projected vehicle trips to be generated by the site have been made using nationally-published average trip-generation rates for land use code "151 – Mini-Warehouse" in *Trip Generation*, 11<sup>th</sup> Edition, 2021 by the Institute of Transportation Engineers (ITE).

Table 1 below presents a summary of the estimated site trip generation. A detailed trip-generation estimate for the development, including ITE rates for the proposed land uses, is presented in Table 3 (attached).

Analysis Dariad		Weekday	,
Analysis Period	In	Out	Total
Morning Peak Hour	3	3	6
Evening Peak Hour	4	4	8
Daily/24-hour	45	45	90

#### Table 1: Estimated External Site Vehicle-Trip Generation

Based on the ITE estimate for the proposed rezone, the site is projected to generate about 90 vehicle trips on the average weekday. During the weekday morning peak hour, approximately 3 vehicles would enter and 3 vehicles would exit the site. Approximately 4 entering vehicles and 4 exiting vehicles are projected for the weekday afternoon peak hour.

#### TRIP DISTRIBUTION AND ASSIGNMENT

#### Trip Directional Distribution

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 3 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the proposed land use, the area road system serving the site, the traffic-count data at the intersection of US Hwy 24/Falcon Highway, previously-conducted traffic studies in the area, and the site's geographic location relative to the Falcon area, the greater City of Colorado Springs metro area, El Paso County, and the Pikes Peak region.

#### Site-Generated Traffic

#### <u>Short Term</u>

Figure 4 shows the projected short-term site-generated traffic volumes for the weekday morning and evening peak hours. Site-generated traffic volumes at the study-area intersections have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 3) to the trip-generation estimates (from Table 3).

#### **Existing-Plus-Site-Generated Traffic Volumes**

Figure 5 shows the sum of existing traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes (shown in Figure 4). These volumes represent the projected short-term total traffic.

#### Estimated Future 2042 Background Traffic Volumes

Figure 6 shows the projected 20-year background traffic volumes for the year 2042. Estimated 2042 background through traffic volumes on US Hwy 24 and Falcon Highway account for projected background growth of undeveloped parcels nearby and align with long-term traffic projections from previous LSC traffic studies in the vicinity of the site. Projected 20-year background traffic volumes do **not** include projected traffic to be generated by the proposed rezone.

#### Future 2042 Total Traffic Volumes

Figure 7 shows the projected 2040 total traffic volumes, which are the sum of 2042 background traffic volumes (from Figure 6) plus the site-generated traffic volumes (from Figure 4).

#### LEVEL OF SERVICE ANALYSIS

The following intersections have been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the morning and evening peak-hour time periods:

- US Highway 24/Falcon Highway
- Falcon Highway/proposed site access

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2:	Intersection Levels of Servic	1 0
	Signalized Intersections	Unsignalized Intersections
	Average Control Delay	Average Control Delay
Level of Service	(Seconds per Vehicle)	(Seconds per Vehicle) <sup>(1)</sup>
А	10.0 sec or less	10.0 sec or less
В	10.1-20.0 sec	10.1-15.0 sec
С	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more
	ersections, if V/C ratio is greate the projected average control d	r than 1.0 the level of service is lelay per vehicle.

Table 2: In	ntersection	Levels of	Service	Delay	Ranges

Detailed Synchro reports are attached. A summary of LOS during the weekday morning and evening peak hours for the following intersections is shown in the following figures:

- Figure 2: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 5: Short-Term Total Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 6: 2042 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 7: 2042 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

#### US Hwy 24/Falcon Highway

#### Short Term

The westbound approach at the intersection of US Hwy 24/Falcon Highway currently operates at LOS E during the morning peak hour and is projected to remain at LOS E during the short-term morning peak hour with the addition of site-generated traffic. All other turning movements currently operate at and are projected to remain at LOS D or better during both short-term peak hours, with or without the addition of site-generated traffic.

#### Long Term

Assuming US Hwy 24 would have six lanes adjacent to Falcon Highway, the westbound approach at the intersection of US Hwy 24/Falcon Highway is projected to operate at LOS F or worse during both long-term peak hours, with or without the addition of site-generated traffic). Overall, the signalized intersection of US Hwy 24/Falcon Highway is projected to operate at LOS D during both long-term peak hours, with or without the addition of site-generated traffic.

#### Falcon Highway/Proposed Site Access

All individual turning movements at the proposed site-access intersection with Falcon Highway are projected to operate at LOS C or better during all short-term and long-term scenarios following the addition of site-generated traffic.

#### AUXILIARY TURN-LANE NEEDS ANALYSIS

Revise to City Criteria.

The Engineering Criteria Manual contains turning-volume thresholds which require auxiliary left- or right-turn lanes by roadway classifications.

• Falcon Highway – Minor Arterial

#### Falcon Highway/Proposed Site Access

Update auxiliary turn lane analysis to match City criteria.

#### Left-Turn Deceleration Lanes

Left-turn deceleration auxiliary turn lanes are required for a Minor Arterial access with a projected peak-hour left-ingress turning volume of 25 vph or greater. The westbound-left turn volume is **not** projected to exceed this 25-vph threshold during either peak hour following the completion of the proposed development. As such, no modifications would be required to the existing westbound approach on Falcon Highway approaching the proposed site access.

#### **Right-Turn Deceleration Lanes**

Right-turn deceleration auxiliary turn lanes are required for a Minor Arterial access with a projected peak-hour right-ingress turning volume of 50 vph or greater. The eastbound-right turn volume is **not** projected to exceed this 50-vph threshold during either peak hour following the completion of the proposed development. As such, no modifications would be required to the existing eastbound approach on Falcon Highway approaching the proposed site access.

#### **Right-Turn Acceleration Lanes**

Per Section 2.3.7.D.2 of the *ECM*, a right-turn acceleration lane is generally not required on Minor Arterial roadways. As such, a northbound-to-eastbound right-turn acceleration lane would **not** be required at the proposed site access on Falcon Highway.

Revise to reference the City Criteria

#### MAJOR TRANSPORTATION CORRIDORS PLAN (MTCP)

Roadway Classifications Roadway improvements to US Highway 24 are shown on the 2040 MTCP and listed on page 50. Please update section.

The following study-area roadway improvements are shown on Map 13 and Table 5 of the El Paso County 2016 *MTCP*.:

- Falcon Highway 2-Lane Minor Arterial (Rural)
- Note: the Corridor Preservation Plan shows Falcon Highway as a four-lane Minor Arterial.

#### **Reimbursable Improvements**

Contact the City to verify if they require ROW preservation or dedication. Update the report to describe their requirements.

The following roadway improvement projects have been identified as being needed by the year 2040 per Map 13 and Table 4 of El Paso County's 2016 *MTCP*:

- U5 Falcon Highway from US Hwy 24 to 1 mile east of Curtis Road (\$16,509,000)
  - Existing conditions 2-lane Rural Unimproved County Road
  - Future conditions 2-lane Rural Minor Arterial

See the attached *MTCP* maps for reference.

#### COUNTY ROAD IMPROVEMENT FEE PROGRAM

#### Transportation Impact Fees

Add "per Resolution 19-471"

This project will be required to participate in the El Paso County Road Improvement Fee Program. The option for participation will be identified at the site development plan stage.

#### MULTI-MODAL TRANSPORTATION AND TDM OPPORTUNITIES

Falcon Hwy between SH24 and Meridian Road is owned by the City. Verify with the City that they do not per Mag<u>15 and Table 5 of El Paso C</u> as all study-area roadways are Rura Sidewalk. Update to identify their requirements.

There is a Park-N-Ride facility located nearby at the southeast corner of New Meridian Road and Swingline Road.

#### CDOT ACCESS PERMIT/REQUIREMENTS

The sit-generated traffic would not increase traffic on the east leg of US Hwy 24/Falcon Highway by more than 20 percent, and it is unlikely that CDOT would require highway improvements of this development. Therefore, an access permit is not likely to be required by CDOT. CDOT may require additional right-of-way for US Highway 24 along this property's frontage.

Contact CDOT for access permit requirements and improvements due to the access point's proximity to Highway 24 and inclusion in CDOT's 2006 Highway 24 Access Control Plan as access ID number 40. Per LSC Traffic Impact Study submitted to the county under file number MS05009 and PPR05037 coordination with CDOT was anticipated for future frontage road on the parcel. Please add a bibliography of reports used to the appendix and include the referenced TIS.

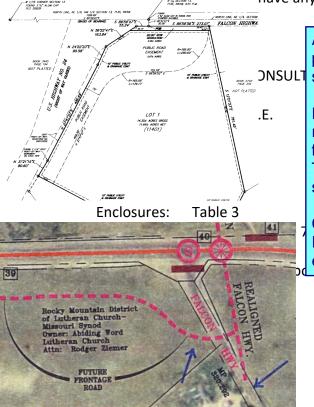
#### DEVIATIONS

No transportation-related deviations to *ECM* design criteria are requested.

#### SUMMARY OF FINDINGS

- The proposed development is projected to generate about 90 vehicle trips on the average weekday.
- During the weekday morning peak hour, 3 vehicles would enter the site while 3 vehicles would exit the site.
- During the weekday evening peak hour, 4 vehicles would enter the site while 4 vehicles would exit the site.
- Please refer to the "Level of Service" section above for detailed LOS analysis results.
- Based on projected turning movement volumes and *ECM* criteria, no auxiliary turn-lane improvements would be required at the proposed site access on Falcon Highway. Please refer to the "Auxiliary Turn-Lane Analysis" section more details.
- Additional details regarding exact access location, access design details, and Roadway Improvement Fee Program option can be addressed in detail at the site development plan
  - Stage. Per El Paso County LDC 6.2.5.C a proposed access connecting to County-maintained paved road shall be paved for a distance of at least 50 feet. Please contact the City of Colorado Springs and include a statement on the city's requirements for paving accesses connecting to COS ROW.

Please contact mo if you have any questions regarding this report.



Add a section regarding the Hwy 24 PEL and access management plan. Provide a summary of the current plan and how it impacts the site.

Example: The 2005 Access Control Plan identified future frontage road through the site. The existing plat identified easements for this frontage road. Is this still in effect with their latest plans/studies? The Future frontage is shown to connect to Falcon Hwy on the east side. How will this impact the proposed access for the property?

Coordinate with CDOT to determine if CDOT will require additional ROW preservation or easement relative to the existing public road easement already shown on the plat.

### Tables



Table 3:	Detailed	Trip	Generation	Estimate
----------	----------	------	------------	----------

	ITE			Trip	Gener	ation F	Rates <sup>2</sup>		Drive	way Tr	ips Gen	ierate	d
		Value	Units <sup>1</sup>	Average	A.	м.	Ρ.	м.	Average	Α.	м.	Ρ.	м.
Code	Description	-		Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
151	Mini-Warehouse	5.000	SU (100s)	17.96	0.62	0.59	0.84	0.84	90	3	3	4	4
<sup>1</sup> SU (1	.00s) = 100 storage u	nits											
<sup>2</sup> Sour	ce: Trip Generation,	11th Editio	on (2021) by	the Institut	e of Tra	anspor	tation	Engine	ers (ITE)				

## Figures



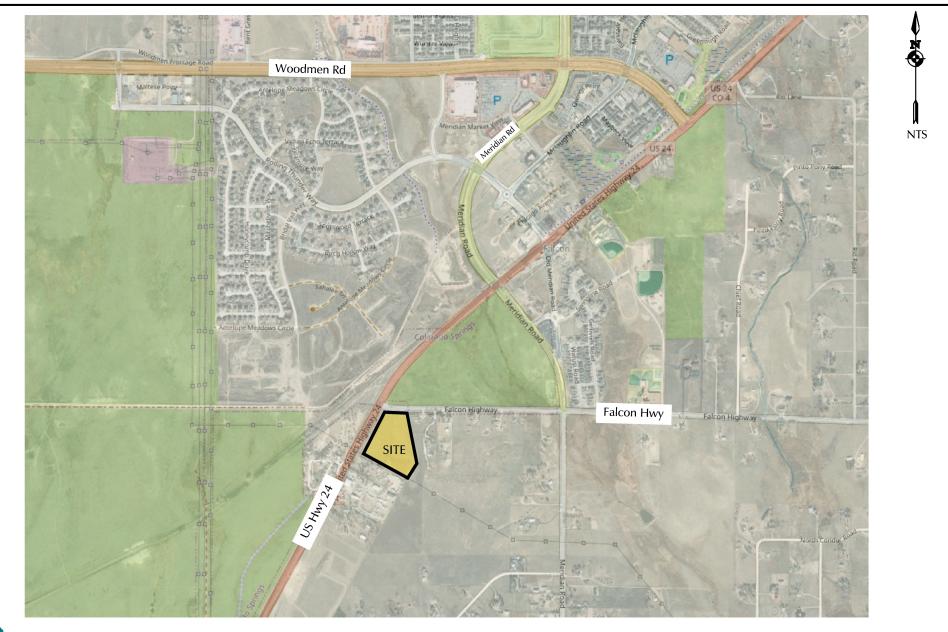




Figure 1 Vicinity Map 11401 E Highway 24 Property Rezone (LSC # S224600)





#### Figure 2

## Site Rezone Information and Access Location

11401 E Highway 24 Property Rezone (LSC # S224600)

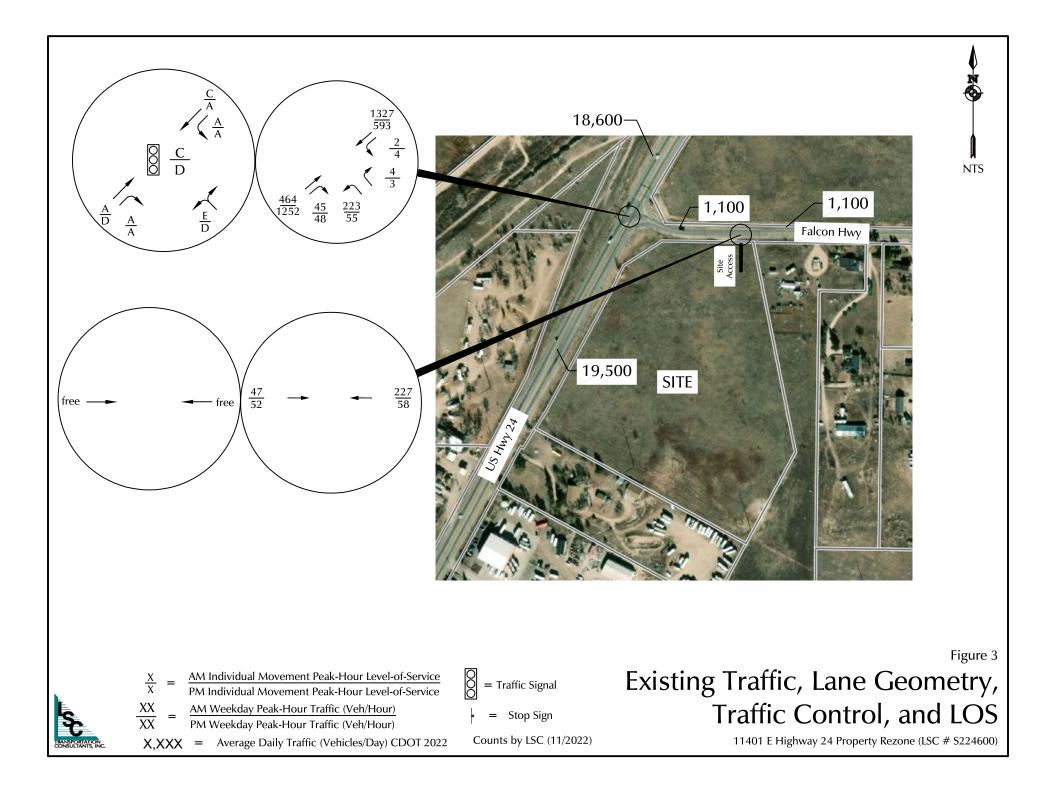




Figure 4

NTS

#### LEGEND:

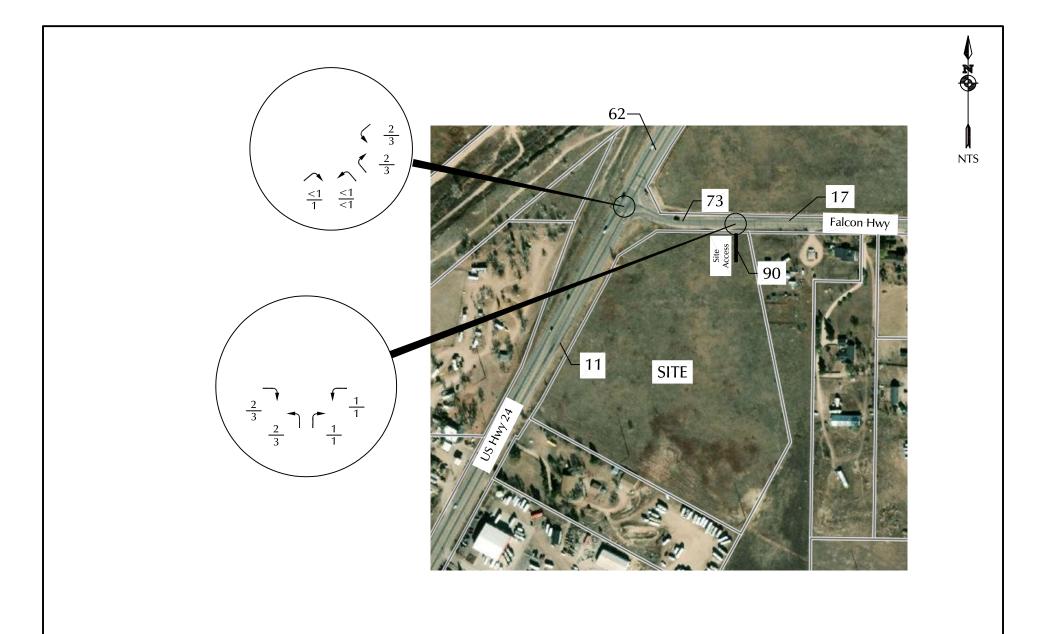


Estimated directional distribution of site-generated trips (% of entering or exiting traffic)



Estimated Directional Distribution

11401 E Highway 24 Property Rezone (LSC # S224600)



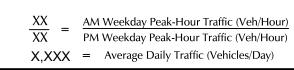
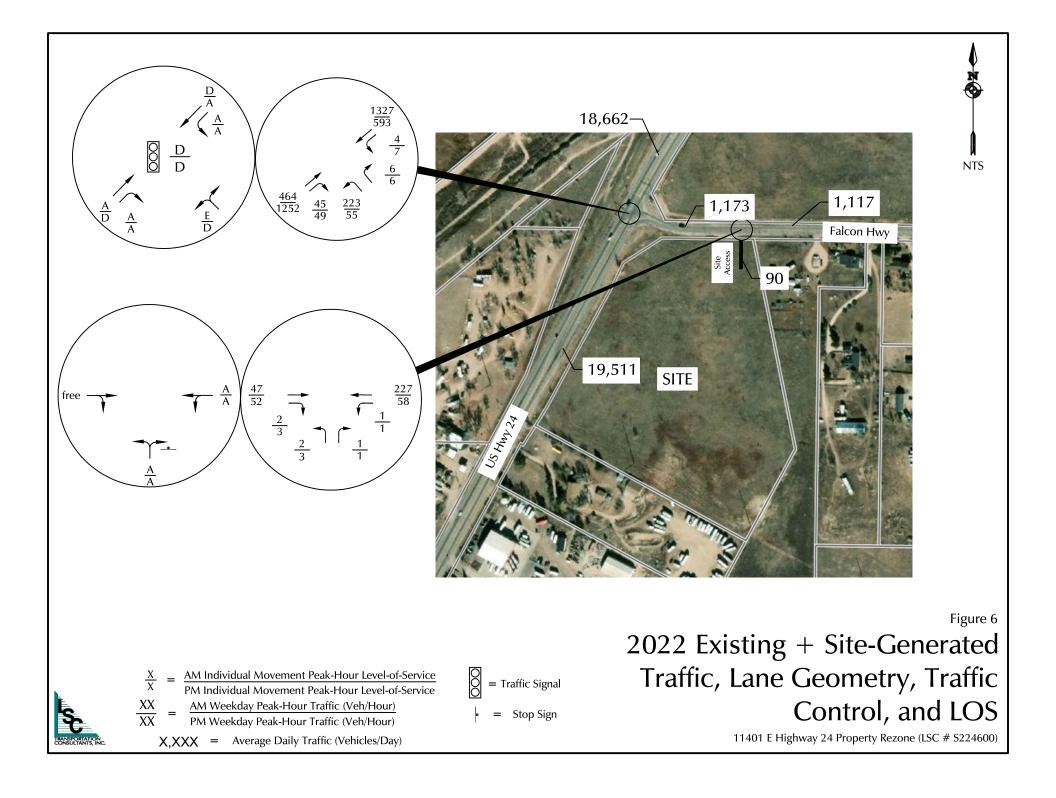
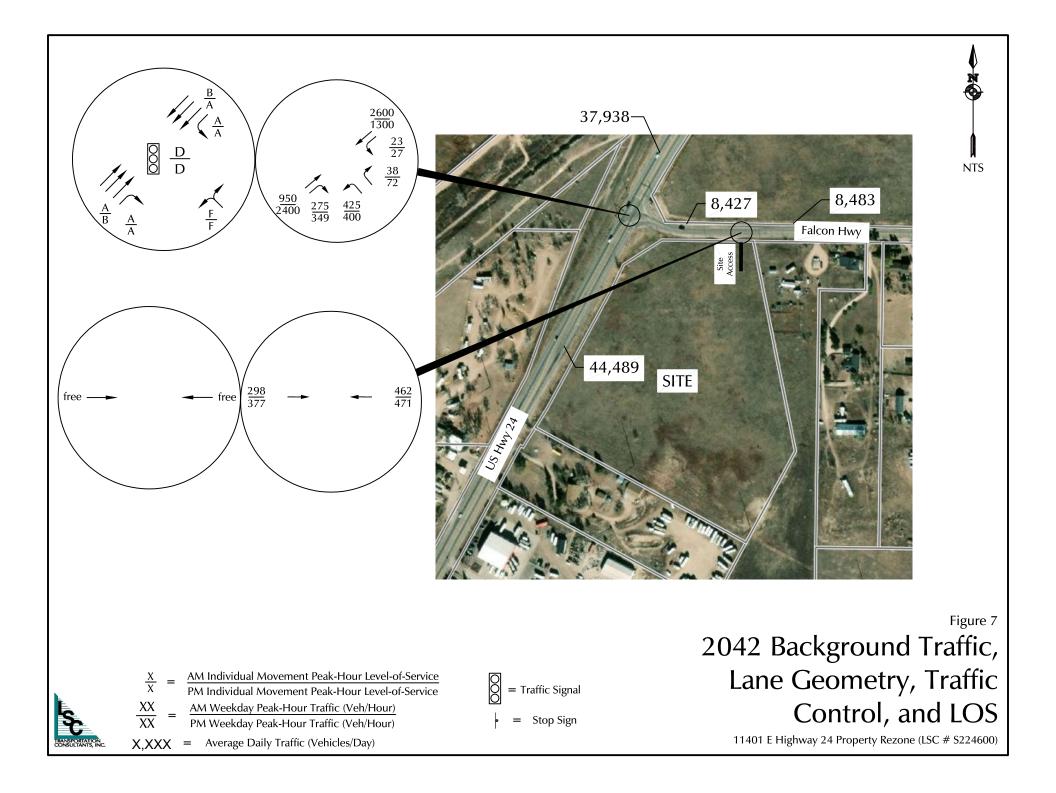
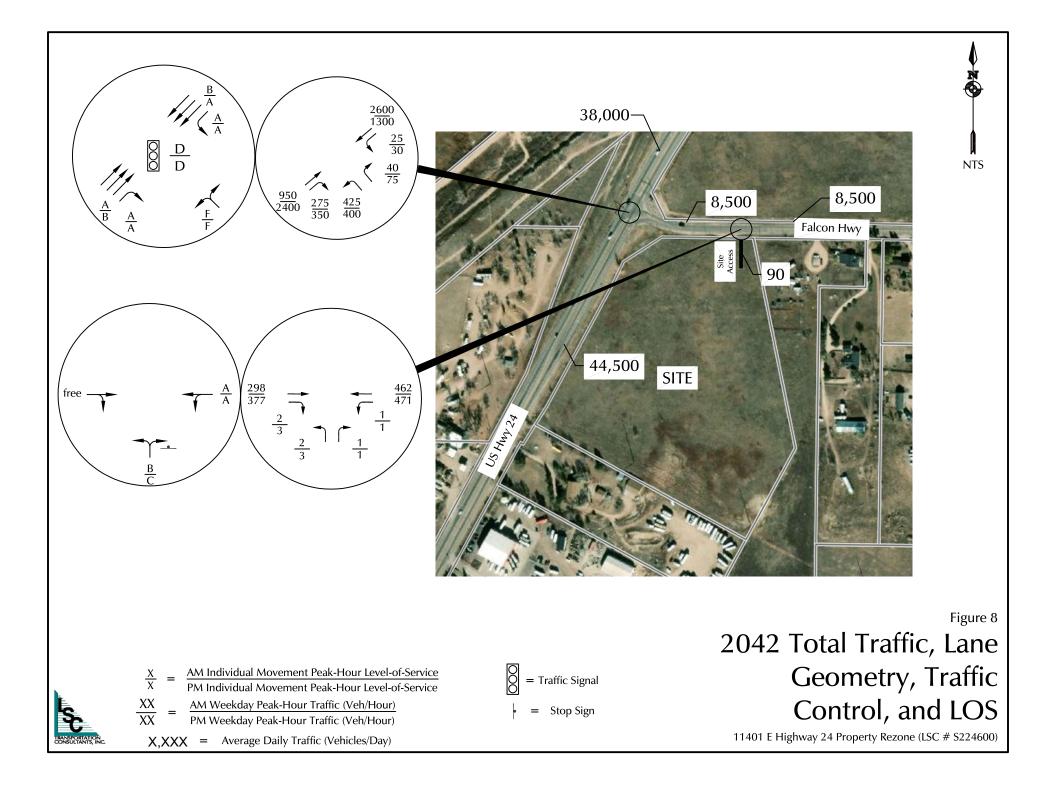


Figure 5 Site-Generated Traffic

11401 E Highway 24 Property Rezone (LSC # S224600)









# LSC Transportation Consultants, Inc. 2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909

719-633-2868

File Name : Hwy 24 - Falcon Hwy AM Site Code : S224600 Start Date : 11/17/2022 Page No : 1

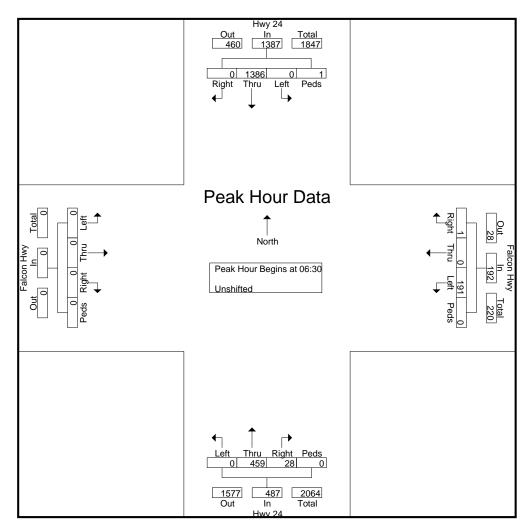
								G	roups	Printe	d- Un	shifted	d								
			Hwy 2	24			Fa	lcon I	-lwy				Hwy 2				Fa	lcon l	Hwy		
		<u>So</u>	<u>uthbo</u>	und			W	estbo	und			No	rthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	123	0	0	123	0	0	10	0	10	1	52	0	0	53	0	0	0	0	0	186
06:35	0	123	0	0	123	0	0	5	0	5	2	42	0	0	44	0	0	0	0	0	172
06:40	0	118	0	0	118	0	0	9	0	9	3	54	0	0	57	0	0	0	0	0	184
06:45	0	119	0	0	119	0	0	7	0	7	3	33	0	0	36	0	0	0	0	0	162
06:50	0	119	0	0	119	0	0	17	0	17	3	39	0	0	42	0	0	0	0	0	178
06:55	0	111	0	0	111	0	0	16	0	16	1	28	0	0	29	0	0	0	0	0	156
Total	0	713	0	0	713	0	0	64	0	64	13	248	0	0	261	0	0	0	0	0	1038
07:00	0	106	0	0	106	0	0	18	0	18	0	28	0	0	28	0	0	0	0	0	152
07:05	0	103	0	1	104	0	0	25	0	25	1	37	0	0	38	0	0	0	0	0	167
07:10	0	113	0	0	113	1	0	16	0	17	2	29	0	0	31	0	0	0	0	0	161
07:15	0	113	0	0	113	0	0	27	0	27	2	47	0	0	49	0	0	0	0	0	189
07:20	0	129	0	0	129	0	0	17	0	17	6	39	0	0	45	0	0	0	0	0	191
07:25	0	109	0	0	109	0	0	24	0	24	4	31	0	0	35	0	0	0	0	0	168
07:30	0	109	0	0	109	0	0	17	0	17	6	29	0	0	35	0	0	0	0	0	161
07:35	0	107	0	0	107	0	0	33	0	33	2	40	0	0	42	0	0	0	0	0	182
07:40	0	117	0	0	117	2	0	12	0	14	5	46	0	0	51	0	0	0	0	0	182
07:45	0	113	0	0	113	0	0	16	0	16	5	32	0	0	37	0	0	0	0	0	166
07:50	0	114	0	0	114	0	0	11	0	11	7	56	0	0	63	0	0	0	0	0	188
07:55	0	94	2	0	96	1	0	7	0	8	5	50	0	0	55	0	0	0	0	0	159
Total	0	1327	2	1	1330	4	0	223	0	227	45	464	0	0	509	0	0	0	0	0	2066
08:00	0	81	0	0	81	1	0	5	0	6	4	40	0	0	44	0	0	0	0	0	131
08:05	0	66	0	0	66	1	0	4	0	5	5	44	0	0	49	0	0	0	0	0	120
08:10	0	88	1	0	89	0	0	4	0	4	1	37	0	0	38	0	0	0	0	0	131
08:15	0	94	0	0	94	0	0	9	0	9	4	37	0	0	41	0	0	0	0	0	144
08:20	0	68	1	0	69	0	0	4	0	4	2	35	0	0	37	0	0	0	0	0	110
08:25	0	67	0	0	67	0	0	7	0	7	_3	36	0	0	39	0	0	0	0	0	113
Grand Total	0	2504	4	1	2509	6	0	320	0	326	77	941	0	0	1018	0	0	0	0	0	3853
Apprch %	0	99.8	0.2	0		1.8	0	98.2	0		7.6	92.4	0	0		0	0	0	0	-	
Total %	0	65	0.1	0	65.1	0.2	0	8.3	0	8.5	2	24.4	0	0	26.4	0	0	0	0	0	

# LSC Transportation Consultants, Inc. 2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909

719-633-2868

File Name : Hwy 24 - Falcon Hwy AM Site Code : S224600 Start Date : 11/17/2022 Page No : 2

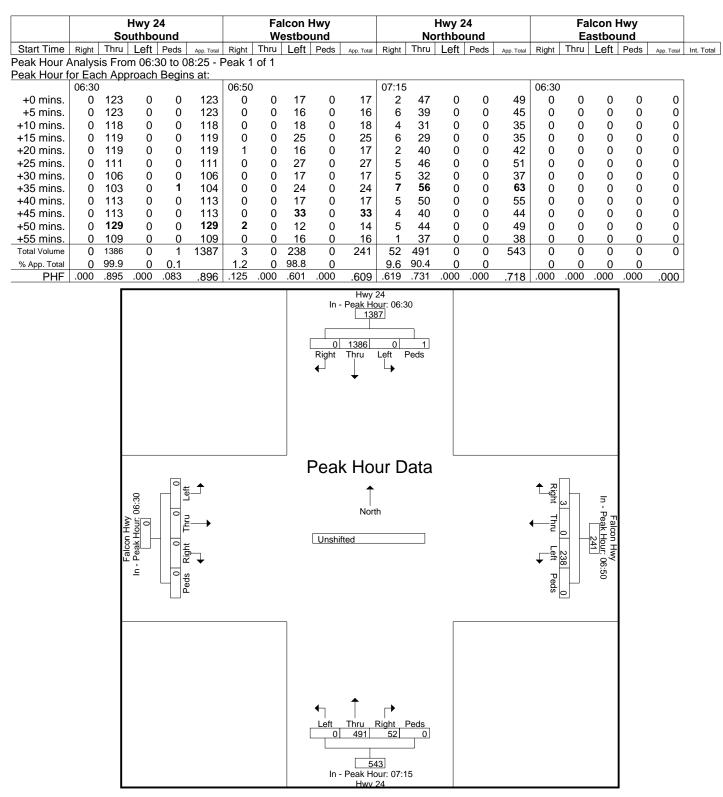
			Hwy 2	.4			Fa	lcon l	lwy			Hwy 24       Northbound       Right     Thru       Left     Peds       App. Total     Right			Fa	lcon l	lwy		]		
		So	uthbo	und			W	estbo	und			No	orthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	ght Thru Left Peds App. Total Right Thru Left Pe		Peds	App. Total	Int. Total					
Peak Hour A	Analys	is Fro	m 06:3	30 to 0	8:25 - F	Peak 1	of 1														
Peak Hour f	or Ent	ire Inte	ersecti	ion Be	gins at	06:30															
06:30	0	123	0	0	123	0	0	10	0	10	1	52	0	0	53	0	0	0	0	0	186
06:35	0	123	0	0	123	0	0	5	0	5	2	42	0	0	44	0	0	0	0	0	172
06:40	0	118	0	0	118	0	0	9	0	9	3	54	0	0	57	0	0	0	0	0	184
06:45	0	119	0	0	119	0	0	7	0	7	3	33	0	0	36	0	0	0	0	0	162
06:50	0	119	0	0	119	0	0	17	0	17	3	39	0	0	42	0	0	0	0	0	178
06:55	0	111	0	0	111	0	0	16	0	16	1	28	0	0	29	0	0	0	0	0	156
07:00	0	106	0	0	106	0	0	18	0	18	0	28	0	0	28	0	0	0	0	0	152
07:05	0	103	0	1	104	0	0	25	0	25	1	37	0	0	38	0	0	0	0	0	167
07:10	0	113	0	0	113	1	0	16	0	17	2	29	0	0	31	0	0	0	0	0	161
07:15	0	113	0	0	113	0	0	27	0	27	2	47	0	0	49	0	0	0	0	0	189
07:20	0	129	0	0	129	0	0	17	0	17	6	39	0	0	45	0	0	0	0	0	191
07:25	0	109	0	0	109	0	0	24	0	24	4	31	0	0	35	0	0	0	0	0	168
Total Volume	0	1386	0	1	1387	1	0	191	0	192	28	459	0	0	487	0	0	0	0	0	2066
% App. Total	0	99.9	0	0.1		0.5	0	99.5	0		5.7	94.3	0	0		0	0	0	0		
PHF	.000	.895	.000	.083	.896	.083	.000	.590	.000	.593	.389	.708	.000	.000	.712	.000	.000	.000	.000	.000	.901



### LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

> File Name : Hwy 24 - Falcon Hwy AM Site Code : S224600 Start Date : 11/17/2022 Page No : 3



# LSC Transportation Consultants, Inc. 2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909

719-633-2868

File Name : Hwy 24 - Falcon Hwy PM Site Code : S224600 Start Date : 11/15/2022 Page No : 1

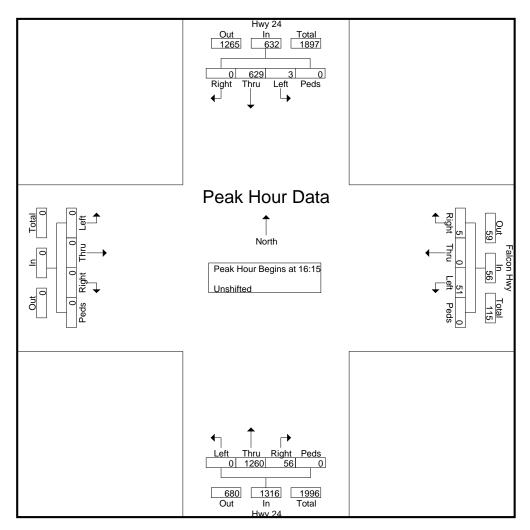
								G	roups	Printe	d- Uns										
			Hwy 2					lcon	,				Hwy 2								
			uthbo					estbo					rthbo					astbo			
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left		App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	0	41	1	0	42	1	0	4	0	5	7	109	0	0	116	0	0	0	0	0	163
16:05	0	48	0	0	48	0	0	10	0	10	2	89	0	0	91	0	0	0	0	0	149
16:10	0	47	2	0	49	0	0	7	0	7	5	94	0	0	99	0	0	0	0	0	155
16:15	0	68	0	0	68	0	0	5	0	5	4	101	0	0	105	0	0	0	0	0	178
16:20	0	48	0	0	48	1	0	3	0	4	8	111	0	0	119	0	0	0	0	0	171
16:25	0	70	0	0	70	2	0	4	0	6	6	103	0	0	109	0	0	0	0	0	185
16:30	0	48	0	0	48	1	0	6	0	7	7	96	0	0	103	0	0	0	0	0	158
16:35	0	62	0	0	62	0	0	2	0	2	4	114	0	0	118	0	0	0	0	0	182
16:40	0	38	1	0	39	0	0	5	0	5	2	92	0	0	94	0	0	0	0	0	138
16:45	0	53	0	0	53	1	0	2	0	3	2	113	0	0	115	0	0	0	0	0	171
16:50	0	63	1	0	64	0	0	4	0	4	3	100	0	0	103	0	0	0	0	0	171
16:55	0	43	0	0	43	0	0	5	0	5	4	109	0	0	113	0	0	0	0	0	161
Total	0	629	5	0	634	6	0	57	0	63	54	1231	0	0	1285	0	0	0	0	0	1982
17:00	0	52	0	0	52	0	0	5	0	5	4	111	0	0	115	0	0	0	0	0	172
17:05	Ō	45	1	Õ	46	Ö	Õ	5	Õ	5	4	105	Õ	Õ	109	Õ	Õ	Õ	Õ	Õ	160
17:10	0	39	0	Õ	39	0	Õ	5	Õ	5	8	105	Õ	Õ	113	Õ	Õ	Ő	Õ	0	157
17:15	Ō	40	Õ	Õ	40	Ö	Õ	6	Õ	6	3	103	Õ	Õ	106	Õ	Õ	Ő	Õ	0	152
17:20	Ō	57	Ō	Ō	57	1	Ō	5	Ō	6	3	103	Ō	Ō	106	Ō	Ō	Ō	Ō	0	169
17:25	Ō	53	1	Ō	54	Ó	Ō	5	Ō	5	4	101	Ō	Ō	105	Ō	Ō	Ō	Ō	Ō	164
17:30	0	47	0	0	47	1	0	3	0	4	6	104	0	0	110	0	0	0	0	0	161
17:35	0	48	0	0	48	0	0	3	0	3	8	110	0	0	118	0	0	0	0	0	169
17:40	0	38	0	0	38	0	0	2	0	2	8	88	0	0	96	0	0	0	0	0	136
17:45	0	37	0	0	37	0	0	2	0	2	3	86	0	0	89	0	0	0	0	0	128
17:50	0	39	0	0	39	0	0	5	0	5	4	78	0	0	82	0	0	0	0	0	126
17:55	0	35	0	0	35	0	0	3	0	3	2	63	0	0	65	0	0	0	0	0	103
Total	0	530	2	0	532	2	0	49	0	51	57	1157	0	0	1214	0	0	0	0	0	1797
Grand Total	0	1159	7	0	1166	8	0	106	0	114	111	2388	0	0	2499	0	0	0	0	0	3779
Apprch %	Ő	99.4	0.6	Ő		7	Ő	93	0		4.4	95.6	0	Ő		Ő	Ő	0	Ő	5	5.15
Total %	0	30.7	0.2	Ő	30.9	0.2	Ő	2.8	0	3	2.9	63.2	0	Ő	66.1	0	0	0	Ő	0	
	0		0.2	0	00.0	0.2	0	2.0	0	0	2.0		0	0	00.1	0	0	0	0	0	

# LSC Transportation Consultants, Inc. 2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909

719-633-2868

File Name : Hwy 24 - Falcon Hwy PM Site Code : S224600 Start Date : 11/15/2022 Page No : 2

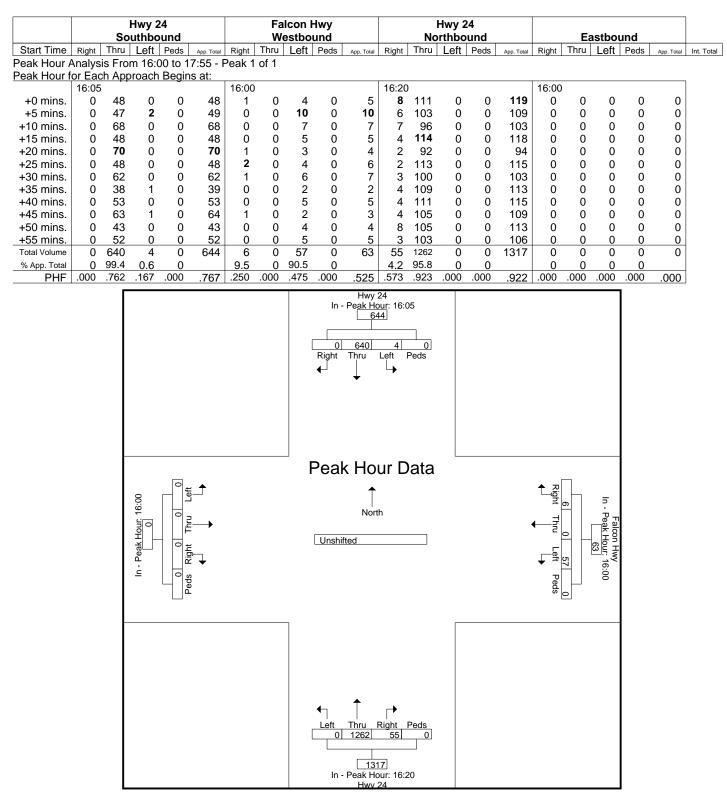
			Hwy 2	24			Fa	lcon l	lwy				Hwy 2	.4							
		So	uthbo	und			W	estbo	und			No	orthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour A	Analys	is Fro	m 16:0	00 to 1	7:55 - F	Peak 1	of 1														
Peak Hour f	or Ent	ire Inte	ersecti	ion Beg	gins at	16:15															
16:15	0	68	0	0	68	0	0	5	0	5	4	101	0	0	105	0	0	0	0	0	178
16:20	0	48	0	0	48	1	0	3	0	4	8	111	0	0	119	0	0	0	0	0	171
16:25	0	70	0	0	70	2	0	4	0	6	6	103	0	0	109	0	0	0	0	0	185
16:30	0	48	0	0	48	1	0	6	0	7	7	96	0	0	103	0	0	0	0	0	158
16:35	0	62	0	0	62	0	0	2	0	2	4	114	0	0	118	0	0	0	0	0	182
16:40	0	38	1	0	39	0	0	5	0	5	2	92	0	0	94	0	0	0	0	0	138
16:45	0	53	0	0	53	1	0	2	0	3	2	113	0	0	115	0	0	0	0	0	171
16:50	0	63	1	0	64	0	0	4	0	4	3	100	0	0	103	0	0	0	0	0	171
16:55	0	43	0	0	43	0	0	5	0	5	4	109	0	0	113	0	0	0	0	0	161
17:00	0	52	0	0	52	0	0	5	0	5	4	111	0	0	115	0	0	0	0	0	172
17:05	0	45	1	0	46	0	0	5	0	5	4	105	0	0	109	0	0	0	0	0	160
17:10	0	39	0	0	39	0	0	5	0	5	8	105	0	0	113	0	0	0	0	0	157
Total Volume	0	629	3	0	632	5	0	51	0	56	56	1260	0	0	1316	0	0	0	0	0	2004
% App. Total	0	99.5	0.5	0		8.9	0	91.1	0		4.3	95.7	0	0		0	0	0	0		
PHF	.000	.749	.250	.000	.752	.208	.000	.708	.000	.667	.583	.921	.000	.000	.922	.000	.000	.000	.000	.000	.903



### LSC Transportation Consultants, Inc.

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> File Name : Hwy 24 - Falcon Hwy PM Site Code : S224600 Start Date : 11/15/2022 Page No : 3

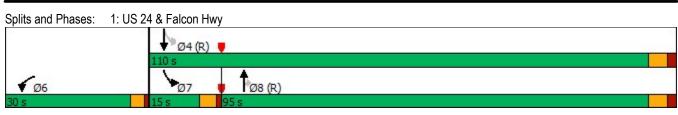




Lane Group         WBL         WBR         NBT         NBR         SBL         SBT           Lane Configurations         *		4	•	Ť	1	1	ŧ
Lane Configurations         Y	Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)         224         5         464         47         3         1237           Future Volume (vph)         224         5         464         47         3         1237           Ideal Flow (vphpl)         1900         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.0	•						
Future Volume (vph)         224         5         464         47         3         1237           Ideal Flow (vphp)         1900         1900         1900         1900         1900         1900           Storage Langth (ft)         0         0         490         775           Storage Langes         1         0         1         1           Taper Length (ft)         25         90         90           Lane Util. Factor         1.00         1.00         1.00         1.00         1.00           Fit Protected         0.953         0.950         90         90         1275           Std. Flow (port)         1770         0         1759         1495         1827           Fith Promited         0.953         0.410         91         51         127           Std. Flow (perm)         1770         0         1759         1495         749         1827           Right Turn on Red         Yes         Yes         Yes         91         125         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heazy Vehicles (%)         2%         2%         8%         8			5				
Ideal Flow (vphpl)         1900         100         100         1.00							
Storage Length (ft)         0         0         490         775           Storage Lanes         1         0         1         1           Taper Length (ft)         25         90           Lane Util. Factor         1.00         1.00         1.00         1.00           Frt         0.997         0.850         0.950           Satd. Flow (prot)         1770         0         1759         1495         1736         1827           Right Turn on Red         Yes         Yes         Yes         749         1827           Right Turn on Red         Yes         Yes         991         17avel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         4%         4%           Adj. Flow (rph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         12         12         12         12         12         12           Lane Group Flow (vph)         263         0         504         51         3         1302           Shared	· · · /						
Storage Lanes         1         0         1         1           Taper Length (ft)         25         90           Lane Util, Factor         1.00         1.00         1.00         1.00         1.00           Fit Protected         0.953         0.950         0.850         1736         1827           Fit Protected         0.953         0.410         0.410         100         1759         1495         749         1827           Stad. Flow (perm)         1770         0         1759         1495         749         1827           Right Turn on Red         Yes         Yes         Yes         Yes         Stad. Flow (RTOR)         1         51           Link Speed (mph)         45         65         65         65         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         2         1         3         1302         Yes         Yes         14 </td <td>,</td> <td></td> <td></td> <td>1000</td> <td></td> <td></td> <td>1300</td>	,			1000			1300
Taper Length (ft)         25         90           Lane Util. Factor         1.00         1.00         1.00         1.00         1.00         1.00           Frt         0.997         0.850         0.950         5           Stat. Flow (port)         1770         0         1759         1495         1736         1827           Right Turn on Red         Yes         Yes         Yes         749         1827           Right Turn on Red         Yes         Yes         51         1         1         51           Link Speed (mph)         45         65         65         65         10.4         Peak Hour Factor         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%         Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         2         2         12         12         12         12         12         12         12         12         12         149         1302         5         56         56         56         56         56         56         56         56							
Lane Util. Factor         1.00 <th1.00< th="">         1.00         1.00</th1.00<>			U		1		
Frit         0.997         0.850           Fit Protected         0.953         0.950           Satd. Flow (prot)         1770         0         1759         1495         1736         1827           Fit Permitted         0.953         0.410         5         1827         Right Turn on Red         Yes			1 00	1 00	1 00		1 00
Fit Protected         0.953         0.950           Satd. Flow (prot)         1770         0         1759         1495         1736         1827           Flt Permitted         0.953         0.410         0.414         0.4195         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.95         0.440         Additter for for for for for for for for for fo			1.00	1.00		1.00	1.00
Satd. Flow (prot)         1770         0         1759         1495         1736         1827           Fit Permitted         0.953         0.410           Satd. Flow (perm)         1770         0         1759         1495         749         1827           Right Turn on Red         Yes         Yes         Yes         Yes         Yes         Yes           Satd. Flow (RTOR)         1         51         11         Stath Flow (RTOR)         1         Yes					0.850	0.050	
Fit Permitted         0.953         0.410           Satd. Flow (perm)         1770         0         1759         1495         749         1827           Right Turn on Red         Yes         Yes         Yes         Yes         Yes           Satd. Flow (RTOR)         1         51         51         51         Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4         Peak Hour Factor         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         17m         12			0	4750	4.405		4007
Satd. Flow (perm)         1770         0         1759         1495         749         1827           Right Turn on Red         Yes         Yes         Yes         Yes         Satd. Flow (RTOR)         1         51           Link Speed (mph)         45         65         65         10.4           Pravel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Lane Bragment         Left         Right         Left         Right         Left	ů ,		0	1759	1495		1827
Right Turn on Red         Yes         Yes           Satd. Flow (RTOR)         1         51           Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.92         0.92         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         2         12         12         12         12         12           Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00							
Satd. Flow (RTOR)         1         51           Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00 <td>, , ,</td> <td>1770</td> <td></td> <td>1759</td> <td></td> <td>749</td> <td>1827</td>	, , ,	1770		1759		749	1827
Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         16           Turning Speed (mph)         15         9         9         15         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         0         0         0         0 </td <td></td> <td></td> <td>Yes</td> <td></td> <td></td> <td></td> <td></td>			Yes				
Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         100         1.	· · · ·				51		
Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         2         12         3         1302           Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Left         Iter           Median Width(ft)         16         16         16         16         16         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00	Link Speed (mph)	45		65			65
Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         Left         Left         Left         Left         Median Width(ft)         16         16         16         16         16         16         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00		414		1195			991
Peak Hour Factor         0.87         0.87         0.92         0.92         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Left         Left         Left         Left         Left         Left         Left         Deft         Left         Moint         No         Size (fr)         No	( )						10.4
Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         I.00         0			0.87		0.92	0.95	
Adj. Flow (vph)         257         6         504         51         3         1302           Shared Lane Traffic (%)         Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Thru         No         1.00 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Shared Lane Traffic (%)           Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         I         12         12         12         Link Offset(ft)         16         16         Tot         16         Tot         No         No         1.00							
Lane Group Flow (vph)         263         0         504         51         3         1302           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Right         Left         Detector         100         0	2 (1)	201	U	004	01	0	1002
Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Right         Left         12         12         12         Left         Left         12         Left         12         Left         12         Left         12         12         Left         12         Left         16         16         Throway Left Turn Lane         No         No         1.00		263	٥	504	51	3	1302
Lane Alignment         Left         Right         Left         Right         Left         Right         Left         Left           Median Width(ft)         12         12         12         12         12           Link Offset(ft)         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16           Two way Left Turn Lane         100         1.00         1.00         1.00         1.00           Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00           Turning Speed (mph)         15         9         9         15         12         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Channel         Usetector 1 Channel         Usetector 2 Size(ft)	,						
Median Width(ft)         12         12         12           Link Offset(ft)         0         0         0           Crosswalk Width(ft)         16         16         16           Two way Left Turn Lane         1.00         1.00         1.00         1.00         1.00           Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00           Turning Speed (mph)         15         9         9         15         9         9         15           Number of Detectors         1         2         1         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         0         0         0         0         0           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel         Detector 1 Queue (s)         0.0         0.0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Link Offset(ft)         0         0         0           Crosswalk Width(ft)         16         16         16           Two way Left Turn Lane			Right		Right	Leπ	
Crosswalk Width(ft)         16         16         16           Two way Left Turn Lane         Headway Factor         1.00	( )						
Two way Left Turn Lane           Headway Factor         1.00         1.00         1.00         1.00         1.00           Turning Speed (mph)         15         9         9         15           Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Type         Cl+Ex         Cl+Ex         Cl+Ex         Cl+Ex         Cl+Ex           Detector 1 Channel         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94         94         94         94         94	. ,						
Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00         1.00           Turning Speed (mph)         15         9         9         15         9         12         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6         0<	( )	16		16			16
Turning Speed (mph)         15         9         9         15           Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel                  Detector 1 Channel							
Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel         0.0         0.0         0.0         0.0         0.0           Detector 1 Extend (s)         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94 <td>Headway Factor</td> <td></td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td></td> <td>1.00</td>	Headway Factor		1.00	1.00	1.00		1.00
Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6         20         20         6           Detector 1 Type         CI+Ex         CI+Ex         CI+Ex         CI+Ex         20         0.	Turning Speed (mph)	15	9		9	15	
Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0 <td< td=""><td>Number of Detectors</td><td>1</td><td></td><td>2</td><td>1</td><td>1</td><td>2</td></td<>	Number of Detectors	1		2	1	1	2
Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0 <td< td=""><td>Detector Template</td><td>Left</td><td></td><td>Thru</td><td>Right</td><td>Left</td><td>Thru</td></td<>	Detector Template	Left		Thru	Right	Left	Thru
Trailing Detector (ft)         0					-		
Detector 1 Position(ft)         0					0		
Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Type         Cl+Ex         Detector 1 Channel         Cl+Ex         Cl+Ex         Cl+Ex         Cl+Ex         Cl+Ex         Detector 1 Channel         0.0         0.						-	
Detector 1 Type         CI+Ex         Detector         CI+Ex         CI+Ex         CI+Ex         CI+Ex         CI+Ex         Detector         CI+Ex         CI+Ex         CI+Ex         Detector         Detector         0.0							
Detector 1 Channel           Detector 1 Extend (s)         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94         94           Detector 2 Size(ft)         6         6         6           Detector 2 Type         Cl+Ex         Cl+Ex         Cl+Ex           Detector 2 Channel           0.0         0.0           Detector 2 Extend (s)         0.0         0.0         0.0         0.0           Turn Type         Prot         NA         Perm         pm+pt         NA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Detector 1 Extend (s)         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6         6           Detector 2 Type         Cl+Ex         Cl+Ex         Cl+Ex           Detector 2 Channel          0.0         0.0         0.0           Detector 2 Extend (s)         0.0         0.0         0.0         0.0           Turn Type         Prot         NA         Perm         pm+pt         NA							
Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6         6           Detector 2 Type         CI+Ex         CI+Ex         CI+Ex           Detector 2 Channel         0.0         0.0         0.0           Detector 2 Extend (s)         0.0         0.0         NA		0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6           Detector 2 Type         Cl+Ex         Cl+Ex           Detector 2 Channel         0.0         0.0           Detector 2 Extend (s)         0.0         0.0           Turn Type         Prot         NA         Perm         pm+pt         NA							
Detector 2 Position(ft)9494Detector 2 Size(ft)66Detector 2 TypeCI+ExCI+ExDetector 2 ChannelUnit of the sector 2 Extend (s)0.00.0Turn TypeProtNAPermpm+ptNA	( )						
Detector 2 Size(ft)66Detector 2 TypeCI+ExCI+ExDetector 2 Channel0.00.0Detector 2 Extend (s)0.00.0Turn TypeProtNAPermpm+ptNA	,	0.0			0.0	0.0	
Detector 2 TypeCI+ExCI+ExDetector 2 Channel0.00.0Detector 2 Extend (s)0.00.0Turn TypeProtNAPermProtNAPermpm+ptNA							
Detector 2 Channel       Detector 2 Extend (s)     0.0       Turn Type     Prot       NA     Perm       pm+pt     NA							
Detector 2 Extend (s)         0.0         0.0           Turn Type         Prot         NA         Perm pm+pt         NA	Detector 2 Type			Cl+Ex			CI+Ex
Turn Type Prot NA Perm pm+pt NA	Detector 2 Channel						
Turn Type Prot NA Perm pm+pt NA	Detector 2 Extend (s)			0.0			0.0
		Prot			Perm	pm+pt	
	Protected Phases	6		8		7	4

Existing AM Lanes, Volumes, Timings Synchro 11 Report JAB

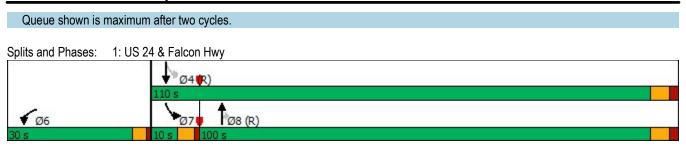
	1	*	1	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		95.0	95.0	15.0	110.0
Total Split (%)	21.4%		67.9%	67.9%	10.7%	78.6%
Maximum Green (s)	26.0		89.0	89.0	10.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		102.0	102.0	105.5	104.0
Actuated g/C Ratio	0.19		0.73	0.73	0.75	0.74
v/c Ratio	0.80		0.39	0.05	0.00	0.96
Control Delay	72.9		8.8	1.9	4.3	33.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	72.9		8.8	1.9	4.3	33.6
LOS	E		A	A	A	C
Approach Delay	72.9		8.1			33.5
Approach LOS	E		A			C
Queue Length 50th (ft)	231		147	0	1	944
Queue Length 95th (ft)	#342		269	14	3	#1444
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)	501			490	775	
Base Capacity (vph)	329		1280	1102	638	1357
Starvation Cap Reductn	020		0	0	000	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.80		0.39	0.05	0.00	0.96
Intersection Summary	0.00		0.00	0.00	0.00	0.00
Area Type:	Other					
Cycle Length: 140	Outor					
Actuated Cycle Length: 14	10					
Offset: 45 (32%), Referend		4.SRTI	and 8·NR	T Start o	f Green	
Natural Cycle: 90		4.0DTL		i, otari u		
Control Type: Actuated-Co	oordinated					
Maximum v/c Ratio: 0.96	Solumated					
Intersection Signal Delay:	31.8			Ir	ntersectio	n LOS: C
Intersection Capacity Utiliz						of Service
Analysis Period (min) 15	Lation 00.2 /0			I.		
# 95th percentile volume	avceeds oo	nacity or		he longe	r	
Queue shown is maxim			leue may	be longe	1.	
	ium alter two	cycles.				



	1	*	1	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y					<u> </u>
Traffic Volume (vph)	55	3	<b>T</b> 1252	48	4	<b>T</b> 593
Future Volume (vph)	55	3	1252	40	4	593
Ideal Flow (vphpl)	1900	1900	1202	1900	1900	1900
Storage Length (ft)	0	0	1300	490	775	1300
Storage Lanes	1	0		490	1	
Taper Length (ft)	25	U		1	90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992	1.00	1.00	0.850	1.00	1.00
Fit Protected	0.992			0.000	0.950	
Satd. Flow (prot)	1765	0	1759	1495	1736	1827
Fit Permitted	0.955	U	1709	1490	0.039	1027
Satd. Flow (perm)	0.955 1765	0	1759	1495	0.039	1827
	1/00	0	1/59		/ 1	1021
Right Turn on Red	0	Yes		Yes		
Satd. Flow (RTOR)	2		05	51		05
Link Speed (mph)	45		65			65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3	0.00	12.5	0.05	0.00	10.4
Peak Hour Factor	0.83	0.83	0.95	0.95	0.93	0.93
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	66	4	1318	51	4	638
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	1318	51	4	638
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2	1	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		6	20	20	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	0.0		94	0.0	0.0	94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
( )	Drot			Dorm	nm i nt	
Turn Type	Prot		NA	Perm	pm+pt 7	NA
Protected Phases	6		8		7	4

2022 Existing PM Lanes, Volumes, Timings Synchro 11 Report JAB

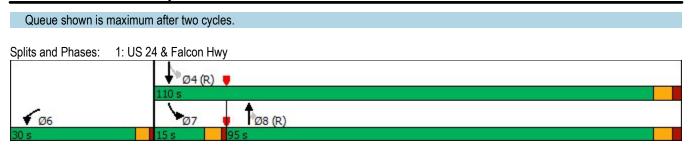
	1	*	t	1	4	ŧ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase	-			-		
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		94.0	94.0	5.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	0.0
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		102.0	102.0	105.5	104.0
Actuated g/C Ratio	0.19		0.73	0.73	0.75	0.74
v/c Ratio	0.13		1.03	0.05	0.03	0.47
Control Delay	48.9		52.8	1.8	4.8	8.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	48.9		52.8	1.8	4.8	8.5
LOS	40.9 D		52.0 D	1.0 A	4.0 A	0.5 A
Approach Delay	48.9		50.9			8.4
Approach LOS	40.9 D		50.9 D			0.4 A
Queue Length 50th (ft)	53		~1137	0	1	205
Queue Length 95th (ft)	91		#1641	14	4	203
Internal Link Dist (ft)	334		1115	14	4	911
Turn Bay Length (ft)	554		1110	490	775	311
Base Capacity (vph)	329		1281	490	118	1357
Starvation Cap Reductn	529 0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
						a
Reduced v/c Ratio	0.21		1.03	0.05	0.03	0.47
Area Type:	Other					
Cycle Length: 140						
Actuated Cycle Length: 14	10					
Offset: 45 (32%), Referend		4:SBTL :	and 8:NB	T. Start of	Green	
Natural Cycle: 110				., etart of	510011	
Control Type: Actuated-Co	oordinated					
Maximum v/c Ratio: 1.03						
Intersection Signal Delay:	37 7			In	tersectio	n LOS: D
Intersection Capacity Utiliz						of Service
Analysis Period (min) 15				ic.		
<ul> <li>Volume exceeds capa</li> </ul>	city nuqua ie	theoretia	cally infin	ite		
Queue shown is maxim						
# 95th percentile volume				he longer		
	evreens rat	ασιτγ, ητ	ieue ilidy	be longer		



	1	×	1	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		1	1	<u> </u>	1
Traffic Volume (vph)	223	6	464	45	4	1327
Future Volume (vph)	223	6	464	45	4	1327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		490	775	
Storage Lanes	1	0			1	
Taper Length (ft)	25	- V			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996		1.00	0.850	1.00	1.00
Flt Protected	0.954			0.000	0.950	
Satd. Flow (prot)	1770	0	1759	1495	1736	1827
Flt Permitted	0.954	U	1100	1100	0.410	1021
Satd. Flow (perm)	1770	0	1759	1495	749	1827
Right Turn on Red	1110	Yes	1100	Yes	775	1021
Satd. Flow (RTOR)	1	100		49		
Link Speed (mph)	45		65	чJ		65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3		12.5			10.4
Peak Hour Factor	0.3	0.87	0.92	0.92	0.95	0.95
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	256	2 /0 7	504	49	4 /0	1397
Shared Lane Traffic (%)	200	1	504	43	4	1391
Lane Group Flow (vph)	263	0	504	49	4	1397
Enter Blocked Intersection	Z03 No	No	No	49 No	4 No	No
Lane Alignment	Left		Left	Right	Left	Left
-	12	Right	12	Right	Leit	12
Median Width(ft)	0		0			
Link Offset(ft)	16		16			0 16
Crosswalk Width(ft)	01		10			01
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor			1.00		1.00	1.00
Turning Speed (mph)	15	9	0	9 1	15	0
Number of Detectors	1		2	•	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		6	20	20	6
Detector 1 Type	CI+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	6		8		7	4

2022 Existing + Site AM Lanes, Volumes, Timings

	4	*	Ť	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		95.0	95.0	15.0	110.0
Total Split (%)	21.4%		67.9%	67.9%	10.7%	78.6%
Maximum Green (s)	26.0		89.0	89.0	10.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		101.9	101.9	105.5	104.0
Actuated g/C Ratio	0.19		0.73	0.73	0.75	0.74
v/c Ratio	0.80		0.39	0.04	0.01	1.03
Control Delay	72.9		8.8	1.9	4.2	51.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	72.9		8.8	1.9	4.2	51.2
LOS	E		A	A	A	D
Approach Delay	72.9		8.2			51.1
Approach LOS	E		A			D
Queue Length 50th (ft)	231		147	0	1	~1358
Queue Length 95th (ft)	#342		270	14	4	#1624
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	511
Base Capacity (vph)	329		1280	1102	638	1357
Starvation Cap Reductn	0		0	0	000	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.80		0.39	0.04	0.01	1.03
	0.00		0.00	0.04	0.01	1.00
Intersection Summary						
Area Type:	Other					
Cycle Length: 140						
Actuated Cycle Length: 14						
Offset: 45 (32%), Reference	ced to phase	4:SBTL a	and 8:NB	T, Start o	f Green	
Natural Cycle: 90						
Control Type: Actuated-Co	ordinated					
Maximum v/c Ratio: 1.03						
Intersection Signal Delay:						n LOS: D
Intersection Capacity Utiliz	ation 90.9%			10	CU Level	of Service
Analysis Period (min) 15						
~ Volume exceeds capac			cally infin	ite.		
Queue shown is maxim						
# 95th percentile volume	exceeds cap	acity, qu	leue may	be longe	r.	



#### Intersection

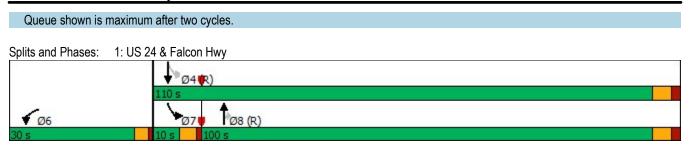
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1.			÷.	Y	
Traffic Vol, veh/h	47	2	1	227	2	1
Future Vol, veh/h	47	2	1	227	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	87	87	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	3	1	261	3	1

Major/Minor	Major1	Ν	Major2		Minor1	
Conflicting Flow All	0	0	63	0	325	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	-	-	4.12	-		6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-		-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1540	-	669	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	781	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1540	-	668	1003
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	780	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.8	
HCM LOS	•		v		A	
			EDT			
Minor Lane/Major Mvm	nt I	VBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		752	-	-	1010	-
HCM Lane V/C Ratio		0.005	-		0.001	-
HCM Control Delay (s)		9.8	-	-	1.0	0
HCM Lane LOS	۱	A	-	-	A	A
HCM 95th %tile Q(veh	)	0	-	-	0	-

	4	*	t	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y			1	<u> </u>	1
Traffic Volume (vph)	55	6	1252	49	7	593
Future Volume (vph)	55	6	1252	49	7	593
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	1500	490	775	1500
Storage Lanes	1	0		430	1	
Taper Length (ft)	25	0		1	90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987	1.00	1.00	0.850	1.00	1.00
Flt Protected	0.987			0.050	0.950	
	1759	0	1759	1495	1736	1827
Satd. Flow (prot) Flt Permitted	0.957	0	1709	1490	0.039	1027
Satd. Flow (perm)		0	1750	1495	0.039	1827
	1759	0	1759		/ 1	1021
Right Turn on Red	0	Yes		Yes		
Satd. Flow (RTOR)	3		05	52		05
Link Speed (mph)	45		65			65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3		12.5			10.4
Peak Hour Factor	0.83	0.83	0.95	0.95	0.93	0.93
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	66	7	1318	52	8	638
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	0	1318	52	8	638
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2	1	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		6	20	20	6
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	6		8		7	4

2022 Existing + Site PM Lanes, Volumes, Timings

	1	•	t	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		94.0	94.0	5.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag	т.0		Lag	Lag	Lead	0.0
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		102.0	102.0	105.5	104.0
					0.75	0.74
Actuated g/C Ratio	0.19		0.73	0.73		
v/c Ratio	0.22		1.03	0.05	0.07	0.47
Control Delay	48.5		52.8	1.8	5.4	8.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	48.5		52.8	1.8	5.4	8.5
LOS Approach Delay	D		D	А	А	A
Approach Delay	48.5		50.8			8.4
Approach LOS	D		D	0	0	A
Queue Length 50th (ft)	55		~1137	0	2	205
Queue Length 95th (ft)	94		#1641	14	6	274
Internal Link Dist (ft)	334		1115	100		911
Turn Bay Length (ft)			1001	490	775	10
Base Capacity (vph)	329		1281	1102	118	1357
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.22		1.03	0.05	0.07	0.47
Intersection Summary	Other					
Area Type:	Other					
Cycle Length: 140	10					
Actuated Cycle Length: 14						
Offset: 45 (32%), Referen	iced to phase	4:SBTL :	and 8:NB	T, Start of	Green	
Natural Cycle: 110						
Control Type: Actuated-C	oordinated					
Maximum v/c Ratio: 1.03						
Intersection Signal Delay:						n LOS: D
Intersection Capacity Utili	zation 78.4%			IC	CU Level	of Service
Analysis Period (min) 15						
~ Volume exceeds capa	acity, queue is	theoreti	cally infin	ite.		
Queue shown is maxir						
# 95th percentile volume			ueue may	be longer		
	- 1	<b>3</b> 7 1	,	0-		



#### Intersection

Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1.			÷.	Y	
Traffic Vol, veh/h	52	3	1	58	3	1
Future Vol, veh/h	52	3	1	58	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	4	1	70	4	1

Major/Minor	Major1	I	Major2		Minor1	
		0				<u>CE</u>
Conflicting Flow All	0	U	67	0	137	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	
Pot Cap-1 Maneuver	-	-	1535	-	856	999
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	951	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1535	-	855	999
Mov Cap-2 Maneuver	-	-	-	-	855	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	950	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		9.1	
HCM LOS					Α	
Minor Lane/Major Mvm	nt N	IBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		887	-	-	1535	-
HCM Lane V/C Ratio		0.006	-	-	0.001	-
HCM Control Delay (s)		9.1	-	-	7.3	0
HCM Lane LOS		A	-	-	A	Ă
					, (	, (

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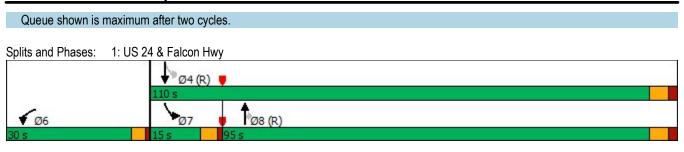
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HCM 95th %tile Q(veh)

	1	•	Ť	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		<b>†</b> †	1	۲	<b>^</b>
Traffic Volume (vph)	425	38	950	275	23	2600
Future Volume (vph)	425	38	950	275	23	2600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		490	775	
Storage Lanes	1	0		100	1	
Taper Length (ft)	25	U		•	90	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.989	1.00	0.95	0.850	1.00	0.95
Flt Protected	0.959			0.050	0.950	
		0	2242	1405		2474
Satd. Flow (prot)	1761	0	3343	1495	1736	3471
Flt Permitted	0.956	_	00.10		0.239	0.1=1
Satd. Flow (perm)	1761	0	3343	1495	437	3471
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	3			289		
Link Speed (mph)	45		65			65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3		12.5			10.4
Peak Hour Factor	0.92	0.92	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	462	41	1000	289	24	2737
Shared Lane Traffic (%)						
Lane Group Flow (vph)	503	0	1000	289	24	2737
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	Tight	12	Nynt	Leit	12
( )						
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2	1	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		6	20	20	6
Detector 1 Type	CI+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
( )	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)						
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	6		8		7	4

2042 Background AM Lanes, Volumes, Timings

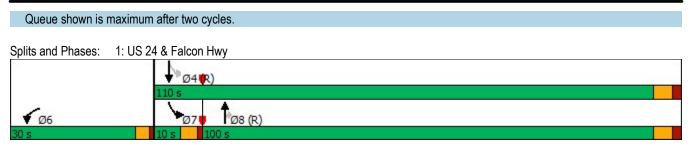
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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		95.0	95.0	15.0	110.0
Total Split (%)	21.4%		67.9%	67.9%	10.7%	78.6%
Maximum Green (s)	26.0		89.0	89.0	10.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		97.6	97.6	105.5	104.0
Actuated g/C Ratio	0.19		0.70	0.70	0.75	0.74
v/c Ratio	1.53		0.43	0.26	0.06	1.06
Control Delay	290.6		10.4	1.5	4.7	56.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	290.6		10.4	1.5	4.7	56.1
LOS	F		В	А	А	Е
Approach Delay	290.6		8.4			55.6
Approach LOS	F		А			Е
Queue Length 50th (ft)	~642		211	0	5	~1440
Queue Length 95th (ft)	#868		259	30	12	#1558
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	329		2329	1129	426	2578
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.53		0.43	0.26	0.06	1.06
Intersection Summary	Other					
Area Type:	Other					
Cycle Length: 140	0					
Actuated Cycle Length: 14					( O	
Offset: 45 (32%), Reference	ced to phase 4	ESBIL 8	and 8:NB	I, Start o	Green	
Natural Cycle: 140						
Control Type: Actuated-Co	pordinated					
Maximum v/c Ratio: 1.53	60.0					
Intersection Signal Delay:					ntersectio	
Intersection Capacity Utiliz	2ation 106.1%			10	JU Level	of Service
Analysis Period (min) 15	-14.	4	II C	· 4 -		
~ Volume exceeds capa			cally infin	Ite.		
Queue shown is maxim				1.1		
# 95th percentile volume	exceeds cap	acity, qu	leue may	be longe	r.	



Right Turn on Red         Yes         Yes           Satd. Flow (RTOR)         6         367           Link Speed (mph)         45         65         65           Link Speed (mph)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No           Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Thru           Median Width(ft) <t< th=""><th></th><th>4</th><th>•</th><th>t</th><th>1</th><th>1</th><th>ţ</th></t<>		4	•	t	1	1	ţ
Lane Configurations         Y	Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)       400       72       2400       349       27       1300         Future Volume (vph)       1900       110       100       100							
Future Volume (vph)         400         72         2400         349         27         1300           Ideal Flow (vphp)         1900         1900         1900         1900         1900         1900         1900           Storage Length (ft)         0         0         490         775         500           Storage Length (ft)         25         90         100         0.95         1.00         1.00         0.95           Lane Util, Factor         1.00         1.00         0.95         1.00         1.00         0.95           Stat. Flow (prot)         1749         0         3343         1495         73         3471           FIt Protected         0.959         0.93         0.93         343         1495         73         3471           Std. Flow (port)         1749         0         343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         Yes         Yes         10.4           Stat. Flow (RTOR)         6         367         2.5         10.4         Yes         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         1.65 <td></td> <td></td> <td>72</td> <td></td> <td></td> <td></td> <td></td>			72				
Ideal Flow (vphpl)         1900         1900         1900         1900         1900         1900         1900           Storage Length (ft)         0         0         1         1         1           Taper Length (ft)         25         90         90         100         0.95           Lane Util. Factor         1.00         1.00         0.95         1.00         1.00         0.95           FIt Protected         0.959         0.850         0.950         50         50           Satd. Flow (prot)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         50         50         50           Link Distance (ft)         414         1195         991         73         3471         50         991         73         3471           Travel Time (s)         6.3         12.5         10.4         190         435         65         65         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95         1.95           Lane Group Flow (vph)         433         78         2526         367         28	,						
Storage Length (ft)         0         0         490         775           Storage Lanes         1         0         1         1           Taper Length (ft)         25         90           Lane Util. Factor         1.00         0.95         1.00         0.950           Fit         0.979         0.850         0.950         5           Storage Length (ft)         1749         0         3343         1495         1736         3471           Fit Protected         0.959         0.040         5         5         65         5         5           Satd. Flow (perm)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         5         5         65         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95           Lane Rorup Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         2         2         3         1495         12         12         14         140         16         16         16         16	,						
Storage Lanes         1         0         1         1           Taper Length (ft)         25         90           Lane Util, Factor         1.00         1.00         0.95         1.00         0.00           Frt         0.979         0.850         0.950         0.850           Satd. Flow (prot)         1749         0         3343         1495         1736         3471           FIP Protected         0.959         0.040         0.040         0.850         0.040         0.850           Satd. Flow (prot)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         Yes         Yes         Stat. Flow (RTOR)         6         367         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No				1900			1900
Taper Length (ft)         25         90           Lane Util. Factor         1.00         1.00         0.95         1.00         1.00         0.95           Fit Protected         0.959         0.850         0.950         0.850         0.950           Satd. Flow (prot)         1749         0         3343         1495         1736         3471           Right Turn on Red         Yes         Yes         Yes         536         65         65           Link Speed (mph)         45         65         65         65         10.4         991           Travel Time (s)         6.3         12.5         10.4         991         1736         3471           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95           Heavy Vehicles (%)         2%         8%         8%         4%         4%           Adj. Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Group Flow (vph)         513         0         2526         367         28         <	<b>3 3</b> ( )						
Lane Util. Factor         1.00         1.00         0.95         1.00         1.00         0.95           Frt         0.979         0.850         0.950           Satd. Flow (prot)         1749         0         3343         1495         1736         3471           FIt Permitted         0.959         0.040         0.959         0.040         0.040           Satd. Flow (perm)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         Satd. Flow (RTOR)         6         367         65         65         65         10.4           Ink Speed (mph)         45         65         65         10.4         991         17avel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         12         12         12         12         12         12         12         12         12         14         100         0         0         0	-		U		I	•	
Frt         0.979         0.850           Fit Protected         0.959         0.950           Satd. Flow (prot)         1749         0         3343         1495         1736         3471           Fit Permitted         0.959         0.040         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         1736         3471           Right Turn on Red         Yes         Yes         Yes         1736         3471           Right Turn on Red         Yes         Yes         Yes         1041         1195         991           Travel Time (s)         6.3         12.5         10.4         1949         1435         78         2526         367         28         1368           Peak Hour Factor         0.92         0.92         0.92         0.92         367         28         1368           Shared Lane Traffic (%)         10         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Thru			4.00	0.05	4 00		0.05
Fit Protected         0.959         0.950           Satd. Flow (prot)         1749         0         3343         1495         1736         3471           FIt Permitted         0.959         0.040         0.040         0.040         0.040           Satd. Flow (perm)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         1736         3471           Satd. Flow (RTOR)         6         367         10.11         1111<			1.00	0.95		1.00	0.95
Satd. Flow (prot)         1749         0         3343         1495         1736         3471           Flt Permitted         0.959         0.040         0.05         0.05         0.95					0.850	0.050	
Fit Permitted         0.959         0.040           Satd. Flow (perm)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         Yes         Satd. Flow (RTOR)         6         367           Link Speed (mph)         45         65         65         10.4         Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95         0.95         0.95         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         10.4           Peak Hour Factor         0.92         2%         8%         8%         4%         4%           Addis Enter Blocked Intersection         No			-				- · - ·
Satd. Flow (perm)         1749         0         3343         1495         73         3471           Right Turn on Red         Yes         Yes         Yes         Yes         Satd. Flow (RTOR)         6         367           Link Speed (mph)         45         65         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No <t< td=""><td>. ,</td><td></td><td>0</td><td>3343</td><td>1495</td><td></td><td>3471</td></t<>	. ,		0	3343	1495		3471
Right Turn on Red         Yes         Yes           Satd. Flow (RTOR)         6         367           Link Speed (mph)         45         65         65           Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00         1.00         1.00 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Satd. Flow (RTOR)         6         367           Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00 </td <td>Satd. Flow (perm)</td> <td>1749</td> <td>0</td> <td>3343</td> <td>1495</td> <td>73</td> <td>3471</td>	Satd. Flow (perm)	1749	0	3343	1495	73	3471
Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00           Number of Detectors         1         2         1         1         2         1         1         2 <t< td=""><td>Right Turn on Red</td><td></td><td>Yes</td><td></td><td></td><td></td><td></td></t<>	Right Turn on Red		Yes				
Link Speed (mph)         45         65         65           Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16           Two way Left Turn Lane         Left         Thru         Right         Left         Thru           Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00           Detector Template         Left         Thru         <	Satd. Flow (RTOR)	6			367		
Link Distance (ft)         414         1195         991           Travel Time (s)         6.3         12.5         10.4           Peak Hour Factor         0.92         0.92         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)         Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No         No           Link Offset(ft)         0         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         16           Two way Left Turn Lane         Headway Factor         1.00         1.00         1.00         1.00         1.00         1.00           Number of Detectors         1         2         1         1         2         1         1         2           Detector Template         Left	Link Speed (mph)	45		65			65
Travel Time (s)       6.3       12.5       10.4         Peak Hour Factor       0.92       0.92       0.95       0.95       0.95       0.95         Heavy Vehicles (%)       2%       2%       8%       8%       4%       4%         Adj. Flow (vph)       435       78       2526       367       28       1368         Shared Lane Traffic (%)       2       12       128       1368         Lane Group Flow (vph)       513       0       2526       367       28       1368         Enter Blocked Intersection       No       No       No       No       No       No         Lane Alignment       Left       Right       Left       Right       Left       Left       Left         Median Width(ft)       12       12       12       12       12       12       12         Link Offset(ft)       0       0       0       0       0       0       100         Training Speed (mph)       15       9       9       15       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100	,	414		1195			991
Peak Hour Factor         0.92         0.92         0.95         0.95         0.95         0.95           Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)             1368           Enter Blocked Intersection         No         No         No         No         No         No           Median Width(ft)         12         12         12         12         12         12           Link Offset(ft)         0         0         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16         16         100         1.00	( )						
Heavy Vehicles (%)         2%         2%         8%         8%         4%         4%           Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)            513         0         2526         367         28         1368           Enter Blocked Intersection         No         Size (fit)         12         12         12         12         12         12         12         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00	( )		0.92		0.95	0.95	
Adj. Flow (vph)         435         78         2526         367         28         1368           Shared Lane Traffic (%)							
Shared Lane Traffic (%)           Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         So 0         0         0         O         Cosswalk Width(ft)         16         16         16         To         So 0         1.00         1.00         1.00         1.00         1.00         1.00         1.00         So 0         So 0         O         O         O         O         O         O         So 0         O         O         O         O         O         O         O         O         O         O         O         O         O         O	•						
Lane Group Flow (vph)         513         0         2526         367         28         1368           Enter Blocked Intersection         No         No         No         No         No         No         No           Lane Alignment         Left         Right         Left         Right         Left         Right         Left         100         0		400	70	2520	507	20	1000
Enter Blocked Intersection         No         No <th< td=""><td></td><td>513</td><td>٥</td><td>2526</td><td>367</td><td>28</td><td>1269</td></th<>		513	٥	2526	367	28	1269
Lane Alignment         Left         Right         Left         Right         Left         International State         Left         International State         International State         International State         International State         International State         Left         International State         Internan State         International State         I	,						
Median Width(ft)         12         12         12         12           Link Offset(ft)         0         0         0         0           Crosswalk Width(ft)         16         16         16         16           Two way Left Turn Lane         100         1.0							
Link Offset(ft)         0         0         0           Crosswalk Width(ft)         16         16         16           Two way Left Turn Lane			Right		Right	Leπ	
Crosswalk Width(ft)         16         16         16         16           Two way Left Turn Lane         1.00 <td< td=""><td>( )</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	( )						
Two way Left Turn Lane           Headway Factor         1.00         1.00         1.00         1.00         1.00           Turning Speed (mph)         15         9         9         15           Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Type         CI+Ex         CI+Ex         CI+Ex         CI+Ex         CI+Ex           Detector 1 Channel         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94         94         94         9							
Headway Factor         1.00	( )	16		16			16
Turning Speed (mph)         15         9         9         15           Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel	Two way Left Turn Lane						
Number of Detectors         1         2         1         1         2           Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel         Detector 1 Channel         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94         94 <td< td=""><td>Headway Factor</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td></td<>	Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Detector Template         Left         Thru         Right         Left         Thru           Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0         0         0         0         0         0           Detector 1 Position(ft)         0         0         0         0         0         0           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Channel         Detector 1 Channel         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         9	Turning Speed (mph)	15	9		9	15	
Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0 <td< td=""><td>Number of Detectors</td><td>1</td><td></td><td>2</td><td>1</td><td>1</td><td>2</td></td<>	Number of Detectors	1		2	1	1	2
Leading Detector (ft)         20         100         20         20         100           Trailing Detector (ft)         0 <td< td=""><td>Detector Template</td><td>Left</td><td></td><td>Thru</td><td>Right</td><td>Left</td><td>Thru</td></td<>	Detector Template	Left		Thru	Right	Left	Thru
Trailing Detector (ft)         0	Leading Detector (ft)	20		100	-	20	100
Detector 1 Position(ft)         0	•						
Detector 1 Size(ft)         20         6         20         20         6           Detector 1 Type         CI+Ex         CI				•	-	•	
Detector 1 Type         Cl+Ex         Output         Out				-		-	
Detector 1 Channel           Detector 1 Extend (s)         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6           Detector 2 Type         CI+Ex         CI+Ex           Detector 2 Channel         0.0         0.0         0.0           Detector 2 Extend (s)         0.0         0.0         0.0           Turn Type         Prot         NA         Perm         pm+pt         NA							
Detector 1 Extend (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Queue (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6         6           Detector 2 Type         CI+Ex         CI+Ex         CI+Ex           Detector 2 Channel          0.0         0.0         0.0           Turn Type         Prot         NA         Perm         pm+pt         NA							
Detector 1 Queue (s)         0.0		0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)         0.0         0.0         0.0         0.0         0.0           Detector 2 Position(ft)         94         94         94           Detector 2 Size(ft)         6         6           Detector 2 Type         CI+Ex         CI+Ex           Detector 2 Channel         0.0         0.0           Detector 2 Extend (s)         0.0         0.0           Turn Type         Prot         NA         Perm pm+pt         NA	. ,						
Detector 2 Position(ft)9494Detector 2 Size(ft)66Detector 2 TypeCI+ExCI+ExDetector 2 Channel0.00.0Detector 2 Extend (s)0.00.0Turn TypeProtNAPermProtNAPermpm+ptNAPermPm+ptNA	( )						
Detector 2 Size(ft)66Detector 2 TypeCI+ExCI+ExDetector 2 Channel0.00.0Detector 2 Extend (s)0.00.0Turn TypeProtNANAPermpm+ptNA	• ( )	0.0			0.0	0.0	
Detector 2 TypeCI+ExCI+ExDetector 2 Channel0.00.0Detector 2 Extend (s)0.00.0Turn TypeProtNANAPermpm+ptNA	( )						
Detector 2 Channel         Detector 2 Extend (s)       0.0       0.0         Turn Type       Prot       NA       Perm pm+pt       NA	Detector 2 Size(ft)			-			6
Detector 2 Extend (s)         0.0         0.0           Turn Type         Prot         NA         Perm pm+pt         NA	Detector 2 Type			Cl+Ex			Cl+Ex
Turn Type Prot NA Perm pm+pt NA	Detector 2 Channel						
Turn Type Prot NA Perm pm+pt NA	Detector 2 Extend (s)			0.0			0.0
,, , , , , , , , , , , , , , , , , , ,		Prot			Perm	pm+pt	
Protected Phases 6 8 7 4	Protected Phases					· · ·_	

2042 Background PM Lanes, Volumes, Timings

4	*	1	1	4	ţ
WBL	WBR	NBT	NBR	SBL	SBT
			8	4	
6		8	8	7	4
5.0		5.0	5.0	5.0	5.0
12.0		41.0	41.0	9.5	41.0
30.0		100.0	100.0	10.0	110.0
21.4%		71.4%	71.4%	7.1%	78.6%
26.0		94.0	94.0	5.5	104.0
3.0		4.0	4.0	3.5	4.0
1.0		2.0	2.0	1.0	2.0
0.0		0.0	0.0	0.0	0.0
4.0		6.0	6.0	4.5	6.0
		Lag	Lag	Lead	
		Yes	Yes	Yes	
3.0		3.0	3.0	3.0	3.0
Max		C-Max	C-Max	None	C-Max
26.0		98.0	98.0	105.5	104.0
0.19		0.70	0.70	0.75	0.74
1.56		1.08	0.32	0.23	0.53
302.9		66.4	1.5	8.9	8.5
0.0		0.0	0.0	0.0	0.0
302.9		66.4	1.5	8.9	8.5
F		E	А	А	А
302.9		58.2			8.5
F		E			А
~658		~1395	0	6	247
#886		#1520	32	13	293
334		1115			911
			490	775	
329		2340	1156	120	2578
0		0	0	0	0
0		0	0	0	0
0		0	0	0	0
1.56		1.08	0.32	0.23	0.53
0.1					
Other					
ced to phase 4	I:SBTL a	ind 8:NB	I, Start of	Green	
oordinated					
oorumateu					
60 0			10	torcotio	
2all011 101.2%			IC	O Level	UI SEIVICE
acity, quana ia	theoratio	ally infini	ito		
		ally min	1.e.		
			he longer	-	
S EXCEEUS CdD	αυιιν. Ο Ο Θ	сие шау	DE IONGÊ		
	6 5.0 12.0 30.0 21.4% 26.0 3.0 1.0 0.0 4.0 3.0 Max 26.0 0.19 1.56 302.9 0.0 302.9 F 302.9 F 302.9 F 302.9 F 302.9 0.0 302.9 F 302.9 0.0 302.9 C 0.0 302.9 0.0 302.9 C 0.0 0.0 302.9 C 0.0 0.0 302.9 C 0.0 0.0 302.9 C 0.0 0.0 302.9 C 0.0 0.0 302.9 C 0.0 0.0 0.0 0.0 0.0 0.0 0.0	6 5.0 12.0 30.0 21.4% 26.0 3.0 1.0 0.0 4.0 3.0 Max 26.0 0.19 1.56 302.9 0.0 302.9 F 302.9 F 302.9 F 302.9 F 302.9 F 302.9 F 302.9 F 302.9 C 0.0 0.0 302.9 C 0.0 0.0 0.0 0.0 0.0 0.0 0.0	6         8           5.0         5.0           12.0         41.0           30.0         100.0           21.4%         71.4%           26.0         94.0           3.0         4.0           1.0         2.0           0.0         0.0           4.0         6.0           Lag         Yes           3.0         3.0           Max         C-Max           26.0         98.0           0.19         0.70           1.56         1.08           302.9         66.4           0.0         0.0           302.9         58.2           F         E           302.9         58.2           F         E           302.9         58.2           F         E           302.9         58.2           F         E           329         2340           0         0           0         0           0         0           0         0           0         0           0         0           0	6         8         8           5.0         5.0         5.0           12.0         41.0         41.0           30.0         100.0         100.0           21.4%         71.4%         71.4%           26.0         94.0         94.0           3.0         4.0         4.0           1.0         2.0         2.0           0.0         0.0         0.0           4.0         6.0         6.0           Lag         Lag         Lag           Yes         Yes         Yes           3.0         3.0         3.0         3.0           0.19         0.70         0.70           0.156         1.08         0.32           302.9         66.4         1.5           0.0         0.0         0.0           302.9         58.2         F           E         ~658         ~1395         0           #886         #1520         32         334         1115           0         0         0         0         0           0         0         0         0         0           1.56         1.08         0.3	8         4           6         8         8         7           5.0         5.0         5.0         5.0           12.0         41.0         41.0         9.5           30.0         100.0         100.0         10.0           21.4%         71.4%         71.4%         7.1%           26.0         94.0         94.0         5.5           3.0         4.0         4.0         3.5           1.0         2.0         2.0         1.0           0.0         0.0         0.0         0.0           4.0         6.0         6.0         4.5           Lag         Lag         Lag         Lead           Yes         Yes         Yes         3.0           3.0         3.0         3.0         3.0         3.0           Max         C-Max         C-Max         None           26.0         98.0         98.0         105.5           0.19         0.70         0.70         0.75           1.56         1.08         0.32         0.23           302.9         66.4         1.5         8.9           0.0         0.0         0         <

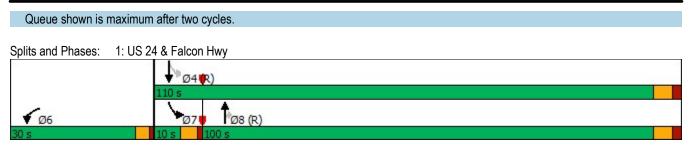


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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		<b>†</b> †	1	5	<b>†</b> †
Traffic Volume (vph)	425	40	950	275	25	2600
Future Volume (vph)	425	40	950	275	25	2600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	1900	490	775	1900
<b>3 3</b> ( )				490	1	
Storage Lanes	1	0		I	•	
Taper Length (ft)	25	4.00	0.05	4 00	90	0.05
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.989			0.850		
Flt Protected	0.956				0.950	
Satd. Flow (prot)	1761	0	3343	1495	1736	3471
Flt Permitted	0.956				0.239	
Satd. Flow (perm)	1761	0	3343	1495	437	3471
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	3			289		
Link Speed (mph)	45		65			65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3		12.5			10.4
Peak Hour Factor	0.92	0.92	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	462	43	1000	289	26	2737
	402	43	1000	209	20	2131
Shared Lane Traffic (%)	505	0	1000	200	00	0707
Lane Group Flow (vph)	505	0	1000	289	26	2737
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2	1	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
	20		6	20	20	6
Detector 1 Size(ft)						
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	6		8	I CIIII	7	
	0		0		1	4

2042 Background + Site AM Lanes, Volumes, Timings

	4	•	1	1	4	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		94.0	94.0	5.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		98.0	98.0	105.5	104.0
Actuated g/C Ratio	0.19		0.70	0.70	0.75	0.74
v/c Ratio	1.53		0.43	0.26	0.07	1.06
Control Delay	293.1		10.1	1.4	4.7	56.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	293.1		10.1	1.4	4.7	56.1
LOS	F		В	A	A	E
Approach Delay	293.1		8.2			55.6
Approach LOS	F		A			E
Queue Length 50th (ft)	~645		208	0	5	~1440
Queue Length 95th (ft)	#872		252	29	13	#1558
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	329		2340	1132	380	2578
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	Ŭ Û	0	0
Reduced v/c Ratio	1.53		0.43	0.26	0.07	1.06
Intersection Summary						
Area Type:	Other					
Cycle Length: 140						
Actuated Cycle Length: 14	10					
Offset: 45 (32%), Reference		:SBTL a	and 8:NB	T. Start of	Green	
Natural Cycle: 140				, 5.0.10		
Control Type: Actuated-Co	pordinated					
Maximum v/c Ratio: 1.53						
Intersection Signal Delay:						n LOS: E
Intersection Capacity Utiliz	zation 106.2%			IC	CU Level	of Service
Analysis Period (min) 15						
~ Volume exceeds capa	city, queue is f	heoretic	cally infini	ite.		
Queue shown is maxim						
# 95th percentile volume	exceeds capa	acity, qu	ieue may	be longer		
				-		

2042 Background + Site AM Lanes, Volumes, Timings



### Intersection

Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	ţ,			ŧ	Y	
Traffic Vol, veh/h	298	2	1	462	2	1
Future Vol, veh/h	298	2	1	462	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	324	2	1	502	3	1

Major/Minor M	ajor1	Ν	Major2		Minor1	
Conflicting Flow All	0	0	326	0	829	325
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	504	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1234	-	340	716
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1234	-	340	716
Mov Cap-2 Maneuver	-	-	-	-	340	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	606	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		13.8	
HCM LOS	0		U		13.0 B	
					D	
Minor Lane/Major Mvmt	N	BLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		412	-	-	1234	-
HCM Lane V/C Ratio	C	0.009	-	-	0.001	-
HCM Control Delay (s)		13.8	-	-	7.9	0
HCM Lane LOS		В	-	-	Α	Α

HCM 95th %tile Q(veh)

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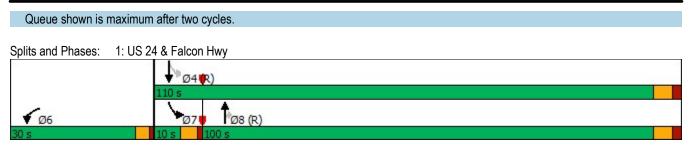
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	4	*	t	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		<b>^</b>	1	۲	<b>^</b>
Traffic Volume (vph)	400	75	2400	350	30	1300
Future Volume (vph)	400	75	2400	350	30	1300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
,	0	0	1900	490	775	1900
Storage Length (ft)					1	
Storage Lanes	1	0		1	•	
Taper Length (ft)	25	4 00	0.05	4 00	90	0.05
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.979			0.850		
Flt Protected	0.960				0.950	
Satd. Flow (prot)	1751	0	3343	1495	1736	3471
Flt Permitted	0.960				0.040	
Satd. Flow (perm)	1751	0	3343	1495	73	3471
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6			368		
Link Speed (mph)	45		65			65
Link Distance (ft)	414		1195			991
Travel Time (s)	6.3		12.5			10.4
Peak Hour Factor	0.92	0.92	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	435	82	2526	368	32	1368
	435	02	2520	300	32	1300
Shared Lane Traffic (%)	<b>F47</b>	0	0500	200	20	4000
Lane Group Flow (vph)	517	0	2526	368	32	1368
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2	1	1	2
Detector Template	Left		Thru	Right	Left	Thru
Leading Detector (ft)	20		100	20	20	100
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		6	20	20	6
~ ~ ~	CI+Ex		CI+Ex	CI+Ex	CI+Ex	
Detector 1 Type	UI+EX		CI+EX	CI+EX	CI+EX	CI+Ex
Detector 1 Channel	0.0		0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	6		8		7	4
	0		0		1	4

2042 Background + Site PM Lanes, Volumes, Timings

	1	•	t	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		94.0	94.0	5.5	104.0
Yellow Time (s)	3.0		4.0	4.0	3.5	4.0
All-Red Time (s)	1.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.0	6.0	4.5	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		C-Max	C-Max	None	C-Max
Act Effct Green (s)	26.0		98.0	98.0	105.5	104.0
Actuated g/C Ratio	0.19		0.70	0.70	0.75	0.74
v/c Ratio	1.57		1.08	0.32	0.27	0.53
Control Delay	305.9		66.4	1.5	9.7	8.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	305.9		66.4	1.5	9.7	8.5
LOS	F		E	A	A	A
Approach Delay	305.9		58.2			8.6
Approach LOS	F		E			A
Queue Length 50th (ft)	~665		~1395	0	6	247
Queue Length 95th (ft)	#894		#1520	32	15	293
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	330		2340	1156	120	2578
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.57		1.08	0.32	0.27	0.53
Intersection Summary	0.1					
Area Type:	Other					
Cycle Length: 140						
Actuated Cycle Length: 14						
Offset: 45 (32%), Reference	ced to phase 4	SBTL :	and 8:NB	T, Start of	Green	
Natural Cycle: 150						
Control Type: Actuated-Co	pordinated					
Maximum v/c Ratio: 1.57						
Intersection Signal Delay:						n LOS: E
Intersection Capacity Utiliz	zation 101.4%			IC	CU Level	of Service
Analysis Period (min) 15						
~ Volume exceeds capa			cally infin	ite.		
Queue shown is maxim						
# 95th percentile volume	e exceeds cap	acity, qı	ueue may	be longer		
•						

2042 Background + Site PM Lanes, Volumes, Timings



Int Delay	s/veh
	, 3/ / 011

Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	ţ,			ŧ	Y	
Traffic Vol, veh/h	377	3	1	471	3	1
Future Vol, veh/h	377	3	1	471	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	410	3	1	512	4	1

Major/Minor N	/lajor1	Ν	Major2		Minor1	
Conflicting Flow All	0	0	413	0	926	412
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1146	-	298	640
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1146	-	298	640
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	599	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		15.6	
HCM LOS					С	
Minor Lane/Major Mvm	t NI	BLn1	EBT	EBR	WBL	WBT
		344			1146	
Capacity (veh/h)	(		-			-
HCM Lane V/C Ratio	(	0.015	-		0.001	-
HCM Control Delay (s)		15.6	-	-	8.1	0
HCM Lane LOS		С	-	-	A	A

0

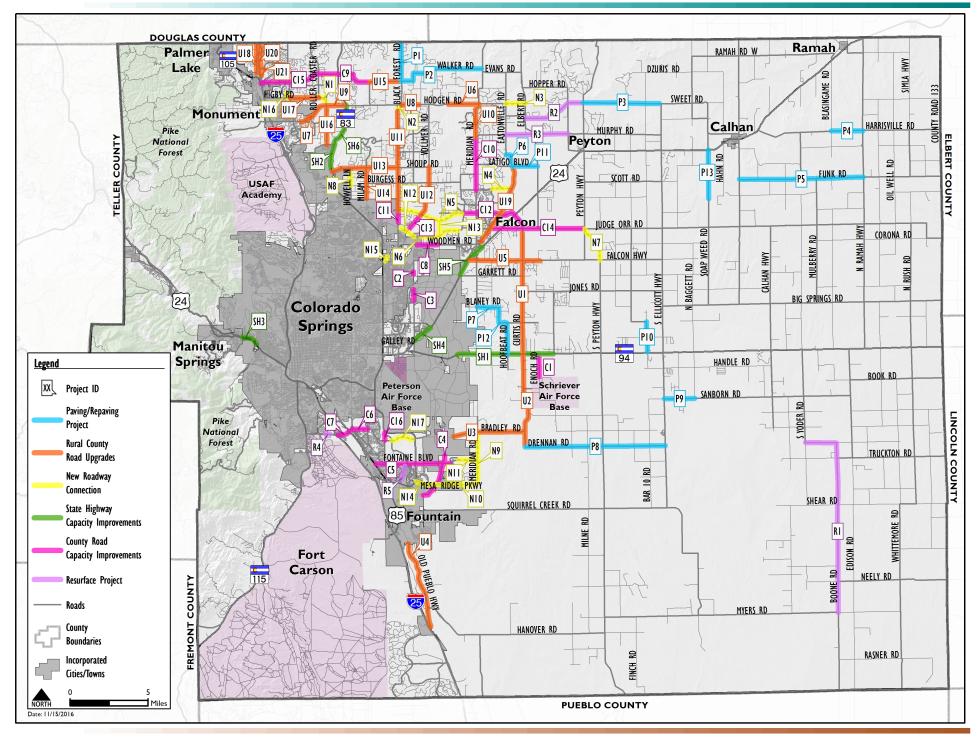
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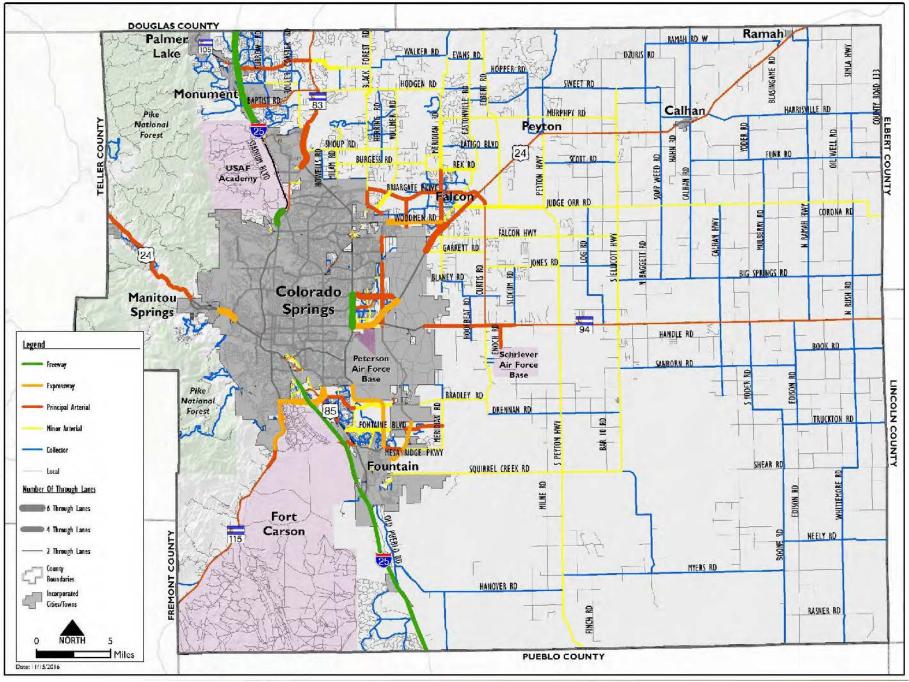
HCM 95th %tile Q(veh)

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## Map 13: Improvements Map

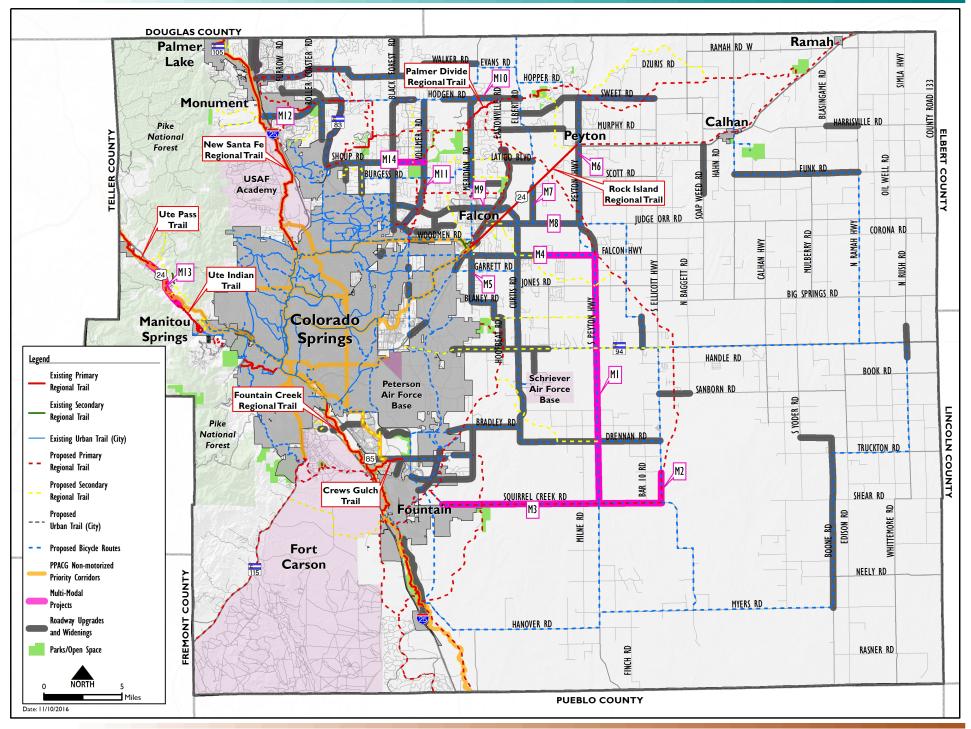




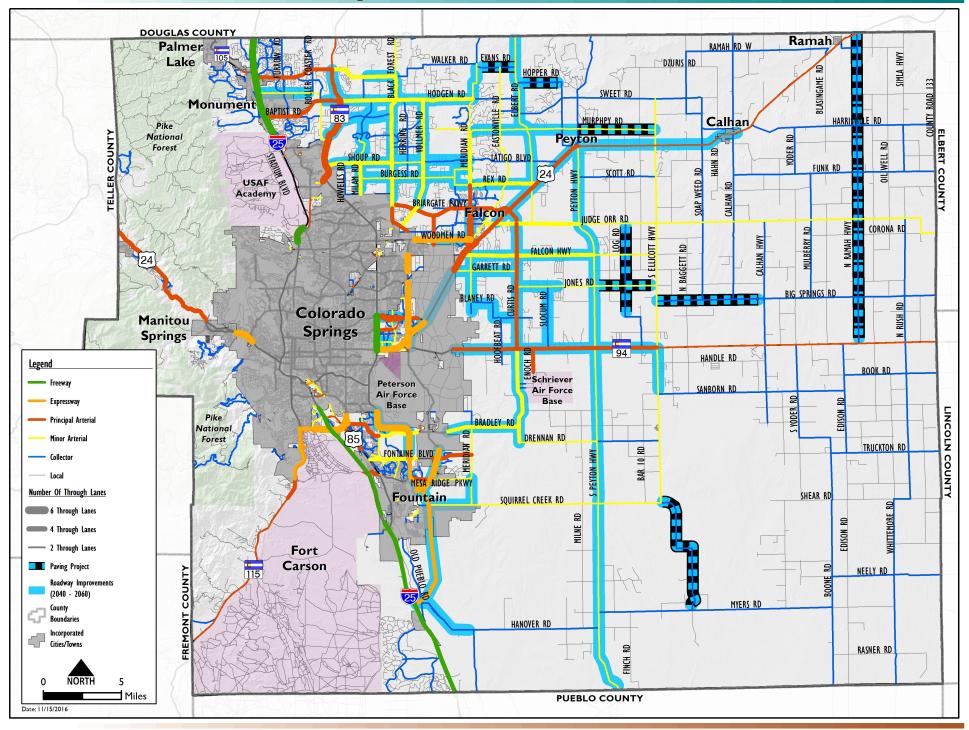
Map 14: 2040 Roadway Plan (Classification and Lanes)



Map 15: Multimodal Improvements



## Map 17: 2060 Corridor Preservation





### Table 4: 2040 Roadway Improvement Projects

Project		Segr	nent	PPRTA	Urban	Exis	ting Conditions	Fut	ture Conditions	
ID	Road Segment	Beginning	End	Project	vs. Rural	Lanes	Functional Class	Lanes	Functional Class	Total Cost
				County R	oad Upgra	des				-
U1	Curtis Rd	Judge Orr Rd.	SH 94		Rural	2	Unimproved County Road	2	Principal Arterial	\$35,549,000
U2	Curtis Rd	SH 94	Drennan Rd		Rural	2	Unimproved County Road	2	Minor Arterial	\$23,379,000
U3	Bradley Rd	COS City Limit	Curtis Rd		Rural	2	Unimproved County Road	2	Minor Arterial	\$24,252,000
U4	Old Pueblo Rd	Fountain City Limits	I-25	В	Rural	2	Unimproved County Road	2	Collector	\$16,722,000
U5	Falcon Hwy	US 24	1 mi east of Curtis Rd		Rural	2	Unimproved County Road	2	Minor Arterial	\$16,509,000
U6	Hodgen Rd	Goshawk Rd	Meridian Rd.	В	Rural	2	Unimproved County Road	2	Minor Arterial	\$7,698,000
U7	Baptist Rd	Desiree Dr	Roller Coaster Rd		Rural	2	Unimproved County Road	2	Collector	\$5,286,000
U8	Hodgen Rd	Black Forest Rd	Bar X Rd	В	Rural	2	Unimproved County Road	2	Minor Arterial	\$5,053,000
U9	Hodgen Rd	Roller Coaster Rd	SH 83		Rural	2	Unimproved County Road	2	Minor Arterial	\$3,518,000
U10	Meridian Rd	Hodgen Rd	Murphy Rd	В	Rural	2	Unimproved County Road	2	Minor Arterial	\$7,763,000
U11	Black Forest Rd	Hodgen Rd	Stapleton Dr	В	Rural	2	Unimproved County Road	2	Minor Arterial	\$22,714,000
U12	Vollmer Rd	Stapleton Dr	Shoup Rd	В	Rural	2	Unimproved County Road	2	Minor Arterial	\$11,691,000



# V1\_Traffic Impact Study Redlines.pdf Markup Summary

Carlos (10)			
Anatomic and the state of the s	Subject: Callout Page Label: 6 Author: Carlos Date: 1/26/2023 9:48:06 AM	Please revise to mini- warehouse since report is using that land use for calculations.	
ner of the US Highway 24 ntified as El Paso County oned <mark>, is mini storage</mark> : A pi <b>posed Site Access</b>	Subject: Highlight Page Label: 6 Author: Carlos Date: 1/26/2023 7:45:41 AM	, is mini storage	
And the set of the	Subject: Text Box Page Label: 6 Author: Carlos Date: 1/26/2023 9:46:30 AM	State the size of the proposed project (area/size of building square footage, proposed number of storage units, etc)	
Set of the set of t	Subject: Text Box Page Label: 7 Author: Carlos Date: 1/26/2023 10:07:33 AM	The section of Falcon Highway adjacent to the parcel is under City of Colorado Springs jurisdiction. Contact COS for requirements and up to date road classification. Per county GIS, Falcon Highway is currently classified as a rural major collector with improvements by 2040 to 2-Lane Minor Arterial.	
	Subject: Text Box Page Label: 8 Author: Carlos Date: 1/26/2023 9:27:54 AM	State how the ADT is being calculated using the ITE (i.e. per GFA, net rentable area, storage units, etc).	
55 The second strength of the second strengt	Subject: Text Box Page Label: 11 Author: Carlos Date: 1/30/2023 4:46:59 PM	Update auxiliary turn lane analysis to match City criteria.	
The second secon	Subject: Text Box Page Label: 12 Author: Carlos Date: 1/26/2023 10:10:39 AM	Roadway improvements to US Highway 24 are shown on the 2040 MTCP and listed on page 50. Please update section.	
and Astron I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Subject: Text Box Page Label: 12 Author: Carlos Date: 1/26/2023 10:12:01 AM	Add "per Resolution 19-471"	

	Subject: Text Box Page Label: 12 Author: Carlos Date: 1/26/2023 10:31:05 AM	Contact CDOT for access permit requirements and improvements due to the access point's proximity to Highway 24 and inclusion in CDOT's 2006 Highway 24 Access Control Plan as access ID number 40. Per LSC Traffic Impact Study submitted to the county under file number MS05009 and PPR05037 coordination with CDOT was anticipated for future frontage road on the parcel. Please add a bibliography of reports used to the appendix and include the referenced TIS.
<text><text><text><text><text><text></text></text></text></text></text></text>	Subject: Text Box Page Label: 13 Author: Carlos Date: 1/26/2023 10:25:43 AM	Per El Paso County LDC 6.2.5.C a proposed access connecting to County-maintained paved road shall be paved for a distance of at least 50 feet. Please contact the City of Colorado Springs and include a statement on the city's requirements for paving accesses connecting to COS ROW.
dsdlaforce (10)		
1.021 Lightwork African Strategiere (2010) 1.000 Strategiere (2010)	Subject: Callout Page Label: 7 Author: dsdlaforce Date: 1/30/2023 4:33:11 PM	Update Falcon Highway to state that this is owned/maintained by the City.
<text><text><text><text><text></text></text></text></text></text>	Subject: Callout Page Label: 7 Author: dsdlaforce Date: 1/30/2023 4:36:59 PM	Update sight distance section to list the Cities criteria. Driveway access permit is through the City.
m Acceleration Laws ex.23.79.21 of the CKA right hum scotteration have is used are its avia, in contribution to exatibuted right in red at the Population and the CKA register Review to Information the Cky Criteria	Subject: Callout Page Label: 11 Author: dsdlaforce Date: 1/30/2023 4:47:10 PM	Revise to reference the City Criteria
() or regard means. () dependent means () de	Subject: Callout Page Label: 11 Author: dsdlaforce Date: 1/30/2023 4:49:09 PM	Revise to City Criteria.
Martingenes investigation         Martingenes investigation	Subject: Highlight Page Label: 12 Author: dsdlaforce Date: 1/30/2023 4:53:55 PM	
Angentes       Bare	Subject: Callout Page Label: 12 Author: dsdlaforce Date: 1/30/2023 4:56:17 PM	Contact the City to verify if they require ROW preservation or dedication. Update the report to describe their requirements.
<text><text><text><text><text><text></text></text></text></text></text></text>	Subject: Callout Page Label: 12 Author: dsdlaforce Date: 1/30/2023 5:00:54 PM	Falcon Hwy between SH24 and Meridian Road is owned by the City. Verify with the City that they do not require the road to be upgraded to with C&G and sidewalk. Update to identify their requirements.



Subject: Text Box Page Label: 13 Author: dsdlaforce Date: 1/30/2023 5:10:43 PM

Add a section regarding the Hwy 24 PEL and access management plan. Provide a summary of the current plan and how it impacts the site.

Example: The 2005 Access Control Plan identified future frontage road through the site. The existing plat identified easements for this frontage road. Is this still in effect with their latest plans/studies? The Future frontage is shown to connect to Falcon Hwy on the east side. How will this impact the proposed access for the property?

Coordinate with CDOT to determine if CDOT will require additional ROW preservation or easement relative to the existing public road easement already shown on the plat.



Subject: Image Page Label: 13 Author: dsdlaforce Date: 1/30/2023 5:09:03 PM



Subject: Image Page Label: 13 Author: dsdlaforce Date: 1/30/2023 5:08:46 PM

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