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Jubilee Group Rezone Traffic Impact Study EPC PCD File No. CS231 (LSC #S224600) May 26, 2023

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.

Steve H. Kang

5/24/2023

Date

Jubilee Group Rezone Traffic Impact Study

Prepared for:

Steve Kang
520 Edison St
Brush CO, 80723-2011

MAY 26, 2023

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

LSC #S224600



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May 26, 2023

Steve Kang
520 Edison St
Brush CO, 80723-2011

RE: 11401 E Highway 24 Property Rezone
Traffic Impact Study
El Paso County, CO
EPC PCD File No. CS231
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

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 a mini warehouse development with 500 storage units anticipated for the initial phase and an additional 500 units in a future phase (1,000 total storage units at buildout). Details including building square footage and configuration, parking, internal circulation, etc. will follow later at the site development plan stage. A parcel detail is shown in Figure 2.

Proposed Site Access

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.

ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the roads adjacent to and in the vicinity of the site. Adjacent roads serving the site are 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 May 2023 Note: The segment of Falcon Highway adjacent to this site is now owned and maintained by the City of Colorado Springs. The City has jurisdictional control with respect to access and development-related right-of-way and infrastructure requirements. Falcon Highway extends east from US Highway 24 to Ellicott Highway. The City *PlanCOS* Major Thoroughfare Plan shows the classification of Falcon Highway as Principal Arterial. The 2040 El Paso County *MTCP* classification of Falcon Highway is a two-lane, Rural, Minor Arterial. Table 4 of the *MTCP* identifies existing Falcon Highway as a two-lane, rural, paved, “unimproved County Road.” 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 Highway 24.

Existing Traffic Volumes

Vehicular-turning-movement counts were conducted at the intersection of US Hwy 24/Falcon 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.
 - Tuesday, November 17, 2022 from 4:00 – 6:00 p.m.

SIGHT DISTANCE

The proposed access point must meet (and maintain) *City of Colorado Springs Traffic Criteria Manual* standards for sight distance.

Intersection Sight Distance (“Speed” Line of Sight)

With a 45-mph speed limit on Falcon Highway east and west of the site, the minimum sight distance for both approaches at the proposed site-access location is 500 feet (per Table 1 in Section 4.4 of the *City Traffic Criteria Manual*).

Sight distance to the east at the proposed site-access location exceed the required 500-foot requirement. Looking west from the proposed site-access location, sight distance is unobstructed to the signalized US Hwy 24/Falcon Highway intersection. This distance is about 350 feet. However, all vehicles arriving from the west turn onto Falcon Highway from US Highway 24 and are traveling at a turning speed, which is lower than 45 mph. Assuming vehicles turning onto Falcon Highway at about 20 to 25 mph, the requirement for sight distance for these speeds is 115 to 280 feet. The available 350 feet exceeds this range of values.

TRIP GENERATION

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, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). The average weekday and weekday morning and afternoon peak-hour trip-generation estimates have been calculated by multiplying the ITE trip-generation rates for land use 151 times the number of storage units (expressed in terms of hundreds of storage units).

Table 1 (attached) presents the estimated site trip generation. The table includes estimates for Phase 1 and buildout of the project.

Based on the trip generation estimate for the proposed rezone, the site at buildout 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

Short Term

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 Phase 1/Short Term trip-generation estimates (from Table 1).

Existing-Plus-Site-Generated Traffic Volumes

Figure 5 shows the sum of existing traffic volumes (from Figure 3) and Phase 1 site-generated peak-hour traffic volumes (shown in Figure 4). These volumes represent the projected short-term total traffic.

Estimated Future 2043 Background Traffic Volumes

Figure 6 shows the projected 20-year background traffic volumes for the year 2043. Estimated 2043 background through traffic volumes on US Highway 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 2043 Total Traffic Volumes

Figure 7 shows the projected 2043 total traffic volumes, which are the sum of 2043 background traffic volumes (from Figure 6) plus the buildout 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 Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle) ⁽¹⁾
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	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

(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

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. This level of service is based on the existing westbound approach laneage. 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

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

- Falcon Highway – Principal Arterial

Falcon Highway/Proposed Site Access

Left-Turn Deceleration Lanes

Left-turn deceleration auxiliary turn lanes are required for a Principal Arterial access with a projected peak-hour left-ingress turning volume of 10 vph or greater. The westbound-left turn volume is **not** projected to exceed this 10-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 Principal Arterial access with a projected peak-hour right-ingress turning volume of 25 vph or greater. The eastbound-right 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 eastbound approach on Falcon Highway approaching the proposed site access.

Right-Turn Acceleration Lanes

Per the *Traffic Criteria Manual*, a right-turn acceleration lane is generally not required on Principal Arterial roadways. As such, an eastbound-right-turn acceleration lane would **not** be required at the proposed site access on Falcon Highway.

MAJOR TRANSPORTATION CORRIDORS PLAN (MTCP)

Roadway Classifications

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). the Corridor Preservation Plan shows Falcon Highway as a four-lane Minor Arterial.
- The City *PlanCOS* Classification Map shows Falcon highway as a Principal Arterial.
- US Highway 24 – 6-Lane Principal Arterial (Rural)

Reimbursable Improvements

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
- SH 5 - US Highway 24 (Garrett Road to Woodmen Road) – 6-Lane Principal Arterial (Rural). Note: Road segment improvements for this section of US Highway 24 are unlikely to be required by this development, so reimbursement would not be applicable. Although not called for in this study, generally intersection improvements (including turn-lane improvements and/or signalization at US Highway 24/side street arterial intersections may be reimbursable.

See the attached *MTCP* maps for reference.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

Transportation Impact Fees

This project will be required to participate in the El Paso County Road Improvement Fee Program per BOCC Resolution 19-471. The option for participation will be identified at the site development plan stage.

MULTI-MODAL TRANSPORTATION AND TDM OPPORTUNITIES

No multi-modal improvement projects have been identified as being needed by the year 2040, per Map 15 and Table 5 of El Paso County's 2016 *MTCP*. With respect to sidewalks, bike lanes, and/or transit stop(s) adjacent to the site on Falcon Highway, the City comments for this application indicate that "*all public improvements to be built to full City standards [...] if Falcon Highway is City of Colorado Springs right-of-way*" [County staff comments indicate that this is the case]. The standard City cross section for a Type I Principal Arterial includes a multi-use paved shoulder (which will accommodate

bicycles), curb and gutter, and detached sidewalk. This project would likely only be required to construct public improvements along the property frontage. The specific city requirements for public improvements can be addressed at the site development plan stage.

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

CDOT REQUIREMENTS

The site-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 or request additional right-of-way for US Highway 24 along this property's frontage. We anticipate that CDOT will specify improvements or other requirements (if any) as part of a referral review letter. Any CDOT requirements can be addressed at the site development plan stage and/or as part of the Access Permit process (if CDOT determines that an access permit would be required). The current application is only for rezoning.

CITY REQUIREMENTS

City comments for this application indicate that "*all public improvements to be built to full City standards [...] if Falcon Highway is City of Colorado Springs right-of-way*" [County staff comments indicate that this is the case]. The standard City cross section for a Type I Principal Arterial includes four through lanes, a center median for left turns, multi-use paved outside shoulders (which will accommodate bicycles), curb and gutter, and detached sidewalks on each side. This project would likely only be required to construct public improvements along the property frontage. The specific city requirements for public improvements can be addressed at the site development plan stage.

RIGHT-OF-WAY REQUIREMENTS

City of Colorado Springs

This rezone site is adjacent to Falcon Highway, which is now a City street. The City classifies Falcon Highway as a Principal Arterial. Based on Section 16 of the *Traffic Criteria Manual*, and assuming the adjacent roadway to be a "Type 1 (4-lane) Principal Arterial," the corridor right-of-way width required is 107 feet.

CDOT

This rezone site is adjacent to US Highway 24, which is a CDOT facility. We anticipate that CDOT will specify their requested/required right-of-way needs along US Highway 24 as part of a referral review letter. The right-of-way needs of CDOT can be addressed at the site development plan stage. The current application is only for rezoning.

DEVIATIONS

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

SUMMARY OF FINDINGS

- The proposed development is projected to generate about 180 vehicle trips on the average weekday at buildout.
- During the weekday morning peak hour, 6 vehicles would enter the site while 6 vehicles would exit the site.
- During the weekday evening peak hour, 8 vehicles would enter the site while 8 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 City 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, Roadway Improvement Fee Program option, and City/CDOT requirements can be addressed in detail at the site development plan stage.

* * * * *

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

Respectfully submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB:jas

Enclosures: Table 1
Figure 1 - Figure 7
Traffic Counts
Synchro LOS Reports
MTCP Maps
Recent Area TIS Reports

Table 1



Table 1: Trip Generation Estimate

ITE		Value	Units ¹	Trip Generation Rates ²					Driveway Trips Generated				
Code	Description			Average	A.M.		P.M.		Average	A.M.		P.M.	
				In	Out	In	Out		In	Out	In	Out	
Phase 1													
151	Mini-Warehouse	5.000	SU (100s)	17.96	0.62	0.59	0.84	0.84	90	3	3	4	4
Phase 2													
151	Mini-Warehouse	5.000	SU (100s)	17.96	0.62	0.59	0.84	0.84	90	3	3	4	4
	Site Buildout								180	6	6	8	8

¹ SU (100s) = 100 storage units

² Source: *Trip Generation, 11th Edition (2021)* by the Institute of Transportation Engineers (ITE) May 25, 2023

Figures 1-7





Figure 1
Vicinity Map

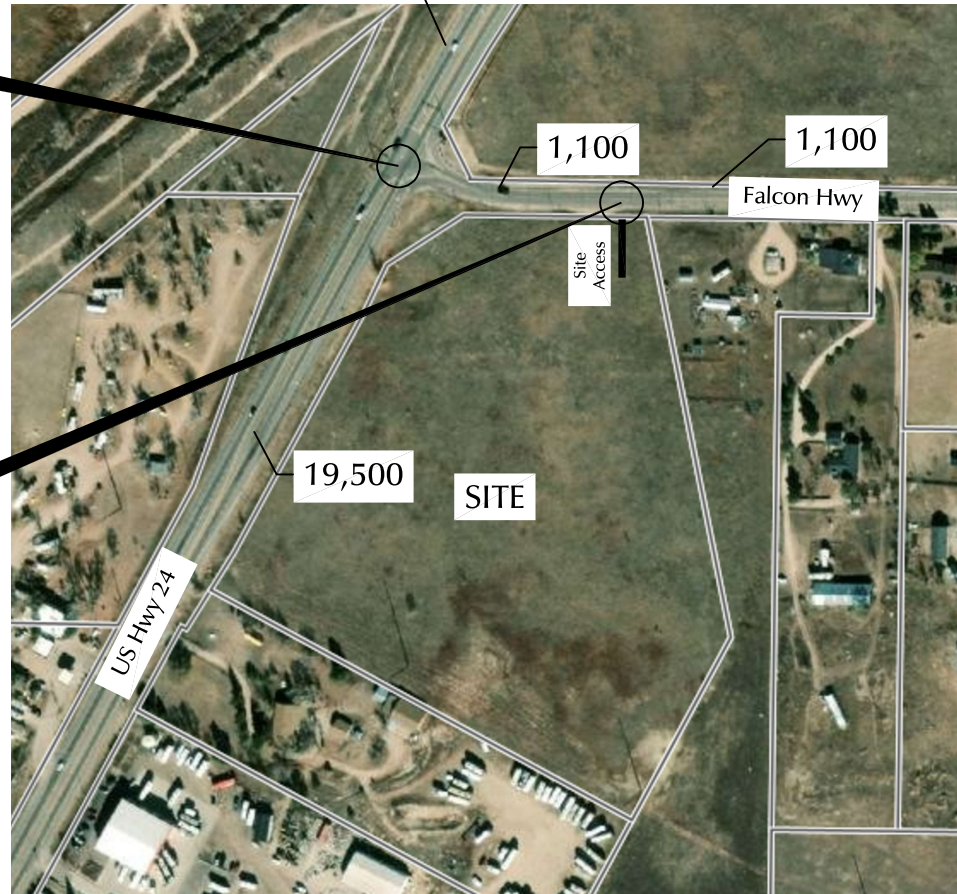
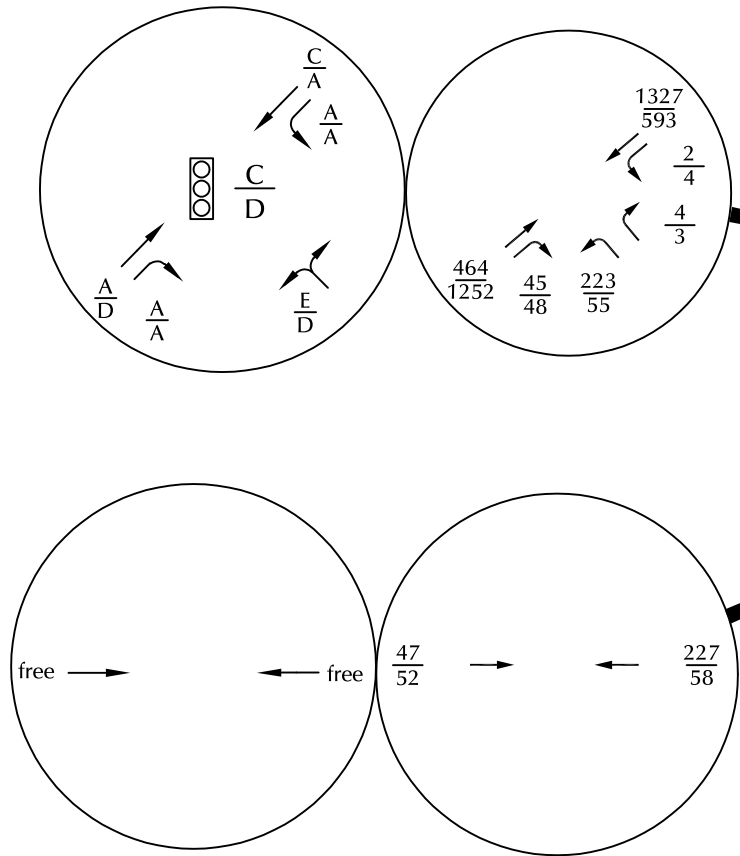
11401 E Highway 24 Property Rezone (LSC # S224600)



Figure 2

Site Rezone Information and Access Location

11401 E Highway 24 Property Rezone (LSC # S224600)



$\frac{X}{X}$ = AM Individual Movement Peak-Hour Level-of-Service
 PM Individual Movement Peak-Hour Level-of-Service
 $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 PM Weekday Peak-Hour Traffic (Veh/Hour)
 X,XXX = Average Daily Traffic (Vehicles/Day) CDOT 2022



 = Traffic Signal
 = Stop Sign
 Counts by LSC (11/2022)

Figure 3
**Existing Traffic, Lane Geometry,
 Traffic Control, and LOS**
 11401 E Highway 24 Property Rezone (LSC # S224600)



LEGEND:

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

$$\frac{XX\%}{XX\%} = \frac{\text{Percent AM Peak-Hour Distribution}}{\text{Percent PM Peak-Hour Distribution}}$$

Figure 4
Estimated Directional Distribution

11401 E Highway 24 Property Rezone (LSC # S224600)



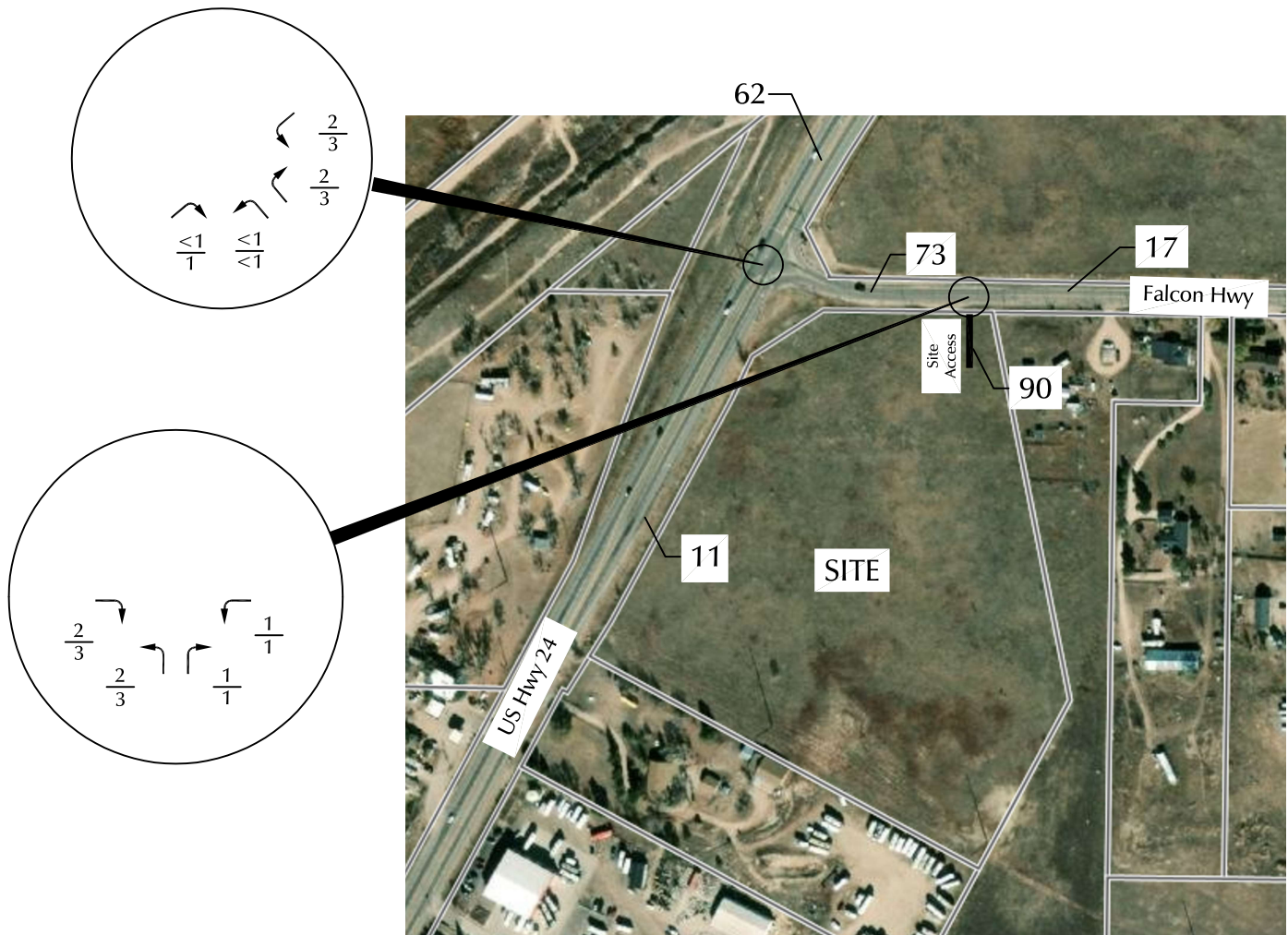


Figure 5a

Short-Term (Phase 1) Site-Generated Traffic

11401 E Highway 24 Property Rezone (LSC # S224600)



$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
 X,XXX = Average Daily Traffic (Vehicles/Day)

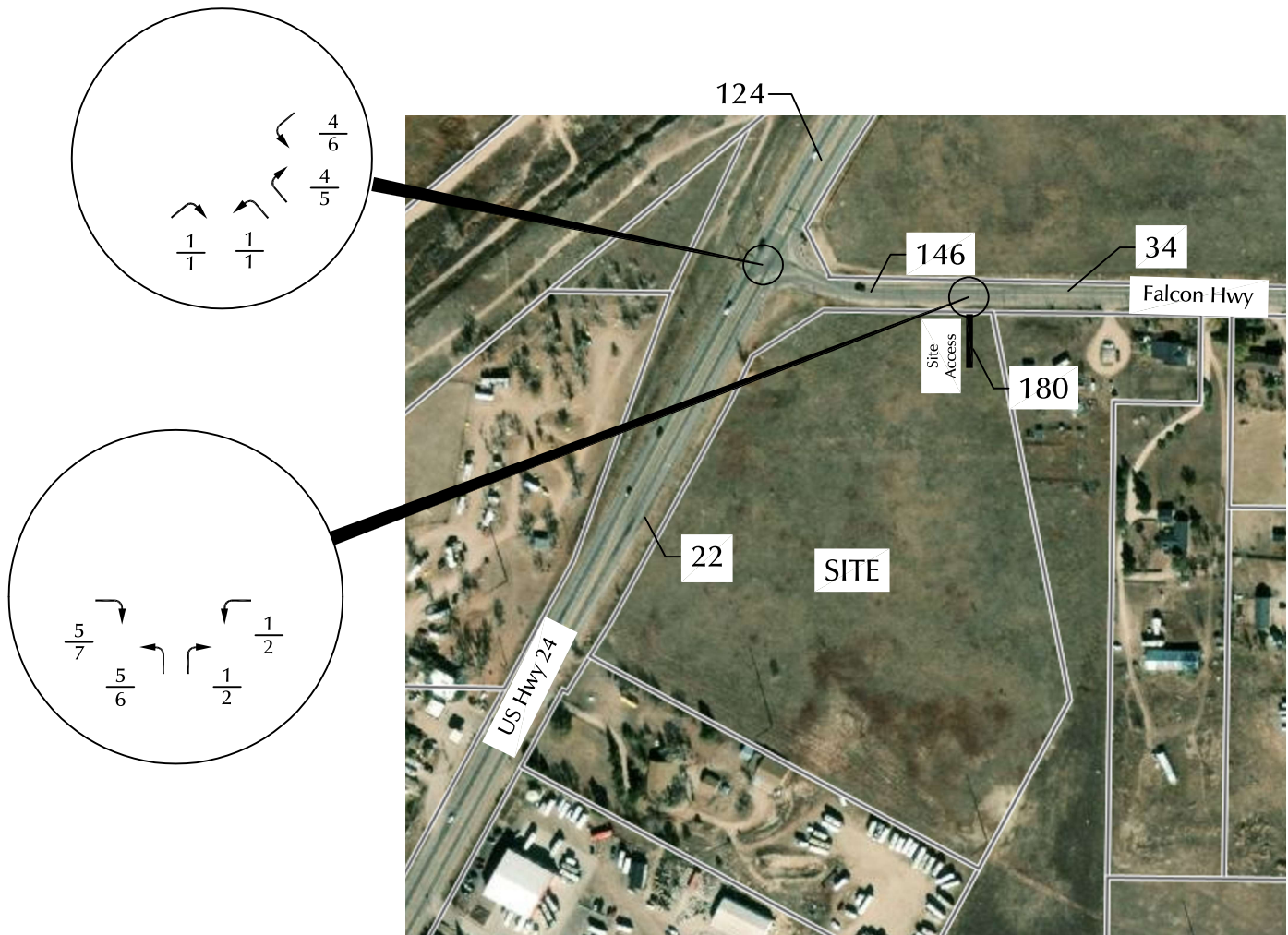


Figure 5b

Phases 1&2/Buildout Site-Generated Traffic

11401 E Highway 24 Property Rezone (LSC # S224600)



$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
 X,XXX = Average Daily Traffic (Vehicles/Day)

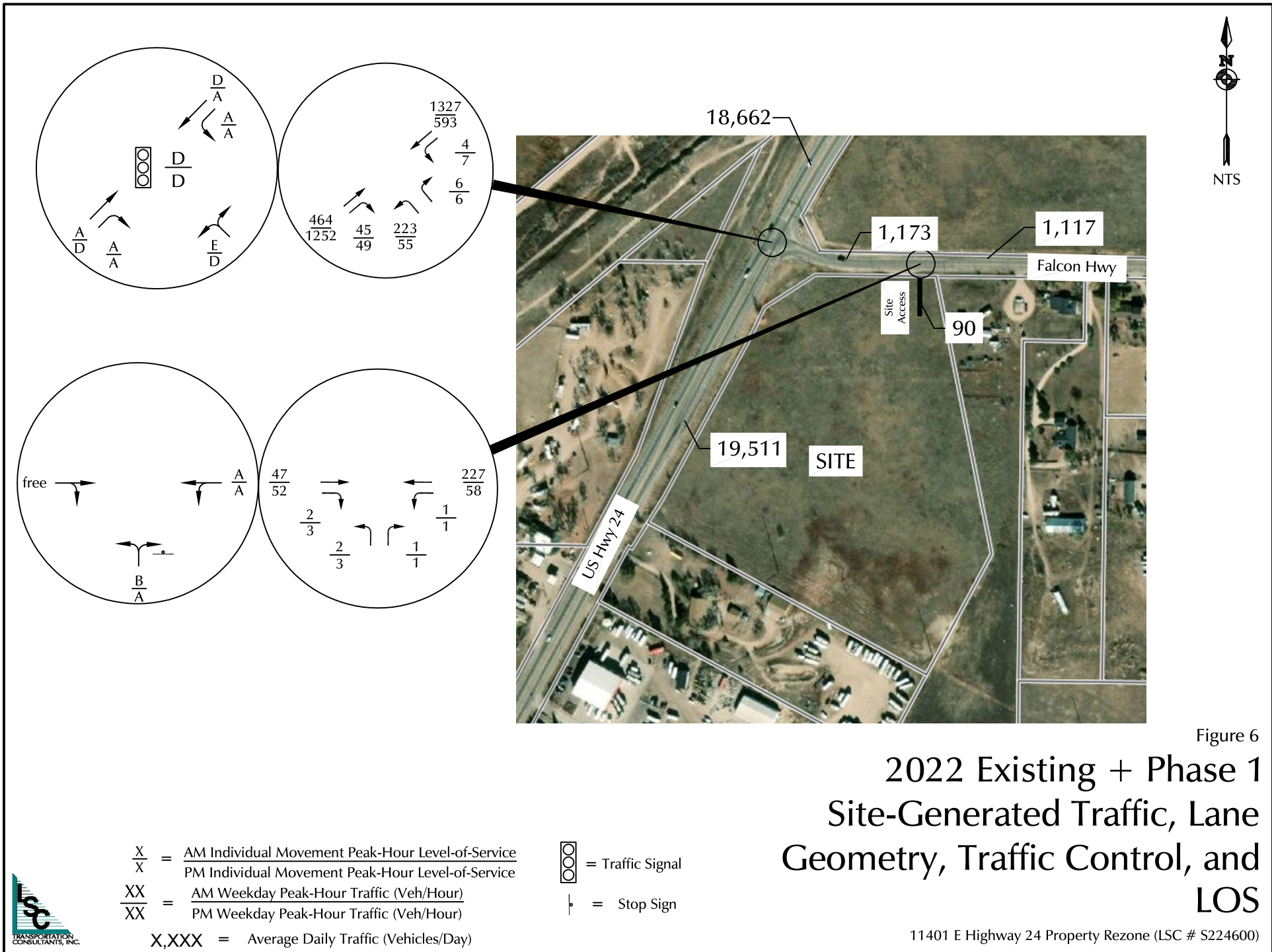


Figure 6
 2022 Existing + Phase 1
 Site-Generated Traffic, Lane
 Geometry, Traffic Control, and
 LOS

$\frac{X}{X}$ = $\frac{\text{AM Individual Movement Peak-Hour Level-of-Service}}{\text{PM Individual Movement Peak-Hour Level-of-Service}}$
 $\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (Veh/Hour)}}{\text{PM Weekday Peak-Hour Traffic (Veh/Hour)}}$

= Traffic Signal
 = Stop Sign

X,XXX = Average Daily Traffic (Vehicles/Day)



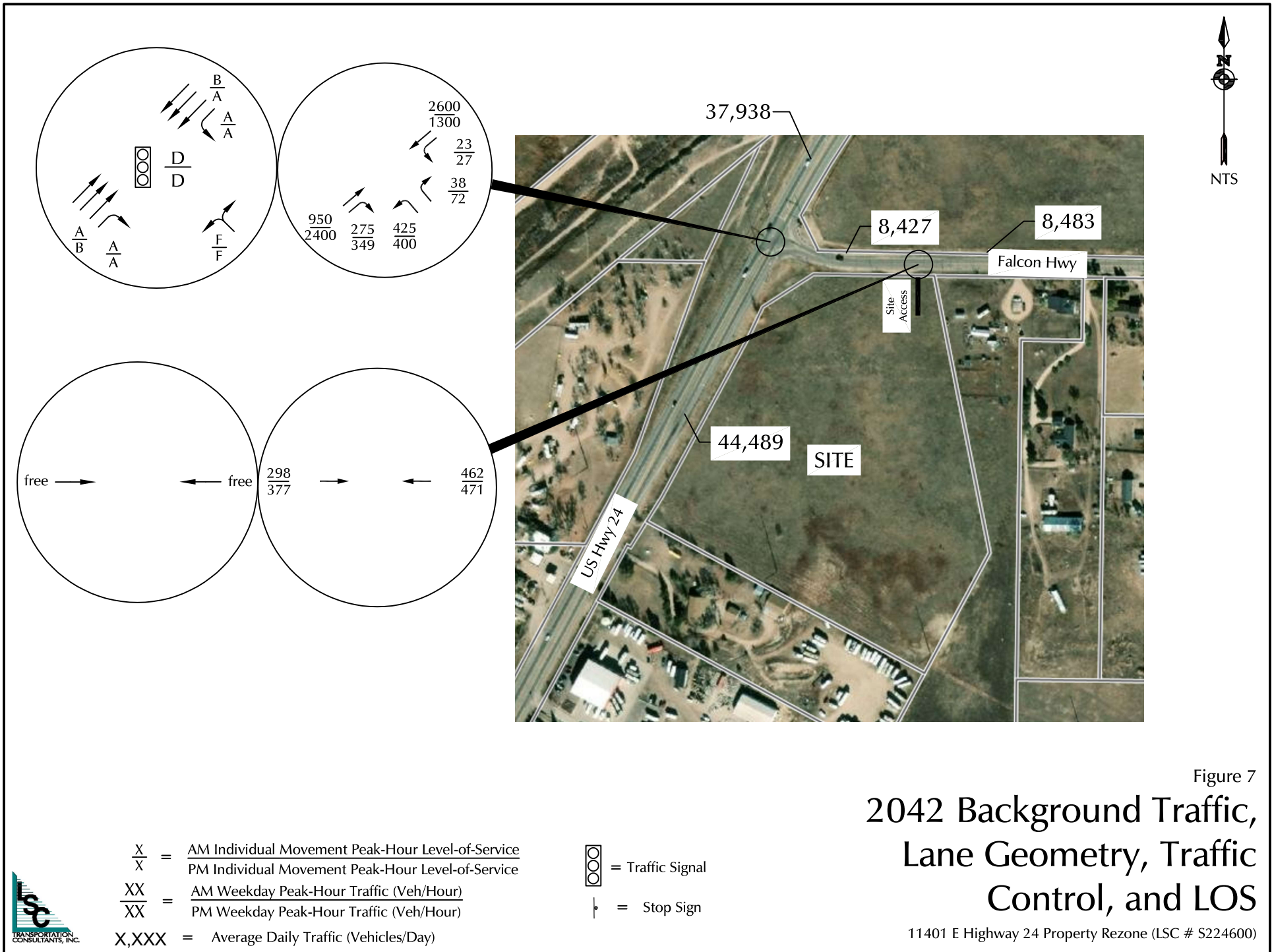


Figure 7
2042 Background Traffic,
Lane Geometry, Traffic
Control, and LOS

11401 E Highway 24 Property Rezone (LSC # S224600)

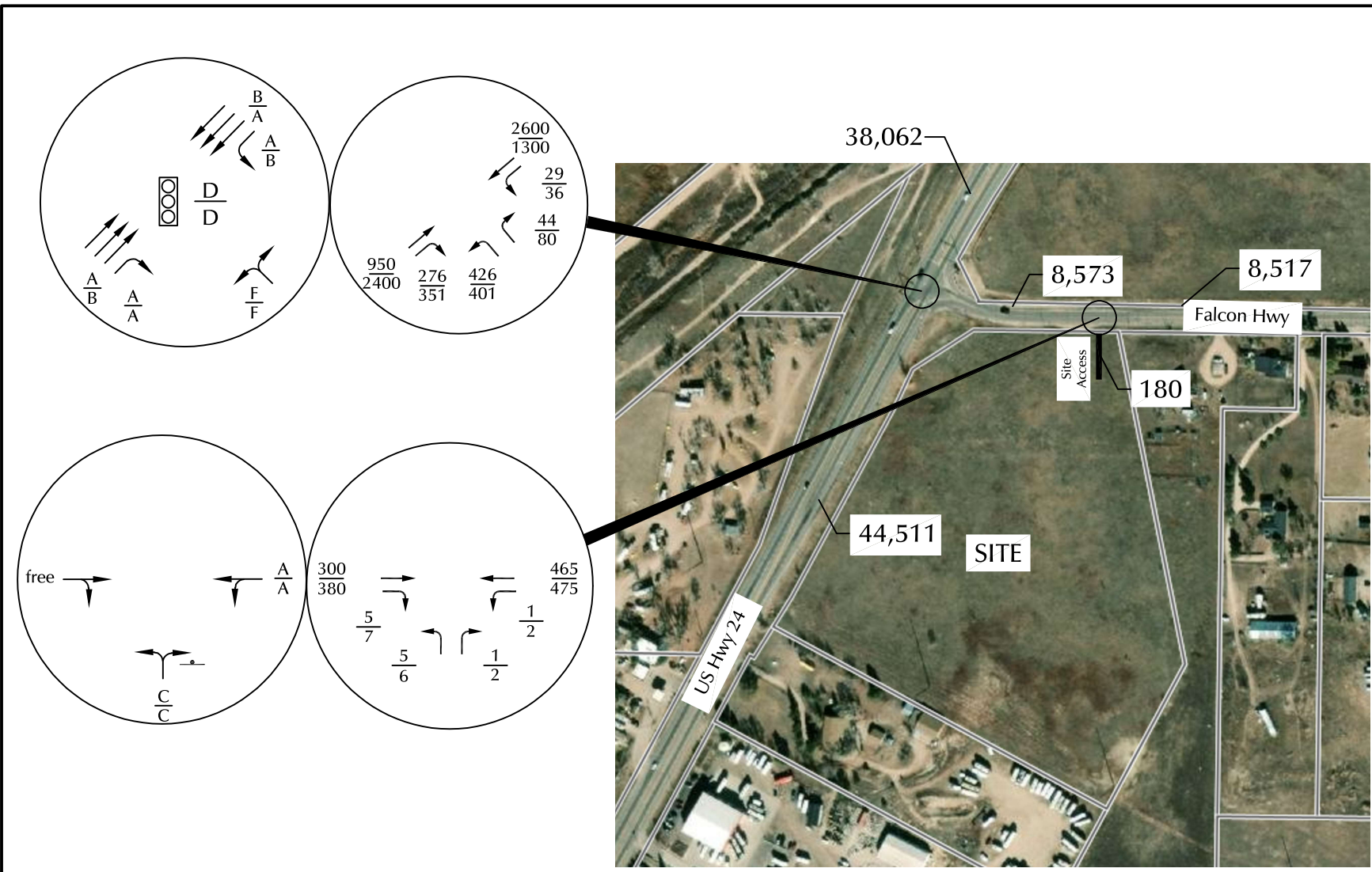


Figure 8
 2042 Total Traffic, Lane
 Geometry, Traffic
 Control, and LOS

$\frac{X}{X}$ = AM Individual Movement Peak-Hour Level-of-Service
 PM Individual Movement Peak-Hour Level-of-Service

$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

= Traffic Signal

= Stop Sign



Traffic Counts



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

Groups Printed- Unshifted

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Falcon Hwy Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	

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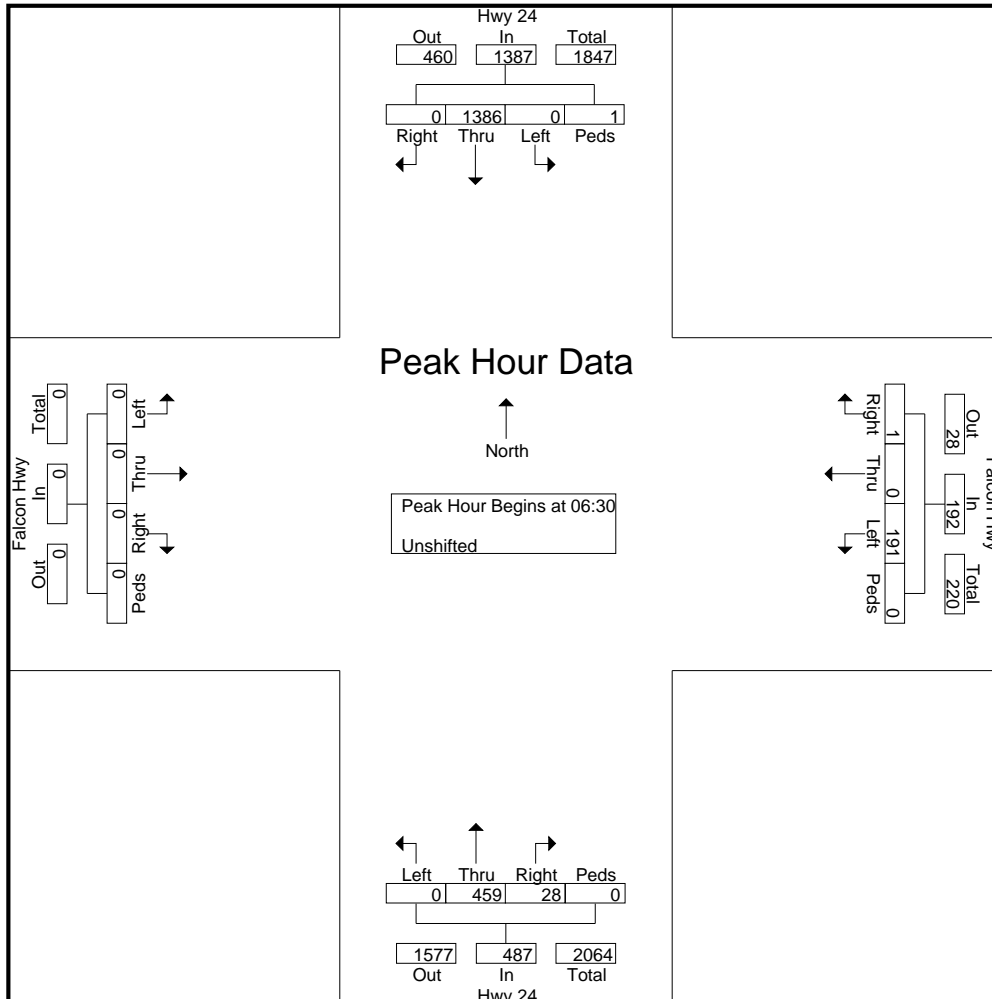
File Name : Hwy 24 - Falcon Hwy AM

Site Code : S224600

Start Date : 11/17/2022

Page No : 2

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Falcon Hwy Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins 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



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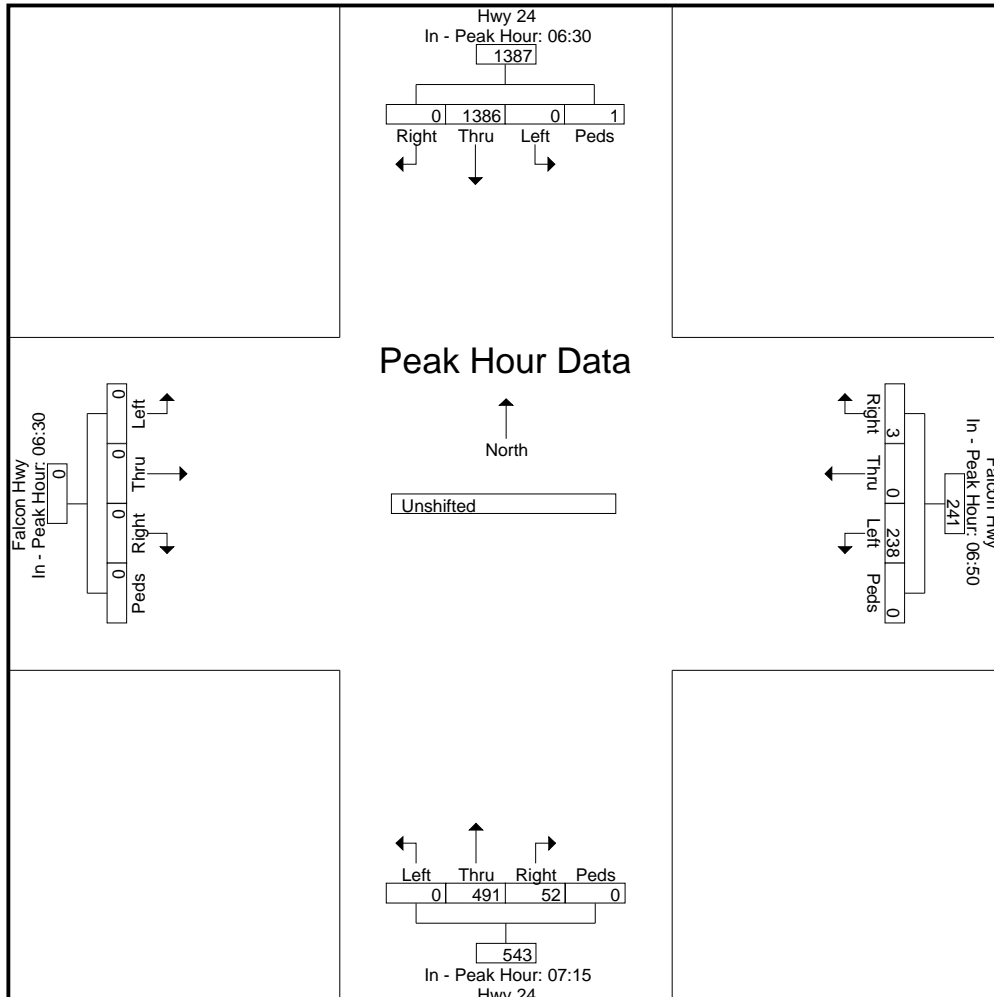
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File Name : Hwy 24 - Falcon Hwy AM
 Site Code : S224600
 Start Date : 11/17/2022
 Page No : 3

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Falcon Hwy Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	06:30					06:50					07:15					06:30				
+0 mins.	0	123	0	0	123	0	0	17	0	17	2	47	0	0	49	0	0	0	0	0
+5 mins.	0	123	0	0	123	0	0	16	0	16	6	39	0	0	45	0	0	0	0	0
+10 mins.	0	118	0	0	118	0	0	18	0	18	4	31	0	0	35	0	0	0	0	0
+15 mins.	0	119	0	0	119	0	0	25	0	25	6	29	0	0	35	0	0	0	0	0
+20 mins.	0	119	0	0	119	1	0	16	0	17	2	40	0	0	42	0	0	0	0	0
+25 mins.	0	111	0	0	111	0	0	27	0	27	5	46	0	0	51	0	0	0	0	0
+30 mins.	0	106	0	0	106	0	0	17	0	17	5	32	0	0	37	0	0	0	0	0
+35 mins.	0	103	0	1	104	0	0	24	0	24	7	56	0	0	63	0	0	0	0	0
+40 mins.	0	113	0	0	113	0	0	17	0	17	5	50	0	0	55	0	0	0	0	0
+45 mins.	0	113	0	0	113	0	0	33	0	33	4	40	0	0	44	0	0	0	0	0
+50 mins.	0	129	0	0	129	2	0	12	0	14	5	44	0	0	49	0	0	0	0	0
+55 mins.	0	109	0	0	109	0	0	16	0	16	1	37	0	0	38	0	0	0	0	0
Total Volume	0	1386	0	1	1387	3	0	238	0	241	52	491	0	0	543	0	0	0	0	0
% App. Total	0	99.9	0	0.1		1.2	0	98.8	0		9.6	90.4	0	0		0	0	0	0	
PHF	.000	.895	.000	.083	.896	.125	.000	.601	.000	.609	.619	.731	.000	.000	.718	.000	.000	.000	.000	.000



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File Name : Hwy 24 - Falcon Hwy PM

Site Code : S224600

Start Date : 11/15/2022

Page No : 1

Groups Printed- Unshifted

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	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
17:15	0	40	0	0	40	0	0	6	0	6	3	103	0	0	106	0	0	0	0	0	152
17:20	0	57	0	0	57	1	0	5	0	6	3	103	0	0	106	0	0	0	0	0	169
17:25	0	53	1	0	54	0	0	5	0	5	4	101	0	0	105	0	0	0	0	0	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 %	0	99.4	0.6	0		7	0	93	0		4.4	95.6	0	0		0	0	0	0	0	
Total %	0	30.7	0.2	0	30.9	0.2	0	2.8	0	3	2.9	63.2	0	0	66.1	0	0	0	0	0	

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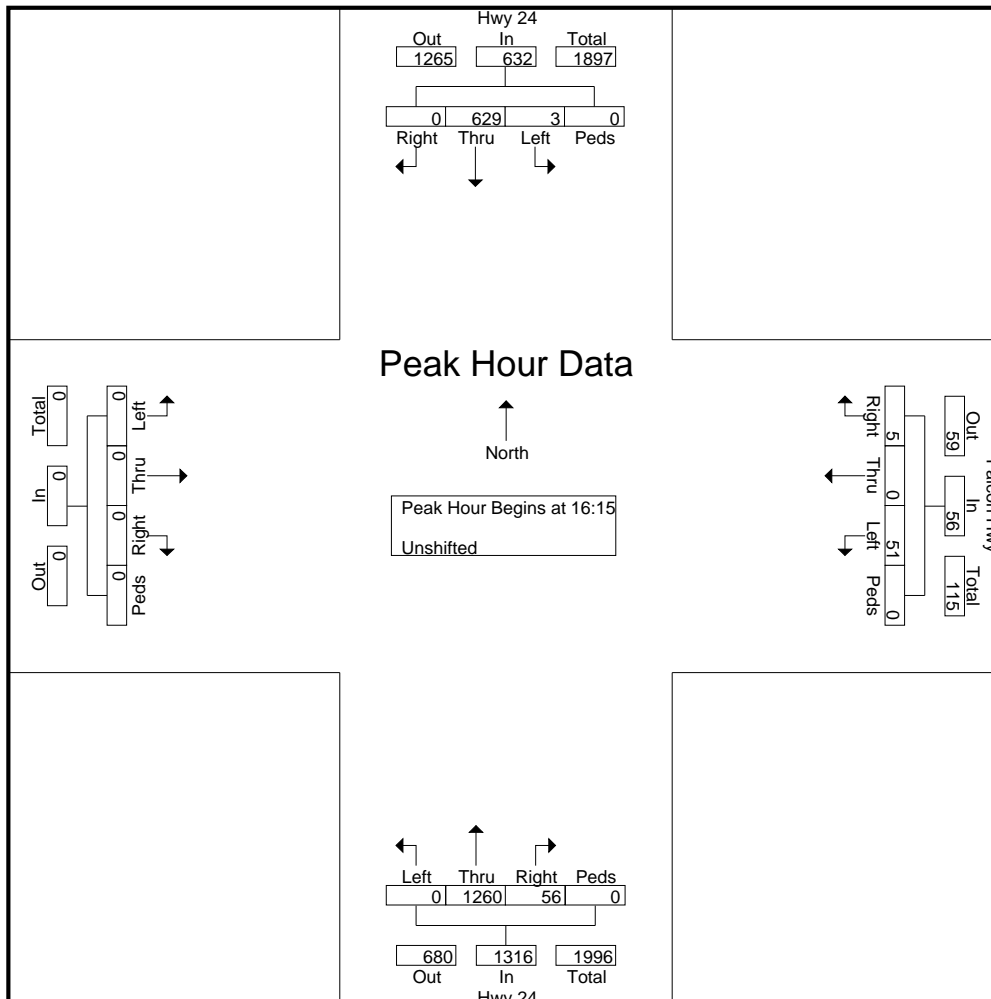
File Name : Hwy 24 - Falcon Hwy PM

Site Code : S224600

Start Date : 11/15/2022

Page No : 2

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins 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



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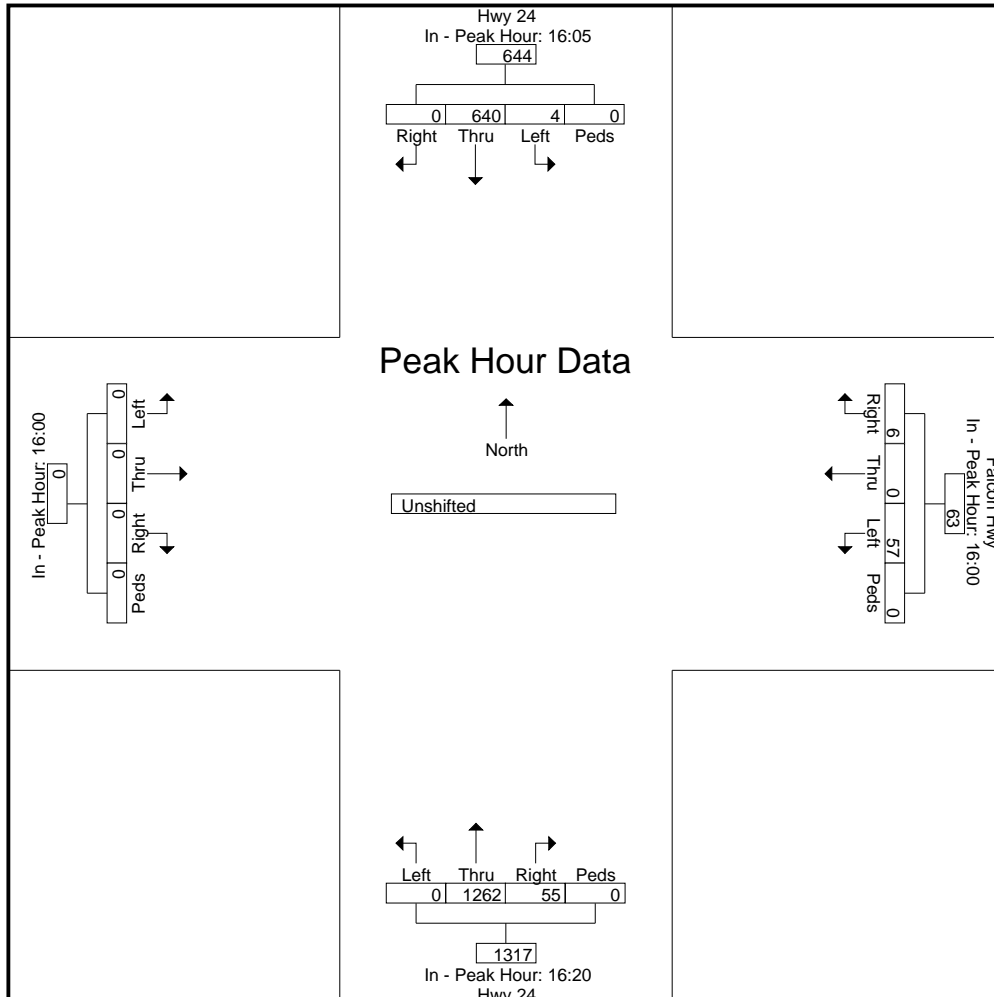
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 719-633-2868

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

Start Time	Hwy 24 Southbound					Falcon Hwy Westbound					Hwy 24 Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	16:05					16:00					16:20					16:00				
+0 mins.	0	48	0	0	48	1	0	4	0	5	8	111	0	0	119	0	0	0	0	0
+5 mins.	0	47	2	0	49	0	0	10	0	10	6	103	0	0	109	0	0	0	0	0
+10 mins.	0	68	0	0	68	0	0	7	0	7	7	96	0	0	103	0	0	0	0	0
+15 mins.	0	48	0	0	48	0	0	5	0	5	4	114	0	0	118	0	0	0	0	0
+20 mins.	0	70	0	0	70	1	0	3	0	4	2	92	0	0	94	0	0	0	0	0
+25 mins.	0	48	0	0	48	2	0	4	0	6	2	113	0	0	115	0	0	0	0	0
+30 mins.	0	62	0	0	62	1	0	6	0	7	3	100	0	0	103	0	0	0	0	0
+35 mins.	0	38	1	0	39	0	0	2	0	2	4	109	0	0	113	0	0	0	0	0
+40 mins.	0	53	0	0	53	0	0	5	0	5	4	111	0	0	115	0	0	0	0	0
+45 mins.	0	63	1	0	64	1	0	2	0	3	4	105	0	0	109	0	0	0	0	0
+50 mins.	0	43	0	0	43	0	0	4	0	4	8	105	0	0	113	0	0	0	0	0
+55 mins.	0	52	0	0	52	0	0	5	0	5	3	103	0	0	106	0	0	0	0	0
Total Volume	0	640	4	0	644	6	0	57	0	63	55	1262	0	0	1317	0	0	0	0	0
% App. Total	0	99.4	0.6	0		9.5	0	90.5	0		4.2	95.8	0	0		0	0	0	0	
PHF	.000	.762	.167	.000	.767	.250	.000	.475	.000	.525	.573	.923	.000	.000	.922	.000	.000	.000	.000	.000














Levels of Service



Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

Existing
AM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	224	5	464	47	3	1237
Future Volume (vph)	224	5	464	47	3	1237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
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	1.00	1.00
Frt	0.997			0.850		
Flt Protected	0.953				0.950	
Satd. Flow (prot)	1770	0	1759	1495	1736	1827
Flt Permitted	0.953				0.410	
Satd. Flow (perm)	1770	0	1759	1495	749	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	0.87	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
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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

Existing
AM



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)				490	775	
Base Capacity (vph)	329		1280	1102	638	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	0.80		0.39	0.05	0.00	0.96

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 31.8
 Intersection LOS: C
 Intersection Capacity Utilization 86.2%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy












Existing
AM

Splits and Phases: 1: US 24 & Falcon Hwy



Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing
PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	3	1252	48	4	593
Future Volume (vph)	55	3	1252	48	4	593
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
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	1.00	1.00
Frt	0.992			0.850		
Flt Protected	0.955				0.950	
Satd. Flow (prot)	1765	0	1759	1495	1736	1827
Flt Permitted	0.955				0.039	
Satd. Flow (perm)	1765	0	1759	1495	71	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	2			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	0.83	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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing
PM



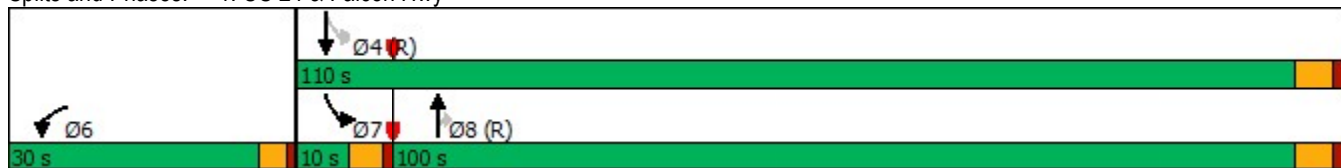
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		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		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	0.21		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	D		D	A	A	A
Approach Delay	48.9		50.9			8.4
Approach LOS	D		D			A
Queue Length 50th (ft)	53		~1137	0	1	205
Queue Length 95th (ft)	91		#1641	14	4	274
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
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	0.21		1.03	0.05	0.03	0.47

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 37.7
 Intersection LOS: D
 Intersection Capacity Utilization 78.4%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.












Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing + Site
AM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	1	
Taper Length (ft)	25				90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996			0.850		
Flt Protected	0.954				0.950	
Satd. Flow (prot)	1770	0	1759	1495	1736	1827
Flt Permitted	0.954				0.410	
Satd. Flow (perm)	1770	0	1759	1495	749	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	1			49		
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	0.95
Heavy Vehicles (%)	2%	2%	8%	8%	4%	4%
Adj. Flow (vph)	256	7	504	49	4	1397
Shared Lane Traffic (%)						
Lane Group Flow (vph)	263	0	504	49	4	1397
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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing + Site
AM



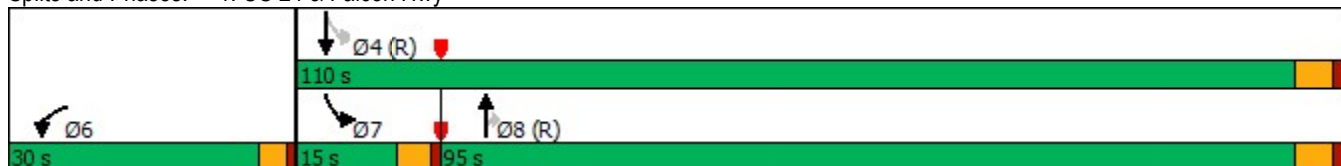
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		95.0	95.0	15.0	110.0
Total Split (%)	21.4%		67.9%	67.9%	10.7%	78.6%
Maximum Green (s)	26.0		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	
Base Capacity (vph)	329		1280	1102	638	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	0.80		0.39	0.04	0.01	1.03

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 43.0 Intersection LOS: D
 Intersection Capacity Utilization 90.9% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	Major2	Minor1			
Conflicting Flow All	0	0	63	0	325	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	263	-
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	-	-	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			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	752	-	-	1540	-
HCM Lane V/C Ratio	0.005	-	-	0.001	-
HCM Control Delay (s)	9.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing + Site
PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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		490	775	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987			0.850		
Flt Protected	0.957				0.950	
Satd. Flow (prot)	1759	0	1759	1495	1736	1827
Flt Permitted	0.957				0.039	
Satd. Flow (perm)	1759	0	1759	1495	71	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	3			52		
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	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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2022 Existing + Site
PM



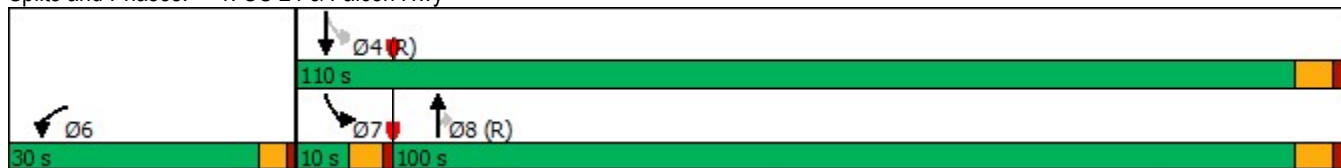
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		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		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	0.22		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	D		D	A	A	A
Approach Delay	48.5		50.8			8.4
Approach LOS	D		D			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			911
Turn Bay Length (ft)				490	775	
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

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 37.6
 Intersection LOS: D
 Intersection Capacity Utilization 78.4%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	67	0	137
Stage 1	-	-	-	-	65
Stage 2	-	-	-	-	72
Critical Hdwy	-	-	4.12	-	6.42
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
Stage 1	-	-	-	-	958
Stage 2	-	-	-	-	951
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1535	-	855
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			A

Minor Lane/Major Mvmt	NBLn1	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	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2042 Background
AM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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		490	775	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				90	
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frt	0.989			0.850		
Flt Protected	0.956				0.950	
Satd. Flow (prot)	1761	0	4803	1495	1736	4988
Flt Permitted	0.956				0.247	
Satd. Flow (perm)	1761	0	4803	1495	451	4988
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
Shared Lane Traffic (%)						
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
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)			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



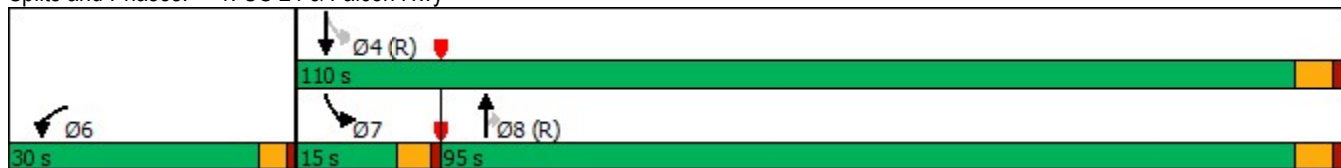
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		95.0	95.0	15.0	110.0
Total Split (%)	21.4%		67.9%	67.9%	10.7%	78.6%
Maximum Green (s)	26.0		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		97.5	97.5	105.5	104.0
Actuated g/C Ratio	0.19		0.70	0.70	0.75	0.74
v/c Ratio	1.53		0.30	0.26	0.07	0.74
Control Delay	293.1		8.9	1.5	4.7	11.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	293.1		8.9	1.5	4.7	11.8
LOS	F		A	A	A	B
Approach Delay	293.1		7.2			11.7
Approach LOS	F		A			B
Queue Length 50th (ft)	~645		130	0	5	463
Queue Length 95th (ft)	#872		156	30	13	510
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	329		3344	1128	436	3705
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		0.30	0.26	0.06	0.74

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.53
 Intersection Signal Delay: 41.6
 Intersection Capacity Utilization 84.5%
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.












Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

2042 Background
PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
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	0.91	1.00	1.00	0.91
Frt	0.979			0.850		
Flt Protected	0.960				0.950	
Satd. Flow (prot)	1751	0	4803	1495	1736	4988
Flt Permitted	0.960				0.040	
Satd. Flow (perm)	1751	0	4803	1495	73	4988
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
Shared Lane Traffic (%)						
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
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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy



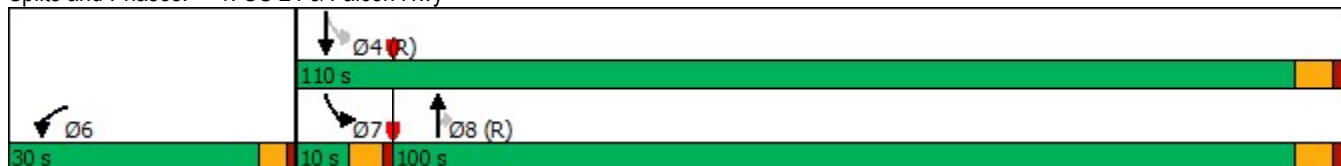
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		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		0.75	0.32	0.27	0.37
Control Delay	305.9		15.8	1.5	9.7	6.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	305.9		15.8	1.5	9.7	6.7
LOS	F		B	A	A	A
Approach Delay	305.9		14.0			6.8
Approach LOS	F		B			A
Queue Length 50th (ft)	~665		542	0	6	144
Queue Length 95th (ft)	#894		602	32	15	165
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	330		3361	1156	120	3705
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		0.75	0.32	0.27	0.37

Intersection Summary
















Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.57
 Intersection Signal Delay: 43.2 Intersection LOS: D
 Intersection Capacity Utilization 81.4% ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (vph)	426	44	950	276	29	2600
Future Volume (vph)	426	44	950	276	29	2600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
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	0.91	1.00	1.00	0.91
Frt	0.987			0.850		
Flt Protected	0.957				0.950	
Satd. Flow (prot)	1759	0	4803	1495	1736	4988
Flt Permitted	0.957				0.248	
Satd. Flow (perm)	1759	0	4803	1495	453	4988
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	3			291		
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)	463	48	1000	291	31	2737
Shared Lane Traffic (%)						
Lane Group Flow (vph)	511	0	1000	291	31	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
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)			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



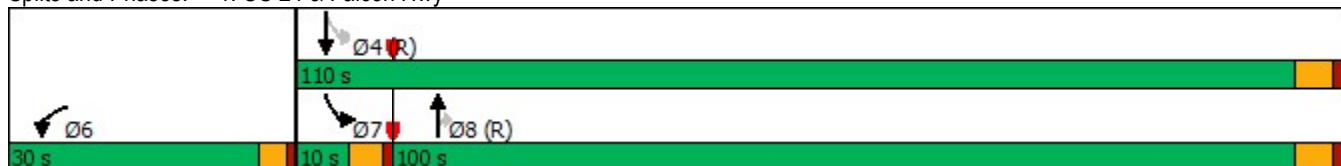
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases				8	4	
Detector Phase	6		8	8	7	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.0		41.0	41.0	9.5	41.0
Total Split (s)	30.0		100.0	100.0	10.0	110.0
Total Split (%)	21.4%		71.4%	71.4%	7.1%	78.6%
Maximum Green (s)	26.0		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	1.55		0.30	0.26	0.08	0.74
Control Delay	300.6		8.6	1.4	4.8	11.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	300.6		8.6	1.4	4.8	11.8
LOS	F		A	A	A	B
Approach Delay	300.6		7.0			11.7
Approach LOS	F		A			B
Queue Length 50th (ft)	~657		128	0	6	463
Queue Length 95th (ft)	#885		152	29	14	510
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	329		3361	1133	391	3705
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	1.55		0.30	0.26	0.08	0.74

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.55
 Intersection Signal Delay: 42.7
 Intersection LOS: D
 Intersection Capacity Utilization 84.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy














Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	5	1	465	5	1
Future Vol, veh/h	300	5	1	465	5	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	326	5	1	505	6	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	331	0	836 329
Stage 1	-	-	-	-	329 -
Stage 2	-	-	-	-	507 -
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	-	-	1228	-	337 712
Stage 1	-	-	-	-	729 -
Stage 2	-	-	-	-	605 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-	337 712
Mov Cap-2 Maneuver	-	-	-	-	337 -
Stage 1	-	-	-	-	729 -
Stage 2	-	-	-	-	604 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	1228	-
HCM Lane V/C Ratio	0.021	-	-	0.001	-
HCM Control Delay (s)	15	-	-	7.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	401	80	2400	351	36	1300
Future Volume (vph)	401	80	2400	351	36	1300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
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	0.91	1.00	1.00	0.91
Frt	0.978			0.850		
Flt Protected	0.960				0.950	
Satd. Flow (prot)	1749	0	4803	1495	1736	4988
Flt Permitted	0.960				0.040	
Satd. Flow (perm)	1749	0	4803	1495	73	4988
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6			369		
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)	436	87	2526	369	38	1368
Shared Lane Traffic (%)						
Lane Group Flow (vph)	523	0	2526	369	38	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
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)			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

Lanes, Volumes, Timings
1: US 24 & Falcon Hwy



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		96.0	96.0	105.5	104.0
Actuated g/C Ratio	0.19		0.69	0.69	0.75	0.74
v/c Ratio	1.59		0.77	0.32	0.32	0.37
Control Delay	315.5		17.1	1.5	12.8	6.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	315.5		17.1	1.5	12.8	6.7
LOS	F		B	A	B	A
Approach Delay	315.5		15.1			6.9
Approach LOS	F		B			A
Queue Length 50th (ft)	~677		542	0	8	144
Queue Length 95th (ft)	#907		602	32	22	165
Internal Link Dist (ft)	334		1115			911
Turn Bay Length (ft)				490	775	
Base Capacity (vph)	329		3293	1141	120	3705
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	1.59		0.77	0.32	0.32	0.37

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45 (32%), Referenced to phase 4:SBTL and 8:NBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.59
 Intersection Signal Delay: 45.3
 Intersection LOS: D
 Intersection Capacity Utilization 81.8%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: US 24 & Falcon Hwy



Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	380	7	2	475	6	2
Future Vol, veh/h	380	7	2	475	6	2
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	413	8	2	516	8	3

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	421	0	937
Stage 1	-	-	-	-	417
Stage 2	-	-	-	-	520
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1138	-	294
Stage 1	-	-	-	-	665
Stage 2	-	-	-	-	597
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1138	-	293
Mov Cap-2 Maneuver	-	-	-	-	293
Stage 1	-	-	-	-	665
Stage 2	-	-	-	-	596

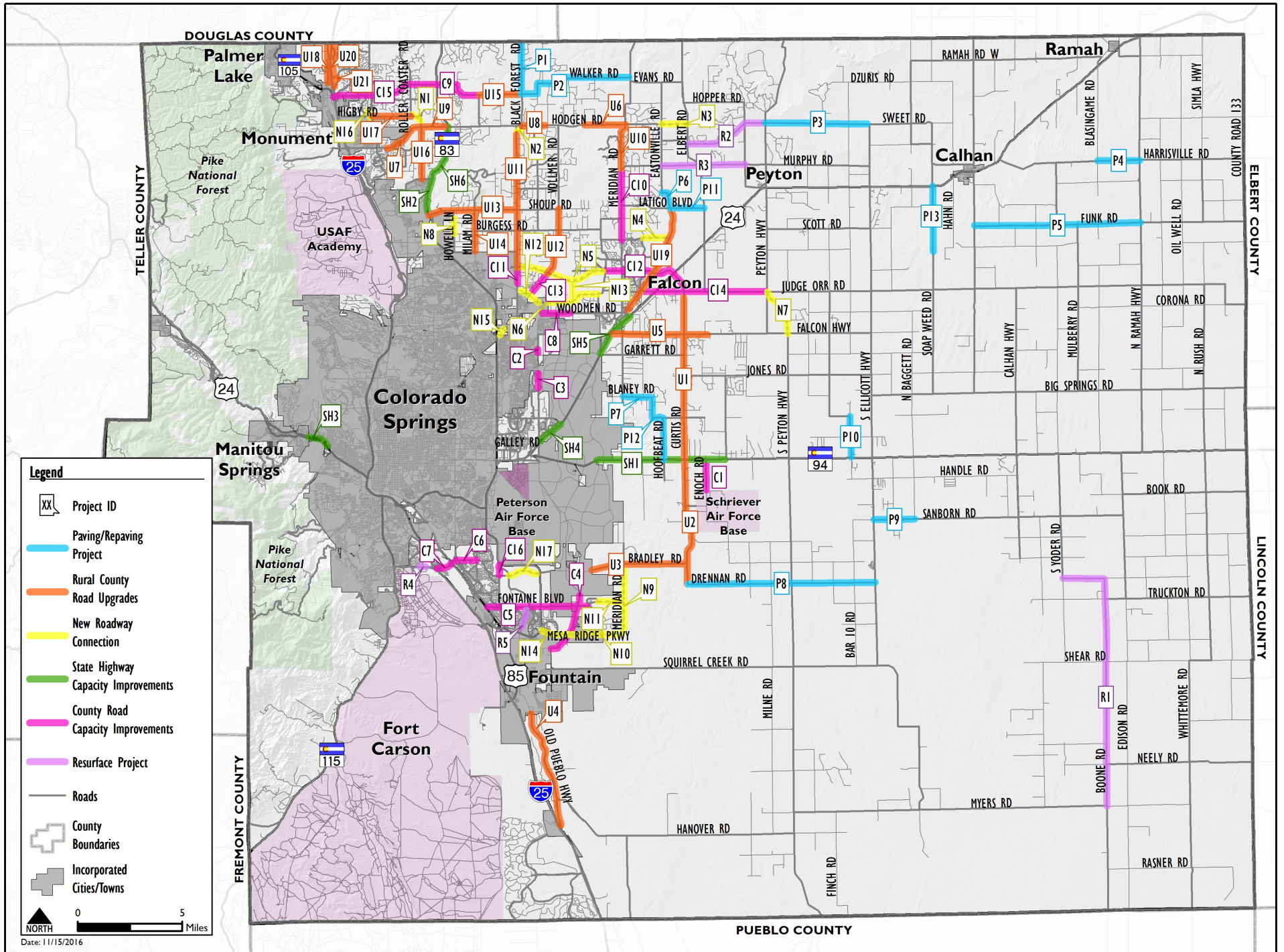
Approach	EB	WB	NB
HCM Control Delay, s	0	0	16
HCM LOS			C

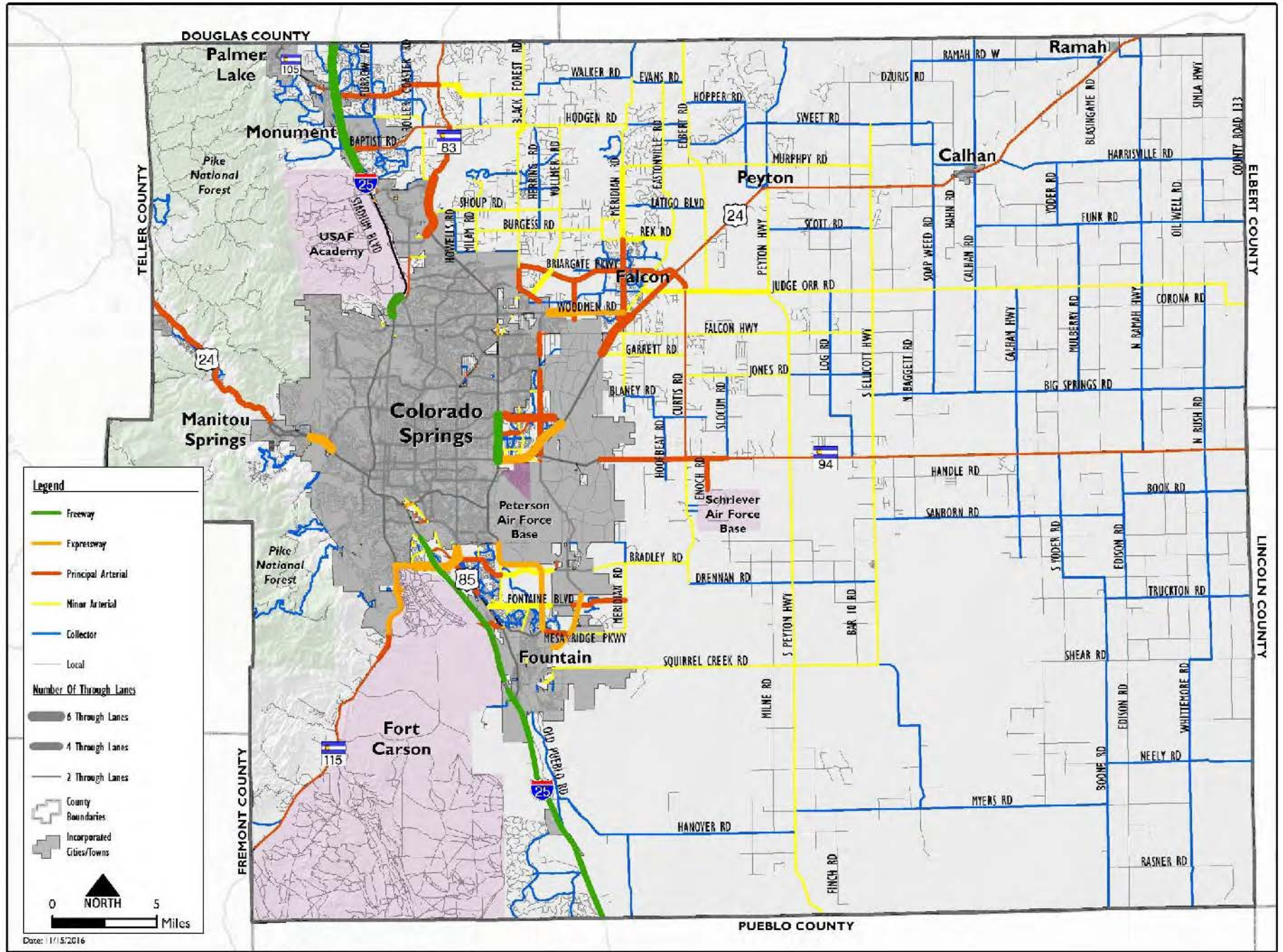
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	339	-	-	1138	-
HCM Lane V/C Ratio	0.03	-	-	0.002	-
HCM Control Delay (s)	16	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

MTCP Maps



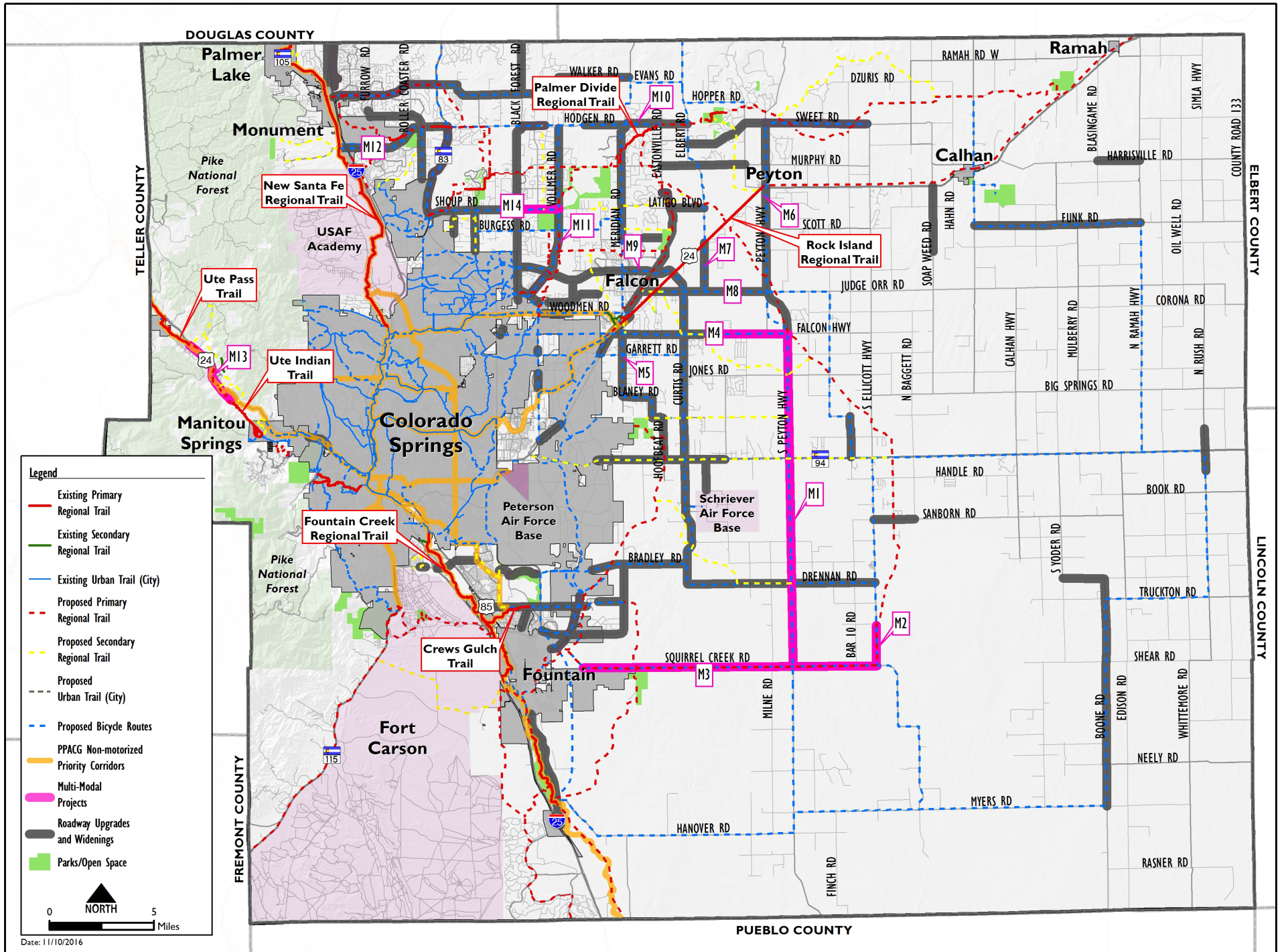
Map 13: Improvements Map



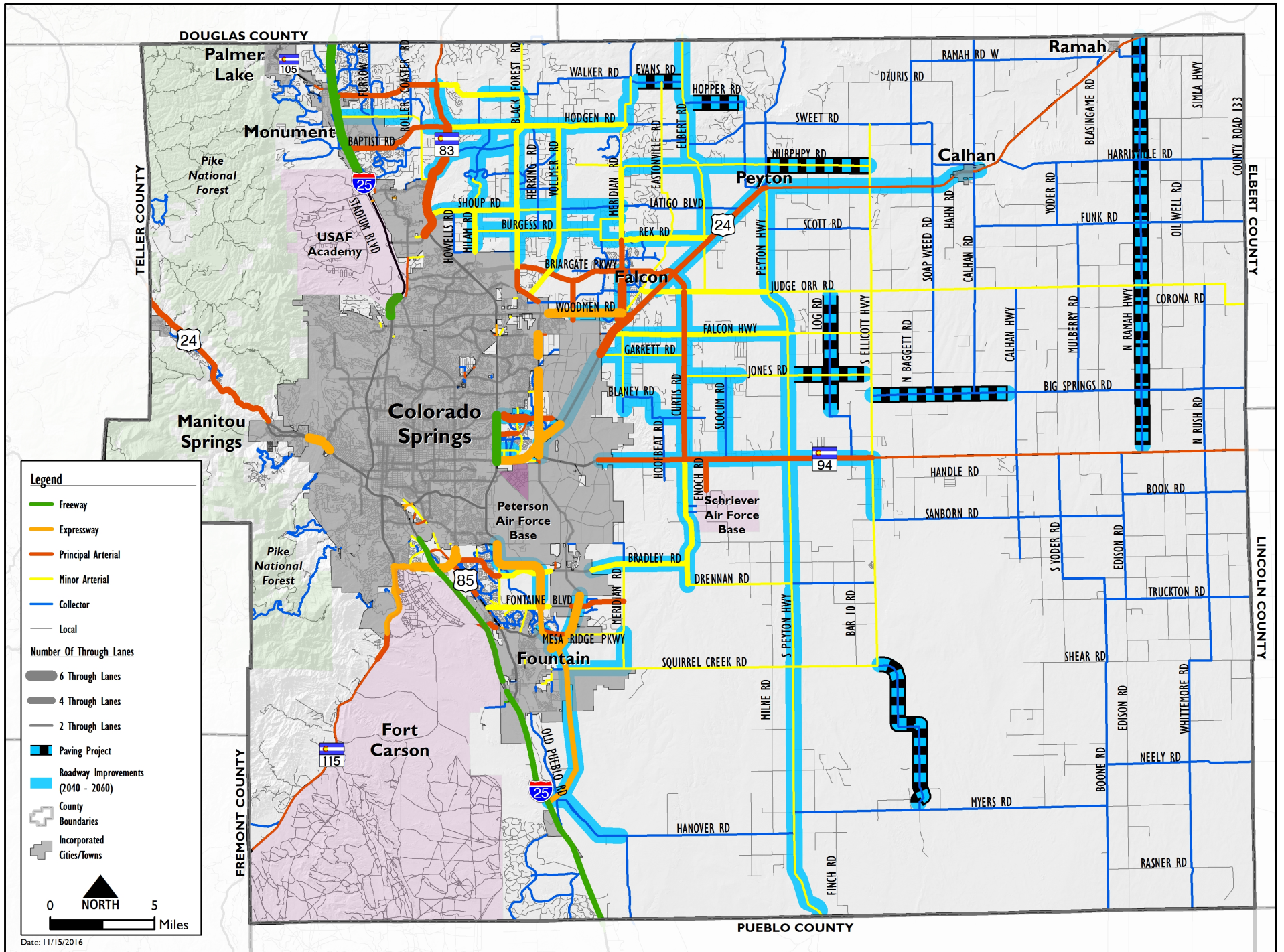


Map 14: 2040 Roadway Plan (Classification and Lanes)

Map 15: Multimodal Improvements



Map 17: 2060 Corridor Preservation



Legend

- Freeway
- Expressway
- Principal Arterial
- Minor Arterial
- Collector
- Local

Number Of Through Lanes

- 6 Through Lanes
- 4 Through Lanes
- 2 Through Lanes

- Paving Project
- Roadway Improvements (2040 - 2060)
- County Boundaries
- Incorporated Cities/Towns

0 5
NORTH
Miles

Table 4: 2040 Roadway Improvement Projects

Project ID	Road Segment	Segment		PPRTA Project	Urban vs. Rural	Existing Conditions		Future Conditions		Total Cost
		Beginning	End			Lanes	Functional Class	Lanes	Functional Class	
County Road Upgrades										
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	B	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.	B	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	B	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	B	Rural	2	Unimproved County Road	2	Minor Arterial	\$7,763,000
U11	Black Forest Rd	Hodgen Rd	Stapleton Dr	B	Rural	2	Unimproved County Road	2	Minor Arterial	\$22,714,000
U12	Vollmer Rd	Stapleton Dr	Shoup Rd	B	Rural	2	Unimproved County Road	2	Minor Arterial	\$11,691,000

Recent Area TIS Reports



Appendix: Recent Traffic Reports Utilized in the Preparation of this Report



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

D-49 Transportation Center
Traffic Impact Study
(LSC #S214340)
PCD File No. U-221 **PPR2236**
December 1, 2022
(Rev. 4/20/2023)



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

Meadowlake Industrial Park
Master Traffic Impact Study
PCD File No. CS221, I221, I222
(LSC #S214950)
July 29, 2022