

LSC TRANSPORTATION CONSULTANTS, INC. 545 East Pikes Peak Avenue, Suite 210 Colorado Springs, CO 80903 (719) 633-2868 FAX (719) 633-5430 E-mail: <u>lsc@lsctrans.com</u> Website: http://www.lsctrans.com

The Glen at Widefield Filing No. 9 Transportation Memorandum (LSC #174850) January 24, 2018

Add "PCD File No. SF185"

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.

Jeffrey C. Hodsdon, P.E., #31684

Developer's Statement

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

20

-Jon 25th 2018 Date



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January 24, 2018

Mr. J. Ryan Watson Widefield Investment Group 3 Widefield Boulevard Colorado Springs, CO 80911

> RE: The Glen at Widefield Filing No. 9 Transportation Memorandum El Paso County, Colorado LSC #174850

Dear Mr. Watson:

In response to your request, LSC Transportation Consultants, Inc. has prepared this transportation memorandum for The Glen at Widefield Filing No. 9. As shown in Figure 1, the site is located northwest of the Marksheffel Road/Mesa Ridge Parkway intersection in El Paso County, Colorado. Filing 9 is planned to contain 106 lots for single-family homes. This memorandum is a supplement to the overall Glen at Widefield East Preliminary Plan traffic report dated January 18, 2016. Please contact our office to obtain a copy of this report, if needed.

A copy of the plat for the 106 single-family lots is attached for reference. The lot and street layout for this filing matches the Preliminary Plan.

REPORT CONTENTS

This report is being prepared as part of a submittal to El Paso County. It identifies the traffic impacts of this development. The report contains the following:

- Traffic count data.
- Projections of short-term (2022) baseline/background traffic volumes at the key area intersections.
- The projected average weekday and peak-hour vehicle-trips to be generated by Filing No. 9.
- The assignment of the Filing No. 9 projected trips to the key area intersections for the short term.
- The short-term level of service at these intersections.
- The short-term level of service and queuing analysis at the intersection of Powers Boulevard/ Mesa Ridge Parkway.
- Findings and recommendations.
- Signal escrow analysis tables.

LAND USE AND ACCESS

Since completion of the 2016 Glen at Widefield East Preliminary Plan Traffic Report, 249 of the 577 proposed lots for single-family homes within the preliminary plan area have been platted as The Glen at Widefield Filings 7 and 8 and Mesa Ridge Parkway has been extended east to Marksheffel Road. Primary access for these filings is via the new intersection of Spring Glen Drive and the recently completed section of Mesa Ridge Parkway. A secondary access to Marksheffel Road is currently under construction that will align with Peaceful Valley Road.

The currently proposed Glen at Widefield Filing No. 9 is planned to contain 106 lots for singlefamily homes. Figure 2 shows the location of The Glen at Widefield Filing Nos. 7, 8, and 9. No additional access is proposed with this filing.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

Figure 1 shows the roadways in the vicinity of the site. The major roadways are identified below, followed by a brief description of each.

Powers Boulevard is a four-lane Expressway extending north from Mesa Ridge Parkway. In the future, Powers Boulevard is planned to be extended south to connect to Interstate 25, potentially at Exit 122. In the vicinity of the site, Powers Boulevard has two through lanes in each direction and a posted speed limit of 55 miles per hour (mph). The Colorado Department of Transportation has been collecting escrow funds from the previous Glen at Widefield filings as participation toward the recently installed traffic signal at the intersection of Mesa Ridge/Powers.

Marksheffel Road extends north from the Link Road/C&S Road intersection in Fountain, Colorado to north of Woodmen Road. Marksheffel has recently been upgraded to an interim three-lane facility between Mesa Ridge Parkway and Bradley Road as part of a PPRTA project. Marksheffel Road is shown as a future four-lane Expressway on the El Paso County *Major Transportation Corridors Plan (MTCP)*. The posted speed limit on Marksheffel Road is 55 mph north of Mesa Ridge Parkway and 45 mph south of Mesa Ridge Parkway.

Mesa Ridge Parkwax is a four-lane median-divided Principal Arterial extending east from I-25 to Powers Boulevard. A half-section of Marksheffel Road with one through lane in each direction has been constructed east from Powers Boulevard to Marksheffel Road. The posted speed limit in the vicinity of the site is 45 mph.

Peaceful Valley Road is a two-lane City of Fountain street that extends east from Marksheffel Road about two-and-a-half miles to the location of a future extension of Meridian Road. The posted speed limit on Peaceful Valley Road is 30 mph. Most of Peaceful Valley Road is located within the City of Fountain.

> Expand the Mesa Ridge Parkway narrative to provide background – information for the trigger to convert this to a 4-lane and what responsibilities (if any) the Glen at Widefield has.

Notable Recent Area Roadway System Improvements

The Marksheffel South project has been completed, a traffic signal has been installed at the intersection of Mesa Ridge Parkway and Powers, and it is our understanding that this signal has only been fully operational since early January. The temporary Roanfield Drive street connection to Powers Boulevard has been closed. Also, the southbound left-turn lane at the Mesa Ridge/ Powers intersection has been lengthened as required with The Glen at Widefield Filing No. 7. The Marksheffel painted center median at the intersection of Peaceful Valley Road/ Marksheffel Road has been striped as a channelized T-configuration (with southbound left-turn deceleration and left-turn acceleration lanes). The configuration may need to change through restriping of the center painted median with the addition of the fourth/west leg of this intersection with The Glen at Widefield Filing No. 8.

EXISTING TRAFFIC VOLUMES

Obtain new traffic counts at all locations and update the analysis to reflect the fully operational condition of the traffic signal so the TIS analysis is representative of

Figure 3 shows the existing peak-hour traffic current conditions. traffic controls. The traffic volumes were based on traffic counts conducted by LSC in November and December 2017. Please note that the traffic counts at the intersection of Powers Boulevard and Mesa Ridge Parkway were conducted prior to installation of the traffic signal. The traffic count reports are attached.

LEVEL OF SERVICE

Level of service (LOS) is a quantitative measure of the level of delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

		ble 1 of Service Delay Range	25										
	Signalized Inte	ersections	Unsignalized Intersections										
Level of Service	Average Control Delay (seconds per vehicle)	V/C ⁽¹⁾	Average Control Delay (seconds per vehicle) ⁽²⁾										
A10.0 sec or lessless than 0.6010.0 sec or less													
A 10.0 sec or less less than 0.60 10.0 sec or less B 10.1-20.0 sec 0.60-0.69 10.1-15.0 sec													
С	20.1-35.0 sec	0.70-0.79	15.1-25.0 sec										
D	35.1-55.0 sec	0.80-0.89	25.1-35.0 sec										
E	55.1-80.0 sec	0.90-0.99	35.1-50.0 sec										
F	80.1 sec or more	1.00 and greater	50.1 sec or more										
(2) For unsignalize	ortation Research Circular d intersections if V/C ratio ne projected average contr	is greater than 1.0 the	e level of service is LOS F										

The intersections of Powers/Mesa Ridge, Marksheffel/Mesa Ridge and Marksheffel/Peaceful Valley were analyzed to determine the existing levels of service. The intersection of Powers/Mesa Ridge was analyzed using Synchro. The intersections of Marksheffel/Mesa Ridge and Marksheffel/Peaceful Valley were analyzed using the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board.

The intersection of Powers/Mesa Ridge was recently signalized and as such, the intersection has been analyzed as a signalized intersection. The current signal timing has been estimated by LSC and the pre-signal volumes have been used in the analyzed. It is currently operating at an overall LOS B or better during the peak hours. The westbound left-turn movement at this intersection is operating at LOS D during the peak hours.

All movements at the stop-sign-controlled intersections of Marksheffel/Mesa Ridge and Marksheffel/Peaceful Valley are currently operating at LOS C or better during the peak hours. The analysis of these intersections has been completed using the 2017 traffic count data.

SHORT-TERM (YEAR 2022) BACKGROUND TRAFFIC

Figure 4a shows the short-term background traffic volumes at the key area intersections. Background traffic is the traffic estimated to be on the roadways without the Glen at Widefield Filing No. 9 traffic.

Background traffic includes the existing traffic volume (from Figure 3) plus increases in through traffic due to regional growth plus traffic estimated to be generated by buildout of existing and currently proposed subdivisions in the vicinity of the site. These estimates include traffic projected to be generated by the development of the 249 single-family homes within The Glen

at Widefield Filing Nos. 7 and 8 and traffic projected to be generated by buildout of all the existing and currently proposed developments within the Lorson Ranch development located east of the intersection of Marksheffel/Fontaine.

Increases in the through traffic volumes on Powers Boulevard were estimated based on the growth rate calculated from the Colorado Department of Transportation 20-year growth factor for this section of Powers Boulevard. Short-term estimates have been based on late 2017 counts prior to signalization of the Powers/Mesa Ridge intersection. LSC has estimated the potential change in traffic patterns and due to the change to signal control – notably additional westbound left-turn volume with the installation of the signal.

Figure 4b shows the lane geometry, traffic control, and level of service at the key area intersections of based on the short-term background volumes.

TRIP GENERATION

The Filing No. 9 site-generated vehicle-trips have been estimated using the nationally published trip generation rates from *Trip Generation*, *10th Edition*, *2017* by the Institute of Transportation Engineers (ITE). Table 2 shows the trip generation estimates for this filing.

Filing 9 is expected to generate 1,001 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 20 vehicles would enter and 59 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 66 vehicles would enter and 39 vehicles would exit the site.

SITE-GENERATED TRAFFIC

Figure 5 shows the projected short-term site-generated traffic volumes for Filing No. 9. These volumes are based on the distribution and short-term roadway system assumptions contained in The Glen at Widefield East Preliminary Plan report (please refer to this report for additional detail) and the access plan for The Glen at Widefield Filing 9 only, as described above.

SHORT-TERM TOTAL TRAFFIC

Figure 6a shows the projected short-term total traffic volumes at the key areas. The short-term total traffic volumes are the sum of the short-term background traffic volumes (from Figure 4) plus the Filing No. 9 short-term site-generated traffic volumes (from Figure 5).

Figure 6b shows the lane geometry, traffic control, and level of service at the key area intersections of based on the short-term total volumes.

LEVEL OF SERVICE

The intersections of Marksheffel/Mesa Ridge and Marksheffel/Peaceful Valley were analyzed to determine the projected levels of service based on the short-term background and total traffic volumes using the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. The signalized intersection of Powers/ Mesa Ridge was analyzed using Synchro. The results of the analysis are shown in Figures 4b and 6b.

All movement at the intersection of Powers/Mesa Ridge is projected to continue to operate at a LOS D or better during the peak hours based on the projected short-term background and total peak-hour traffic volumes.

All movements at the stop-sign-controlled intersections of Marksheffel/Mesa Ridge and Marksheffel/Peaceful Valley are projected to operate at LOS C or better during the peak hours.

Please refer to the Glen at Widefield East Preliminary Plan traffic report for the long-term analysis of the key area intersections.

QUEUING ANALYSIS

A queuing analysis has been performed for the southbound and westbound left turn at Powers/ Mesa Ridge. The analysis has been completed based on dual left-turn lanes with existing length for the westbound Mesa Ridge left-turn lane, the recently extended southbound left-turn lane, and projected short-term total traffic.

The maximum southbound left-turn queue on Powers Boulevard approaching Mesa Ridge Parkway is projected to be about 163 feet long based on the projected short-term total traffic volumes. The southbound left-turn lane has recently been lengthened to 1,108 feet plus a 222-foot taper.

The maximum westbound left-turn queue on Mesa Ridge Parkway approaching Powers Boulevard is projected to be about 331 feet long based on the projected short-term total traffic volumes assuming dual westbound left-turn lanes.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

• Filing 9 is expected to generate 1,001 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour about 20 vehicles would enter and 59 vehicles would exit the site. During the afternoon peak hour about 66 vehicles would enter and 39 vehicles would exit the site.

Level of Service

- The signalized intersection of Mesa Ridge Parkway/Powers Boulevard is projected to continue to operate at a satisfactory level of service based on the projected short-term background and total peak-hour traffic volumes.
- The intersections of Marksheffel/Peaceful Valley Road and Mesa Ridge Parkway/Spring Glen Drive (the two access points to Filing No. 9) and the intersection of Marksheffel/Mesa Ridge would operate at satisfactory levels of service as stop-sign-controlled intersections based on the projected short-term background and total peak-hour traffic volumes.

Intersection Lane Configurations

- A 475-foot left-turn lane approaching Spring Glen Drive has been installed with the construction of Mesa Ridge Parkway.
- Mesa Ridge Parkway has been constructed and striped with 10-foot paved shoulders in the vicinity of Spring Glen Drive. Once the full for is anticipated that the acceleration lane w future westbound right-turn acceleration la any additional requirements they may have, and update as the half-section to be built with the initial This has been shown on the Mesa Ridge Pai This has been shown on th
- The addition of Filing No. 9 site-generated right-turn deceleration lane on Mesa Ridge right-turn deceleration lane on Mesa Ridge to summarize the outcome of the coordination.
- Marksheffel Road may need to be restriped to remove the southbound left-turn acceleration lane at the intersection of Peaceful Valley Drive and replaced with a northbound left-turn lane once the secondary site access is opened. This intersection is controlled by El Paso County and it would be an El Paso County Public Works decision to restripe/reconfigure the center median.
- The southbound left-turn lane on Powers Boulevard approaching Mesa Ridge Parkway has
 recently been lengthened as part of the Glen at Widefield Filing 7 access permit. The level of
 service analysis and queueing analysis for the short-term total traffic volumes indicates
 acceptable operations with the current single-lane configuration. The late 2017 (pre-signal)
 traffic volumes are lower than prior projections. Granted, volumes may change somewhat
 with the recent traffic signal installation, however the background traffic estimates in this
 report anticipate the signal installation (and associated shift in area traffic patterns) will have
 more of an affect on the the minor street left-turn (westbound) volumes than the major
 street (southbound) left-turn volumes.
- Based on the projected short-term and total traffic volumes, Mesa Ridge Parkway should be widened approaching Powers Boulevard to provide dual westbound left-turn lanes. Based on

the queueing analysis, the existing 350-foot turn lane length would be adequate to accommodate the projected queues.

Proposed Subdivision Street Classifications

• Figure 7 shows the recommended street classifications for the entire Preliminary Plan, including Filing 9.

Mesa Ridge Parkway/Powers Boulevard Intersection

CDOT has agreed to a signal escrow amount of \$107,018 for all of Glen at Widefield East. The
number of total lots in the Preliminary Plan has been reduced to 578 and therefore the
corresponding escrow amount would be \$103,960 for all of Glen at Widefield East. For
purposes of the Filing 9 access permit, the amount would be \$19,065. Table 3 presents the
signal escrow analysis including the previously identified amount for Filings 7 and 8 and the
remaining amount for future filings.

Mesa Ridge Parkway/Spring Glen Drive Signal Escrow

 The Glen East Preliminary Plan traffic report contains an estimated signal escrow amount for the entire Preliminary Plan and states that the developer's percentage contribution toward this signal will be calculated and a proportional contribution made toward the signal construction with each filing. The estimated proportional contribution for Filing 9 is \$6,189. Table 4 presents the signal escrow analysis for this intersection including the previously identified amount for Filings 7 and 8 and the remaining amount for future filings.

Marksheffel Road/Peaceful Valley Road

 The Glen at Widefield East Preliminary Plan traffic report contains an estimated escrow amount for the Preliminary Plan and states that the developer's percentage contribution toward this signal will be calculated and a proportional contribution made toward the signal construction with each filing. The estimated proportional contribution for Filing 9 is \$6,648. Table 5 presents the signal escrow analysis for this intersection including the previously identified amount for Filings 7 and 8 and the remaining amount for future filings.

ROADWAY IMPROVEMENT FEE PROGRAM

• This project will be required to participate in the El Paso County Road Improvement Fee Program. The Glen at Widefield Filing No. 9 will join the ten-mil PID. The ten-mil PID building permit fee portion associated with this option is \$923 per single-family dwelling unit. Based on 101 lots, the total building permit fee would be \$97,838.

* * * * *

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

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By feffrey C. Hodsdon, P.E., PTOE

Principal

JCH:KDF:bjwb

Enclosures: Tables 2-5 Figures 1-7 Filing No. 9 Plat Traffic Count Reports Level of Service Reports Queuing Reports

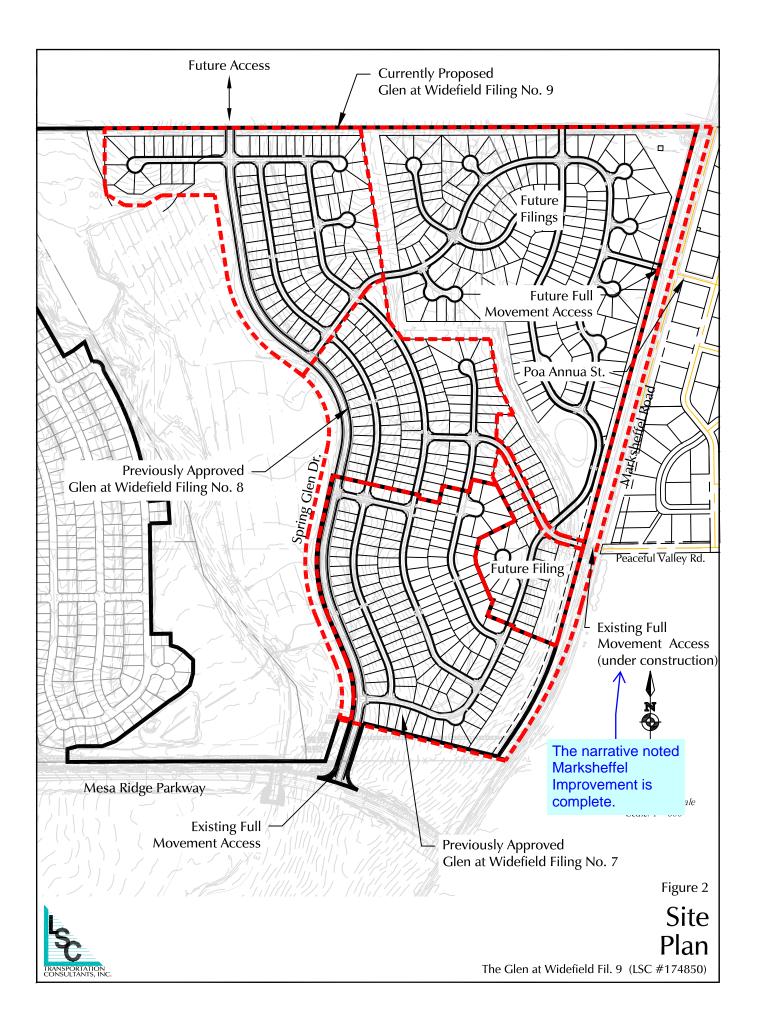
			ті	Ta Trip Gener he Glen at Wie			9						
				Т	rip Gene	ration R	ates ⁽¹⁾			Total T	rips Gene	rated	
	Land Use	Land Use	Trip Generation	Average Weekday	Mor	ning Hour	After	noon Hour	Average Weekday	Мо	rning k Hour	After	noon Hour
Filing	Code	Description	Units	Traffic	In	Out	In	Out	Traffic	In	Out	In	Out
Approved	Filings												
7	210	Single-Family Detached Housing	148 DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	1,397	27	82	92	54
8	210	Single-Family Detached Housing	101 DU	9.44	0.19	0.56	0.62	0.37	953	19	56	63	37
		5 , 5 <u></u>	249 DU	-					2,351	46	138	155	91
Currently I	Propose	d Filing											
9	210	Single-Family Detached Housing	106 DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	1,001	20	59	66	39
		Total Filings 7-9	355 DU						3,351	66	197	221	130
Future Fili	ngs	-											
11	210	Single-Family Detached Housing	40 DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	378	7	22	25	15
12	210	Single-Family Detached Housing	103 DU	9.44	0.19	0.56	0.62	0.37	972	19	57	64	38
13	210	Single-Family Detached Housing	79 DU	9.44	0.19	0.56	0.62	0.37	746	15	44	49	29
			222 DU						2,096	41	123	138	81
		Total Filings 7-13	577 DU						1,123	22	66	74	44
Notes: (1) Source: (2) DU = dv	•	neration, 10th Edition, 2017" by the Institute of T nit	ransportation E	ngineers (ITE)								
Source: LSC	Transportat	ion Consultants, Inc.											

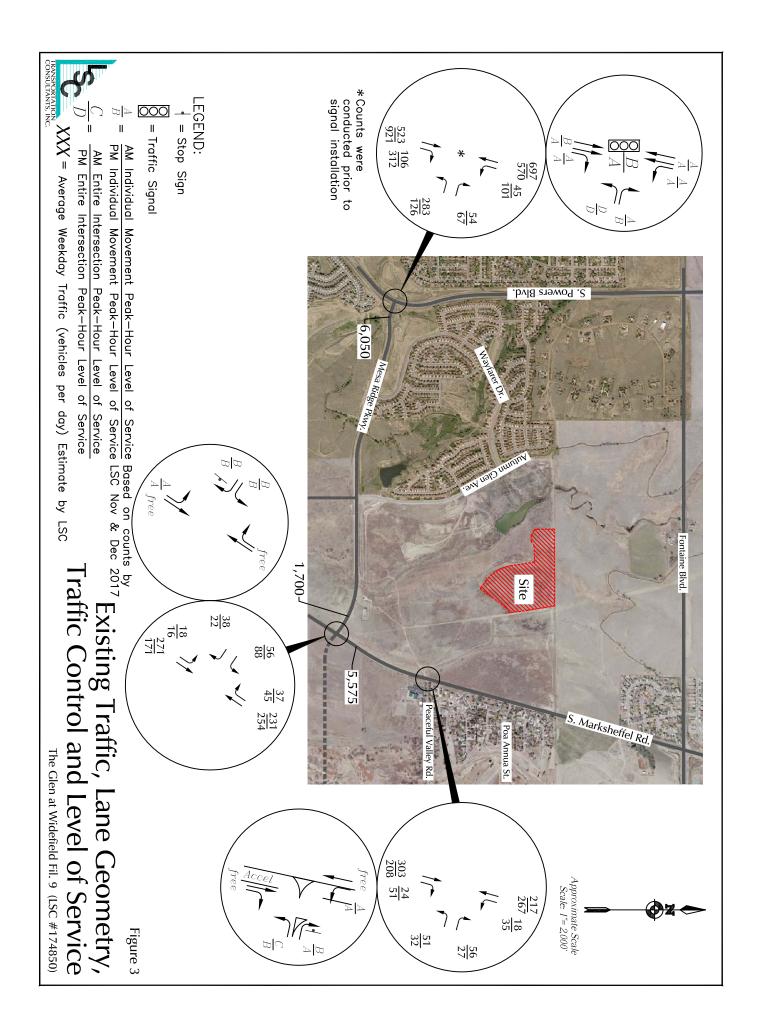
			Change to Filing												
				Mesa Ridge & Pow	ess Permit and Escrow Analysis vers (SH 21)										
Shown in TIS															
Number of Lots	Subdivision Name	Number of Lots	Status	Portion of total Escrow of \$103,960	Access Permits	Access Permit Escrow Amt.	Escrow to be deposited in account with CDOT								
148	Filing 7	148	Platted	\$26,648	Approved	\$26,648	NTP Issued; Turn Lane Extended								
101	Filing 8	101	Plat Approved - not recorde	\$18,166	Application pending	\$18,166	Prior to issuance of NTP								
106	Remaining Filings	106	Pending	\$19,065	Application to be submitted soon	\$19,065	Prior to issuance of NTP								
223	Remaining Filings	223	Future	\$40,081	Application(s) not submitted	TBD									
			1		1		1								

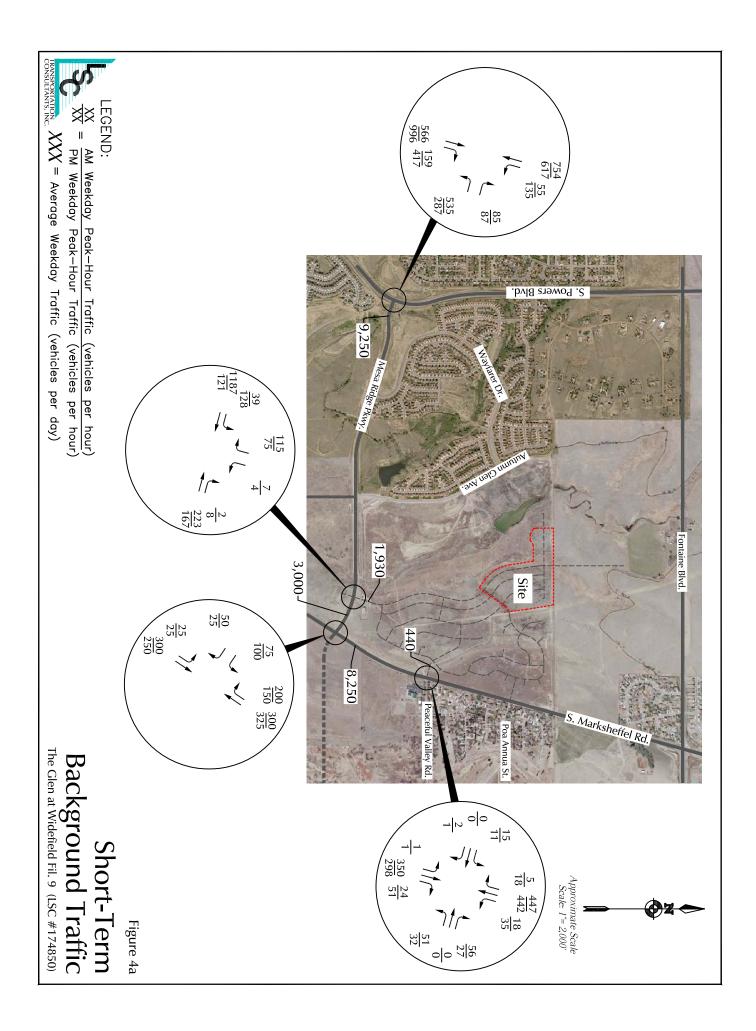
	Mesa Ridge Parl	kway & Spring	4 Intersection Escrow Analysis g Glen Drive Intersection Future Filings	
Shown in TIA	Sub	divisions Cur	rently Proposed	Signal Escrow Amounts
Number of Lots	Subdivision Name	Number of Lots	Status	Portion of Total Escrow of \$33,750
148	Filing 7	148	Platted	\$8,875
101	Filing 8	101	Plat Approved - not recorded	\$6,057
106	Filing 9	106	Pending	\$6,189
223	Remaining Filings	223	Future	\$12,629
Source: LSC Transportat	I ion Consultants, Inc. Au	gust 24, 2016	1	

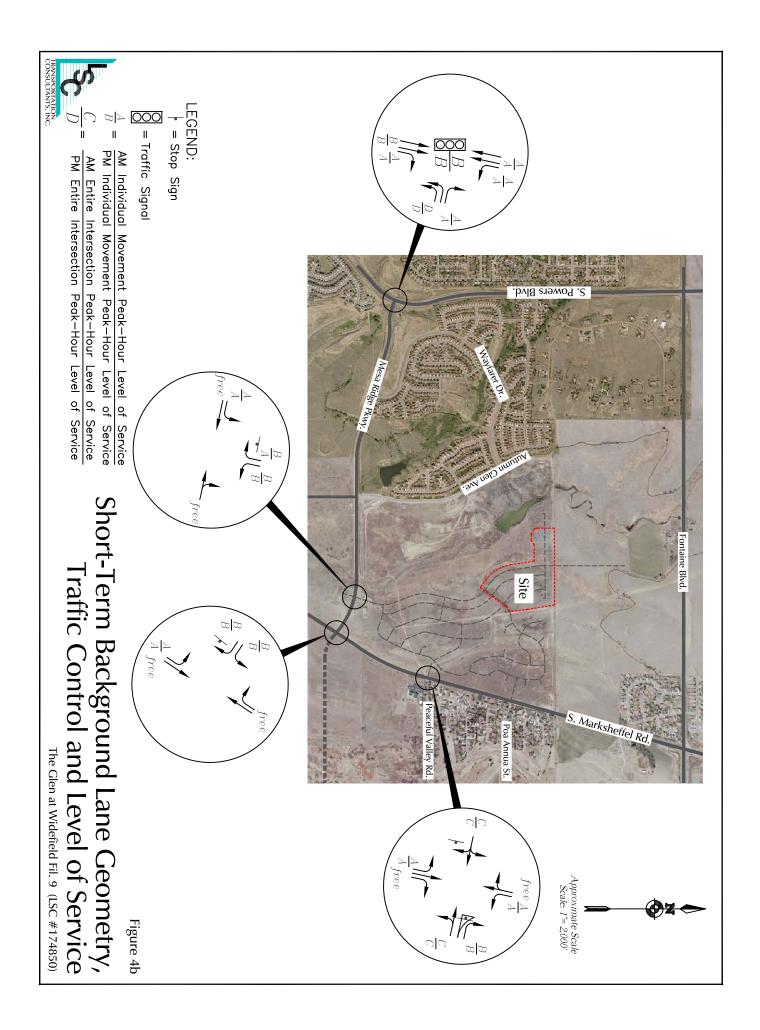
Gler	Peaceful Valley Roa	d & Marksh	ersection Signal Escrow Analysis neffel Road Intersection uture Filings	
Shown in TIS	Sub	divisions Cı	urrently Proposed	Signal Escrow Amounts
		Number		Portion of total
Number of Lots	Subdivision Name	of Lots	Status	Escrow of \$36,250
148	Filing 7	148	Platted	Deferred to Fil 8
101	Filing 8	101	Plat Approved - not recorded	\$15,615
106	Filing 9	106	Pending	\$6,648
223	Remaining Filings	223	Future	\$13,987
Note: The escrow amount for Source: LSC Transportation Co	-		unt for Filing 7	•

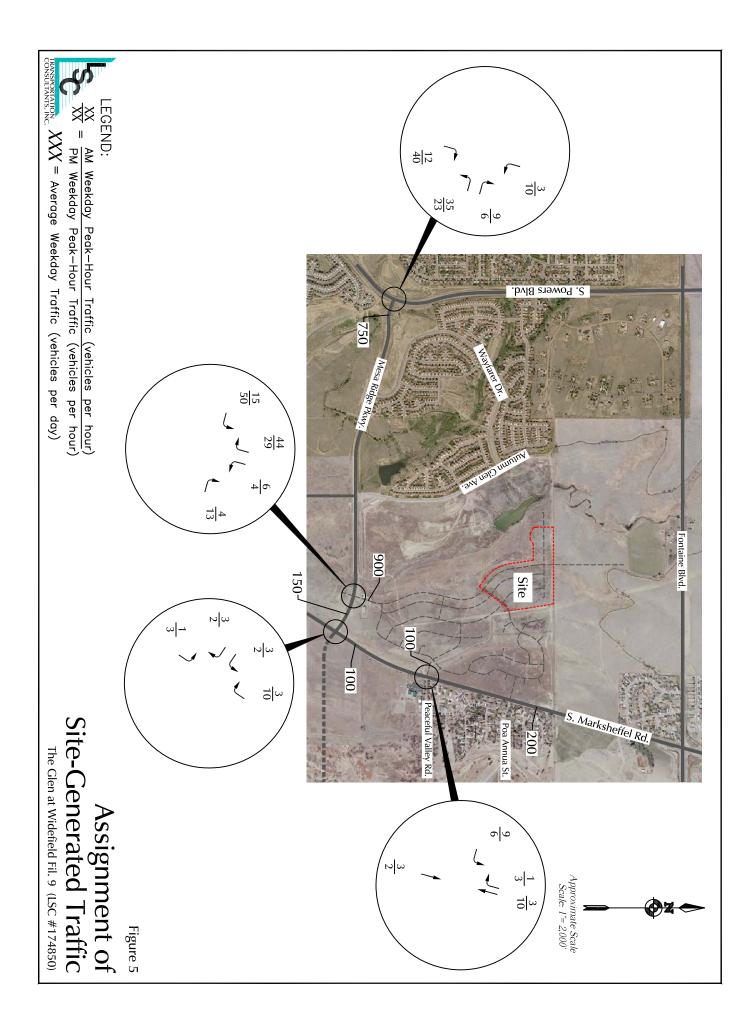


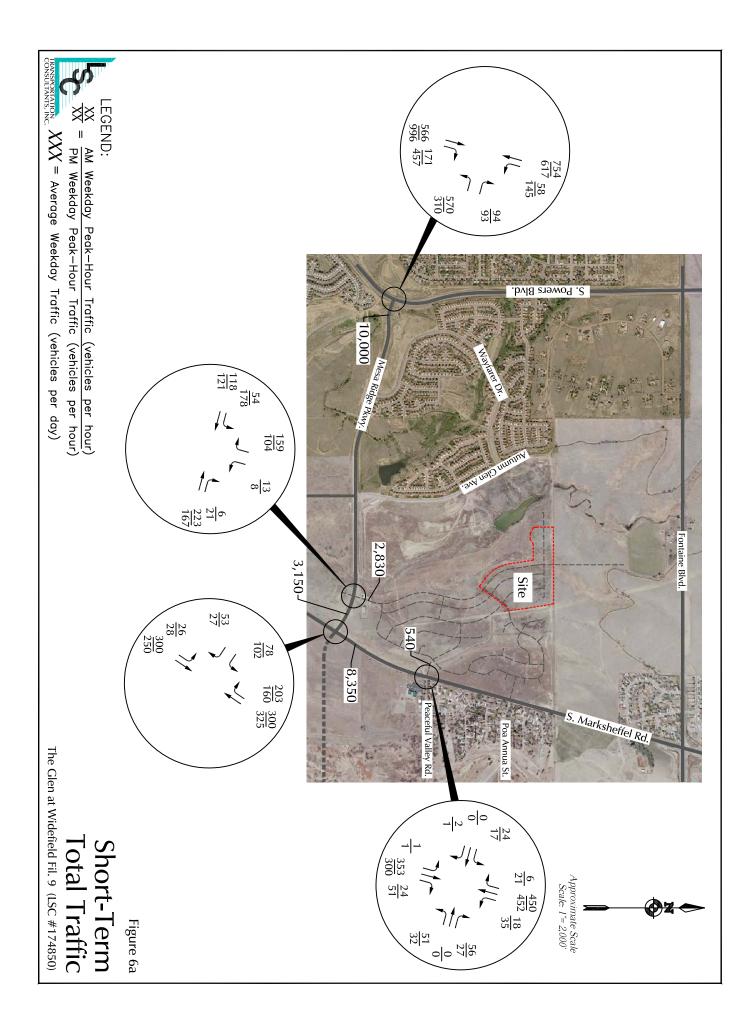


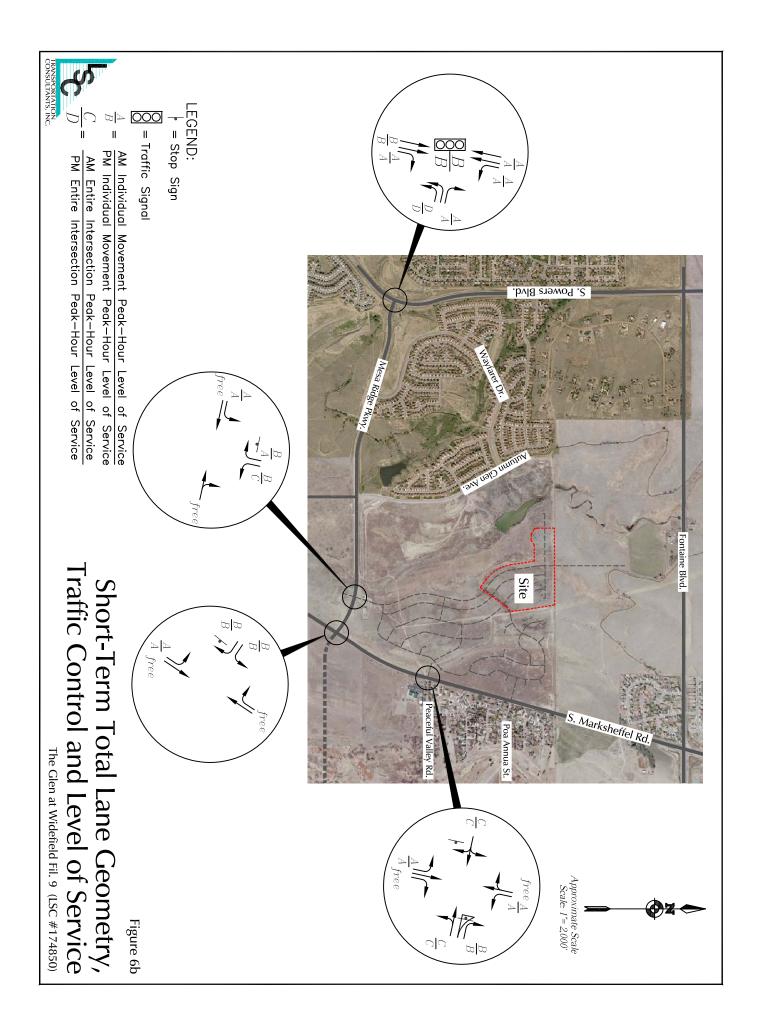


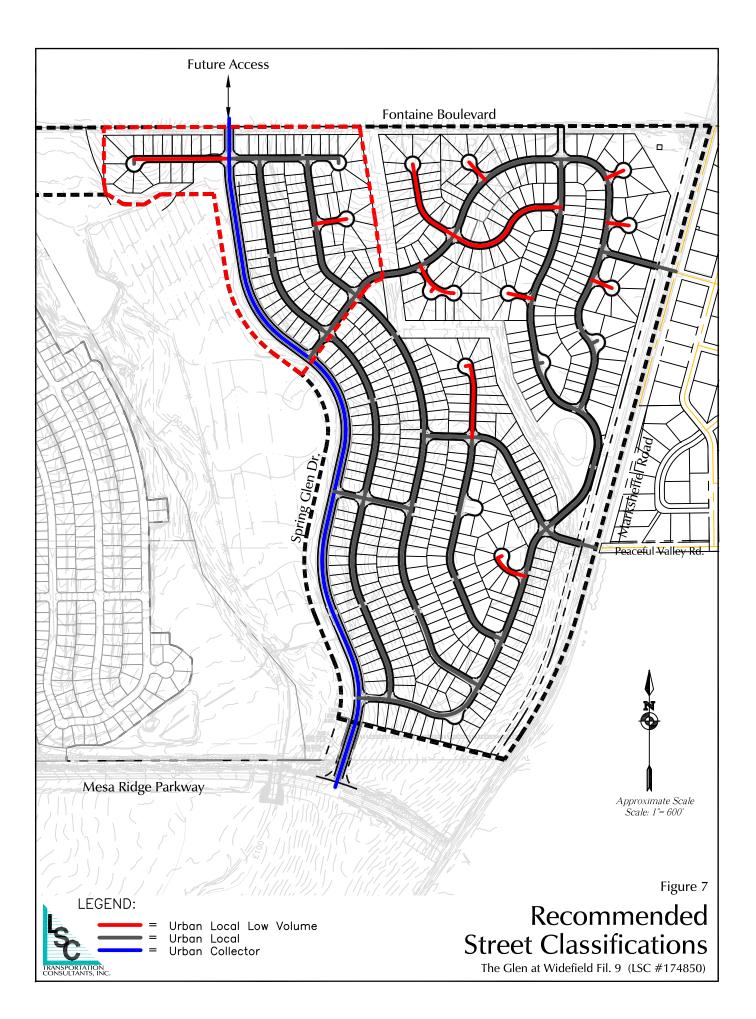












THE ⊳ GLEN portion of the Southeast Andrews F st One-quarter (SE1/4), Township 15 South (T15) WID F ter (SE1/4), Section 21 and the Southwest One-quarter South (T15S), Range 65 West (R65W) of the 6TH P.M. County of El Paso, State of Colorado FIE LD \mathcal{O} \square BDIVISIO Ž (SW1/4) of Section FILIN <u>
</u> 22 \bigcirc \bigcirc

KNOW ALL MEN BY THESE PRESENTS:

Group No. VIII, LLC, being the owner

the

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That

Glen

LAND DESCRIPTION, THE GLEN SUBDIVISION FILING NO. 9: AT WIDEFIELD

A tract of land located in a Portion of Sections 21 and 22, Township West (R65W) of the 6th P.M., County of El Paso, State of Colorado, t as follows: p 15 being South (T15S), Range 65 particularly described

Beginning at the Northwest corner of the Gien at Widefield Subdivision No. 8 as recorded under Reception No._______ in the records of the Clerk and Recorders Offse. County of E Paos. State of Coordo: Therce N32/92.3W, a distance of 168.90 feet, Therce along the arc of a curve to the right, having a central angle of 44:45/21°, a radius of 800.00 feet, an arc length of 33.89 feet. Therce N044/402W, a distance of 522.81 feet; Therce along the arc of a curve to the right having a central angle of 44:45/21°, a radius of 800.00 feet, an arc length of 33.89 feet; Therce S374/122W, a distance of 522.81 feet; Therce N047/4, a radius of 800.00 feet, an arc end or a reverse curve to the left, having a central angle of 907.32%, a radius of 2000 feet, an arc eff. Therce N047/4, a distance of 52.81 feet; Therce N890.51 00W, a distance of 42.88 feet; Therce N364/31.25W, a distance of 52.84 feet; Therce N890.51 00W, a distance of 42.88 feet; therce N367431°W, a distance of 52.41 feet; Therce N890.51 00W, a distance of 42.88 feet; therce N367431°W, a distance of 52.41 feet; Therce N367451°W, a distance of 42.88 feet; distance N3951/21°E, a distance of 15.9.2 feet; there N30531°W, a distance of 42.88 feet; distance N3951/21°E, a distance of 15.9.2 feet; there N30531°W, a distance of 42.88 feet; distance N3951/21°E, a distance of 15.9.2 feet; here N3951/31°E, a distance of 100 GG Gis Line Easement; a distance of 53.44 feet; there S0931.38°E (a) distance of 381.45 feet; there N3051/21°E, a distance of 15.9.2 feet; here N30510°W, a distance of distance Subdivision Filing No. 8; There along the arc of a subdivision filing No.8; Subdivision Filing No.8; There are solved widefield Subdivision Filing No. 8; There along the radius distance of sal4850°E. 7.9°C and the Northery line of and (clein at Widefield Subdivision Filing No. 8; S303037W, a distance of 588.31 feet to the Point of Beginning.

Said tract contains 30.505 acres (1,328,801 S.F.) more or less.

OWNERS CERTIFICATE:

The undersigned, being all the owners, mortgages, beneficiaries of deets of trust and holders of other interests in the land described herein, have laid out, suddvided, and platted sadi dans into last, streets, and essements as solarn herein under the name and subdivision of the CLBNAT WIDEFIELD SUBDIVISION FILMS NO. 9. All public improvements so platted are hereby dedicated to public used and said avere does hereby covenut adgree that the public improvements will be provided at said avere does and tots proper drainage and ension control for same will be provided at said avere does and that proper drainage and ension control for same will be provided at said avere septence. All the satisfaction of the Baard of County Commissioners of EI Pass County, Colorado. The utility essements are dedicated will become matters of moniterance by EI Pass County. Colorado. The utility essements shown hereon. The entries response by EI Pass County, Colorado. The utility essements shown hereon enders dedicated for public utilities and communication the essements are detablished one hereby granter the preferable for providing the services for which the essements are established one hereby granter the preferable for providing the service tor which the established one hereby granter the preferable for providing the service tor which the observations of installation, maintenance, and replacement of utility lines and related facilities.

Glen Investment Group No. . VIII, LLC

J. Mark Watson President Glen Investment Group No. VIII, LLC

NOTARIAL:

STATE OF COLORADO

COUNTY OF EL PASO) SS

The foregoing instrument was acknowledged before me of ______, 20____ A.D., by J. Mark Watson, this _____ – day : of Glen Investment Group No. ≦,

ЕC

my Hand and Seal:

My Commission Expires: Notary Public

DEDICATION:

Address:

The does party in inferest has caused said tract to be picited into Lots Blocks. Steets, Essements and Tacks a sharin on the pick which is dram to a fixed scale andicated thereon, and accurately sets forth the boundaries and dimensions of said Lots. Blocks, Streets, Essements, and Tracts which shall be known as "The CLN AI WIDEFLD SUBDIVISION FILIKON.9" EI Desa County, Colorado. All streets as picted are hereby dedicated to public use and said owner does hereby personality covenant and agree that all platted streets will be graded, paved and that proper drainage for County Commissioners of EI passo County, Colorado, all streets Board of County Commissioners of Ei Passo County, Colorado, and youn acceptance by EL Passo County, Colorado.

BASIS OF BEARINGS STATEMENT:

The bearings of this pict are based upon a portion of the Easterly boundary of the records of Wadfield Subdivision Films No. 58 as recorded under Reception No. 2067/3226 in the records of the Cerk and Recorders (Office. Journy of El Paos, State of Colorada, Said line being also a genoric of the Easterly Reptired Hay time of Autum Stein Anne as described in a subdivision, subdivision and the Point of Unservory of said boundary by a found rebor and easter "PASC 20988" and at the Point of Currentum of said boundary by a found rebor and con marked "PLSC 20988". Said line beam V3976 (JHV), and saidonce of 1951;11 feet.

EASEMENTS:

Unless shown greater in width, both sides of all side tot lines will be platted with five (5) foot essentents for drainage purposes and public utilities only, and both sides of all rear tot lines will be platted with a ten (10) foot essentent to drainage purposes and public utilities only, and all tot lines adjoining a street which has a fifty (50) foot right-of-way width will be platted with a fifteen (15) foot essentent to all one essentent in the platted with a fifteen (15) foot essentent side or lessentent in the platted with a creaternet, being or line (5) foot essentent side or the street with side responsibility for maintenance being vested with the adjoining property owners.

- These tracts of land are subject to the following per the Commitment for Title Insurance, prepared by Unified Title Company, effective date April 21, 2016 at 7:30 A.M. Order No. 42495UTC,
- 9. Any interest which may have been acquired by the public reason of the Resolution of the Board of County Commissioners recorded October 3, 1887 in Road Boak A at Page 78, which provided that all section lines, township lines, and range line adamain east of the range line fairing range lines 65 west and 66 west declared to be public highways of the width of 60 freet on each side of soid section lines, township lines, or range line adamain the section lines. rs dated and s on the public) feet, being 30
- 10. Any rights of the Spring Lake Reservoir as shown on Map recorded under Reception No. 499772, File No. 836

12. Right of Way recorded December 1, 1927 in Book 798 at Page 202, subject to the Special Warranty Deed recorded July 19, 1928 in Book 814 at Page 324, subject to the Agreement and Partial Release recorded November 15, 1982 in Book 3534 at Page 80, as modified by and subject to the Colorado Interstate Gas Company Right of Way and Easement Agreement to Pipeline Contair recorded June 7, 2002 at Reception No. 202092771, and as modified by the Partial Release of Right of Way Agreement recorded February 21, 2008 as Reception No. 202092711.

Gorel of Rijk of Way to the Mountin' New Debris: Annolation, Inc., recorded Sprinter, 70, 1986 in Book 2256 of Page 64, 14. Agreement barrent Wateried Water and Sprinterion Database Wateried Sprinterion Database Materials Database Materials Sprinterion Database Materials Materials Sprinterion Database Materials Sprinterion Database Materials Sprinterion Database Materials Materials Sprinterion Database Materials Sprinterion Database Materials Materials

- The following reports have been submitted and are on file at the County Development Services Department. Soils and Geo Wastewater Resources, Drainage Report, Natural Features Inventory Report, Erosion Control Report, Wetland Impoch Report, No man-made or non-man-made obstructions shall be allowed to penetrate the 40:1 approach surface of the Colorado Municipal Airport. and Geological, Water Report.
- Springs
- All exterior lighting plans shall be approved by the Director of Aviation to prevent a hazard to aircraft.
 Ne electomagnetic, light, or any other physical emissions which might interfere with aircraft, avigation, communications or navigational axis shall be allowed.
- The Avjort Advisory Commission suggest that residences constructed in this area should include FAA, approved sound mitigation construction techniques to obtain at least a 25db reduction in interior noise. NOTICE: This property may be adversely imported by noise caused by aircraft aperting into and out of the Colondo Springs Municipal Airport. The buyer should familiarize himself/herself with this potentiality and the ramifications thereof.
- 10 All property owners are responsible for maintaining proper storm water drainage in and through their property.
- No lot or interest therein, shall be sold, concept or transferred whether by deed or by contract, nor shall building permits be issued, until and unless either the required public and common development impovements have been constructed and completed and preliminary accepted in accordance with the Subdivision improvements argument between the applicant/owner and E Pasa Cauty argument Reception multiple from the subdivision of salid improvements from the acception of the subdivision improvements agreement between the subdivision of salid improvements argument between the applicant/owner and E Pasa Cauty, and the cauty of the cauty commissioners or, if permitted by the Cauty of the cauty of the cauty of the cauty commissioners or the there are the the cauty of the cauty of the cauty commissioners of the cauty of the cauty of the cauty commissioners of the cauty of the cauty of the cauty of the cauty cauty of the cauty of the cauty cauty of the cauty commissioners is the cauty of the cauty of the cauty of the cauty of the cauty cauty of the cauty of the cauty cauty of the cauty of th
- 12
- All corner lots will be platted Easement" detail. No obstruc allowed within this area. The with a Sight Visibility and Public Improvements Essement as shown in the "Typical Public Improvements store greater than thirty (30⁻) incluse in height above flow file deviation of the adjacent randway are sole responsibility for maintenance and ownership being vested with individual property owners. Whithed on this plot are for informational purposes only. They are not the legal descriptions and are whithed on this plot are for informational purposes only. They are not the legal descriptions and are
- _) exhibited on this plat

Direct lot access to Spring Glen Drive is prohibited

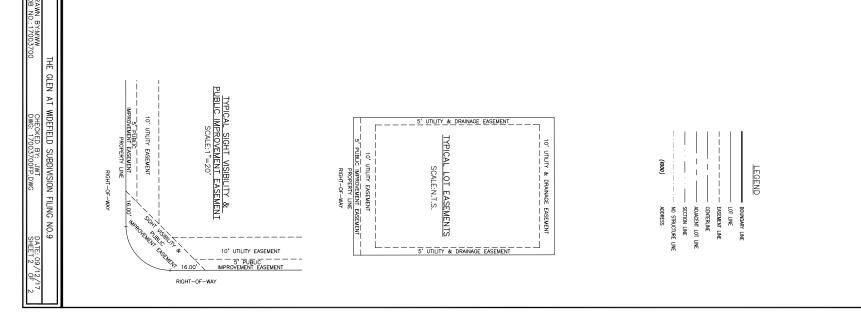
14 3

21 COUNTY ROAD 5, DIVIDE, CO 687-7360

ACTION BASED UPON ANY DEFECT I ACTION BASED UPON ANY DEFECT I AFTER YOU FIRST DISCOVER SUCH BASED UPON ANY DEFECT IN THIS TEN YEARS FROM THE DATE OF THE 10 LAW YOU MUST (T IN THIS SURVEY) H DEFECT. IN NO EV IS SURVEY BE COMM THE CERTIFICATION ST COMMENCE ANY LEGAL EY WITHIN THREE YEARS D EVENT, MAY ANY ACTION OMMENCED MORE THAN ON SHOWN HEREON.

AUST COMMENCE ANY LEGAL VOEY MITHIN THEEE YEARS NO EVENT, MAX ANY ACTION COMMENCED MORE THAN TOON SHOWN HEREON. TOON SHOWN HEREON.	are about in a "Os Structure Area", Forae mitigicion terriduciona de the provided aring overtar subature solar in accordance with the research provided argue precise subatures solar benefactor in the loss of Labor Caurly in Fle No. 2015 de to rund in Fle No. Structure III DI The Statuture Time as Ser-15-000. Functure III DI The Statuture Time as being not recommended for the development of balling are the solar of this line as being not recommended for the development of balling are the no-balling line are been and the number of the line with the flee of the investment of balling are the no-balling line are been are are are the no-balling line are been are	APPROVALS: The accompanying plat was approved by the EL Paso Co this day of 20 AD 	DOW) of the BIH P.M. 15. The Gen et Wadnied Filing No. 9 is subject to the provisions of the Perk Lunds Agreement as recorded at Reception No. 16. The property may be adversely impacted by passible radio twees installation on an adjacent pored. The buyer should for the formation of monocolar twees. 17. This property is subject to the Protection Coverant, recorded at Reception No. 18. The amount of the Recorder. 19. This property is subject to the Protection Coverant, recorded at Reception No. 19. This property is subject to the Protection Coverant, recorded at Reception No. 19. This property is subject to the Protection Coverant, recorded at Reception No. 10. This property is subject to the Protection Coverant, recorded at Reception No. 10. This property is subject to the Protection Coverant, recorded at Reception No. 10. This property is subject to the Protection Coverant, recorded at Reception No. 10. This property is subject to the Protection Coverant, recorded at Reception No. 10. This property is adjusted of the secords. The Company, Other No. 2020 (C. d) 700 M. 10. Between additions, organized to the receive and Provide Coverant, the Company, Cover No. 2020 (C. d) 700 M. 10. Between additions and the relations to the Proble's Models Adversed at a difference of the State and Provide Coverant, the Like Adverse is the Proble's Models Adversed at a difference of the State and Provide Coverant of Transportation. Cover a difference of the Provide State and the Provide at a difference of the Reception of Transportation and united States and a state and Provide States. 10. Mainteend addition accordance with all El Provo Cover to Coverage and the Reception of Transportation and united States and the Coverage of Coverage Adversed States. 10. Mainteend addition is condance with all El Provo Cover to Coverage Adversed States. 11. Setting States adversed States and the adversed Adversed States and
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LSC Transportation Consultants, Inc.

File Name : Marksheffel Rd - Mesa Ridge Pkwy AM Site Code : 00174850 Start Date : 11/29/2017

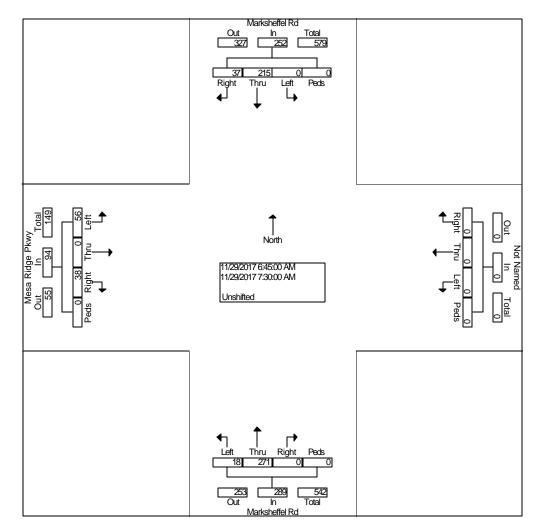
Page No : 1

						G	roups F	Printed-	Unshift	ted							
	ſ	Markshe	effel Rd						N	larkshe	ffel Rd		Me	sa Rido	je Pkw	у	
		From	North			From	East			From S	outh		-	From V	Vest		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	13	39	0	0	0	0	0	0	0	59	3	0	7	0	16	0	137
06:45 AM	10	68	0	0	0	0	0	0	0	61	2	0	11	0	7	0	159
Total	23	107	0	0	0	0	0	0	0	120	5	0	18	0	23	0	296
07:00 AM	10	60	0	0	0	0	0	0	0	63	4	0	18	0	19	0	174
07:15 AM	11	51	0	0	0	0	0	0	0	67	3	0	3	0	14	0	149
07:30 AM	6	36	0	0	0	0	0	0	0	80	9	0	6	0	16	0	153
07:45 AM	10	41	0	0	0	0	0	0	0	69	3	0	8	0	12	0	143
Total	37	188	0	0	0	0	0	0	0	279	19	0	35	0	61	0	619
08:00 AM	17	38	0	0	0	0	0	0	0	32	6	0	2	0	16	0	111
08:15 AM	22	39	0	0	0	0	0	0	0	53	5	0	1	0	18	0	138
Grand Total	99	372	0	0	0	0	0	0	0	484	35	0	56	0	118	0	1164
Apprch %	21.0	79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.3	6.7	0.0	32.2	0.0	67.8	0.0	
Total %	8.5	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.6	3.0	0.0	4.8	0.0	10.1	0.0	

Counts by LSC

File Name: Marksheffel Rd - Mesa Ridge Pkwy AMSite Code: 00174850Start Date: 11/29/2017Page No: 2

		Mar	ksheff	el Rd								Ма	rkshef	fel Ro	ł		Mes	a Rid	ge Pk	wy	
		Fr	om No	orth			F	From E	ast			F	rom S	outh				From	West	-	
Start	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Int.
Time	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	Total
Peak Hour	From (06:30	AM to	08:1	5 AM -	Peak	1 of 1														
Intersecti on	06:4	5 AM																			
Volume	37	21	0	0	252	0	0	0	0	0	0	27	18	0	289	1 38	0	56	0	94	l 635
Percent	14. 7	5 85. 3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	1 93. 8	6.2	0.0		40. 4	0.0	59. 6	0.0		
07:00 Volume	10	60	0	0	70	0	0	0	0	0	0	63	4	0	67	18	0	19	0	37	174
Peak Factor																					0.912
High Int.	06:4	5 AM				6:15	:00 A	М			07:3	30 AN	1			07:	00 AN	Λ			
Volume	10	68	0	0	78	0	0	0	0	0	0	80	9	0	89	18	0	19	0	37	•
Peak					0.80										0.81					0.63	
Factor					8										2					5	



LSC Transportation Consultants, Inc.

File Name : Marksheffel Rd - Mesa Ridge Pkwy PM Site Code : 00174850

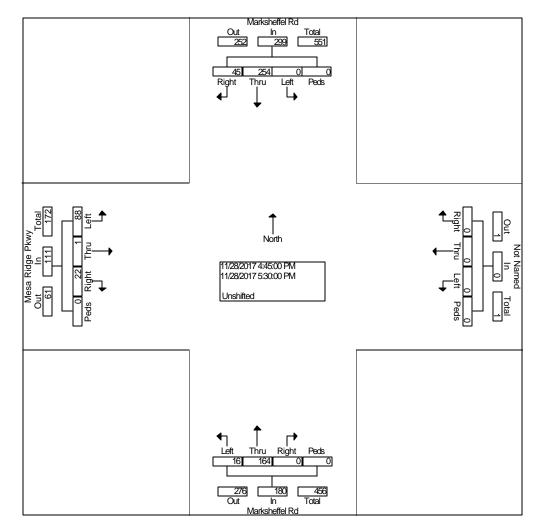
Start Date : 11/28/2017

Page No : 1 Groups Printed- Unshifted

	Ν		effel Rd		From East					larkshe			Me		ge Pkwy	/	
		From	North			From	East			From S	South			From V	Vest		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	15	51	0	0	0	0	0	0	0	38	3	0	7	0	26	0	140
04:15 PM	13	54	0	0	0	0	0	0	0	49	3	0	3	0	21	0	143
04:30 PM	10	44	0	0	0	0	0	0	0	39	5	0	1	0	25	0	124
04:45 PM	16	83	0	0	0	0	0	0	0	39	3	0	3	0	18	0	162
Total	54	232	0	0	0	0	0	0	0	165	14	0	14	0	90	0	569
05:00 PM	9	46	0	0	0	0	0	0	0	40	4	0	5	1	28	0	133
05:15 PM	13	68	0	0	0	0	0	0	0	42	4	0	7	0	14	0	148
05:30 PM	7	57	0	0	0	0	0	0	0	43	5	0	7	0	28	0	147
05:45 PM	5	36	0	0	0	0	0	0	0	30	6	0	17	0	22	0	116
Total	34	207	0	0	0	0	0	0	0	155	19	0	36	1	92	0	544
Grand Total Apprch % Total %	88 16.7 7.9	439 83.3 39.4	0 0.0 0.0	320 90.7 28.8	33 9.3 3.0	0 0.0 0.0	50 21.5 4.5	1 0.4 0.1	182 78.1 16.4	0 0.0 0.0	1113						

File Name: Marksheffel Rd - Mesa Ridge Pkwy PMSite Code: 00174850Start Date: 11/28/2017Page No: 2

		Mar	ksheff	el Rd								Ма	rkshef	fel Ro	ł		Mes	a Rid	ge Pk	wy	7
		Fi	om No	orth			F	From E	ast			F	rom S	outh				From '	West		
Start	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Int.
Time	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	Total
Peak Hour I	From (04:00	PM to	05:45	5 PM - F	Peak 1	of 1														
Intersecti on	04:4	5 PM																			
Volume	45	25 4	0	0	299	0	0	0	0	0	0	16 4	16	0	180	22	1	88	0	111	590
Percent	15. 1	84. 9	0.0	0.0		0.0	0.0	0.0	0.0		0.0	91. 1	8.9	0.0		19. 8	0.9	79. 3	0.0		
04:45 Volume	16	83	0	0	99	0	0	0	0	0	0	39	3	0	42	3	0	18	0	21	162
Peak Factor																					0.910
High Int.	04:45	5 PM				3:45	:00 PN	Λ			05:3	0 PM				05:3	30 PM			-	
Volume Peak Factor	16	83	0	0	99 0.75 5	0	0	0	0	0	0	43	5	0	48 0.93 8	7	0	28	0	35 0.79 3	



LSC Transportation Consultants, Inc.

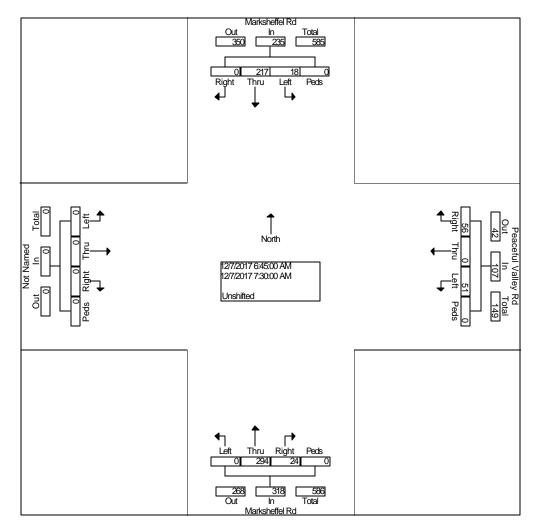
File Name : Marksheffel Rd - Peaceful Valley Rd AM Site Code : 00174850

Start Date : 12/07/2017 Page No : 1

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	Ν	Markshe	effel Rd		Pea	aceful V	/alley R	d	Μ	arkshet	ffel Rd						
		From	North			From	East			From S	South			From V	Vest		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	35	2	0	12	0	8	0	0	78	0	0	0	0	0	0	135
06:45 AM	0	51	1	0	11	0	11	0	5	71	0	0	0	0	0	0	150
Total	0	86	3	0	23	0	19	0	5	149	0	0	0	0	0	0	285
07:00 AM	0	64	8	0	21	0	22	0	4	88	0	0	0	0	0	0	207
07:15 AM	0	51	5	0	8	0	8	0	9	76	0	0	0	0	0	0	157
07:30 AM	0	51	4	0	16	0	10	0	6	59	0	0	0	0	0	0	146
07:45 AM	0	33	4	0	2	0	5	0	9	51	0	0	0	0	0	0	104
Total	0	199	21	0	47	0	45	0	28	274	0	0	0	0	0	0	614
08:00 AM	0	30	6	0	12	0	14	0	16	51	0	0	0	0	0	0	129
08:15 AM	0	32	20	0	10	0	19	0	13	31	0	0	0	0	0	0	125
Grand Total	0	347	50	0	92	0	97	0	62	505	0	0	0	0	0	0	1153
Apprch %	0.0	87.4	12.6	0.0	48.7	0.0	51.3	0.0	10.9	89.1	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	30.1	4.3	0.0	8.0	0.0	8.4	0.0	5.4	43.8	0.0	0.0	0.0	0.0	0.0	0.0	

File Name: Marksheffel Rd - Peaceful Valley Rd AMSite Code: 00174850Start Date: 12/07/2017Page No: 2

		Mar	ksheff	el Rd			Peace	eful Va	alley F	٦d		Ма	rkshef	ffel Ro	ł						
		Fr	om No	orth			F	From E	ast			F	rom S	outh				From	West		
Start	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Int.
Time	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	Total
Peak Hour	From (06:30	AM to	08:1	5 AM - I	Peak	1 of 1														
Intersecti on	06:4	5 AM																			
Volume	0	21 7	18	0	235	56	0	51	0	107	24	29 4	0	0	318	0	0	0	0	0	660
Percent	0.0	92. 3	7.7	0.0		52. 3	0.0	47. 7	0.0		7.5	92. 5	0.0	0.0		0.0	0.0	0.0	0.0		
07:00 Volume	0	64	8	0	72	21	0	22	0	43	4	88	0	0	92	0	0	0	0	0	207
Peak Factor																					0.797
High Int.	07:0	0 AM				07:0	00 AM				07:0	00 AN	1			6:1	5:00 A	٩M			
Volume	0	64	8	0	72	21	0	22	0	43	4	88	0	0	92						
Peak					0.81					0.62					0.86						
Factor					6					2					4						



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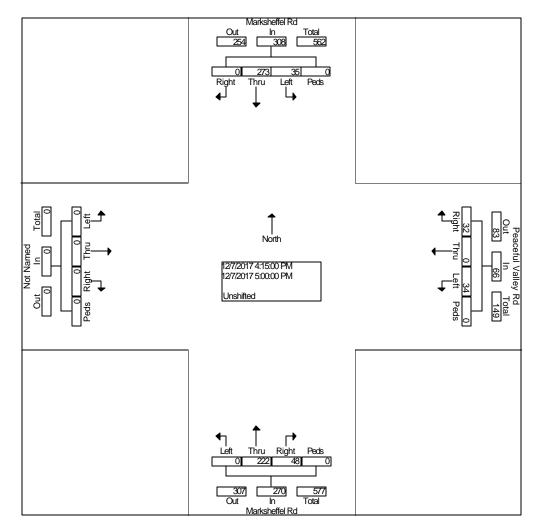
File Name : Marksheffel Rd - Peaceful Valley Rd PM Site Code : 00174850 Start Date : 12/07/2017

Page No : 1

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	Ν	/larkshe	effel Rd		Pe	aceful \	/alley R	d	Ν	larkshet	fel Rd						
		From I	North			From	East			From S	outh			From V	Vest		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	0	64	13	0	4	0	4	0	13	44	0	0	0	0	0	0	142
04:15 PM	0	74	10	0	6	0	10	0	13	59	0	0	0	0	0	0	172
04:30 PM	0	67	7	0	7	0	7	0	9	50	0	0	0	0	0	0	147
04:45 PM	0	77	10	0	9	0	9	0	13	44	0	0	0	0	0	0	162
Total	0	282	40	0	26	0	30	0	48	197	0	0	0	0	0	0	623
05:00 PM	0	55	8	0	10	0	8	0	13	69	0	0	0	0	0	0	163
05:15 PM	0	72	12	0	6	0	11	0	13	53	0	0	0	0	0	0	167
05:30 PM	0	57	5	0	2	0	4	0	12	42	0	0	0	0	0	0	122
05:45 PM	0	42	8	0	4	0	5	0	11	38	0	0	0	0	0	0	108
Total	0	226	33	0	22	0	28	0	49	202	0	0	0	0	0	0	560
Grand Total	0	508	73	0	48	0	58	0	97	399	0	0	0	0	0	0	1183
Apprch %	0.0	87.4	12.6	0.0	45.3	0.0	54.7	0.0	19.6	80.4	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	42.9	6.2	0.0	4.1	0.0	4.9	0.0	8.2	33.7	0.0	0.0	0.0	0.0	0.0	0.0	

File Name: Marksheffel Rd - Peaceful Valley Rd PMSite Code: 00174850Start Date: 12/07/2017Page No: 2

		Mar	ksheff	el Rd			Peace	eful Va	alley F	۲d		Ма	rkshef	fel Ro	ł						
		Fr	om N	orth			F	From E	ast			F	rom S	outh				From '	West		
Start	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Int.
Time	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	ht	u	t	ds	Total	Total
Peak Hour I	From (04:00	PM to	05:45	PM - F	Peak 1	of 1														
Intersecti on	04:15	5 PM																			
Volume	0	27 3	35	0	308	32	0	34	0	66	48	22 2	0	0	270	0	0	0	0	0	644
Percent	0.0	88. 6	11. 4	0.0		48. 5	0.0	51. 5	0.0		17. 8	82. 2	0.0	0.0		0.0	0.0	0.0	0.0		
04:15 Volume	0	74	10	0	84	6	0	10	0	16	13	59	0	0	72	0	0	0	0	0	172
Peak Factor																					0.936
High Int.	04:45	5 PM				04:4	5 PM				05:0	0 PM				3:4	5:00 F	M			
Volume	0	77	10	0	87	9	0	9	0	18	13	69	0	0	82						
Peak					0.88					0.91					0.82						
Factor					5					7					3						



LSC Transportation Consultants, Inc.

File Name : Powers Blvd - Mesa Ridge AM

Site Code : 00174850

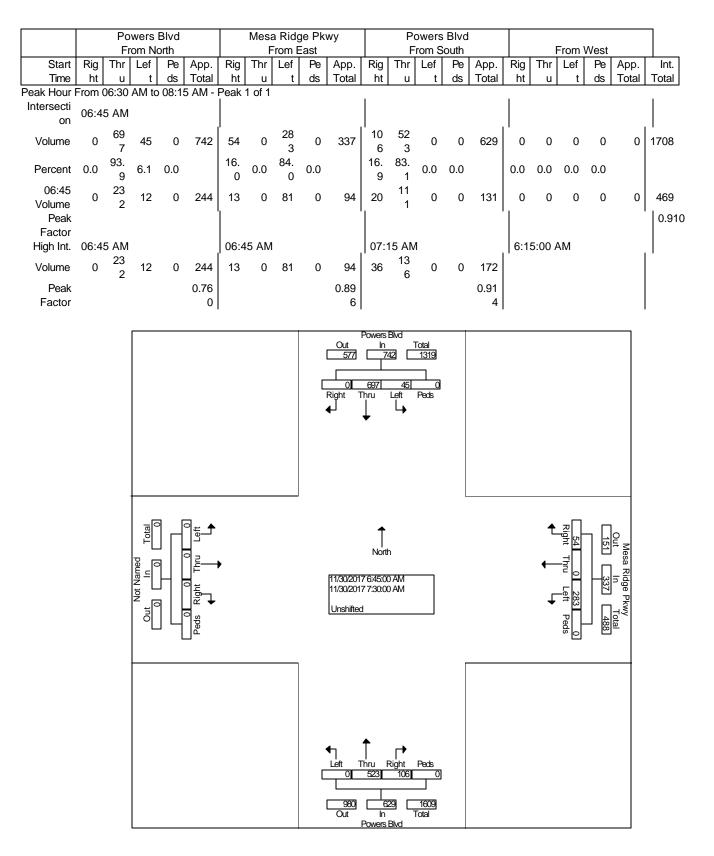
Start Date : 11/30/2017

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									Unshift	ted										
		Power	s Blvd		Me	esa Ridge Pkwy Powers Blvd							Ridge Pkwy Powers Blvd							
		From	North			From	East			From S	outh			From V	Vest					
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total			
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
06:30 AM	0	152	9	0	11	0	65	0	19	100	0	0	0	0	0	0	356			
06:45 AM	0	232	12	0	13	0	81	0	20	111	0	0	0	0	0	0	469			
Total	0	384	21	0	24	0	146	0	39	211	0	0	0	0	0	0	825			
					•															
07:00 AM	0	186	9	0	10	0	71	0	24	146	0	0	0	0	0	0	446			
07:15 AM	0	128	11	0	18	0	67	0	36	136	0	0	0	0	0	0	396			
07:30 AM	0	151	13	0	13	0	64	0	26	130	0	0	0	0	0	0	397			
07:45 AM	0	140	11	0	4	0	57	0	38	126	0	0	0	0	0	0	376			
Total	0	605	44	0	45	0	259	0	124	538	0	0	0	0	0	0	1615			
					1															
08:00 AM	0	127	8	0	15	0	40	0	45	122	0	0	0	0	0	0	357			
08:15 AM	0	166	17	0	19	0	72	0	26	105	0	0	0	0	0	0	405			
Grand Total	0	1282	90	0	103	0	517	0	234	976	0	0	0	0	0	0	3202			
Apprch %	0.0	93.4	6.6	0.0	16.6	0.0	83.4	0.0	19.3	80.7	0.0	0.0	0.0	0.0	0.0	0.0				
Total %	0.0	40.0	2.8	0.0	3.2	0.0	16.1	0.0	7.3	30.5	0.0	0.0	0.0	0.0	0.0	0.0				
	0.0	40.0	2.0	0.0	0.2	0.0	10.1	0.0	1.0	00.0	0.0	0.0	0.0	0.0	0.0	0.0	1			

File Name : Powers Blvd - Mesa Ridge AM

- Site Code : 00174850
- Start Date : 11/30/2017
- Page No : 2



LSC Transportation Consultants, Inc.

File Name : Powers Blvd - Mesa Ridge PM

Site Code : 00174850

Start Date : 11/30/2017

Page No : 1

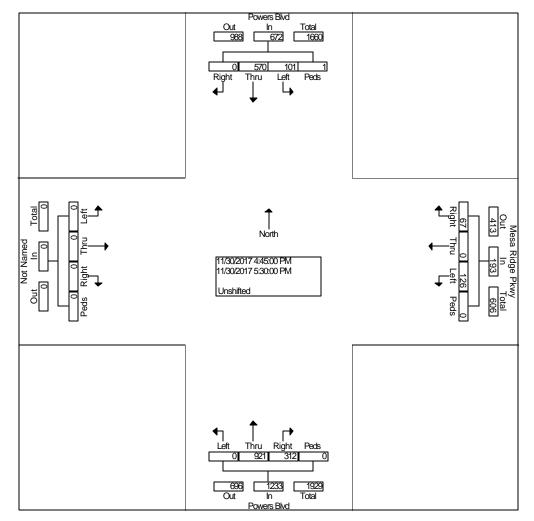
						ugen				_	-						
		ed- Unshifted															
					Powers Blvd					ge Pkw	esa Rid	Me		s Blvd			
		Vest	From V			outh	From S			East	From		From North				
Ir Tota	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Start Time
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Factor
45	0	0	0	0	0	0	192	59	0	33	0	7	0	30	136	0	04:00 PM
49	0	0	0	0	0	0	208	67	0	32	0	10	0	23	151	0	04:15 PM
49	0	0	0	0	0	0	201	79	0	33	0	13	0	27	139	0	04:30 PM
55	0	0	0	0	0	0	243	85	0	30	0	16	0	24	153	0	04:45 PM
199	0	0	0	0	0	0	844	290	0	128	0	46	0	104	579	0	Total
49	0	0	0	0	0	0	229	77	0	23	0	21	1	22	125	0	05:00 PM
52	0	0	0	0	0	0	209	81	0	37	0	17	0	31	154	0	05:15 PM
52	0	0	0	0	0	0	240	69	0	36	0	13	0	24	138	0	05:30 PM
49	0	0	0	0	0	0	207	96	0	36	0	9	0	30	113	0	05:45 PM
203	0	0	0	0	0	0	885	323	0	132	0	60	1	107	530	0	Total
402	0	0	0	0	0	0	1729	613	0	260	0	106	1	211	1109	0	Grand Total
	0.0	0.0	0.0	0.0	0.0	0.0	73.8	26.2	0.0	71.0	0.0	29.0	0.1	16.0	84.0	0.0	Apprch %
1	0.0	0.0	0.0	0.0	0.0	0.0	42.9	15.2	0.0	6.5	0.0	2.6	0.0	5.2	27.5	0.0	Total %

Counts by LSC

File Name : Powers Blvd - Mesa Ridge PM

- Site Code : 00174850
- Start Date : 11/30/2017
- Page No : 2

		Po	wers	Blvd			Moor	a Rido	no Dki	A/\/		D	owers	Blvd							
			om N					From E		vvy			rom S					From	Most		
Start	Rig	Thr		Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	App.	Rig	Thr	Lef	Pe	Ann	Int.
Time	ht	u	+	ds	Total	ht	u u	101	ds	Total	ht	u u	101	ds	Total	ht	u u	+	ds	App. Total	Total
Peak Hour I			L DM to				-	L	us	TULAI	ΠL	u	L	us	TUlai	III	u	ι	us	TULAI	Total
Intersecti	04:45			00.40) F IVI - F																
Volume	0	57 0	10 1	1	672	67	0	12 6	0	193	31 2	92 1	0	0	1233	0	0	0	0	0	2098
Percent	0.0	84. 8	15. 0	0.1		34. 7	0.0	65. 3	0.0		25. 3	74. 7	0.0	0.0		0.0	0.0	0.0	0.0		
04:45 Volume	0	15 3	24	0	177	16	0	30	0	46	85	24 3	0	0	328	0	0	0	0	0	551
Peak Factor																					0.952
High Int.	05:15	5 PM				05:1	5 PM				04:4	5 PM				3:4	5:00 P	M			
Volume	0	15 4	31	0	185	17	0	37	0	54	85	24 3	0	0	328						
Peak					0.90					0.89					0.94						
Factor					8					4					0						



Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	٦	1	1	1	٦	1
Traffic Vol, veh/h	51	56	303	24	18	217
Future Vol, veh/h	51	56	303	24	18	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	290	340	-
Veh in Median Storage	,# 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	62	62	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	90	352	28	22	265

Major/Minor	Minor1	Ν	/lajor1	Ν	Major2	
Conflicting Flow All	661	352	0	0	380	0
Stage 1	352	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	427	692	-	-	1178	-
Stage 1	712	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	419	692	-	-	1178	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	745	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.6
HCM LOS	В		

Minor Lane/Major Mvmt	NBT	NBR	VBLn1V	VBLn2	SBL	SBT	
Capacity (veh/h)	-	-	419	692	1178	-	
HCM Lane V/C Ratio	-	-	0.196	0.131	0.019	-	
HCM Control Delay (s)	-	-	15.7	11	8.1	-	
HCM Lane LOS	-	-	С	В	Α	-	
HCM 95th %tile Q(veh)	-	-	0.7	0.4	0.1	-	

Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	1	1
Traffic Vol, veh/h	56	38	18	271	231	37
Future Vol, veh/h	56	38	18	271	231	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	100	100	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	59	18	271	257	41

Major/Minor	Minor2		Major1	Maj	or2	
Conflicting Flow All	564	257	298	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	487	782	1263	-	-	-
Stage 1	786	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	480	782	1263	-	-	-
Mov Cap-2 Maneuver	480	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.5	0
HCM LOS	В		

Minor Lane/Major Mvmt	NBL	NBTI	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1263	-	480	782	-	-
HCM Lane V/C Ratio	0.014	-	0.182	0.076	-	-
HCM Control Delay (s)	7.9	-	14.2	10	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0	-	0.7	0.2	-	-

	4	*	1	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	۲	1	^	1	۲	<u></u>
Traffic Volume (vph)	283	54	523	106	45	697
Future Volume (vph)	283	54	523	106	45	697
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	40.0	40.0	40.0	40.0	10.0	50.0
Total Split (%)	44.4%	44.4%	44.4%	44.4%	11.1%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	21.5	21.5	51.4	51.4	58.5	58.5
Actuated g/C Ratio	0.24	0.24	0.57	0.57	0.65	0.65
v/c Ratio	0.74	0.14	0.34	0.14	0.10	0.30
Control Delay	42.2	7.3	13.1	3.2	7.7	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	7.3	13.1	3.2	7.7	8.0
LOS	D	A	В	A	A	A
Approach Delay	36.6		11.4			8.0
Approach LOS	D		В			A
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced t	to phase 2:	NBT and	6:SBTL,	Start of G	ireen	
Natural Cycle: 45						
Control Type: Actuated-Coo	rdinated					
Maximum v/c Ratio: 0.74						
Intersection Signal Delay: 1	5.0			Ir	ntersectio	n LOS: B
Intersection Capacity Utiliza						of Service
Analysis Period (min) 15						
· · · · · · · · · · · · · · · · · · ·						
Splits and Phases: 10: Me	esa Ridge l	Pkwv/Pov	vers Blvd	& Mesa F	Ridae Pk	vav
		1.00 9/1 00			uugo i M	<u> </u>



10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Existing Traffic AM Peak Hour

Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	٦	1	1	1	٦	1
Traffic Vol, veh/h	32	27	208	51	35	267
Future Vol, veh/h	32	27	208	51	35	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	290	340	-
Veh in Median Storage	,#0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	98	98	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	31	212	52	40	303

Major/Minor	Minor1	Ν	/lajor1	Ν	Major2	
Conflicting Flow All	595	212	0	0	264	0
Stage 1	212	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	467	828	-	-	1300	-
Stage 1	823	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	828	-	-	1300	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0.9
HCM LOS	В		

Minor Lane/Major Mvmt	NBT	NBRWBL	1WBLn2	SBL	SBT	
Capacity (veh/h)	-	- 4	53 828	1300	-	
HCM Lane V/C Ratio	-	- 0.0	31 0.037	0.031	-	
HCM Control Delay (s)	-	- 13	.6 9.5	7.9	-	
HCM Lane LOS	-	-	B A	A	-	
HCM 95th %tile Q(veh)	-	- (.3 0.1	0.1	-	

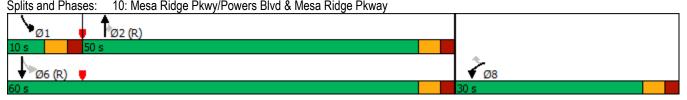
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	•	1
Traffic Vol, veh/h	88	22	16	171	254	45
Future Vol, veh/h	88	22	16	171	254	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage	,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	22	16	171	334	59

Major/Minor	Minor2	l	Major1	Maj	or2	
Conflicting Flow All	537	334	393	0	-	0
Stage 1	334	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	505	708	1166	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	498	708	1166	-	-	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.7	0
HCM LOS	В		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1166	-	498	708	-	-
HCM Lane V/C Ratio	0.014	-	0.177	0.031	-	-
HCM Control Delay (s)	8.1	-	13.8	10.2	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0	-	0.6	0.1	-	-

	4	•	1	*	1	Ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	۲	1	† †	1	۲	††
Traffic Volume (vph)	126	67	921	312	101	570
Future Volume (vph)	126	67	921	312	101	570
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	30.0	50.0	50.0	10.0	60.0
Total Split (%)	33.3%	33.3%	55.6%	55.6%	11.1%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	0.0	0.0	Lag	Lag	Lead	0.0
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	11.7	11.7	58.4	58.4	68.3	68.3
Actuated g/C Ratio	0.13	0.13	0.65	0.65	0.76	0.76
v/c Ratio	0.13	0.13	0.05	0.05	0.76	0.70
Control Delay	44.9	11.2	9.6	1.8	4.7	3.7
	44.9	0.0	9.0	0.0	4.7	0.0
Queue Delay			0.0 9.6			
Total Delay	44.9	11.2		1.8	4.7	3.7
LOS Annarach Dalau	D	В	A	А	А	A
Approach Delay	33.2		7.6			3.9
Approach LOS	С		А			А
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to	phase 2:	NBT and	6:SBTL,	Start of G	ireen	
Natural Cycle: 40						
Control Type: Actuated-Coor	dinated					
Maximum v/c Ratio: 0.55						
Intersection Signal Delay: 8.7	7			lr	ntersectio	n LOS: A
Intersection Capacity Utilizati		,				of Service
Analysis Period (min) 15						



10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Existing Traffic PM Peak Hour

Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		\$			र्च	1	۲.	•	1	1	et 👘		
Traffic Vol, veh/h	15	0	2	51	0	56	1	350	24	18	447	5	
Future Vol, veh/h	15	0	2	51	0	56	1	350	24	18	447	5	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	0	340	-	290	340	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	16	0	2	55	0	61	1	380	26	20	486	5	

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	924	937	489	912	913	380	491	0	0	406	0	0	
Stage 1	529	529	-	382	382	-	-	-	-	-	-	-	
Stage 2	395	408	-	530	531	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	250	265	579	255	273	667	1072	-	-	1153	-	-	
Stage 1	533	527	-	640	613	-	-	-	-	-	-	-	
Stage 2	630	597	-	533	526	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	224	260	579	250	268	667	1072	-	-	1153	-	-	
Mov Cap-2 Maneuver	224	260	-	250	268	-	-	-	-	-	-	-	
Stage 1	532	518	-	639	612	-	-	-	-	-	-	-	
Stage 2	572	596	-	522	517	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	21.2	16.9	0	0.3	
HCM LOS	С	С			

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1\	VBLn1\	NBLn2	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	241	250	667	1153	-	-
HCM Lane V/C Ratio	0.001	-	-	0.077	0.222	0.091	0.017	-	-
HCM Control Delay (s)	8.4	-	-	21.2	23.5	10.9	8.2	-	-
HCM Lane LOS	А	-	-	С	С	В	А	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.8	0.3	0.1	-	-

Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	•	1
Traffic Vol, veh/h	75	50	25	300	300	200
Future Vol, veh/h	75	50	25	300	300	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	54	27	326	326	217

Major/Minor	Minor2		Major1	Maj	or2	
Conflicting Flow All	706	326	543	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	402	715	1026	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	392	715	1026	-	-	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	691	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.7	0
HCM LOS	В		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1026	-	492	715	-	-
HCM Lane V/C Ratio	0.026	-	0.166	0.076	-	-
HCM Control Delay (s)	8.6	-	13.8	10.4	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0.2	-	-

Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	۲.	1	et		٦	1
Traffic Vol, veh/h	39	118	223	2	7	115
Future Vol, veh/h	39	118	223	2	7	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	475	-	-	-	0	0
Veh in Median Storage	e, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	128	242	2	8	125

Major/Minor	Major1	Majo	or2		Minor2	
Conflicting Flow All	244	0	-	0	455	243
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	212	-
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	1322	-	-	-	563	796
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1322	-	-	-	545	796
Mov Cap-2 Maneuver	-	-	-	-	545	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	10.5
HCM LOS			В

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1	SBLn2
Capacity (veh/h)	1322	-	-	- 545	796
HCM Lane V/C Ratio	0.032	-	-	- 0.014	0.157
HCM Control Delay (s)	7.8	-	-	- 11.7	10.4
HCM Lane LOS	А	-	-	- B	В
HCM 95th %tile Q(veh)	0.1	-	-	- 0	0.6

	4	•	1	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	1	††	1	ሻ	††
Traffic Volume (vph)	535	85	566	159	55	754
Future Volume (vph)	535	85	566	159	55	754
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	30.0	50.0	50.0	10.0	60.0
Total Split (%)	33.3%	33.3%	55.6%	55.6%	11.1%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	20.5	20.5	50.7	50.7	59.5	59.5
Actuated g/C Ratio	0.23	0.23	0.56	0.56	0.66	0.66
v/c Ratio	0.75	0.21	0.31	0.18	0.12	0.35
Control Delay	38.4	7.1	12.1	2.5	6.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	7.1	12.1	2.5	6.8	7.7
LOS	D	А	В	А	А	А
Approach Delay	34.1		10.0			7.6
Approach LOS	С		В			А
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced	to phase 2:	NBT and	6:SBTL,	Start of G	Green	
Natural Cycle: 40						
Control Type: Actuated-Coo	ordinated					
Maximum v/c Ratio: 0.75						
Intersection Signal Delay: 1					ntersectio	
Intersection Capacity Utiliza	tion 46.7%			10	CU Level	of Service
Analysis Period (min) 15						
Splits and Phases: 10 [,] M	ooo Didao I		vora Dlud	9 Maaa I	Didae Dia	

Splits and Phases: 10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway



10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Short-Term Total Traffic AM Peak Hour

Intersection

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		\$			र्भ	1	۲.	•	1	1	et 👘		
Traffic Vol, veh/h	11	0	1	32	0	27	1	298	51	35	442	18	
Future Vol, veh/h	11	0	1	32	0	27	1	298	51	35	442	18	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	0	340	-	290	340	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	12	0	1	34	0	28	1	314	54	37	465	19	

Major/Minor	Minor2			Minor1			Major1		ľ	Major2			
Conflicting Flow All	892	919	475	865	874	314	484	0	0	368	0	0	
Stage 1	549	549	-	316	316	-	-	-	-	-	-	-	
Stage 2	343	370	-	549	558	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	263	271	590	274	288	726	1079	-	-	1191	-	-	
Stage 1	520	516	-	695	655	-	-	-	-	-	-	-	
Stage 2	672	620	-	520	512	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	246	262	590	267	279	726	1079	-	-	1191	-	-	
Mov Cap-2 Maneuver	246	262	-	267	279	-	-	-	-	-	-	-	
Stage 1	519	500	-	694	654	-	-	-	-	-	-	-	
Stage 2	645	619	-	503	496	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	19.6	15.7	0	0.6	
HCM LOS	С	С			

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1V	VBLn1\	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	259	267	726	1191	-	-
HCM Lane V/C Ratio	0.001	-	-	0.049	0.126	0.039	0.031	-	-
HCM Control Delay (s)	8.3	-	-	19.6	20.4	10.2	8.1	-	-
HCM Lane LOS	А	-	-	С	С	В	Α	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0.1	0.1	-	-

Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	•	1
Traffic Vol, veh/h	100	25	25	250	325	150
Future Vol, veh/h	100	25	25	250	325	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	26	26	263	342	158

Major/Minor	Minor2		Major1	Maj	jor2		
Conflicting Flow All	657	342	500	0	-	0	
Stage 1	342	-	-	-	-	-	
Stage 2	315	-	-	-	-	-	
Critical Hdwy	6.42	6.22	4.12	-	-	-	
Critical Hdwy Stg 1	5.42	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	-	
Follow-up Hdwy	3.518	3.318	2.218	-	-	-	
Pot Cap-1 Maneuver	430	701	1064	-	-	-	
Stage 1	719	-	-	-	-	-	
Stage 2	740	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver		701	1064	-	-	-	
Mov Cap-2 Maneuver	515	-	-	-	-	-	
Stage 1	702	-	-	-	-	-	
Stage 2	740	-	-	-	-	-	

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.8	0
HCM LOS	В		

Minor Lane/Major Mvmt	NBL	NBTI	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1064	-	515	701	-	-
HCM Lane V/C Ratio	0.025	-	0.204	0.038	-	-
HCM Control Delay (s)	8.5	-	13.8	10.3	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.1	-	-

Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	٦	1	et 👘		٦	1
Traffic Vol, veh/h	128	121	167	8	4	75
Future Vol, veh/h	128	121	167	8	4	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	475	-	-	-	0	0
Veh in Median Storage	, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	135	127	176	8	4	79

Major/Minor	Major1	Maj	or2		Minor2	
Conflicting Flow All	184	0	-	0	577	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	397	-
Critical Hdwy	4.12	-	-	-	••••	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	1391	-	-	-	478	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuve		-	-	-	432	863
Mov Cap-2 Maneuve	r -	-	-	-	432	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	679	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	9.8
HCM LOS			А

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR S	BLn1	SBLn2
Capacity (veh/h)	1391	-	-	-	432	863
HCM Lane V/C Ratio	0.097	-	-	-	0.01	0.091
HCM Control Delay (s)	7.9	-	-	-	13.4	9.6
HCM Lane LOS	А	-	-	-	В	А
HCM 95th %tile Q(veh)	0.3	-	-	-	0	0.3

	4	•	1	1	1	ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ኘኘ	1	† †	1	ኘ	^
Traffic Volume (vph)	287	87	996	417	135	617
Future Volume (vph)	287	87	996	417	135	617
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	30.0	50.0	50.0	10.0	60.0
Total Split (%)	33.3%	33.3%	55.6%	55.6%	11.1%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	13.2	13.2	54.1	54.1	66.8	66.8
Actuated g/C Ratio	0.15	0.15	0.60	0.60	0.74	0.74
v/c Ratio	0.60	0.30	0.49	0.39	0.36	0.25
Control Delay	40.7	10.0	11.8	2.2	6.3	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	10.0	11.8	2.2	6.3	4.2
LOS	D	А	В	А	А	А
Approach Delay	33.5		8.9			4.6
Approach LOS	С		А			А
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to	o phase 2:	NBT and	6:SBTL,	Start of G	Green	
Natural Cycle: 45						
Control Type: Actuated-Coor	dinated					
Maximum v/c Ratio: 0.60						
Intersection Signal Delay: 11	.3			li	ntersectio	n LOS: B
Intersection Capacity Utilizat	ion 55.7%			10	CU Level	of Service
Analysis Period (min) 15						
Splits and Phases: 10: Me	sa Ridge I		vers Rivd	8 Masa I	Ridae Ph	wav
	sa Nuye	1 KWy/1 OV			Nuge i N	way

Splits and Phases: Ø2 (R) **Z**ø8 Ø6 (R) 🏼 📕

10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Short-Term Background Traffic PM Peak Hour

Int Delay, s/veh	2.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4			्रभ	1	٦	↑	1	٦	4		
Traffic Vol, veh/h	24	0	2	51	0	56	1	353	24	18	450	6	
Future Vol, veh/h	24	0	2	51	0	56	1	353	24	18	450	6	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	0	340	-	290	340	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	26	0	2	55	0	61	1	384	26	20	489	7	

Major/Minor	Minor2			Vinor1			Major1			Major2			
Conflicting Flow All	932	945	493	920	922	384	496	0	0	410	0	0	
Stage 1	533	533	-	386	386	-	-	-	-	-	-	-	
Stage 2	399	412	-	534	536	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	247	262	576	251	270	664	1068	-	-	1149	-	-	
Stage 1	531	525	-	637	610	-	-	-	-	-	-	-	
Stage 2	627	594	-	530	523	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	221	257	576	246	265	664	1068	-	-	1149	-	-	
Mov Cap-2 Maneuver	221	257	-	246	265	-	-	-	-	-	-	-	
Stage 1	530	516	-	636	609	-	-	-	-	-	-	-	
Stage 2	569	593	-	519	514	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	22.7	17.1	0	0.3	
HCM LOS	С	С			

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1V	VBLn1\	VBLn2	SBL	SBT	SBR
Capacity (veh/h)	1068	-	-	232	246	664	1149	-	-
HCM Lane V/C Ratio	0.001	-	-	0.122	0.225	0.092	0.017	-	-
HCM Control Delay (s)	8.4	-	-	22.7	23.8	11	8.2	-	-
HCM Lane LOS	А	-	-	С	С	В	А	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.8	0.3	0.1	-	-

Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	•	1
Traffic Vol, veh/h	78	53	26	300	300	203
Future Vol, veh/h	78	53	26	300	300	203
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	58	28	326	326	221

Major/Minor	Minor2		Major1	Maj	or2	
Conflicting Flow All	708	326	547	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	401	715	1022	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	390	715	1022	-	-	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, s	12.5	0.7	0	
HCM LOS	В			

Minor Lane/Major Mvmt	NBL	NBT I	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1022	-	490	715	-	-
HCM Lane V/C Ratio	0.028	-	0.173	0.081	-	-
HCM Control Delay (s)	8.6	-	13.9	10.5	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0.3	-	-

Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	٦	1	et 👘		٦	1
Traffic Vol, veh/h	54	118	223	6	13	159
Future Vol, veh/h	54	118	223	6	13	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	475	-	-	-	0	0
Veh in Median Storage	,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	128	242	7	14	173

Major/Minor	Major1	Majo	or2	l	Minor2		
Conflicting Flow All	249	0	-	0	492	246	
Stage 1	-	-	-	-	246	-	
Stage 2	-	-	-	-	246	-	
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	1317	-	-	-	536	793	
Stage 1	-	-	-	-	795	-	
Stage 2	-	-	-	-	795	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1317	-	-	-	512	793	
Mov Cap-2 Maneuver	· _	-	-	-	512	-	
Stage 1	-	-	-	-	759	-	
Stage 2	-	-	-	-	795	-	

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	10.9
HCM LOS			В

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1	SBLn2
Capacity (veh/h)	1317	-	-	- 512	793
HCM Lane V/C Ratio	0.045	-	-	- 0.028	0.218
HCM Control Delay (s)	7.9	-	-	- 12.2	10.8
HCM Lane LOS	А	-	-	- B	В
HCM 95th %tile Q(veh)	0.1	-	-	- 0.1	0.8

	4	•	1	1	1	ŧ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ኸካ	1	† †	1	5	<u>†</u> †
Traffic Volume (vph)	570	94	566	171	58	754
Future Volume (vph)	570	94	566	171	58	754
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	30.0	50.0	50.0	10.0	60.0
Total Split (%)	33.3%	33.3%	55.6%	55.6%	11.1%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		0.0	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	21.2	21.2	50.1	50.1	58.8	58.8
Actuated g/C Ratio	0.24	0.24	0.56	0.56	0.65	0.65
v/c Ratio	0.77	0.23	0.31	0.19	0.13	0.35
Control Delay	38.7	6.8	12.4	2.5	7.1	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	6.8	12.4	2.5	7.1	8.0
LOS	D	A	В	A	A	A
Approach Delay	34.2		10.1			7.9
Approach LOS	C		В			A
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced t	to phase 2 [.]	NBT and	6.SBTI	Start of G	reen	
Natural Cycle: 40	to pridoc 2.		0.0012,			
Control Type: Actuated-Coc	rdinated					
Maximum v/c Ratio: 0.77	anatou					
Intersection Signal Delay: 1	65			Ir	ntersectio	n I OS' B
Intersection Capacity Utiliza						of Service
Analysis Period (min) 15				N		
Splits and Phases: 10: M	esa Ridge	Pkwv/Pov	wers Blvd	& Mesa I	Ridae Pkv	vav

10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Splits and



10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Short-Term Total Traffic AM Peak Hour

Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		\$			र्च	1	1	•	1	1	et 👘		
Traffic Vol, veh/h	17	0	1	32	0	27	1	300	51	35	452	21	
Future Vol, veh/h	17	0	1	32	0	27	1	300	51	35	452	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	0	340	-	290	340	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	18	0	1	35	0	29	1	326	55	38	491	23	

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	935	962	503	907	918	326	514	0	0	381	0	0	
Stage 1	579	579	-	328	328	-	-	-	-	-	-	-	
Stage 2	356	383	-	579	590	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	246	256	569	257	272	715	1052	-	-	1177	-	-	
Stage 1	501	501	-	685	647	-	-	-	-	-	-	-	
Stage 2	661	612	-	501	495	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	230	248	569	250	263	715	1052	-	-	1177	-	-	
Mov Cap-2 Maneuver	230	248	-	250	263	-	-	-	-	-	-	-	
Stage 1	500	485	-	684	646	-	-	-	-	-	-	-	
Stage 2	633	611	-	484	479	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	21.5	16.5	0	0.6	
HCM LOS	С	С			

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	VBLn1V	WBLn2	SBL	SBT	SBR	
Capacity (veh/h)	1052	-	-	238	250	715	1177	-	-	
HCM Lane V/C Ratio	0.001	-	-	0.082	0.139	0.041	0.032	-	-	
HCM Control Delay (s)	8.4	-	-	21.5	21.7	10.3	8.2	-	-	
HCM Lane LOS	Α	-	-	С	С	В	Α	-	-	
HCM 95th %tile Q(veh)	0	-	-	0.3	0.5	0.1	0.1	-	-	

Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦	1	٦	1	•	1
Traffic Vol, veh/h	102	27	28	250	325	160
Future Vol, veh/h	102	27	28	250	325	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	500	-	-	290
Veh in Median Storage	,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	29	30	272	353	174

Major/Minor	Minor2		Major1	Majo	or2		
Conflicting Flow All	685	353	527	0	-	0	
Stage 1	353	-	-	-	-	-	
Stage 2	332	-	-	-	-	-	
Critical Hdwy	6.42	6.22	4.12	-	-	-	
Critical Hdwy Stg 1	5.42	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	-	
Follow-up Hdwy	3.518	3.318	2.218	-	-	-	
Pot Cap-1 Maneuver	414	691	1040	-	-	-	
Stage 1	711	-	-	-	-	-	
Stage 2	727	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	402	691	1040	-	-	-	
Mov Cap-2 Maneuver	- 500	-	-	-	-	-	
Stage 1	690	-	-	-	-	-	
Stage 2	727	-	-	-	-	-	

Minor Lane/Major Mvmt	NBL	NBTI	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1040	-	500	691	-	-
HCM Lane V/C Ratio	0.029	-	0.222	0.042	-	-
HCM Control Delay (s)	8.6	-	14.2	10.4	-	-
HCM Lane LOS	А	-	В	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.1	-	-

Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	٦	1	et -		٦	1
Traffic Vol, veh/h	178	121	167	21	8	104
Future Vol, veh/h	178	121	167	21	8	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	475	-	-	-	0	0
Veh in Median Storage	e, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	132	182	23	9	113

Major/Minor	Major1	Majo	or2		Minor2	
Conflicting Flow All	205	0	-	0	712	194
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	518	-
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	1366	-	-	-	399	847
Stage 1	-	-	-	-	839	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1366	-	-	-	343	847
Mov Cap-2 Maneuver	-	-	-	-	343	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	10.3
HCM LOS			В

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1	SBLn2
Capacity (veh/h)	1366	-	-	- 343	847
HCM Lane V/C Ratio	0.142	-	-	- 0.025	0.133
HCM Control Delay (s)	8.1	-	-	- 15.8	9.9
HCM Lane LOS	А	-	-	- C	Α
HCM 95th %tile Q(veh)	0.5	-	-	- 0.1	0.5

Splits and Phases: 10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway



10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway Short-Term Total Traffic PM Peak Hour

Intersection: 10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	Т	Т	R	L	Т	Т
Maximum Queue (ft)	278	331	68	206	157	66	63	168	141
Average Queue (ft)	163	208	22	103	40	29	29	90	55
95th Queue (ft)	267	300	46	166	100	57	55	151	111
Link Distance (ft)			824	517	517			1437	1437
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	350	350				150	1000		
Storage Blk Time (%)	0	0			0				
Queuing Penalty (veh)	0	0			0				

Intersection: 10: Mesa Ridge Pkwy/Powers Blvd & Mesa Ridge Pkway

Movement WB WB WB NB NB SB SB S
Movement WB WB WB NB NB SB SB S
Directions Served L L R T T R L T
Maximum Queue (ft) 178 206 72 302 266 190 163 147 11
Average Queue (ft) 65 128 27 188 126 76 70 70 3
95th Queue (ft) 160 192 54 293 247 144 123 124 8
Link Distance (ft) 824 517 517 1624 162
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft) 350 350 150 1000
Storage Blk Time (%) 2 0
Queuing Penalty (veh) 8 2

Markup Summary

dsdlaforce (6)		
ansportation Memoranc (LSC #174850) January 24, 2018 Add "PCD File No. SF185" (g information were prepared under my res	Subject: Text Box Page Label: 1 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/20/2018 4:52:06 PM Color:	Add "PCD File No. SF185"
	Subject: Callout Page Label: 3 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/22/2018 7:48:54 AM Color:	Expand the Mesa Ridge Parkway narrative to provide background information for the trigger to convert this to a 4-lane and what responsibilities (if any) the Glen at Widefield has.
<text></text>	Subject: Callout Page Label: 4 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/22/2018 7:18:17 AM Color:	Obtain new traffic counts at all locations and update the analysis to reflect the fully operational condition of the traffic signal so the TIS analysis is representative of current conditions.
	Subject: Callout Page Label: 8 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/22/2018 8:34:34 AM Color:	Contact and coordinate with EPC DPW and/or CDOT regarding these two proposed improvements to determine any additional requirements they may have, and update the narrative to summarize the outcome of the coordination. Submit construction plans for review (if required by DPW and/or CDOT). With regards to Mesa Ridge Parkway dual WBLT, verify any CDOT access permit requirements. Update narrative to summarize the outcome of the coordination.
Province of the second	Subject: Callout Page Label: 12 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/21/2018 6:30:14 PM Color:	Change to Filing 9
The American Access funder construction The Access funder construction The Access funder construction The Access funder fu	Subject: Callout Page Label: 16 Lock: Unlocked Status: Checkmark: Unchecked Author: dsdlaforce Date: 3/22/2018 7:21:13 AM Color:	The narrative noted Marksheffel Improvement is complete.