#### Exhibit A

## The Quarry: Legal Description

All that certain real property situate within a portion of Section 9, Township 20 North, Range 20 East, Mount Diablo Meridian, County of Washoe, State of Nevada, described as follows:

Parcel 2 as shown on the Record of Survey to support a Boundary Line Adjustment (RS3818) filed within the Official Records of Washoe County, Nevada on June 30, 2000 as File No. 2460839 and being more particularly described as follows:

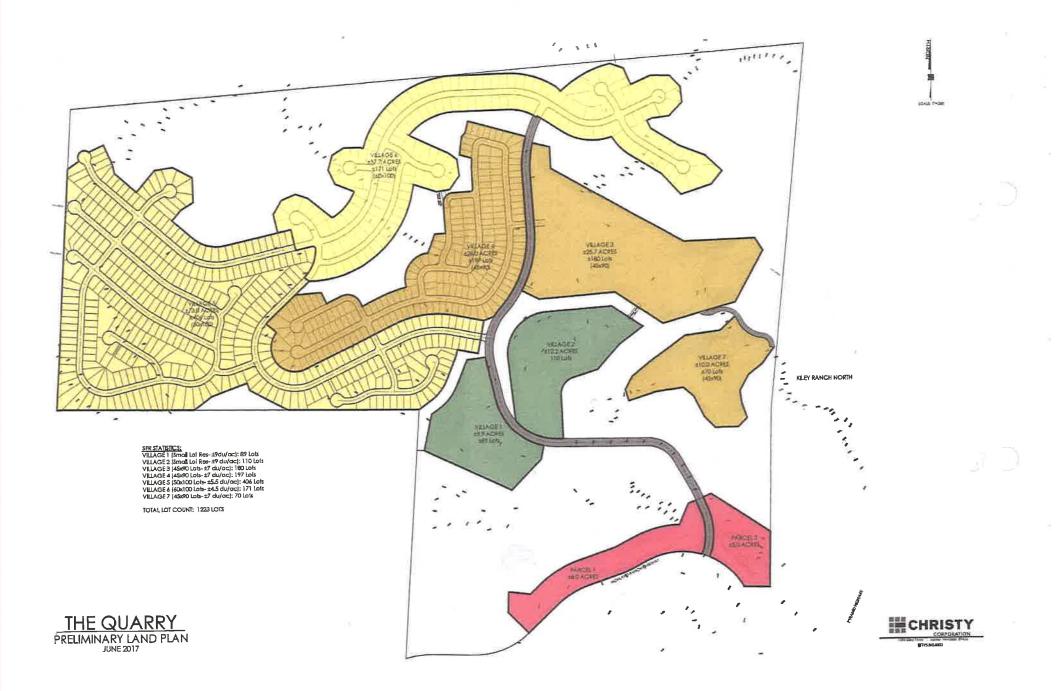
Beginning at the Northeast corner of Section 9;

South 05°43'28" West, 2702.52 feet to the East one- guarter (E 1/4) corner of Section 9; Continuing along the Easterly line of Section 9, South 00°57'17" West, 1318.51 feet to the Northerly line of the Southeast one-quarter (SE  $\frac{1}{4}$ ) of Section 9; Thence along the Northerly line of the Southeast one-quarter (SE 1/4) of Section 9, North 89°02'15" West, 189.31 feet to the Northerly right-of-way of Highland Ranch Parkway; Leaving the Northerly line of the Southeast one-guarter (SE ¼) of Section 9, along the Northerly rightof-way of Highland Ranch Parkway, along the arc of a non-tangent curve to the left, from a tangent which bears North 29°56'39"West, having a length of 815.03 feet and a radius of 530.00 feet, through a central angle of 88°06'31"; Continuing along the Northerly right-of-way of Highland Ranch Parkway, South 61°56'50" West, 126.45 feet; Continuing along the Northerly right-of-way of Highland Ranch Parkway, along the arc of a curve to the right, having a length of 90.68 feet and a radius of 570.00 feet, through a central angle of 09°06'56"; Continuing along the Northerly right-of-way of Highland Ranch Parkway, South 71°03'46" West, 254.89 feet; Continuing along the Northerly rightof-way of Highland Ranch Parkway, along the arc of a curve to the left, having a length of 279.50 feet and a radius of 630.00 feet, through a central anale of 25°25'09"; Continuing along the Northerly right-of-way of Highland Ranch Parkway, South 45°38'37" West, 300.00 feet; Continuing along the Northerly right-of-way of Highland Ranch Parkway, along the arc of a curve to the right, having a length of 453.78 feet and a radius of 570.00 feet, through a central gnale of 45°36'50"; Continuing along the Northerly right-of-way of Highland Ranch Parkway, North 88°44'33" West, 300.00 feet; Continuing along the Northerly right-of-way of Highland Ranch Parkway, along the arc of a curve to the left, having a length of 204.69 feet and a radius of 630.00 feet, through a central angle of 18°36'55", to the North-South centerline of Section 9; Leaving the Northerly right-of-way of Highland Ranch Parkway, along the North-South centerline of Section 9, North 03°39'56" East, 1859.59 feet to the center of Section 9; Thence along the East-West centerline of Section 9, North 89°25'32" West, 2683.82 feet to the West one-quarter (1/4) of Section 9; Thence along the West line of Section 9, North 03°18'58" East, 2211.00 feet to the Northwest corner of Section 9; Thence along the North line of Section 9, North 85°28'37" East, 2721.15 feet to the North one-quarter (N 1/4) corner of Section 9; Continuing along the North line of Section 9, North 85°29'07" East, 2720.96 feet to the Northeast corner of Section 9 and the Point of Beginning.

Containing 386.87 acres, more or less.

APN: 083-011-15





# **THE QUARRY** Fiscal Impact Analysis

DECEMBER 2017

**Prepared by:** 

EKAY ECONOMIC CONSULTANTS

550 West Plumb Lane Suite B459 Reno, NV 89509 (775) 232-7203 www.ekayconsultants.com

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**Executive Summary** 

The Quarry- Fiscal Impact Analysis

# THE QUARRY FISCAL IMPACT ANALYSIS

## **DECEMBER 2017**

#### **EXECUTIVE SUMMARY**

Ekay Economic Consultants, Inc. (EEC) of Reno, Nevada was retained to conduct a fiscal impact analysis of the proposed The Quarry project on the City of Sparks. The project is currently located in Washoe County, with the developer proposing to annex the project to the City of Sparks. The analysis assumes the annexation is successful, with the project generating revenue for and receiving services from the City.

The project includes 386.9 acres of land, of which approximately 196.5 acres are expected to be dedicated to residential uses, 13.0 acres to commercial uses, and 177.4 acres to open space and roadways. The project will include 1,223 single-family residential units and 141,570 square feet of general commercial space built over a six-year period. The following are the findings of the analysis:

#### General Fund

- The project is estimated to generate \$47.3 million in revenue for the City of Sparks General Fund over the 20-year analysis period (2018-2037). This includes \$32.9 million in real property tax revenue, \$2.1 million in sales tax revenue, and other revenue sources.
- The project is estimated to generate \$33.0 million in City of Sparks General Fund expenditures over the 20-year analysis period. This includes all General Fund expenditure sources (police, fire, judicial, etc.), as well as a 3% contingency amount.
- The project is estimated to have a cumulative positive impact (revenue surplus) on the City of Sparks General Fund of \$14.3 million over the 20-year analysis period.

#### Street/Road Fund

• The project is estimated to generate \$3.3 million in revenue for the City of Sparks Road Fund over the 20-year analysis period. The fund receives revenue primarily from fuel taxes, as well as franchise fees.

#### **Executive Summary**

The Quarry- Fiscal Impact Analysis

- The project is estimated to generate \$14.9 million in expenditures for the City of Sparks Road Fund. This includes all maintenance and repair costs associated with streets added to the City by the project.
- The project is estimated to result in a deficit of \$11.5 million for the City of Sparks Road Fund over the 20-year analysis period. The deficit is due to a disconnect between limited sources of revenue available for this fund and high costs associated with street maintenance and repair. This disconnect applies not only to this project, but to all new and existing streets within the City as the existing Road Fund revenue structure is insufficient to meet street maintenance costs.
- Despite this, the analysis indicates the project will generate sufficient General Fund surplus to cover the deficit in the Road Fund, resulting in a positive fiscal impact for the City of Sparks.

#### Other Impacts

- In addition to General and Road Fund impacts, the project is estimated to generate \$21.8 million in various development-related fees.
- This includes \$2.5 million in building permit, \$1.1 million in plan review, \$0.2 million in current planning, \$1.2 million in fire inspection and plan review, \$5.8 million in region road impact, \$1.2 million in residential park tax, and \$7.2 million in sewer connection revenue.
- Additionally, the project will be located in the Impact Fee Service Area #1 (IFSA1), generating \$2.6 million in revenue to be spent in the IFSA1, including \$0.4 million in sanitary sewer, \$0.8 million in flood control, \$0.9 million in regional park/recreation, and \$0.5 million in fire station revenue.

#### Development Size

- The project's zoning allows for approximately 2,200 units, with the analysis assuming 1,223 units. An increase in the number of units in the project will increase the positive impact of the project on the City.
- For example, increasing the number of residential units to 1,750, with no significant additional streets added to the City for maintenance, results in a surplus for the City of Sparks General Fund of \$16.3 million and Road Fund deficit of \$10.2 million over the 20-year analysis period.
- Development-related fee revenue would also increase with an increase in the number of units.

The Quarry- Fiscal Impact Analysis

# THE QUARRY FISCAL IMPACT ANALYSIS

## **DECEMBER 2017**

Ekay Economic Consultants, Inc. (EEC) of Reno, Nevada was retained to conduct a fiscal impact analysis of the proposed The Quarry project on the City of Sparks. The project is currently located in Washoe County, with the developer proposing to annex the project to the City of Sparks. The analysis assumes the annexation is successful, with the project generating revenue for and receiving services from the City.

#### **DEVELOPMENT DESCRIPTION**

The project includes 386.9 acres of land, of which approximately 196.5 acres are expected to be dedicated to residential uses, 13.0 acres to commercial uses, and 177.4 acres to open space and roadways. Project developers are projecting 1,223 single-family residential units built over a six-year period, divided between seven villages. Approximately 141,570 square feet of general commercial space will also be constructed during this period. This is summarized in Table 1.

	# of Acres	# of Units	Building Square Feet
Village 1	9.9	89	169,100
Village 2	12.2	110	220,000
Village 3	25.7	180	414,000
Village 4	28.0	197	453,100
Village 5	73.0	406	1,015,000
Village 6	37.7	171	461,700
Village 7	10.0	70	203,000
<b>General Commercial</b>	13.0	-	141,570
Open Space	177.4		
Total	386.9	1,223	3,077,470

#### **Table 1. Project Summary**

The Quarry- Fiscal Impact Analysis

#### METHODOLOGY

Buildout assumptions for the development provide the foundation on which the fiscal impact analysis is based. These assumptions are presented in Appendix 1 and represent information provided by the developer based on past experience and existing market data.

The buildout spans six years; the analysis includes a 20-year period to show the longterm impact of the project (2018-2037). Appendix 1 shows annually the number of residential units and commercial square feet constructed; land and improvement taxable values; and construction materials costs. It should be noted that information in Appendix 1 is based on the best information available to the developer as of the date of the report and may change as the project moves through the approval process and begins development. This fiscal impact analysis may be revised if such changes occur.

Buildout assumptions shown in Appendix 1 are used to estimate revenue and costs generated by the development for the City of Sparks. Appendices at the end of this report present revenue and cost projections on an annual basis over the analysis period. Assumptions used in developing these estimates are presented at the end of each appendix. Those appendices are:

Appendix 1:	Buildout Assumptions
Appendix 2:	City of Sparks Estimated Number of Residents and Employees
Appendix 3:	City of Sparks Estimated Real Property Tax Revenue
Appendix 4:	City of Sparks Estimated Sales Tax Revenue
Appendix 5:	City of Sparks Estimated Permit and Impact Fee Revenue
Appendix 6:	City of Sparks Comparison of Estimated Revenue to Estimated Costs
Appendix 7:	City of Sparks Police Department Cost Projections
Appendix 8:	City of Sparks Fire Department Cost Projections
Appendix 9:	City of Sparks Street Maintenance Cost Projections

The following important assumptions were made in this analysis:

The Quarry- Fiscal Impact Analysis

 The analysis estimates 3,293 new residents to the area generated by the project's residential units at full buildout. Due to low single-family home vacancy rates in the Reno-Sparks area, all residents of the project are estimated to be new residents of the City of Sparks, whether due to development residents moving to Sparks from outside the City or moving from existing Sparks homes, as these homes are expected to become occupied by new residents to the area.

The project estimates the project's commercial uses will provide space for 169 employees. The fiscal impact analysis estimates costs and revenues associated with the development using estimated number of new development residents only. The analysis assumes employees of the development will be existing residents of the region, residents of other regions, or residents of the development.

2. The fiscal impact analysis for the City of Sparks includes all revenue and expenditure sources for the General and Road Funds. This is because the General Fund is expected to provide the majority of services to the project and receive the majority of its revenue. The Road Fund analysis is included, as the project will add new streets to the City of Sparks inventory, resulting in new costs for the City.

The Development Services Fund is omitted even though it will collect permit/fee revenue and will provide building inspection services to the development. Revenue and costs for this fund, and other similar funds, are accounted for in an Enterprise or Proprietary Funds which are required to break-even, minimizing any fiscal impact on the City. However, various building permit, plan review and impact fee revenue is estimated in Appendix 5 to show the impact of project construction on these revenue sources.

3. Property tax revenue estimated in this analysis includes real property only. The project, through its commercial uses, will generate personal property revenues for the City of Sparks. However, as the value of this property is unknown and difficult to estimate, the analysis is conservative in estimating real property tax revenue only.

The Quarry- Fiscal Impact Analysis

4. Fiscal impact revenue and cost estimates are made using three methodologies. The main methodology (direct methodology) utilizes existing tax rates, service levels, national service standards and information from department representatives to estimate direct costs associated with the project. This methodology is used to estimate expenditures associated with law enforcement, fire, and street maintenance costs, as well as revenues from sales, property tax, and impact fee sources.

If detailed information required for this type of analysis is not available or the impact on the revenue or expenditure source is expected to be directly related to population changes, the ACM (average cost method) is used to estimate costs and revenues associated with the project. This method uses per capita revenue and expenditure amounts applied to the estimated residential population of the project.

Indirect administrative costs, such as costs associated with providing services (human resources, finance, legal, etc.) to the direct service departments are estimated as percent of additional direct services (law enforcement, fire, etc.), the third methodology used in the analysis. Appendix 6 provides detailed assumptions and calculations for each of the three methods.

- 5. Costs and revenues estimated using the direct method are founded on methodology developed based on conversations with local government representatives. Costs associated with City of Sparks Fire, Police, and Community Services Departments are estimated using information provided by department representatives for this and/or past projects.
- 6. It is our understanding, based on similar projects in the area, that the closest fire station to the Project is one operated by the Truckee Meadows Fire Protection District (TMFPD) and the closest City of Sparks station may be outside of the desirable response drive time to the Project. There are two City of Sparks fire stations in some proximity to the Project. Station 4-1450 Disc Drive is located an approximately 7 minute drive away from the Project, according to Google Maps, and Station 5-6490 Vista Boulevard, 11 minutes. For the TMFPD, both Station 17-500 Rockwell Boulevard

#### The Quarry- Fiscal Impact Analysis

and Station 15-110 Quartz Lane are located approximately 5 minutes away from the proposed Project.

There is an existing collaboration between the two fire districts, providing services to each other's jurisdictions. Additionally, the area surrounding the proposed development was once planned for a large residential and commercial development, Kiley Ranch, with a proposed fire station. While some portions of Kiley ranch development plan have been withdrawn, the area continues to grow and will require a fire station to accommodate this growth. The Impact Fee Service Area #1 (IFSA1) collects impact fees from developments in this area; one of the fees is for the purposes of constructing a fire station. The project will contribute an estimated \$0.5 million in revenue for the IFSA1 fire station.

- 7. Police costs are estimated using a national staffing ratio of 1.5 uniformed officers per 1,000 population and calls for service for similar commercial projects, as provided by the Sparks Police Department. Non-uniformed positions are also estimated, as well as vehicle costs associated with uniformed positions for the project.
- 8. Information for the ACM and the indirect cost analyses was obtained from the fiscal year (FY) 2017-18 budget documents for City of Sparks. FY 2016-17 is used as the base year for the analysis, as this is the latest year for which non-budgeted, actual data is available.
- 9. Additional information for revenue and cost estimate methodology, sources of data, calculations, and findings is provided in the appendices attached to this report.

#### FINDINGS

The findings of the fiscal impact analysis are presented below with summaries for estimated revenue and costs for each fund.

Table 2 below summarizes the estimated impact of the project on the City of Sparks General Fund over the 20-year analysis period. Detailed information on City of Sparks revenues and costs by line item, by year, as well as methodology for estimating these

The Quarry- Fiscal Impact Analysis

costs and revenues is found in Appendix 6. The table shows the project is estimated to result in a revenue surplus for the City of Sparks General Fund in the amount of \$14.3 million over the 20-year analysis period.

evenu	
\$	32,854,535
	8,704,989
	5,209,018
	508,697
	•
\$	47,277,239
endit	ures
\$	6,408,807
	1,743,659
	20,804,207
	589,672
	2,367,374
	141,033
	961,643
\$	33,016,396
iprlu	s/(Deficit)
\$	14,260,844
	\$ s s s s

Table 2. Summary	of Estimated City of Sparks General Fund Impacts, 20-Year Total
	Estimated Revenue

Table 3 shows the estimated impact of the project on the City of Sparks General Fund over the analysis period (2018-2037), by year. The table shows all years of the analysis show a positive fiscal impact on the City's General Fund.

Table 4 shows the 20-year estimated impact of the project on the Road Fund. Detailed information for these cost and revenue calculations can also be found in Appendix 6. The table shows the project is estimated to result in a revenue deficit for the City of Sparks Road Fund in the amount of \$11.5 million over the analysis period.

### The Quarry- Fiscal Impact Analysis

	Summary of Estimated City of Sparks General Fund Impacts, by Yo Annual Cumulativ					
	<b>Total Project</b>	Total Project	Revenue	Revenue		
Year	Revenue	Costs	Surplus	Surplus		
2018	\$ 54,948	\$ -	\$ 54,948	\$ 54,948		
2019	214,704	127,082	87,622	142,57		
2020	657,964	471,101	186,863	329,433		
2021	1,116,366	770,640	345,726	675,15		
2022	1,599,636	1,080,582	519,054	1,194,21		
2023	2,069,269	1,428,133	641,136	1,835,34		
2024	2,432,609	1,714,223	718,386	2,553,73		
2025	2,505,588	1,764,183	741,404	3,295,13		
2026	2,580,755	1,815,642	765,114	4,060,25		
2027	2,658,178	1,868,644	789,534	4,849,78		
2028	2,737,923	1,923,236	814,687	5,664,47		
2029	2,820,061	1,979,466	840,595	6,505,06		
2030	2,904,663	2,037,383	867,279	7,372,34		
2031	2,991,803	2,097,038	894,765	8,267,11		
2032	3,081,557	2,158,482	923,075	9,190,18		
2033	3,174,003	2,221,770	952,234	10,142,42		
2034	3,269,224	2,286,956	982,268	11,124,69		
2035	3,367,300	2,354,097	1,013,203	12,137,89		
2036	3,468,319	2,423,253	1,045,066	13,182,95		
2037	3,572,369	2,494,484	1,077,885	14,260,84		
Total	\$ 47,277,239	\$ 33,016,396	\$ 14,260,844			

# Table 3. Summary of Estimated City of Sparks General Fund Impacts, by Year

# Table 4. Summary of Estimated City of Sparks Road Fund Impacts, 20-Year Total

Estimated Revenue							
Licenses and Permits	\$	1,321,680					
Intergovernmental		2,018,872					
Miscellaneous		-					
Total Revenue	\$	3,340,551					
Estimated Ex	pendit	ures					
Expenditures	\$	14,861,610					
Contingency		-					
Cumulative Surplus/(Deficit)							
Surplus/(Deficit)	\$	(11,521,059)					

#### The Quarry- Fiscal Impact Analysis

Table 5 shows the estimated impact of the project on the City of Sparks Road Fund over the analysis period (2018-2037), by year. It should be noted that major road maintenance costs will occur 5-, 10-, 15-, and 20-years after road construction and dedication. These costs are annualized in the analysis and shown in the table below. However, these costs will not actually occur annually, but rather in five-year increments, with the largest expenditure occurring starting 20 years after initial road construction and dedication.

		<b>m</b> . 1 <b>n</b> . 1	Annual	Cumulative
	Total Project	Total Project	Revenue	Revenue
Year	Revenue	Costs	Surplus	Surplus
2018	\$ -	\$-	\$ -	\$-
2019	2	522	(522)	(522)
2020	31,718	819,813	(788,094)	(788,616)
2021	65,076	820,247	(755,171)	(1,543,787)
2022	98,507	821,873	(723,366)	(2,267,154)
2023	137,239	824,087	(686,848)	(2,954,002)
2024	176,048	825,709	(649,661)	(3,603,663)
2025	181,329	825,862	(644,533)	(4,248,196)
2026	186,769	826,019	(639,250)	(4,887,446)
2027	192,372	826,179	(633,806)	(5,521,252)
2028	198,143	826,341	(628,198)	(6,149,450)
2029	204,088	826,507	(622,420)	(6,771,870)
2030	210,210	826,677	(616,466)	(7,388,336)
2031	216,517	826,850	(610,333)	(7,998,669)
2032	223,012	827,026	(604,014)	(8,602,683)
2033	229,703	827,206	(597,503)	(9,200,185)
2034	236,594	827,389	(590,795)	(9,790,981)
2035	243,691	827,576	(583,884)	(10,374,865)
2036	251,002	827,767	(576,764)	(10,951,630)
2037	258,532	827,961	(569,429)	(11,521,059)
Total	\$ 3,340,551	\$ 14,861,610	\$ (11,521,059)	

Table 5.	Summary of E	Estimated City of	f Sparks Road	Fund Im	pacts, by Year

Table 5 shows a revenue deficit generated by the project for the City of Sparks Road Fund. One of the Fund's revenue sources, franchise fees, was reduced in FY 2017-18, resulting in

#### The Quarry- Fiscal Impact Analysis

lower revenues for the Fund. With this reduction and the major source of revenue for the Fund, fuel taxes, insufficient to cover road maintenance costs for the City, alternative revenue sources for the Fund are needed and may include transfers from the General Fund until the funding issue is resolved. *This disconnect between Road Fund costs and revenues applies not only to this project, but to all new and existing streets within the City as the existing Road Fund revenue structure is insufficient to meet street maintenance costs.* 

Overall, the 20-year surplus shown to be generated by the project for the City of Sparks General Fund is sufficient to cover the negative surplus estimated for the Road Fund, resulting in a net positive impact on the City of Sparks.

In addition to General and Road Fund impacts, the project is estimated to generate \$21.8 million in various development-related fees. This includes \$2.5 million in building permit, \$1.1 million in plan review, \$0.2 million in current planning, \$1.2 million in fire inspection and plan review, \$5.8 million in region road impact, \$1.2 million in residential park tax, and \$7.2 million in sewer connection revenue. Additionally, the project will be located in the Impact Fee Service Area #1 (IFSA1), generating \$2.6 million in revenue to be spent in IFSA1, including \$0.4 million in sanitary sewer, \$0.8 million in flood control, \$0.9 million in regional park/recreation, and \$0.5 million in fire station revenue.

Finally, the project's zoning allows for approximately 2,200 units, with the analysis assuming 1,223 units. An increase in the number of units in the project will increase the positive impact of the project on the City. For example, increasing the number of residential units to 1,750, with no significant additional streets added to the City for maintenance, results in a surplus for the City of Sparks General Fund of \$16.3 million and Road Fund deficit of \$10.2 million over the 20-year analysis period. Development-related fee revenue would also increase with an increase in the number of units.

#### Limiting Conditions & Disclosures

The Quarry- Fiscal Impact Analysis

#### LIMITING CONDITIONS & DISCLOSURES

In the preparation of this report, EEC asserts:

- The report is to be used in its entirety, and no part is to be used without the whole.
- In preparing this report, EEC relied on information provided by other individuals or found in previously existing records and/or documents. This information is assumed to be reliable. However, no warranty, either expressed or implied, is given by EEC for the accuracy of such information and EEC assumes no responsibility for information relied upon later found to have been inaccurate.
- EEC may amend this report in the event additional documents and/or other material discovered subsequent to the submission of this report and pertinent to the report and/or the conclusions contained herein are made available.
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- Possession of this report, or a copy of this report, does not carry with it the right of publication. Without the consent of EEC, this report may not be used for any purpose by any person other than the party for whom this report was prepared.

# Appendices

The Quarry- Fiscal Impact Analysis

# **APPENDICES**

			APPENDI BUILDOUT ASS			9 AU _ 1 _ 2
<u>YEAR</u>	USE TYPE	SQUARE FEET <u>BUILT</u>	# OF UNITS <u>BUILT</u>	ADDED LAND <u>VALUE</u>	ADDED IMPROVEMENTS <u>VALUE</u>	CONSTRUCTION MATERIALS <u>COST</u>
2018	Village 1			\$ 2,018,250	\$ =	\$
	Village 2			2,466,750	<u>a</u>	-
	Village 3 Village 4		6 <b>7</b> 0 652	- 3,950,100		(#) 2011
	Village 5		-	5,535,000		-
	Village 6			*		
	Village 7			8	8	۲
	Gen. Commercial		2. <del></del> )	1,271,044	# ~	9 <del>0</del> 0
Subtotal	Open Space			1,081,066 16,322,211	· · · ·	:•:-
Subtotal				10,922,211		
2019	Village 1	85,500	45	1,973,400	9,418,500	4,709,250
	Village 2	110,000	55	2,466,750	11,511,500	5,755,750
	Village 3		-		10.100.000	(7) 0.0440000
	Village 4	151,800	66	3,950,100	18,433,800	9,216,900
	Village 5 Village 6	205,000	82	5,467,500	25,830,000	12,915,000
	Village 7	170 171				
	Gen. Commercial	87,120	S.#.	794,403	10,756,687	5,378,344
	Open Space		()#)		<u> </u>	
Subtotal		639,420	248	14,652,153	75,950,487	37,975,244
2020	Village 1	83,600	44	×	9,209,200	4,604,600
	Village 2	110,000	55		11,511,500	5,755,750
	Village 3	20 	-	-		50
	Village 4	151,800	66 81	3,890,250	18,433,800	9,216,900
	Village 5 Village 6	202,500	81	5,467,500 6,437,100	25,515,000	12,757,500
	Village 7	1990 1990	-	5,457,100		
	Gen. Commercial	54,450	25		6,722,930	3,361,465
Subtotal	Open Space	602,350	- 246	15,794,850	71,392,430	35,696,215
2021						
2021	Village 1 Village 2	198 199	2.5	×		(#5) (2)
	Village 3			5,386,500		2
	Village 4	149,500	65		18,154,500	9,077,250
	Village 5	202,500	81	5,467,500	25,515,000	12,757,500
	Village 6	232,200	86	6,362,250	30,039,800	15,019,900
	Village 7	5 <b>2</b> 3		-		
	Gen. Commercial Open Space	-				
Subtotal	open opere	584,200	232	17,216,250	73,709,300	36,854,650
2022	¥7:11 *					
2022	Village 1 Village 2	150 A		. ÷	2 <b>7</b>	*
	Village 3	207,000	- 90	5,386,500	25,137,000	12,568,500
	Village 4					,==,==
	Village 5	202,500	81	5,467,500	25,515,000	12,757,500
	Village 6	229,500	85		29,690,500	14,845,250
	Village 7		÷1	6,037,500	-	
	Gen. Commercial Open Space	450 (180			29. 191	
Subtotal		639,000	256	16,891,500	80,342,500	40,171,250
2023	Village 1		-	-	-	
	Village 2	2004 2004				
	Village 3	207,000	90		25,137,000	12,568,500
	Village 4	•	-	*		•
	Village 5	202,500	81	÷	25,515,000	12,757,500
	Village 6 Village 7	203,000	- 70	1. 12	- 28,175,000	14,087,500
	Gen. Commercial	203,000	- 10	-	20,175,000	14,087,500
	Open Space	(#)			······································	

1			APPENDI BUILDOUT ASSI		HONS				
YEAR	USE <u>TYPE</u>	SQUARE FEET <u>BUILT</u>	# OF UNITS <u>BUILT</u>		ADDED LAND <u>VALUE</u>	IM	ADDED PROVEMENTS <u>VALUE</u>	C	CONSTRUCTION MATERIALS <u>COST</u>
TOTAL		3,077,470	1,223	S	80,876,963	S	380,221,717	S	190,110,858

#### **APPENDIX 1, ASSUMPTIONS:**

The following land and building costs represent the Developer's best estimate in 2017. Analysis adds land value in the year before construction and improvement value in the year of construction.
 a) Residential:

,	# of Acres	<u># of Units</u>	Total <u>Square Feet</u>	Projected Sales <u>Price/Unit</u>	Land Value/ <u>Unit</u>	Improv. Value/ <u>Unit</u>
Village 1	9.90	89	169,100	\$ 299,000	\$ 44,850	\$ 209,300
Village 2	12.20	110	220,000	299,000	44,850	209,300
Village 3	25.70	180	414,000	399,000	59,850	279,300
Village 4	28.00	197	453,100	399,000	59,850	279,300
Village 5	73.00	406	1,015,000	450,000	67,500	315,000
Village 6	37.70	171	461,700	499,000	74,850	349,300
Village 7	10.00	70	203,000	575,000	86,250	402,500
	196.50	1,223	2,935,900			

Source: Number of acres, units, square footage, and projected sales price from Developer. Land and improvement value based on values for homes sold at similar prices in City of Sparks in 2016 and 2017. Source: Washoe County Assessor's website. *b) Commercial:* 

		Total	Improvements	Land Value/	
	<u># of Acres</u>	Square Feet	Cost/Sq. Ft.	Acre	
General Comm.	13.0	141,570	\$ 123.5	\$ 158,881	

Source: Number of acres and square footage from Developer. Land and improvement value from comparable uses (LU400) around the project. Source: Washoe County Assessor's website.

c) Open Space:

Open Space, estimated at 177.4 acres is expected to be valued using value per acre of \$ 6,095 for similar uses (LU 100) surrounding the project. Source: Washoe County Assessor's Office.

Existing value of the project cannot be used as it is valued as a quarry.

2. Construction Materials Cost is estimated at 50% of Building Cost. Source: Discussions with contractors.

Fiscal Impact Analysis-City of Sparks

		ESFO		APPENDIX 2 TY OF SPARKS COF RESIDENTS A	ND EMPLOYEES		
<u>YEAR</u>	USE <u>TYPE</u>	# OF <u>UNITS BUILT</u>	CUMUL. # OF OCCUPIED <u>UNITS</u>	SQUARE FEET <u>CONSTRUCTED</u>	CUMUL. NO. OF <u>RESIDENTS</u>	CUMUL. NO. OF <u>EMPLOYEES</u>	% OF SPARKS <u>POPULATION</u>
2018	Village 1	S#3	2	2	741	2	0.00
	Village 2	( <b>7</b> )	-		( <b>5</b> )		0.00
	Village 3		-	<b>H</b>			0.00
	Village 4		-	-	-		0.00
	Village 5 Village 6		5 ~	10 IS	1.82 (a)	18 10	0,00 0,00
	Village 7	-		2			0.00
	Gen. Commercial	200	*				0,00
	Open Space		2			<u>.</u>	0.00
Subtotal							0.00
2019	Village 1	45		85,500	( <b>*</b> )	æ	0.00
	Village 2 Village 3	55	-	110,000	-	1	0.00
	Village 4	- 66		151,800		5	0.00
	Village 5	82	2	205,000		-	0.00
	Village 6	-	-				0.00
	Village 7				9 <b>4</b> 2	2	0.00
	Gen. Commercial	( <b>a</b> )	-	87,120		104	0.00
Subtotal	Open Space	248	<u> </u>	639,420			0.00
				039,420		104	0.00
2020	Village 1	44	43	83,600	121	7	0.13
	Village 2	55	53	110,000	148		0.16
	Village 3 Village 4	- 66	- 64	151,800	178	-	0.00
	Village 5	81	79	202,500	221	17 12	0.19
	Village 6	-	-	202,500	-	-	0.00
	Village 7		-	-	1990 1990		0.00
	Gen. Commercial	540 C	÷	54,450	1	169	0.00
	Open Space						0.00
Subtotal		246	239	602,350	668	169	0.71
2021	Village 1	-	86		240	2	0.26
	Village 2 Village 3	•	106		296		0.32
	Village 4	65	127	149,500	355		0.38
	Village 5	81	157	202,500	439		0.47
	Village 6	86	-	232,200	-	-	0.00
	Village 7	-	8				0.00
	Gen. Commercial	-			(1 <del>4</del> )	169	0.00
Subtotal	Open Space	232	477	584,200	- 1,330	- 169	0.00 <b>1.42</b>
		LJL		507200		105	
2022	Village 1	-	86	2	240	i <del>n</del>	0.26
	Village 2 Village 3	- 90	106	207,000	296	-	0.32
	Village 4	-	190	207,000	530		0.57
	Village 5	81	235	202,500	657	-	0.70
	Village 6	85	83	229,500	232		0.25
	Village 7	( <b>4</b> .)		3 <del>4</del>	-	-	0.00
	Gen. Commercial Open Space	•	8		-	169	0.00
Subtotal	open open	256	701	639,000	1,955	169	2.09
2023	Village 1	-	86	-	240	ji ji	0,26
	Village 2	-	106		296		0.32
	Village 3	90	87	207,000	242	14	0.26
	Village 4	•	190		530	17	0.57
	Village 5	81	314	202,500	875		0.94
	Village 6 Village 7	- 70	165	- 203,000	460	-	0.49
	Gen. Commercial	- 10	5 2	205,000	100	- 169	0.00
	Open Space						0.00
Subtotal		241	948	612,500	2,644	169	2.83

	ey er - S	ESTIMAT	CITY	PENDIX 2 OF SPARKS * RESIDENTS AND E	MPLOYEES		
2024	Village 1		86	-	240	-	0.26%
	Village 2		106		296		0.32%
	Village 3		174		485		0.52%
	Village 4		190		530		0.57%
	Village 5		392		1,093		1.17%
	Village 6		165		460		0.49%
	Village 7		68		188		0.20%
	Gen. Commercial					169	0.00%
	Open Space						0.00%
Subtotal			1,180		3,293	169	3.52%
TOTAL		1,223		3,077,470			

#### **APPENDIX 2, ASSUMPTIONS:**

1. Number of residential units and square feet of buildings from Appendix  $1_{\rm eff}$ 

Occupied single-family units are estimated using a vacancy rate of 3.5% to account for household movement and other timing issues. Households are
assumed to be occupied a year after construction. Source: Center for Regional Studies, University of Nevada, Reno, based on data from the American
Community Survey.

 Residents are estimated using a ratio of 2.79 residents per occupied household/unit for owner-occupied units Source: "Average Household Size of Occupied Units by Tenure." 2016 American Community Survey 1-Year Estimates, US Census Bureau. Data for Sparks, Nevada.

4. Employee estimates from the Center for Regional Studies, UNR (CRS). Employees added in the year of construction.

	<b>Project Square</b>		Employee
Use Type	Feet	Sq.Ft./Employee	Estimate
Gen Commercial	141,570	837	169
. A louis Aires		فالمرابع بالفترين فريتهم ترم مرمون و	lana 1 a marané arata aratéhan

5. Impacts: Analysis estimates costs and revenues associated with the development using estimated number of new development residents only. The analysis assumes employees of the development will be existing residents of the region, residents of other regions, or residents of the development.

 City of Sparks FY 2016-17 population is estimated at This is used to estimate the percent of existing population generated by the project.

		ES		PENDIX 3 OF SPARKS PROPERTY TAX 1	REVENUE	40 12 S	
YEAR	USE <u>TYPE</u>	ADDED TAX. LAND <u>VALUE (S)</u>	ADDED TAX. IMPROVEMENT <u>VALUE (\$)</u>	CUMULATIVE TOTAL TAX. <u>VALUE (\$)</u>	CUMULATIVE ASSESSED <u>VALUE (\$)</u>	GENERAL FUND <u>REVENUE</u>	AB 104 <u>REVENUE</u>
2018	Village 1	\$ 2,018,250	\$	\$ 2,018,250	\$ 706,388	\$ 6,780	\$ 14
	Village 2	2,466,750	•)	2,466,750	863,363	8,287	18
	Village 3	2.050.100	( <b></b> ))	2 050 100	1 202 626	12.050	-
	Village 4 Village 5	3,950,100 5,535,000	-	3,950,100 5,535,000	1,382,535 1,937,250	13,270 18,594	28 39
	Village 6	5,555,000		5,555,000	1,757,250	10,594	
	Village 7	34 - C	-	2		5	-
	Gen. Commercial	1,271,044	100	1,271,044	444,866	4,270	9
0-14-4-1	Open Space	1,081,066	(internet internet in	1,081,066	378,373	3,632	8
Subtotal		16,322,211		16,322,211	5,712,774	54,831	116
2019	Village 1	1,973,400	9,418,500	4,052,198	1,418,269	13,613	29
	Village 2	2,466,750	11,511,500	5,007,503	1,752,626	16,822	36
	Village 3	2 050 100	10 422 800	9 019 702	2 806 846	26.027	-
	Village 4 Village 5	3,950,100 5,467,500	18,433,800 25,830,000	8,018,703 11,168,550	2,806,546 3,908,993	26,937 37,519	57 80
	Village 6	5,407,500	25,650,000	-	5,700,975	57,519	-
	Village 7		(40)	*	4 <b>4</b> 0	(m)	-
	Gen. Commercial	794,403	10,756,687	2,103,578	736,252	7,067	15
S-14-4-1	Open Space	14 (20 12)		1,113,498	389,724	3,741	8
Subtotal		14,652,153	75,950,487	31,464,030	11,012,410	105,697	224
2020	Village 1	÷	9,209,200	13,874,818	4,856,186	46,610	99
	Village 2		11,511,500	17,014,573	5,955,100	57,157	121
	Village 3		540. A A A A A A A A A A A A A A A A A A A		227	8 <b>6</b>	-
	Village 4 Village 5	3,890,250 5,467,500	18,433,800	31,136,328	10,897,715	104,596	222
	Village 6	6,437,100	25,515,000	43,576,007 6,437,100	15,251,602 2,252,985	146,385 21,624	311 46
	Village 7	-	•		2,272,707	21,024	-
	Gen. Commercial		6,722,930	13,246,074	4,636,126	44,498	94
	Open Space			1,146,903	401,416	3,853	8
Subtotal		15,794,850	71,392,430	126,431,802	44,251,131	424,722	902
2021	Village 1	с <del>н</del>	( <b>-</b> )	23,776,539	8,321,789	79,873	170
	Village 2	<b></b>	2 <u>-</u> 2	29,381,855	10,283,649	98,702	210
	Village 3	5,386,500	1.00 A B A B A B A B A B A B A B A B A B A	5,386,500	1,885,275	18,095	38
	Village 4 Village 5	5,467,500	18,154,500 25,515,000	51,057,232	17,870,031	171,517	364
	Village 6	6,362,250	30,039,800	76,631,237 12,992,463	26,820,933 4,547,362	257,427 43,646	546 93
	Village 7	5,502,250	20,023,000	12,772,105	1,017,002	45,040	-
	Gen. Commercial			20,568,073	7,198,826	69,094	147
	Open Space			1,181,310	413,459	3,968	
Subtotal		17,216,250	73,709,300	220,975,209	77,341,323	742,322	1,576
2022	Village 1	-	-	24,489,835	8,571,442	82,269	175
	Village 2		-	30,263,310	10,592,159	101,664	216
	Village 3	5,386,500	25,137,000	10,934,595	3,827,108	36,733	78
	Village 4	-		71,288,084	24,950,829	239,478	508
	Village 5	5,467,500	25,515,000	110,678,124	38,737,343	371,801	789
	Village 6 Village 7	6,037,500	29,690,500	44,323,231 6,037,500	15,513,131 2,113,125	148,895 20,282	316 43
	Gen. Commercial	3,007,000	1417 1417	21,185,116	7,414,790	71,167	45
	Open Space			1,216,750	425,862	4,087	9
Subtotal		16,891,500	80,342,500	320,416,544	112,145,790	1,076,375	2,285
2023	Village 1	2	-	25,224,530	8,828,586	84,737	180
	Village 2		-	31,171,210	10,909,923	104,713	222
	Village 3		25,137,000	37,153,743	13,003,810	124,811	265
	Village 4	-	÷	73,426,726	25,699,354	246,662	524
	Village 5		25,515,000	140,278,918	49,097,621	471,239	1,000
	Village 6 Village 7		- 28,175,000	76,234,143	26,681,950	256,093	544
	Gen. Commercial		20,175,000	6,218,625 21,820,669	2,176,519 7,637,234	20,890 73,302	44 156
	w waaaawa wasal						
	Open Space	· <u> </u>	· · · ·	1,253,252	438,638	4,210	9

Fiscal Impact Analysis-City of Sparks

		E		PENDIX 3 OF SPARKS PROPERTY TAX I	REVENUE		
YEAR	USE <u>TYPE</u>	ADDED TAX. LAND <u>VALUE (\$)</u>	ADDED TAX. IMPROVEMENT <u>VALUE (S)</u>	CUMULATIVE TOTAL TAX. <u>VALUE (\$)</u>	CUMULATIVE ASSESSED <u>VALUE (S)</u>	GENERAL FUND <u>REVENUE</u>	AB 104 <u>REVENUE</u>
2024	Village 1	-	-	25,981,266	9,093,443	87,279	185
	Village 2		-	32,106,346	11,237,221	107,855	229
	Village 3	8	×	64,159,465	22,455,813	215,531	458
	Village 4	Ĕ.	1 <u>1</u>	75,629,528	26,470,335	254,062	539
	Village 5		8	170,767,735	59,768,707	573,660	1,218
	Village 6 Village 7			78,521,167 35,425,434	27,482,408 12,398,902	263,776 119,005	560 253
	Gen. Commercial		:	22,475,289	7,866,351	75,501	160
	Open Space	. <u> </u>		1,290,850	451,797	4,336	9
Subtotal		-	-	506,357,080	177,224,978	1,701,005	3,611
2025	Village 1	-		26,760,704	9,366,246	89,897	191
	Village 2	2 2		33,069,536	11,574,338	111,090	236
	Village 3			66,084,249	23,129,487	221,997	471
	Village 4	*		77,898,414	27,264,445	261,684	555
	Village 5	3		175,890,767	61,561,768	590,870	1,254
	Village 6 Village 7			80,876,802	28,306,881	271,689 122,575	577
	Gen. Commercial			36,488,197 23,149,548	12,770,869 8,102,342	77,766	260 165
	Open Space	<u></u>	-	1,329,575	465,351	4,466	9
Subtotal				521,547,792	182,541,727	1,752,035	3,719
2026	3711			07.6(2.625	0 (17 001	00.604	107
2026	Village 1 Village 2		2	27,563,525 34,061,622	9,647,234 11,921,568	92,594 114,423	197 243
	Village 3			68,066,777	23,823,372	228,657	485
	Village 4	-		80,235,366	28,082,378	269,535	572
	Village 5			181,167,490	63,408,622	608,596	1,292
	Village 6			83,303,106	29,156,087	279,840	594
	Village 7	*		37,582,843	13,153,995	126,252	268
	Gen. Commercial Open Space	12 22	-	23,844,034	8,345,412	80,099 4,600	170 10
Subtotal	Open Space			<u>1,369,462</u> 537,194,226	479,312 188,017,979	1,804,597	3,831
2027	Village 1	2 	-	28,390,431	9,936,651	95,372	202
	Village 2 Village 3	2		35,083,471 70,108,780	12,279,215	117,856	250 500
	Village 4			82,642,427	24,538,073 28,924,850	235,516 2 <b>7</b> 7,621	589
	Village 5			186,602,515	65,310,880	626,854	1,331
	Village 6			85,802,199	30,030,770	288,235	612
	Village 7	3		38,710,328	13,548,615	130,040	276
	Gen. Commercial	3	2	24,559,355	8,595,774	82,502	175
Subtotal	Open Space	<u> </u>	· · · · · · · · · · · · · · · · · · ·	1,410,546 553,310,053	493,691 193,658,519	4,738 1,858,734	10 3,946
Subtotal				333,310,033	193,030,319	1,030,734	3,240
2028	Village 1	5		29,242,144	10,234,750	98,233	209
	Village 2	¥	5	36,135,975	12,647,591	121,392	258
	Village 3	3		72,212,043	25,274,215	242,582	515
	Village 4		-	85,121,700	29,792,595	285,949	607
	Village 5	-	-	192,200,590	67,270,207 30,931,693	645,659	1,371
	Village 6 Village 7	17. 12.		88,376,265 39,871,638	13,955,073	296,882 133,941	630 284
	Gen. Commercial	2		25,296,136	8,853,648	84,977	180
	Open Space			1,452,863	508,502	4,881	10
Subtotal				569,909,355	199,468,274	1,914,496	4,064
2029	Village 1	12	22.7	30,119,408	10,541,793	101,180	215
	Village 2			37,220,055	13,027,019	125,033	265
	Village 3	: <del>```</del>	14	74,378,405	26,032,442	249,859	530
	Village 4			87,675,351	30,686,373	294,528	625
	Village 5	(H)	-	197,966,608	69,288,313	665,029	1,412
	Village 6	-		91,027,553	31,859,644	305,789	649
	Village 7 Gen. Commercial	15. 14		41,067,787 26,055,020	14,373,725 9,119,257	137,959 87,527	293 186
	Open Space	ŭ		1,496,448	523,757	5,027	11
Subtotal			-	587,006,635	205,452,322	1,971,931	4,186
						-1 11- 4 1	192.00

1	APPENDIX 3 CITY OF SPARKS ESTIMATED REAL PROPERTY TAX REVENUE										
YEAR	USE <u>TYPE</u>	ADDED TAX. LAND <u>VALUE (S)</u>	ADDED TAX. IMPROVEMENT <u>VALUE (S)</u>	CUMULATIVE TOTAL TAX. <u>VALUE (\$)</u>	CUMULATIVE ASSESSED <u>VALUE (\$)</u>	GENERAL FUND <u>REVENUE</u>	AB 104 <u>REVENUE</u>				
2030	Village 1	-		31,022,990	10,858,047	104,216	221				
	Village 2			38,336,656	13,417,830	128,784	273				
	Village 3		-	76,609,757	26,813,415	257,355	546				
	Village 4	2	-	90,305,612	31,606,964	303,364	644				
	Village 5	-		203,905,606	71,366,962	684,980	1,454				
	Village 6		-	93,758,380	32,815,433	314,963	669				
	Village 7		-	42,299,821	14,804,937	142,098	302				
	Gen. Commercial		•	26,836,671	9,392,835	90,152	191				
	Open Space	<u> </u>		1,541,342 604,616,834	539,470 211,615,892	5,178 2,031,089	11 4,311				
Subtotal				004,010,834	211,013,092	2,031,003	4,011				
2031	Village 1			31,953,680	11,183,788	107,342	228				
	Village 2		-	39,486,756	13,820,365	132,648	282				
	Village 3			78,908,049	27,617,817	265,076	563				
	Village 4	-		93,014,780	32,555,173	312,465	663 1,498				
	Village 5			210,022,774 96,571,131	73,507,971 33,799,896	705,530 324,411	1,498				
	Village 6 Village 7		-	43,568,815	15,249,085	146,361	311				
	Gen. Commercial			27,641,771	9,674,620	92,857	197				
	Open Space			1,587,582	555,654	5,333	11				
Subtotal	open opace		-	622,755,339	217,964,369	2,092,022	4,441				
				22 012 001	11 610 200	110 5(2	0.24				
2032	Village 1		-	32,912,291	11,519,302	110,562	23:				
	Village 2	-		40,671,359	14,234,975	136,627	58				
	Village 3			81,275,291 95,805,224	28,446,352 33,531,828	273,028 321,838	68				
	Village 4 Village 5	-		216,323,458	75,713,210	726,695	1,54				
	Village 6			99,468,265	34,813,893	334,144	70				
	Village 7			44,875,880	15,706,558	150,752	32				
	Gen. Commercial	-		28,471,024	9,964,858	95,643	203				
	Open Space	-	. <u> </u>	1,635,210	572,323	5,493	12				
Subtotal		-	•	641,438,000	224,503,300	2,154,783	4,574				
2033	Village 1	-		33,899,659	11,864,881	113,879	242				
	Village 2	-		41,891,499	14,662,025	140,726	29				
	Village 3			83,713,550	29,299,742	281,219	59				
	Village 4	-	-	98,679,380	34,537,783	331,494	70-				
	Village 5			222,813,161	77,984,606	748,496	1,58				
	Village 6			102,452,313	35,858,310	344,168	73				
	Village 7		-	46,222,156	16,177,755	155,274	33				
	Gen. Commercial			29,325,155	10,263,804	98,512	20				
Subtotal	Open Space		· · · ·	1,684,266 660,681,140	589,493 231,238,399	5,658 2,219,426	4,71				
JUDIOLAI				000,001,140	101,100,000						
2034	Village 1	· · ·		34,916,649	12,220,827	117,295	24				
	Village 2			43,148,244	15,101,885	144,948	30				
	Village 3			86,224,956	30,178,735	289,655	61				
	Village 4		-	101,639,762	35,573,917	341,438	72				
	Village 5		-	229,497,556	80,324,145	770,951	1,63				
	Village 6		•	105,525,883	36,934,059	354,493	75				
	Village 7			47,608,821	16,663,087	159,932	33				
	Gen. Commercial Open Space			30,204,909 1,734,794	10,571,718 607,178	101,467 5,828	21				
Subtotal	Open Bpace	-	-	680,501,574	238,175,551	2,286,009	4,85				
				26.0/1.1/2	10 207 420	100.014					
2035	Village 1	-	•	35,964,149	12,587,452	120,814	25 31				
	Village 2			44,442,692	15,554,942 31,084,097	149,296 298,345	63				
	Village 3 Village 4			88,811,705 104,688,955	36,641,134	351,682					
	Village 5		-	236,382,483	82,733,869	794,080	1,68				
	Village 6		<u> </u>	108,691,659	38,042,081	365,128	77				
	Village 7			49,037,085	17,162,980	164,730	35				
	Gen. Commercial			31,111,056	10,888,870	104,511	22				
	Open Space			1,786,838	625,393	6,003	1				

	APPENDIX 3 CITY OF SPARKS ESTIMATED REAL PROPERTY TAX REVENUE										
YEAR	USE <u>TYPE</u>	ADDED TAX. LAND <u>VALUE (\$)</u>	ADDED TAX. IMPROVEMENT <u>VALUE (S)</u>	CUMULATIVE TOTAL TAX. <u>VALUE (\$)</u>	CUMULATIVE ASSESSED <u>VALUE (\$)</u>	GENERAL FUND <u>REVENUE</u>	AB 104 <u>REVENUE</u>				
2036	Village 1		-	37,043,073	12,965,076	124,439	264				
	Village 2	-	¥	45,775,972	16,021,590	153,775	326				
	Village 3	-	-	91,476,056	32,016,620	307,296	652				
	Village 4	-		107,829,623	37,740,368	362,232	769				
	Village 5			243,473,957	85,215,885	817,902	1,736				
	Village 6	-		111,952,409	39,183,343	376,082	798				
	Village 7	-		50,508,198	17,677,869	169,672	360				
	Gen. Commercial	-		32,044,388	11,215,536	107,647	229				
	Open Space			1,840,443	644,155	6,183	13				
Subtotal				721,944,120	252,680,442	2,425,227	5,148				
2037	Village 1			38,154,365	13,354,028	128,172	272				
	Village 2			47,149,252	16,502,238	158,388	336				
	Village 3		-	94,220,338	32,977,118	316,514	672				
	Village 4			111,064,512	38,872,579	373,099	792				
	Village 5	-		250,778,176	87,772,362	842,439	1,788				
	Village 6			115,310,981	40,358,843	387,364	822				
	Village 7			52,023,444	18,208,205	174,762	371				
	Gen. Commercial		-	33,005,720	11,552,002	110,876	235				
	Open Space			1,895,656	663,480	6,368	14				
Subtotal				743,602,443	260,260,855	2,497,984	5,302				
TOTAL		\$ 80,876,963	\$ 380,221,717			\$ 32,854,535	\$ 69,741				

**APPENDIX 3, ASSUMPTIONS:** 

1. As the project is not currently located in the City of Sparks, all property tax revenue generated by the project will be net new to the City.

2. Taxable value of land and improvements is estimated in Appendix 1.

3. Land and improvement taxable values are inflated by 3.0% annually, the maximum allowed increase for owner-occupied properties. This may be conservative for commercial uses in the project, which can increase up to 8% per year.

4. Property tax calculation: Taxable Value X 35% = Assessed Value; Assessed Value/100 X Tax Rate = Property Tax Revenue.

Analysis assumes improvements will generate property tax revenue in the year after improvements are made to account for work-in-progress. Land values will generate property tax in the year as developed.

5. City of Sparks General Fund operating tax rate is assumed to remain constant at FY 2017-18 rate of \$ 0.9598 per \$100 of value. Source: City of Sparks Budget, FY 2017-18.

6. City of Sparks is expected to receive
 7.49% of property tax revenue generated by the AB 104 property tax rate of
 0.0272 Source: Nevada Department of Taxation. "Local Gov't Tax Act Distribution." Three-year average FY 2014-15, FY 2015-16, and 2016-17.

		ES	APPENDIX 4 CITY OF SPARKS TIMATED SALES TAX R	EVENUE		
<u>YEAR</u>	USE <u>TYPE</u>	CONSTR. MATERIALS <u>COST</u>	HOUSEHOLD EXPENDITURES	TOTAL TAXABLE <u>SALES</u>	CCRT SALES TAX <u>REVENUE</u>	AB 104 SALES TAX <u>REVENUE</u>
2018	Village 1	\$	\$	- 5	S – S	
	Village 2	2 <b>4</b> 1	227	2 <u>4</u> )	9	-
	Village 3		3 <b>5</b> is	8 <b>9</b> 1		
	Village 4	3 <b>6</b> 5	5#6) 	10 <b>0</b> 0	-	-
	Village 5 Village 6		20			
	Village 7		-		-	
	Gen. Commercial			< <b>.</b>	- -	
	Open Space	)#(				
Subtotal						*
2019	Village 1	4,709,250	, <b>=</b> /)	4,709,250	12,624	866
	Village 2	5,755,750	2003	5,755,750	15,429	1,059
	Village 3	0.016.000	(P)	0.016.000	-	-
	Village 4 Village 5	9,216,900 12,915,000		9,216,900 12,915,000	24,707 34,620	1,696 2,376
	Village 6	12,713,000	÷.	12,715,000	54,020	2,57
	Village 7		180		×	
	Gen. Commercial Open Space	5,378,344	52 ( -	5,378,344	14,417	990
Subtotal		37,975,244	-	37,975,244	101,796	6,987
2020	Village 1	4,604,600	801,371	5,405,971	14,491	995
2020	Village 2	5,755,750	979,454	6,735,204	18,054	1,239
	Village 3	(7 <b>4</b> )		060	*	740
	Village 4	9,216,900	1,330,032	10,546,932	28,272	1,940
	Village 5	12,757,500	1,844,332	14,601,832	39,141	2,680
	Village 6	-	240			
	Village 7 Gen. Commercial	3,361,465		3,361,465	9,011	618
	Open Space					120
Subtotal		35,696,215	4,955,188	40,651,403	108,970	7,479
001	V31 1		1 622 492	1 622 492	1 376	200
2021	Village 1 Village 2		1,632,482 2,017,674	1,632,482 2,017,674	4,376 5,409	300 371
	Village 3	-	2,011,011	2,011,011	-	-
	Village 4	9,077,250	2,739,865	11,817,115	31,677	2,174
	Village 5	12,757,500	3,776,157	16,533,657	44,320	3,042
	Village 6	15,019,900	2.5	15,019,900	40,262	2,763
	Village 7	-	-	-		
	Gen. Commercial Open Space	1.5-	- -		15. 14	-
Subtotal	-pro-space	36,854,650	10,166,178	47,020,828	126,043	8,65
2022	Village 1	1.5	1,681,456	1,681,456	4,507	309
	Village 2		2,078,205	2,078,205	5,571	382
	Village 3	12,568,500	10 A	12,568,500	33,691	2,312
	Village 4		4,211,712	4,211,712	11,290	77:
	Village 5	12,757,500	5,822,231	18,579,731	49,805	3,41
	Village 6 Village 7	14,845,250	2,257,208	17,102,458	45,845	3,14
	Village 7 Gen. Commercial	14	-	-	2	
	Open Space		•	<u>k</u>		-
Subtotal		40,171,250	16,050,813	56,222,063	150,708	10,344
2023	Village 1		1,731,900	1,731,900	4,643	319
	Village 2		2,140,551	2,140,551	5,738	394
	Village 3	12,568,500	1,981,857	14,550,357	39,003	2,67
	Village 4	10 757 500	4,338,064	4,338,064	11,629	79
	Village 5 Village 6	12,757,500	7,987,672 4,622,815	20,745,172 4,622,815	55,609 12,392	3,81′ 85
	Village 7	14,087,500	7,022,012	14,087,500	37,763	2,592
	Gen. Commercial		1990 1990	,	*	-
	Open Space	<u> </u>	× .	· · · · ·	<u> </u>	
		39,413,500	22,802,858	62,216,358	166,776	11,447

Fiscal Impact Analysis-City of Sparks

		E	APPENDIX 4 CITY OF SPARKS STIMATED SALES TAX F	REVENUE	and the star	
YEAR	USE TYPE	CONSTR. MATERIALS <u>COST</u>	HOUSEHOLD EXPENDITURES	TOTAL TAXABLE <u>SALES</u>	CCRT SALES TAX <u>REVENUE</u>	AB 104 SALES TAX <u>REVENUE</u>
2024	Village 1	S#2	1,783,857	1,783,857	4,782	328
	Village 2	32	2,204,767	2,204,767	5,910	406
	Village 3		4,082,625	4,082,625	10,944	751
	Village 4	3.45	4,468,206	4,468,206	11,977	822
	Village 5		10,277,799	10,277,799	27,551	1,89
	Village 6		4,761,500	4,761,500	12,764	87
	Village 7 Gen. Commercial	: •••	2,006,944	2,006,944	5,380	369
	Open Space		570 1997		 	-
Subtotal			29,585,697	29,585,697	79,307	5,443
2025	Village 1		1,837,373	1,837,373	4,925	338
	Village 2	275) 1951	2,270,910	2,270,910	6,087	418
	Village 3	125	4,205,103	4,205,103	11,272	774
	Village 4	0.5	4,602,252	4,602,252	12,337	847
	Village 5	2 <b>4</b> 5	10,586,133	10,586,133	28,377	1,94
	Village 6		4,904,344	4,904,344	13,147	90
	Village 7		2,067,153	2,067,153	5,541	38
	Gen. Commercial Open Space					
Subtotal		-	30,473,268	30,473,268	81,686	5,601
2026	Village 1		1,892,494	1,892,494	5,073	348
2020	Village 2		2,339,038	2,339,038	6,270	43
	Village 3		4,331,256	4,331,256	11,610	79
	Village 4	125	4,740,320	4,740,320	12,707	87
	Village 5		10,903,716	10,903,716	29,228	2,00
	Village 6	() <del>s</del> ē	5,051,475	5,051,475	13,541	92
	Village 7	•	2,129,167	2,129,167	5,707	39:
	Gen. Commercial Open Space				-	
Subtotal	open opue		31,387,466	31,387,466	84,137	5,775
			4 0 10 0 (0	1.010.070		
2027	Village 1		1,949,269	1,949,269	5,225	35
	Village 2 Village 3		2,409,209 4,461,194	2,409,209 4,461,194	6,458 11,959	44: 82
	Village 4	-	4,882,529	4,882,529	13,088	89
	Village 5	÷.	11,230,828	11,230,828	30,105	2,06
	Village 6		5,203,019	5,203,019	13,947	95
	Village 7		2,193,042	2,193,042	5,879	40
	Gen. Commercial			ŧ	π.	-
Subtotal	Open Space		32,329,090	32,329,090	86,661	5,94
Subtotal			32,323,090	34,329,090	80,001	2,24
2028	Village 1		2,007,747	2,007,747	5,382	369
	Village 2		2,481,485	2,481,485	6,652	45
	Village 3	-	4,595,030	4,595,030	12,317	84
	Village 4	· ·	5,029,005	5,029,005	13,481	92
	Village 5		11,567,753	11,567,753	31,008	2,12
	Village 6 Village 7		5,359,110 2,258,833	5,359,110 2,258,833	14,366 6,055	98 41
	Gen. Commercial		2,230,035	-	-	
	Open Space			<u> </u>		
Subtotal		18	33,298,963	33,298,963	89,261	6,120
2029	Village 1		2,067,979	2,067,979	5,543	38
	Village 2		2,555,930	2,555,930	6,851	47
	Village 3		4,732,881	4,732,881	12,687	87
	Village 4		5,179,875	5,179,875	13,885	95
	Village 5	~	11,914,785	11,914,785	31,939	2,19
	Village 6 Village 7	0.0	5,519,883	5,519,883	14,797	1,01
	Gen. Commercial	-	2,326,598	2,326,598	6,237	42
	Open Space		<u> </u>	<u> </u>		
			34,297,932	34,297,932		6,31

Fiscal Impact Analysis-City of Sparks

APPENDIX 4 CITY OF SPARKS ESTIMATED SALES TAX REVENUE										
YEAR	USE <u>TYPE</u>	CONSTR. MATERIALS <u>COST</u>	HOUSEHOLD EXPENDITURES	TOTAL TAXABLE <u>SALES</u>	CCRT SALES TAX <u>REVENUE</u>	AB 104 SALES TAX <u>REVENUE</u>				
2030	Village 1		2,130,019	2,130,019	5,710	392				
.050	Village 2		2,632,607	2,632,607	7,057	484				
	Village 3		4,874,867	4,874,867	13,068	89				
	Village 4	-	5,335,271	5,335,271	14,302	98				
	Village 5		12,272,229	12,272,229	32,897	2,25				
	Village 6		5,685,479	5,685,479	15,240	1,04				
	Village 7		2,396,396	2,396,396	6,424	44				
	Gen. Commercial		2,000,000	2,570,570	0,424					
	Open Space									
ubtotal		•	35,326,870	35,326,870	94,697	6,49				
031	Village 1	-	2,193,919	2,193,919	5,881	40				
	Village 2		2,711,586	2,711,586	7,269	49				
	Village 3	1.	5,021,113	5,021,113	13,460	92				
	Village 4		5,495,330	5,495,330	14,731	1,01				
	Village 5	-	12,640,396	12,640,396	33,884	2,32				
	Village 6		5,856,044	5,856,044	15,698	1,07				
	Village 7		2,468,288	2,468,288	6,616	45				
	Gen. Commercial Open Space		2							
Subtotal			36,386,676	36,386,676	97,538	6,69				
2032	Village 1		2,259,737	2,259,737	6,057	41				
	Village 2		2,792,933	2,792,933	7,487	51				
	Village 3		5,171,747	5,171,747	13,863	95				
	Village 4		5,660,189	5,660,189	15,173	1,04				
	Village 5		13,019,608	13,019,608	34,900	2,39				
	Village 6		6,031,725	6,031,725	16,169	1,11				
	Village 7		2,542,337	2,542,337	6,815	46				
	Gen. Commercial		2,542,557	2,042,007	0,015	40				
	Open Space									
Subtotal		-	37,478,276	37,478,276	100,464	6,89				
2033	Village 1		2,327,529	2,327,529	6,239	42				
	Village 2		2,876,721	2,876,721	7,711	52				
	Village 3		5,326,899	5,326,899	14,279	98				
	Village 4	-	5,829,995	5,829,995	15,628	1,07				
	Village 5		13,410,196	13,410,196	35,947	2,46				
	Village 6		6,212,677	6,212,677	16,654	1,14				
	Village 7		2,618,607	2,618,607	7,019	48				
	Gen. Commercial					-				
	Open Space			· · · · ·		-				
Subtotal			38,602,624	38,602,624	103,478	7,10				
034	Village 1		2,397,355	2,397,355	6,426	44				
	Village 2	· · ·	2,963,023	2,963,023	7,943	54				
	Village 3		5,486,706	5,486,706	14,708	1,00				
	Village 4		6,004,895	6,004,895	16,097	1,10				
	Village 5	( <b>a</b> )	13,812,502	13,812,502	37,026	2,54				
	Village 6		6,399,057	6,399,057	17,153	1,17				
	Village 7	•	2,697,165	2,697,165	7,230	49				
	Gen. Commercial	1 A								
ubtotal	Open Space		39,760,703	39,760,703	106,582					
				37,700,703	100,002	7,31				
035	Village 1	-	2,469,276	2,469,276	6,619	45				
	Village 2		3,051,914	3,051,914	8,181	56				
	Village 3		5,651,307	5,651,307	15,149	1,04				
	Village 4		6,185,042	6,185,042	16,580	1,13				
	Village 5 Village 6		14,226,877	14,226,877	38,136	2,61				
	v mage 6	-	6,591,029	<mark>6,591,029</mark>	17,668	1,21				
			7 770 000	3 770 000	- A A -					
	Village 7		2,778,080	2,778,080	7,447	51				
		-	2,778,080	2,778,080	7,447	51				

	APPENDIX 4 CITY OF SPARKS ESTIMATED SALES TAX REVENUE										
<u>YEAR</u>	USE <u>TYPE</u>	CONSTR. MATERIALS <u>COST</u>	HOUSEHOLD EXPENDITURES	TOTAL TAXABLE <u>SALES</u>	CCRT SALES TAX <u>REVENUE</u>	AB 104 SALES TAX <u>REVENUE</u>					
2036	Village 1		2,543,354	2,543,354	6,818	468					
	Village 2		3,143,471	3,143,471	8,426	578					
	Village 3		5,820,846	5,820,846	15,603	1,071					
	Village 4	14	6,370,593	6,370,593	17,077	1,172					
	Village 5		14,653,683	14,653,683	39,280	2,696					
	Village 6		6,788,760	6,788,760	18,198	1,249					
	Village 7		2,861,423	2,861,423	7,670	526					
	Gen. Commercial										
	Open Space			*							
Subtotal			42,182,130	42,182,130	113,073	7,761					
2037	Village 1		2,619,654	2,619,654	7,022	482					
	Village 2	-	3,237,775	3,237,775	8,679	596					
	Village 3		5,995,472	5,995,472	16,071	1,103					
	Village 4		6,561,711	6,561,711	17,589	1,207					
	Village 5		15,093,294	15,093,294	40,459	2,777					
	Village 6		6,992,423	6,992,423	18,744	1,286					
	Village 7	-	2,947,265	2,947,265	7,900	542					
	Gen. Commercial	-		-	-	-					
	Open Space	(#)		(a)							
Subtotal			43,447,594	43,447,594	116,465	7,994					
TOTAL		\$ 190,110,858	\$ 559,485,851 \$	749,596,709	\$ 2,009,359	\$ 137,912					

#### **APPENDIX 4, ASSUMPTIONS:**

1. Construction Materials Cost is estimated in Appendix 1.

Household Taxable Sales-estimated based on the number of occupied households, estimated household income, and expenditure information. Household income and percent of income spent on taxable items are estimated as follows, based on projected sales price for each village shown in Appendix 1:
 % Spent on Taxable

			% Spent on 1
	Hou	sehold Income	Items
Village 1	\$	61,316	27.5%
Village 2	\$	61,316	27.5%
Village 3	\$	79,390	24.1%
Village 4	\$	79,390	24.1%
Village 5	\$	88,608	24.1%
Village 6	\$	97,465	24.1%
Village 7	\$	111,201	21.7%
		10.000	

Affordability calculator created by EEC and Center for Regional Studies, UNR. Percent of household income spent on taxable items from Consumer Expenditure Survey, 2016, Bureau of Labor Statistics, data by corresponding household income range. Estimates are inflated 3% annually.

3. Relevant tax rates for the City of Sparks are as follows:

0.500% Basic City County Relief Tax (BCCRT)

Supplemental City County Relief Tax (SCCRT)

0.250% Fair Share (AB 104)

Distribution of BCCRT and SCCRT sales tax revenue to the City of Sparks is calculated12.13%of all Washoe County CCRT revenue.Source: Distribution based on average percentage share of Washoe County C-Tax distributionfrom FY 2014-15 to FY 2016-17. Data from NevadaDepartment of Taxation. "Consolidated Tax Distribution: Revenue Summary by County."7.49%of all Washoe County AB 104 revenue.

1.750%

Source: Distribution based on average percentage share of Washoe County AB104 distribution from FY 2014-15 to FY 2016-17. Data from Nevada Department of Taxation. "Local Government Tax Act Distribution."

4. A State administrative fee of 1.75% of all sales tax revenue is subtracted for State uses. Source: AB 552.

rks		TOTAL	90,360 110,440 132,528 164,656 - 100,711	598,695	88,352 110,440 132,528 162,648 62,944	130,520 130,520 162,648 172,688	465,856	- 180,720 162,648 170,680 - - -
Fiscal Impact Analysis-City of Sparks		AREA #1 FIRE STATION	<ul> <li>\$ 15,300</li> <li>\$ 18,700</li> <li>\$ 18,700</li> <li>\$ 22,440</li> <li>\$ 27,880</li> <li>\$ 27,880</li> <li>\$ 29,621</li> </ul>	113,941	14,960 18,700 22,440 27,540 18,513	22,100 27,540 29,240	78,880	- 30,600 27,540 28,900 <b>-</b> -
Impact Analy		IMPACT FEE SERVICE AREA #1 LOOD REGIONAL FIRE NTROL PARKS/REC STATION	\$ 35,010 42,790 51,348 63,796	192,944	34,232 42,790 51,348 63,018 -	50,570 50,570 66,908	180,496	70,020 70,020 63,018 66,130 66,130
Fiscal		IMPACT FLOOD CONTROL	<ul> <li>\$ 26,685</li> <li>32,615</li> <li>39,138</li> <li>48,626</li> <li>46,783</li> </ul>	193,847	26,092 32,615 39,138 48,033 48,033 29,240	38,545 48,033 50,998	137,576	53,370 53,370 48,033 50,405 50,405
		SANITARY <u>SEWER</u>	\$ 13,365 16,335 16,335 19,602 24,354 24,354 24,306	97,962	13,068 16,335 19,602 24,057 15,192	19,305 24,057 25,542	68,904	26,730 26,730 24,057 25,245 25,245 76,032
		RESIDENTIAL PARK TAX <u>REVENUE</u>	\$ 45,000 55,000 66,000 82,000	248,000	44,000 55,000 66,000 81,000	65,000 81,000 86,000	232,000	- 90,000 81,000 85,000 - -
	APPENDIX 5 CITY OF SPARKS ESTIMATED PERMIT AND IMPACT FEE REVENUE	SEWER CONNECT. <u>REVENUE</u>	<pre>\$ 264,388 323,140 387,768 481,773</pre>	1,457,069	258,512 323,140 387,768 475,898 475,898	381,893 475,898 505,274	1,363,065	- 528,775 475,898 499,399 1,504,072
	APPENDIX 5 CITY OF SPARKS MIT AND IMPACT F	REGIONAL ROAD <u>REVENUE</u>	<pre>\$ 176,488 215,708 215,708 258,849 321,601 610,816</pre>	1,583,462	172,566 215,708 215,708 258,849 317,679 317,679 381,760	254,927 254,927 317,679 337,289	909,895	- 352,976 317,679 333,367 333,367 333,367 333,367 -
	APPE CITY OF PERMIT AN	RE INSPEC/ AN REVIEW REVENUE	31,795 38,861 58,017 58,017 79,295 79,295	226,105	31,089 38,861 58,017 78,3017 78,328 78,328 78,328 11,659	57,138 57,138 78,328 90,431	225,897	79,114 78,328 89,380 89,380
	ESTIMATED	CURRENT FIRE INSPECJ REGIONAL PLANNING PLAN REVIEW ROAD REVENUE REVENUE REVENUE	\$ 6,300 \$ 7,700 9,240 11,480 21,146	55,866	6,160 7,700 9,240 111,340 13,593	9,100 9,100 11,340 12,040	32,480	12,600 11,340 11,900 35,840
		PLAN REVIEW J REVENUE	\$ 28,905 35,328 35,328 52,743 72,086 30,915	219,978	28,263 35,328 35,743 52,743 71,207 19,873	51,944 51,944 71,207 82,210	205,361	71,922 71,207 81,254
		BUILDING PERMIT REVENUE	\$ 69,083 84,435 126,055 172,286 39,407	491,265	67,548 84,435 84,435 126,055 170,185 25,332	124,145 170,185 196,482	490,812	- 171,893 170,185 194,198 - - -
		PRINCIPAL <u>AMOUNT</u>	\$ 72,262 88,321 131,857 180,216 +1,221	513,876	70,657 88,321 88,321 131,857 178,018 26,497	129,859 178,018 205,525	513,402	179,805 178,018 203,136 560,958
		ESTIMATED BUILDING VALUATION	о на така на така С	ŧ	9,418,500 11,511,500 18,433,800 25,830,000 25,830,000 10,756,687	9,209,200 9,209,200 11,511,500 18,433,800 25,515,000 25,515,000 6,722,930	71,392,430	18,154,500 25,515,000 30,039,800 30,039,800
The Quarry		USE TYPE	Village 1 Village 2 Village 2 Village 4 Village 4 Village 5 Village 7 Gen. Commercial Oben Sbace	-	Village 1 Village 2 Village 2 Village 4 Village 4 Village 6 Village 6 Village 6 Open Space	Village 1 Village 2 Village 3 Village 4 Village 4 Village 5 Village 6 Village 6 Village 7		Village 1 Village 2 Village 3 Village 4 Village 4 Village 5 Village 7 Gen. Commercial Open Space
		YEAR	2018	Subtota	2019	2020	Subtotal	2021 Sebtotal

December 2017

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Fiscal Impact Analysis-City of Sparks

B         ESTIMATED         RUILDING         RUILDING         RUILDING         RUILDING         RUILDING         RUILDING         RUILDING         RUILDING         RERMIT         PERMIT										
USE         BUILDING         PRINCIPAL         PERMIT           IXYPE         VALUATION         AMOUNT         REVENUE           Village 1         VALUATION         AMOUNT         REVENUE           Village 1         VILLAGE         25,137,000         179,805         171,893           Village 3         25,137,000         179,805         171,893           Village 4         2         25,515,000         178,018         170,185           Village 5         25,515,000         178,018         170,185           Village 6         29,690,500         178,018         170,185           Village 7         25,515,000         178,018         170,185           Open Space         188,143         179,864         -           Open Space         188,143         179,864         -           Open Space         80,342,500         545,965         521,942           Village 1         -         -         -         -           Village 2         25,515,000         545,965         521,942           Village 3         25,137,000         -         -         -           Village 4         25,515,000         -         -         -           Village 5 <th>PLAN CURRENT</th> <th>CURRENT FIRE INSPECJ REGIONAL</th> <th>REGIONAL</th> <th>SEWER</th> <th>RESIDENTIAL</th> <th></th> <th>IMPACT</th> <th>IMPACT FEE SERVICE AREA #1</th> <th>3 AREA #1</th> <th></th>	PLAN CURRENT	CURRENT FIRE INSPECJ REGIONAL	REGIONAL	SEWER	RESIDENTIAL		IMPACT	IMPACT FEE SERVICE AREA #1	3 AREA #1	
Village 1       -	REVIEW PLANNING REVENUE REVENUE	PLANNING PLAN REVIEW REVENUE REVENUE	ROAD REVENUE	CONNECT. REVENUE	PARK TAX REVENUE	SANITARY SEWER	FLOOD	REGIONAL PARKS/REC	FIRE	TOTAL
Village 2       -       -       -         Village 3       25,137,000       179,805       171,893         Village 4       -       -       -         Village 5       25,515,000       178,018       170,185         Village 6       29,690,500       -       179,864         Gen. Commercial       -       188,143       179,864         Open Space       188,143       179,864         Open Space       -       -       -         Open Space       -       -       -         Village 1       -       -       -         Village 1       -       -       -         Village 2       25,137,000       -       -         Village 4       25,137,000       -       -         Village 1       -       -       -         Village 2       25,137,000       -       -         Village 4       25,515,000       -       -         Village 5       25,515,000       -       -         Village 6       -       2       -       -         Village 6       -       2       -       -         Village 6       -       2 <td< td=""><td>•</td><td></td><td></td><td>•</td><td></td><td></td><td>•</td><td>•</td><td>•</td><td>•</td></td<>	•			•			•	•	•	•
Village 3       25,137,000       179,805       171,893         Village 4       25,515,000       178,018       170,185         Village 5       25,515,000       178,018       170,185         Village 6       29,690,500       -       -         Village 7       178,143       179,864         Cen. Commercial       -       188,143       179,864         Open Space       188,143       179,864         Open Space       -       -       -         Open Space       -       -       -         Village 1       -       -       -       -         Village 2       25,137,000       -       -       -       -         Village 4       25,137,000       -       -       -       -       -         Village 5       25,137,000       -	•	•	5	•	•	,			•	1
25,515,000 178,018 170,185 29,690,500 188,143 179,864 - 188,143 179,864 - 25,137,000 545,965 521,942 25,137,000 - 1 25,515,000 - 1 28,175,000 - 1 28,175,000 - 1	71,922 12,600	79,114	352,976	528,775	90,000	26,730	53,370	70,020	30,600	180,720
Village 5       25,515,000       178,018       170,185         Village 6       29,690,500       -       -         Village 7       -       188,143       179,864         Gen. Commercial       -       -       -         Open Space       -       -       -         Village 1       -       -       -         Village 2       25,137,000       -       -         Village 5       25,515,000       -       -         Village 6       -       -       -         Village 7       28,175,000       -       -         Village 7       28,175,000       -       -	•	•	à	1		•	•	,	•	•
Village 6       29,690,500       -       -         Village 7       -       188,143       179,864         Gen. Commercial       -       -       -         Open Space       -       -       -         Village 1       -       -       -         Village 2       25,137,000       -       -         Village 5       25,515,000       -       -         Village 6       -       -       -         Village 7       28,175,000       -       -         Village 7       28,175,000       -       -	71,207 11,340	78,328	317,679	475,898	81,000	24,057	48,033	63,018	27,540	162,648
Village 7     -     188,143     179,864       Gen. Commercial     -     -     -       Open Space     -     -     -       Open Space     -     -     -       Open Signed     -     -     -       Village 1     -     -     -       Village 3     25,137,000     -     -       Village 4     -     -     -       Village 5     25,515,000     -     -       Village 6     -     -     -       Village 7     28,175,000     -     -	•	•		ė		•	•	•	•	•
Gen. Commercial       -	75,257 9,800	82,783	274,537	411,270	70,000	20,790	41,510	54,460	23,800	140,560
Open Space         -	•	4		•	9	•	•	•	•	•
otal 80,342,500 545,965 521,942 Village I								1		1
Village 1 Village 2 Village 3 Village 4 Village 5 Village 6 Village 6	218,386 33,740	240,225	945,192	1,415,942	241,000	71,577	142,913	187,498	81,940	483,925
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Gen. Commercial	•	,		ţ	Y	•	ì	,	•	
Open Space	•	•		•	•		•	•		•
Subtotal 78,827,000	•			÷		1		1	¥	

# **APPENDIX 5, ASSUMPTIONS:**

- 1. Building valuation is estimated in Appendix 1. It should be noted that permit fees associated with some residential uses are likely underestimated as construction values provided by the Client and used to estimate permit revenues for the projection of the client and used to estimate permit revenues for the projection of the projection of the client and used to estimate permit revenues for the projection of the permit revenues for the projection of the projection of the permit permit permit revenues for the projection of the permit are lower than those provided by the 2012 International Building Code.
  - 2. Principal amount for the calculation of building permit and plan check fee revenue is estimated at follows, principal amount and resulting fees are estimated in the year prior to construction:
    - for each additional \$1,000 thereafter through a value of \$500,000. 5.60
    - for each additional \$1,000 thereafter. 3.65 \$ 993.75 for the first \$100,000.01 of Building Permit Valuation, plus 5,608.75 for the first \$1,000,000.01 of Building Permit Valuation, plus
- Source: "City of Sparks Permit Fees." Revised October 9, 2017. As the number of connnercial buildings is unknown, analysis conservatively assumes one building permit per year. of principal amount. 95.60%
- of principal amount, except for single family repeats, which are estimated at 40.00% of the principal amount, except for single family repeats, which are estimated; \$ 140.00 per building. of the principal amount. of the principal amount. 22.00% 22.00% 75.00% Current Planning Plan Review fee revenue is estimated at Fire Prevention Plan review fee revenue is estimated at Fire Prevention Inspection fee revenue is estimated at Building Plan Review fee revenue is estimated at 3. Building Permit fee revenue is estimated at
- Analysis conservatively assumes all single family homes are repeat units. Source: "City of Sparks Permit Fees." Revised October 9, 2017. Revenue for mechanical, plumbing, and electrical permit fees is not estimated as the construction deta: required for these estimates are unknown.
  - 4. Regional Road Impact fee (RRIF) revenue is estimated at:
- 3,921.96 per dwelling unit. 643 Single Family
- 7,011.20 per 1,000 square feet of gross floor area. 69 Commercial
- Source: "Regional Road Impact Fee (RRIF)." Regional Transportation Commission. 5th Edition, March 20, 2017. Data for North Service Area.
- \$ 5,875.28 per residential unit. Source: "City of Sparks Permit Fees." Revised October 9, 2017. Connection fees for commercial uses are not estimated as fixture information Sewer Connection fee revenue is estimated at is not available. s.

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Fiscal Impact Analysis-City of Sparks

ESTIMATED     BUILDING     PRINCIPAL     PER       USE     BUILDING     PRINCIPAL     PER       Valuation will result in the following values per unit:     Village 1     \$       Valuation will result in the following values per unit:     Village 2     \$       Yullage 2     \$     Yillage 4     \$       Yullage 4     \$     Yillage 5     \$       Y. The Project is located adjacent to the Impact Fees Service Area     Un	APPENDIX A         CITY OF SPARKS         ESTIMATED       BUILDING       PLANTED FERMIT AND IMPACT FEE REVENUE         ESTIMATED       BUILDING       PLANTED FERMIT AND IMPACT FEE REVENUE         VER       BUILDING       PLAN       CURRENT FIRE INSPECT RECIONAL       SEVENT A       IMPACT FEE SERVICE AREA #1         VER       BUILDING       PRINCIPAL       PERMIT AND IMPACT FEE REVENUE       REVENUE <th< th=""></th<>
Single Family Dwelling	elling \$ 297.00 \$ 593.00 \$ 778.00 \$ 340.00
Commercial 1,000 Sq.Ft.	0 Sq.Ft. \$ 279.00 \$ 537.00 \$ - \$ 340.00

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40.0         20.1         20.2 <th< td=""></th<>
424.72         5         742.32         5         1076.375         5         1,386.658         5         1,721.035         5         1,886.734         5         1           424.72         5         742.312         5         1,076.375         5         1,386.658         5         1,721.035         5         1,886.734         5         1           45831         5         94031         5         1,2337         5         1,386.658         5         1,751.035         5         1,888.734         5         1           4,531         7         0         4,042         6,113         8,534         10,034         11,262         11,600         11,948         7         1         1         2
424,72 $5$ $742,32$ $5$ $1076,375$ $5$ $1.386,658$ $5$ $1.701,005$ $5$ $1.896,573$ $5$ $1.886,734$ $5$ $1.886,734$ $5$ $1.886,734$ $5$ $1.0$ $1.2$ $1.886,734$ $5$ $1.886,734$ $5$ $1.0$ $1.886,734$ $5$ $1.0$ $1.886,734$ $5$ $1.0$ $1.2$ $1.286,734$ $5$ $1.0$ $1.1262$ $1.1806,737$ $5$ $1.986,734$ $5$ $1.0$ $1.1960$ $1.1$
44.712         5         742,321         5         1,076,375         5         1,386,658         5         1,751,065         5         1,888,734         5         18           45,831         5         94,031         5         142,237         5         198,304         5         254,360         5         262,011         5         209,872         5         277968         5         1           44,37         70,653         106,959         149,002         191,137         196,871         202,777         208,860         1         294         2         2         2           4413         852         106,959         5         156,706         5         75,307         5         84,137         5         86,61         2
45,831         5         94,031         5         142,337         5         198,304         5         254,380         5         260,872         5         277,968         5         1           1,970         4,042         6,118         8,524         10,934         11,562         11,600         11,948         1
1,970 $4,042$ $6,118$ $8,524$ $10,934$ $11,262$ $11,600$ $11,948$ $11,948$ $3,4,37$ $70,653$ $106,950$ $149,002$ $11,913$ $19,137$ $19,6871$ $208,860$ $11,948$ $11,144$ $415$ $822$ $12,890$ $1,9902$ $1,9902$ $2,373$ $2,443$ $2,2433$ $2,2443$ $2,2433$ $2,2433$ $2,2433$ $2,2433$ $2,2433$ $2,3712$ $20,8601$ $2,2304$ $1,7479$ $8,6511$ $10,344$ $11,447$ $5,443$ $5,607$ $5,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $5,948$ $2,775$ $2,948$ $2,775$ $2,948$ $2,775$ $2,948$ $2,775$ $2,948$
34,437 $70,653$ $106,950$ $149,002$ $191,137$ $196,871$ $202,777$ $208,860$ $1$ $415$ $823$ $106,957$ $2$ $357,626$ $2$ $357,626$ $2$ $357,626$ $2$ $202,777$ $208,860$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,518$ $2$ $2,516$ $2$ $2,516$ $2$ $2,516$ $2$ $2,516$ $2$ $2,516$ $2$ $2,516$ $2$ $2,507$ $2$ $2,507$ $2$ $2,507$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ $2,504$ $2$ <
34,437 $70,653$ $106,950$ $14,900$ $1,900$ $1,900$ $2,303$ $2,343$ $2,0129$ $2,518$ $2,2445$ $2,511294$ $2,2133$ $2,2445$ $2,21394$ $2,2133$ $2,2445$ $2,21394$ $2,2133$ $2,2139$ $2,2133$ $2,2445$ $2,511294$ $2,2133$ $2,2445$ $2,511294$ $2,2133$ $2,2445$ $2,511294$ $2,2133$ $2,2445$ $2,511294$ $2,2133$ $2,2445$ $2,511294$ $2,21301$ $2,21301$ $2,21301$ $2,21292$ $11,447$ $5,443$ $5,607$ $5,7175$ $5,948$ $2,212,912$ $2,212,912$ $2,212,912$ $2,212,912$ $3,511$ $3,719$ $3,331$ $3,946$ $2,212,912$ $2,212,912$ $3,2112$ $3,2112$ $3,2122$ $5,212,912$ $3,2112$ $3,2112$ $3,2122$ $2,212,912$ $3,2129$ $3,2311$ $3,2122$ $2,212,912$ $3,2122$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$ $2,214,212$
82,653         5         169,578         5         256,695         5         357,626         5         458,755         5         471,51         5         86,661         5         501,294         5         5         501,294         5         5         501,294         5         5         501,204         5         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         501,204         5         504,60         5         504,60         5         504,60         5         504,60         5         504,60         5         504,60         5         <
7,479         8,651         10,344         11,447         5,443         5,607         5,775         5,948           902         1,576         2,285         2,943         3,611         3,719         3,831         3,946           145,759         5         194,556         5         304,087         5         246,040         5         253,422         5         261,024         5         3946           145,759         5         194,556         5         304,087         5         246,040         5         253,422         5         268,855         5         2           145,759         5         194,556         5         304,087         5         246,040         5         253,422         5         268,855         5         2           145,759         5         -         5         -         5         -         5         5         5         5         2         5 <t< td=""></t<>
902 $1.576$ $2.285$ $2.943$ $3.611$ $3.719$ $3.831$ $3.946$ -         -<
5         194,556         5         251,666         5         304,087         5         246,040         5         253,422         5         268,855         5         2
S         194,556         S         251,566         S         304,087         S         246,040         S         253,422         S         268,855         S         Z         S         Z         Z         S         Z68,855         S         Z <thz< td="" th<<=""></thz<>
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4,830 \$ 9,910 \$ 15,001 \$ 20,899 \$ 26,808 \$ 27,613 \$ 28,441 \$ 29,294 \$
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The Quarry						APPENDIX 6 CITY OF SPARKS	APPENDIX 6 TV OF SPARI	S					Fiscal Impact Analysis-City of Sparks	t Analysis-C	ity of Sp	arks
			COM	PARISO	N OF EST	IMATED	REVEN	UE TO EST	PARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS	STS			2			
EXPENDITURES	Base Year FY 16-17	2018	2019		2020	2021	Ν.	2022	2023	2024	0	2025	2026	2027	IST 10-YEAR <u>SUBTOTAL</u>	TAL TAL
General Government																
Legislative <sup>9</sup>	\$ 438,791 \$	1	\$	886 \$	3,286	\$ 5.376	8	7.538 \$	9,962 \$	11,957	ы	12,306 \$	12,665 \$	13,035	S	77,010
Mayor <sup>9</sup>	109,556	ŗ												3,254		19,228
Management Services <sup>9</sup>	5,966,619	Ĩ.	12,054	154	44,684	73,096		102,494	135,460	162,596		167,334	172,215	177,242	1,04	1,047,175
Legal <sup>9</sup>	1,617,935	,	3,	3,269	12,117	19,821	_	27,793	36,732	44,090		45,375	46,699	48,062	28	283,957
Financial Services <sup>9</sup> Community Services <sup>9</sup>	3,044,757 1,032,879	6.6	6, 2,(	6,151 2,087	22,802 <mark>7,735</mark>	37,301 12,654		52,303 17,743	69,125 23,449	82,972 28,147		85,390 28,967	87,881 29,812	90,447 30,682	53	534,372 181,276
General Government Total	\$ 12,210,537 \$		\$ 24,6	568 S	91,445	\$ 149,589	s	209,752 \$	277,215 S	332,748	s	342,445 S	352,434 S	362,722	S 2,14	2,143,017
Judicial																
Judicial <sup>10</sup>	\$ 2,123,457 \$		69	\$	16,556	\$ 33,967	69	51,417 \$	71,634 \$	91,891	69	94,648 \$	97,487 \$	100,412	s 55	558,014
Judicial Total	S	×	s	600 1	16,556	\$ 33,967	s	51,417 \$	71,634 S	91,891	s	94,648 \$	97,487 S	100,412	\$ 55	558,014
Public Safety																
<u>Police</u> Police <sup>11</sup>	Appendix 7 \$	6	\$ 4,8	4,825 \$	179,654	\$ 320,617	69	461,896 \$	625,547 \$	789,526	69	812,079 \$	835,308 \$	859,234	\$ 4,88	4,888,686
<u>Fire</u> Fire <sup>12</sup>	Appendix 8 \$	6)	\$ 49,622	522 S	100,199	\$ 148,226	69	203,841 S	259,571 \$	267,359	69	275,379 \$	283,641 \$	292,150	s 1,87	1,879,988
Community Services Community Services <sup>13</sup>	\$ 1,277,098 \$	ae.	\$ 20,246	246 \$	20,853	\$ 21,479	<del>60</del>	22,123 S	22,787 \$	23,471	69	24,175 \$	24,900 \$	25,647	<mark>\$</mark> 20	205,681
Public Safety Total	8		\$ 74,693	593 S	300,706	\$ 490,321	s	687,860 \$	907,905 S	1,080,356	s	1,111,633 \$	1,143,849 \$	1,177,031	S 6.97	6,974,354
Public Works																
Community Services <sup>14</sup>	\$ 1,480,919 \$	•	\$ 23,4	\$ 11	24,181 5	\$ 24,907	64	25,654 \$	26,424 \$	27,216	69	28,033 \$	28,874 S	29,740	\$ 23	238,507
Public Works Total	S	6	\$ 23,4	477 S	24,181	<mark>\$ 24,907</mark>	68	25,654 \$	26,424 S	27,216	60	28,033 \$	28,874 \$	29,740	<mark>\$</mark> 3	238,507
Culture and Recreation																
Community Services <sup>10</sup>	\$ 2,883,027 \$	x	69	\$	22,478	\$ 46,118	69	69,810 \$	97,258 \$	124,761	69	128,504 \$	132,359 \$	136,330	\$ 75	757,618
Culture and Recreation Total	69		s	99 1	22,478	<mark>\$ 46,118</mark>	s	69,810 S	97,258 S	124,761	\$	128,504 \$	132,359 \$	136,330	<mark>\$ 7</mark> 5	757,618

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			COL	APARIS	ON OF ES	CIT	APPENDIX 6 CITY OF SPARKS AATED REVENUE	IX 6 ARKS ENUE TO	ESTIN	APPENDIX 6 CITY OF SPARKS COMPARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS	STS							
Bi E	Base Year FY 16-17	2018	2019	ଣ	2020	2021	11	2022		2023	2024		2025	2026		2027	IST 10-YEAR SUBTOTAL	EAR
Management Services <sup>9</sup> \$	268,707 \$	8	Ś	543 \$	2,012	69	3,292 \$	4,616	8	6,100 \$	7,322	22 \$	7,536	5	7,756 \$	7,982	\$	47,160
Community Support Total	69		s	<mark>543 \$</mark>	2,012	s	<mark>3,292 S</mark>	4,616	8	6,100 S	1,322	23 S	7,536	\$ 7;	7,756 \$	7,982	<mark>\$</mark> 47	47,160
EXPENDITURES SUBTOTAL	S	. 6.	\$ 123.	381 \$	457,379	S 74	748,194 S	1,049,109	S	1,386,537 \$	S 1,664,295	S	1,712,799	\$ 1,762,759	S	1,814,217	S 10,718,670	8,670
CONTINGENCY	3% \$	a).	69	3,701 \$	13,721	\$	22,446 \$	31,473	\$9	41,596 \$	49,929	s 67	51,384	\$ 52,883	383 \$	54,427	\$ 321	321,560
EXPENDITURES TOTAL	69	8	\$ 127	,082 \$	471,101	S 77	770,640 \$	1,080,582	69	1,428,133	\$ 1,714,223	69	1,764,183	\$ 1,815,642	S	1,868,644	S 11,040,230	1,230
GENERAL FUND SURPLUS/(DEFICIT)	S	54,948	\$ 8	1,622 \$	186,863	S 34	345,726 S	519,054	s	641,136 S	718,386	S 98	741,404	s 765,114	114 S	789,534	S 4,849	4,849,787
ROAD FUND																		
REVENUE																		
Licenses and Permits Licenses and Permits <sup>3,12</sup>	1,609,563 \$	0	69	69	12,549	69	25,747 \$	38,974	\$	54,298 \$	69,653	33 \$	71,742	\$ 73,	73,895 \$	76,112	S 423	422,970
			63	1.		69	25,747 \$	38,974		54,298 S	69,653		71,742	\$ 73,895		76,112		422,970
Intergovernmental Revenues County Gasoline Tax <sup>3</sup> \$ State Gasoline Tax <sup>2</sup>	665,250 \$	• •	69	<mark>69</mark> 1 1	5,187	63	10,642 \$	16,108 43,425	69	22,442 \$	28,788	38 S	29,652 79 935	\$ 30,541 82,333	541 \$ 333	31,458 84.803	\$ 17 <sup>4</sup>	174,818 471.271
ļ	2,458,615 S	ľ	69	1		69	39,329 S		69	82,941 S		2 S	109,587	s 112,875	875 S	116,261	S 64	646,089
<u>Miscellaneous</u> Interest Earned' \$	5,000 \$		69	-		69	-		\$		'	60			8		\$	
Subtotal	69		69	•		64	6/2		69	69		695 1	1	s	69	•	s	•
REVENUE TOTAL	S		s	- S	31,718	\$ 6	65,076 S	98,507	5	137,239 S	176.048	<b>8</b>	181.329	<mark>\$ 186,769</mark>	769 S	192,372	<mark>\$ 1,06</mark>	1,069,059
EXPENDITURES																		
Public Works <sup>16</sup> Ap	Appendix 9 \$	6	69	522 \$	819,813	\$ 82	820,247 S	821,873	69	824,087 S	825,709	\$ 6(	825,862	\$ 826,019	319 \$	826,179	\$ 6,590,311	116(
EXPENDITURES SUBTOTAL	S	ľ	s	522 \$	819,813	5	820,247 S	821,873	603	824,087 \$	825,709	9 S	825,862	\$ 826.019	1 <mark>19 S</mark>	826,179	<mark>S 6.591</mark>	6.590.311
CONTINGENCY	0% \$	0	69	69 1		69	s 1	ä	69	59		643	1	69	5	,	s	
EXPENDITURES TOTAL	69		\$	<mark>522 \$</mark>	819,813	\$ 82	820,247 S	821,873	59	824,087 S	825,709	S 6	825,862	\$ 826,019	S 610	826,179	S 6,590,311	311
ROAD FUND SURPLUS/(DEFICIT)	8		\$	(522) \$	(788,094)	50	(755,171) S	(723,366)	-	(686,848) \$	(649,661)	s	(644,533)	\$ (639,250)	50) S	(633,806)	S (5,521,252	,252)

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	1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		COL	MPARISC	N OF ES	A CIT STIMAT	APPENDIX 6 CITY OF SPARKS AATED REVENUE	APPENDIX 6 CTTV OF SPARKS COMPARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS	STIMAT	ED COST	ş		0) 			
	2028	2029		2030	2031	_1	2032	2033	50	2034	2035	2036	2037	10-YEAR SUBTOTAL	20- 11C	20-YEAR TOTAL
GENERAL FUND																
REVENUE																
<u>Taxes</u> Ad Valorem'	\$1,914,496	\$ 1,971,931	60	2,031,089	\$ 2,092,022		\$ 2,154,783	\$2,219,426		\$ 2,286,009	\$ 2,354,589	\$ 2,425,227	\$ 2,497,984	\$21,947,557	\$ 32	32,854,535
Subtotal	\$1,914,496			\$ 2,031,089			\$ 2,154,783				\$ 2,354,589	S 2,425,227				32,854,535
Licenses and Permits Business Licenses <sup>3</sup>	\$ 286,307	64	896 S	303,743	\$ 312	312,855 \$		64	643	341,865 \$		<del>69</del>	\$	6A	*	4,826,921
Liquor Licenses <sup>2</sup> City Gamino I icenses <sup>2</sup>	12,307		12,676	13,056	1	13,448	13,851	14,267		(14,69	051,CI	066,61	16,001	141,082		20/,481
Franchise Fees <sup>3</sup> Nonhusiness Licenses and Permits <sup>2</sup>	215,126	2	580	228,227	235	235,074	242,126	249,390		256,872	264,578	272,515	280,690	2,466,177	en	3,626,862
Subtotal	5 516,333	S.	31,823 S	547,778	S 564	564,211 S	ŝ	\$ 51	S	616,528 S	9	S 65	S 6	\$ 21	90 50	8,704,989
Intergovenmental Revenue Consolidated Tax-CCRT Revenue <sup>4</sup> Consolidated Tax-Other Revenue <sup>5</sup>	\$ 89,261 177.470	64	91,939 \$ 182 794	94,697 188 278	\$ 192	97,538 \$	100,464 199.744	\$ 103,478 205.736	64	106,582 \$ 211.908	109,779 218.265	<pre>\$ 113,073 224.813</pre>	\$ 116,465 231.558	\$ 1,023,275 2,034,491	0 0 8	2,009,359 2,992,007
State Distributive Fund-Sales Tax <sup>4</sup>	6,126	1	6,310	6,499		6,694	6,895			7,315	7,535			Î		137,912
State Distributive Fund-Other <sup>°</sup> County Gaming Licenses <sup>2</sup>	4,064	4	4,186	4,311	ч	4,441	4,574	4,711	11	4,853	4,998	5,148	5,302	46,588		69,741
Other Intergovernmental Revenue	•			X			9				8	18. 19.	×	•		10
Subtotal	S 276,921	S 285,228	228 S	293,785	S 302	302,599 S	311,677	S 321,027	s	330,658 S	340,578	S 350,795	S 361,319	S 3,174,586	5	5,209,018
Charges for Services Building and Zoning Fees <sup>7</sup> Other <sup>8</sup>	ел н С	\$	\$		69	<u>د</u>	* *	es l	ы	ю Э. 1	÷. 8	• •	ы. 19	• • ••	69	
Subtotal		69	69	a A	s		*	5	S	*	•	•	•	•	5	•
<u>Fines</u> and Forfeits Fines <sup>3</sup>	\$ 30,173	\$ 31,	31,078 \$	32,011	\$ 32	32,971 \$	33,960	\$ 34,979	ŝ	36,028 \$	37,109	\$ 38,222	\$ 39,369	s 345,902	\$	508,697
<u>Miscellaneous</u> Miscellaneous <sup>7</sup>	\$	64	\$	į.	69	\$	8	69	69	69	8	•	63	۰ ج	69	ŧ
REVENUE TOTAL	\$2,737,923	\$ 2,820,061	S	2,904,663	\$ 2,991,803		\$ 3,081,557	\$3,174,003		S 3,269,224 S	\$3,367,300	\$ 3,468,319	\$ 3,572,369	\$31,387,222	\$ 47	47,277,239

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1. 20. 20.		CO	MPARISON	APPENDIX 6 CITY OF SPARKS COMPARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS	APPENDIX 6 CITY OF SPARKS IATED REVENUE	CS JE TO ESTIN	TATED COS	SL				
	2028	2029	2030	2031	2032	2033	2034	2035	<u>2036</u>	2037	10-YEAR SUBTOTAL	20-YEAR <u>TOTAL</u>
643	13,415 \$	13,808 \$	14,212 \$	14,628 \$	15,056	\$ 15,498 \$	15,952	\$ 16,421 \$	16,903	\$ 17,400	\$ 153,293	S 230,303
	3,350	3,447	3,548	3,652	3,759	3,869	3,983	4,100	4,220	4,344	38,274	57,501
	182,421 49,466	187,754 50,912	193,247 52,402	198,906 53,936	204,/34 55,517	210,/3/ 57,144	216,920 58,821	60,548 60,548	229,848 62,326	250,004 64,159	2,084,457 565,231	3,131,032 849,187
	93,089 31,579	95,811 32,502	98,614 33,453	101,501 34,432	104,475 35,441	107,539 36,481	110,694 37,551	113,944 38,653	117,291 39,789	120,739 40,958	1,063,696 360,840	1,598,067 542,116
5	373,319 S	384,234 \$	395,476 \$	407,056 \$	418,983	S 431,267 S	443,921	S 456,953 S	470,377	\$ 484,204	\$ 4,265,790	\$ 6,408,807
\$	<b>\$</b> 103,424 <b>\$</b>	106,527 S	109,723 \$	113,015 \$	116,405	\$ 119,897 \$	123,494	\$ 127,199 \$	131,015	\$ 134,945	\$ 1,185,645	<mark>\$ 1,743,659</mark>
<b>\$</b> 10	\$ 103,424 \$	106,527 \$	109,723 \$	113,015 \$	116,405	S 119,897 S	123,494	<mark>\$ 127,199 \$</mark>	131,015	\$ 134,945	\$ 1,185,645	\$ 1,743,659
\$	883,878 \$	909,261 \$	935,406 \$	962,334 \$	990,071	\$1,018,640 \$	\$ 1,048,066	\$ 1,078,375	\$ 1,109,593 \$	\$ 1,141,747	\$10,077,372	\$ 14,966,058
\$ 30	300,914 \$	309,942 S	319,240 \$	328,817 \$	338,682	\$ 348,842 \$	359,308	\$ 370,087 \$	381,189	\$ 392,625	\$ 3,449,647	\$ 5,329,635
8	26,416 \$	27,209 \$	28,025 \$	28,866	29,732	\$ 30,624 \$	31,543	\$ 32,489 \$	33,463	<b>\$</b> 34,467	\$ 302,834	\$ 508,515
\$1,2	\$1,211,209 \$ 1	<b>S 1,246,412 S</b> 1	<b>\$ 1,282,671 \$</b>	1,320,018	\$ 1,358,485	\$1,398,106	S 1,438,916	S 1,480,950 S	\$ 1,524,246 \$	S 1,568,840	\$13,829,852	S 20,804,207
69	30,632 \$	31,551 \$	32,498 \$	33,473 \$	34,477	\$ 35,511 \$	36,577	\$ 37,674 \$	38,804	\$ 39,968	\$ 351,165	\$ 589,672
69	30,632 \$	31,551 \$	32,498 \$	33,473 \$	34,477	<mark>\$ 35,511 \$</mark>	36,577	\$ 37,674 \$	38,804	\$ 39,968	\$ 351,165 S	\$ 589,672
69	\$ 140,420 \$	144,632	\$ 148,971 \$	153,441 \$	158,044	\$ 162,785 \$	167,669	\$ 172,699 \$	177,880	\$ 183,216	\$ 1,609,756	S 2,367,374
4	e 140.430 e	A 411 744 A		A 84 4 4 4		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		A 180 700 A	100		A 4 444	A DAMA DA

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1 ne Quany										FISCAI IN	riscal impact Analysis-City of Sparks	ity of Sparks
			OMPARISO	APPENDIX 6 CITY OF SPARKS COMPARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS	APPENDIX 6 CITY OF SPARKS AATED REVENUE	S KS UE TO ESTI	MATED CO	STS				
Community Support	2028	2029	2030	<u>2031</u>	<u>2032</u>	2033	2034	<u>2035</u>	<u>2036</u>	2037	10-YEAR SUBTOTAL	20-YEAR TOTAL
Management Services <sup>9</sup>	\$ 8,215	<mark>\$</mark> 8,456	\$ 8,703	<mark>\$ 8,958</mark>	\$ 9,220	\$ 9,491	<mark>\$ 9,769</mark>	\$ 10,056	\$ 10,351	\$ 10,655	\$ 93,874 \$	141,033
Community Support Total	<mark>\$ 8,215</mark>	<mark>\$ 8,456</mark>	\$ 8,703	<mark>\$ 8,958</mark>	<mark>\$ 9,220</mark>	<mark>\$ 9,491</mark>	<mark>\$ 9,769</mark>	<mark>\$ 10,056</mark>	\$ 10,351	\$ 10,655	<mark>\$ 93,874 \$</mark>	141,033
EXPENDITURES SUBTOTAL	\$1,867,220	\$ 1,921,812	\$ 1,978,042	\$ 2,035,959	S 2,095,614	\$2,157,058	<mark>\$ 2,220,345</mark>	\$ 2,285,531	\$ 2,352,673	<mark>\$ 2,421,829</mark>	\$21,336,083 \$	32,054,753
CONTINGENCY	\$ 56,017	S 57,654	\$ 59,341	\$ 61,079	\$ 62,868	\$ 64,712	\$ 66,610	\$ 68,566	s 70,580	\$ 72,655	<b>\$ 640,082 \$</b>	961,643
EXPENDITURES TOTAL	\$1,923,236 \$ 1,979,466	\$ 1,979,466	\$ 2,037,383	\$ 2,097,038	\$ 2,158,482	\$2,221,770	\$ 2,286,956	\$ 2,354,097	\$ 2,423,253	\$ 2,494,484	\$21,976,165 \$	33,016,396
GENERAL FUND SURPLUS/(DEFICIT \$ 814,687	CII \$ 814,687	<mark>\$ 840,595</mark>	\$ 867,279	\$ 894,765	\$ 923,075	\$ 952,234	S 982,268	\$ 1,013,203	\$ 1,045,066	\$ 1,077,885	\$ 9,411,057 \$	14,260,844
ROAD FUND												
REVENUE												
Licenses and Permits. Licenses and Permits <sup>2,13</sup>	\$ 78,395	\$ 80,747	\$ 83,169	\$ 85,664	\$ 88,234	\$ 90,881	<mark>\$</mark> 93,608	\$ 96,416	\$ 99,308	\$ 102,288	\$ 898,710 \$	1,321,680
Subtotal	\$ 78,395	<mark>S 80,747</mark>	83,169	<mark>\$ 85,664</mark>	<mark>\$ 88,234</mark>	90,881	<mark>\$ 93,608</mark>	96,416	805,99	\$ 102,288	898,710	1,321,680
<u>Intergovermmental Revenues</u> County Gasoline Tax <sup>3</sup> State Gasoline Tax <sup>3</sup> Subtotal	\$ 32,401 87,347 <b>\$ 119,749</b>	<pre>\$ 33,374</pre>	S 34,375 92,667 <b>\$ 127,041</b>	<pre>\$ 35,406 95,447 \$ 130,852</pre>	<pre>\$ 36,468     98,310     <b>5 134,778</b></pre>	\$ 37,562 101,259 \$ 138,821	<pre>\$ 38,689 104,297 \$ 142,986</pre>	\$ 39,850 107,426 <b>\$ 147,276</b>	<pre>\$ 41,045 \$ 110,649 \$ 151,694 \$</pre>	<ul> <li>\$ 42,277</li> <li>\$ 113,968</li> <li>\$ 156,245</li> </ul>	\$ 371,446 \$ 1,001,337 \$ 1,372,783 \$	546,265 1,472,607 2,018,872
<u>Miscellaneous</u> Interest Earned'	69		69		, 8	,	5	и 69	5	69	5 1 5	
Subtotal	- -		ľ			1		'	'		ŀ	•
REVENUE TOTAL	\$ 198,143	S 204,088	\$ 210,210	\$ 216,517	\$ 223,012	\$ 229,703	<mark>\$ 236,594</mark>	<mark>\$ 243,691</mark>	S 251,002	\$ 258,532	\$ 2,271,493 \$	3,340,551
EXPENDITURES												
Public Works <sup>16</sup>	\$ 826,341	\$ 826,507	\$ 826,677	\$ 826,850	\$ 827,026	\$ 827,206	\$ 827,389	\$ 827,576	\$ 827,767 \$	\$ 827,961	\$ 8,271,299 \$	14,861,610
EXPENDITURES SUBTOTAL	\$ 826,341	<mark>\$ 826,507</mark>	\$ 826,677	<mark>\$ 826,850</mark>	<mark>\$ 827,026</mark>	\$ 827,206	<mark>\$ 827,389</mark>	S 827,576	<mark>\$ 827,767 \$</mark>	\$ 827,961	\$ 8,271,299 \$	14,861,610
CONTINGENCY	• ••	•	•	5	•	69	•	•	·	69	5	
EXPENDITURES TOTAL	\$ 826,341	\$ 826,507	\$ 826,677	\$ 826,850	\$ 827,026	\$ 827,206	\$ 827,389	\$ 827,576	S 827,767 S	\$ 827,961	S 8,271,299 S	14,861,610
ROAD FUND SURPLUS/(DEFICIT)		S (628,197) S (622,419)	\$ (616,466)	\$ (610,332) \$	(604,013)	\$ (597,502) \$	S (590,795)	S (583,884)	\$ (576,764) \$	\$ (569,429)	S (576,764) S (569,429) S (5,999,807) S	(11,521,059)
Ekay Economic Consultants, Inc.											Ă	December 2017

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Fiscal Impact Analysis-City of Sparks

# APPENDIX 6 CITY OF SPARKS COMPARISON OF ESTIMATED REVENUE TO ESTIMATED COSTS

# **APPENDIX 6, ASSUMPTIONS:**

Unless otherwise indicated, the analysis uses Estimated Current Year Ending 6/30/2017 (Fiscal Year 2016-2017) revenue and expenditure data from the City of Sparks Budget, FY 2017-18.

1 See Appendix 3 for calculations.

- 2 The analysis is conservative in not estimating the increase in some Sparks business-related revenues resulting from new residents of the development, though this increase is expected to occur.
- Source: City of Sparks Budget FY 2017-18. annually and applied to the estimated annual population of 93,581 the Project. Per capita revenue is calculated by dividing FY 2016-17 revenue for each source by City of Sparks FY 2016-17 population of 3 ACM: Revenues are calculated based on estimated FY 2016-17 City of Sparks estimated per capita revenues inflated 4 See Appendix 4 for calculations.
- 12.13% of all County C-tax revenue. As a result, the City's portion of GST revenue is 5 In addition to CCRT revenue, Consolidated tax for the City includes revenue from Real Property Transfer Tax, GST (MVPT), Cigarette and Liquor taxes. A per capita methodology as explained in footnote 3 is applied to estimate this revenue. Total Washoe County revenues from liquor, cigarette and GST (analysis conservatively does not include RPTT as it is not a recurring revenue) 30,048,968 in FY 2016-2017. City of Sparks is estimated to receive 5 sources totaled
- 6 In addition to sales tax revenue, AB 104 revenue for the City includes revenue from property, gaming, and RPTT taxes and interest. Analysis is conservative in not estimating gaming, RPTT, and interest Source: Nevada Department of Taxation. "Consolidated Tax Distribution." City of Sparks portion of C-tax revenue is based on a three-year average data for FY 2014-15 to FY 2016-17. 3,643,715 and the ACM is applied to this amount. 6 estimated at
  - revenue. Property tax revenue is estimated in Appendix 3.
    - 7 Though the project may generate revenue for the City from these sources, the amount is difficult to estimate and/or expected to be minimal.
- 8 Charges for services for the City include inter-department and inter-fund transfers, which, though impacted, may be difficult to estimate. Some charges for services revenue, such as false alarms may of direct service costs. 25.7% 9 Administrative service (indirect) costs assumed to be impacted by the project are calculated at be generated by the project, but again are difficult to estimate.
  - Source: Average percent indirect costs of direct costs for FY 2016-17. Source: City of Sparks Budget, FY 2017-18.
- Source: City of Sparks Budget FY 2017-18. annually and applied to estimated annual population 93,581 3% of the Project. Per capita costs are calculated by dividing FY 2016-17 costs for each source by City of Sparks FY 2016-17 population of 10 ACM: Expenditures are calculated based on estimated FY 2016-17 City of Sparks budget per capita costs inflated
  - See Appendix 7 for calculations and assumptions.
     See Appendix 8 for calculations and assumptions.
- 13 Expenditures for the Public Safety source include traffic signals, signs and other public safety items. Costs associated with these services are estimated by dividing total expenditures for this source of
- 1,009,280 inflated 3% annually. Source: Expenditures from City of Sparks budget FY 2017-18, City of Sparks streets inventory from City of Sparks Community Services Department. 67,541,767 and applying to the number of square feet added by the development of 1,277,098 by the total square feet of City of Sparks streets of 64
- 14 Expenditures for the Public Works source include Public Works administrative and facility maintenance costs. Costs associated with these services are estimated by dividing total expenditures for this source of 1,009,280 inflated 3% annually. Source: Expenditures from City of Sparks budget FY 2017-18, City of Sparks streets inventory from City of Sparks Community Services Department. 67,541,767 and applying to the number of square feet added by the development of 1,480,919 by the total square feet of City of Sparks streets of
  - 15 Analysis uses FY 2017-18 amount (instead of FY 2016-17) as it includes the shift of franchise revenues from the Road Fund to the Park & Recreation Project Fund.
    - 16 See Appendix 9 for calculation and assumptions.

			FOLIC		ENDIX 7 F SPARKS NT COST PROJI	ECTIONS		-	
YEAR	CUMUL. NEW RESIDENTIAL <u>POPULATION</u>	OFFICERS REQUIRED RESIDENTIAL	OFFICERS REQUIRED <u>COMMERCIAL</u>	OFFICERS REQUIRED <u>TOTAL</u>	CIVILIANS <u>REQUIRED</u>	SALARY/ <u>BENEFITS</u>	SERVICES/ SUPPLIES	ANNUALIZED VEHICLE <u>COSTS</u>	TOTAL <u>COST</u>
2018				2	-	\$ -	\$ -	\$-	\$ -
2019		÷.	0.04	0.04	0.01	4,662	163		4,825
2020	668	1.00	0.06	1.06	0.35	137,076	4,804	37,775	179,654
2021	1,330	2.00	0.06	2.06	0.69	273,265	9,577	37,775	320,617
2022	1,955	2.93	0.06	2.99	1.00	409,761	14,360	37,775	461,896
2023	2,644	3.97	0.06	4.03	1.34	567,871	19,901	37,775	625,547
2024	3,293	4.94	0.06	5.00	1.67	726,298	25,454	37,775	789,526
2025	3,293	4.94	0.06	5.00	1.67	748,087	26,217	37,775	812,079
2026	3,293	4.94	0.06	5.00	1.67	770,530	27,004	37,775	835,308
2027	3,293	4.94	0.06	5.00	1.67	793,646	27,814	37,775	859,234
2028	3,293	4.94	0.06	5.00	1.67	817,455	28,648	37,775	883,878
2029	3,293	4.94	0.06	5.00	1.67	841,979	29,508	37,775	909,261
2030	3,293	4.94	0.06	5.00	1.67	867,238	30,393	37,775	935,406
2031	3,293	4.94	0.06	5.00	1.67	893,255	31,305	37,775	962,334
2032	3,293	4.94	0,06	5.00	1.67	920,053	32,244	37,775	990,071
2033	3,293	4.94	0,06	5.00	1.67	947,654	33,211	37,775	1,018,640
2034	3,293	4.94	0.06	5.00	1.67	976,084	34,208	37,775	1,048,066
2035	3,293	4.94	0.06	5.00	1.67	1,005,367	35,234	37,775	1,078,375
2036	3,293	4.94	0.06	5.00	1.67	1,035,528	36,291	37,775	1,109,593
2037	3,293	4.94	0.06	5.00	1.67	1,066,593	37,380	37,775	1,141,747
TOTAL						\$ 13,802,400	\$ 483,715	\$ 679,942	\$ 14,966,058

#### **APPENDIX 7, ASSUMPTIONS:**

1. Population estimates are shown in Appendix 2 of the report.

2. For the residential portion of the analysis, uniformed officer positions are estimated at

1.5 positions per 1,000 population. For non-uniformed positions, a ratio of 0.5 positions for every three uniformed positions, is used. Source: City of Sparks Police Department. 3. For General Commercial use, the analysis estimates the number of calls for service generated by the project by using average data for similar projects:

			CF5/5q.FL		
	Annual CFS	<b>Building Sq.Ft.</b>	(000s)	Project Sq.Ft.	Project CFS
Home Depot	52	102,489	0.51		•
Costco	102	148,346	0.69		
Kohl's	92	87,888	1.05		
Average			0.75	141,570	105.79

Source: CFS from City of Sparks Police Department. Comparable project square footage from Washoe County Assessor.

However, many visitors to the commercial portion of the project will be existing residents of the project, calls for service for these residents are estimated above, or existing City of Sparks residents, already generating calls for service for the City. Only non-Sparks residents coming to the project will generate new calls for service for the City. The analysis conservatively assumes 50% of the above General Commercial calls for service will be net new calls for service for the City.

According to a calculation of the number of calls for service handled annually by a police officer, based on the number of hours worked, break time,

vacation time, and other components, an officer is estimated to handle an average of 875 calls for service per year. This results in an estimated

0.06 officer positions for the commercial portion of the project.

Source: City of Sparks Police Department and data from City of Reno Police Department for similar studies.

			APPE			the second s
			CITY O			
	FOLI	ee d	EPARTMEN	TEC	IST PROJE	CTIONS
4. The following City of Sparks salary information is us	sed to estimate	орега	ting costs, inf	lated		3% annually.
			Salary	Rang	e	
FY 2017-18	Low		High	A	verage	
Police Officer \$	51,730	\$	67,371	\$	59,550	
Sergeant	73,112		87,734		80,423	
Crime Analyst	55,245		70,512		62,878	
Records Technician	45,510		57,990		51,750	
Police Office Assistant	34,070		43,368		38,719	
GT/IT Support Specialist	44,866		57,179		51,022	
Dispatcher	43,368		55,245		49,306	
Weighted Average Officers \$	54,402	\$	69,917	\$	62,160	
Weighted Average Civilians \$	40,351	\$	51,396	\$	45,873	Source: "Online Jobs Page." City of Sparks Human Resources.
5. Benefits costs are calculated at	57.1%	of s	alaries.			
Services/Supplies costs calculated at	3.5%	of s	alaries and be	nefits		

Source: Three-year average FY 2015-16 through FY 2017-18 from City of Sparks Budget FY 2017-18.

6. One police vehicle is added for every 3 uniformed positions. The 2017 cost of a fully-equipped vehicle is

\$70,000 inflated 3% annually. Life of vehicle is 5 years and the analysis includes vehicle replacement costs with no salvage value. Source: City of Sparks Police Department.

The Quarry

		FIRE D	APPENDIX 8 CITY OF SPARI EPARTMENT COST 1	KS	1		
YEAR	CUMUL. # OF <u>UNITS</u>	RESIDENTIAL <u>CFS*</u>	COMMERCIAL CFS	TOTAL <u>CFS*</u>		IMATED ST/CFS	TOTAL <u>EXPENSES</u>
2018	0	0.00	0.00	0.00	\$	1,473 \$	
2019	248	29.89	2,81	32.70		1,518	49,622
2020	494	59.54	4.56	64.10		1,563	100,199
2021	726	87.51	4.56	92.07		1,610	148,226
2022	982	118.36	4.56	122.92		1,658	203,841
2023	1,223	147.41	4.56	151.97		1,708	259,571
2024	1,223	147.41	4.56	151.97		1,759	267,359
2025	1,223	147.41	4.56	151.97		1,812	275,379
2026	1,223	147.41	4.56	151.97		1,866	283,641
2027	1,223	147.41	4.56	151.97		1,922	292,150
2028	1,223	147.41	4.56	151.97		1,980	300,914
2029	1,223	147.41	4.56	151.97		2,039	309,942
2030	1,223	147.41	4.56	151.97		2,101	319,240
2031	1,223	147.41	4.56	151.97		2,164	328,817
2032	1,223	147.41	4.56	151.97		2,229	338,682
2033	1,223	147.41	4.56	151.97		2,295	348,842
2034	1,223	147.41	4.56	151.97		2,364	359,308
2035	1,223	147.41	4.56	151.97		2,435	370,087
2036	1,223	147.41	4.56	151.97		2,508	381,189
2037	1,223	147.41	4.56	151.97		2,584	392,625
TOTAL						\$	5,329,635

\*CFS-calls for service. APPENDIX 8, ASSUMPTIONS:

1. Number of residential units from Appendix 1. Analysis includes all units, not just occupied units, for Fire Department impacts.

2. Residential calls for service are estimated using average cfs per unit data for single-family residential properties between FY 2011-12 and FY 2015-16, estimated at 0.12 cfs. Source: City of Sparks Fire Department and Washoe County Assessor's Office parcel data for number of single-family units.

3. Calls for service for the General Commercial portion are estimated using cfs data for comparable projects:

	Annual CFS	Building Sq.Ft.	CFS/Sq.Ft. (000s)	Project Sq.Ft.	Project CFS
Costco	10	148,346	0.07		-
Kohl's	5.4	87,888	0.06		
Average			0.06	141,570	9.12

Source: City of Sparks Fire Department. Data is a five year average of calls for service for FY 2011-12 to FY 2015-16. However, many visitors to the commercial portion of the project will be existing residents of the project, calls for service for these residents are estimated above, or existingCity of Sparks residents, already generating calls for service for the City. Only non-Sparks residents coming to the project will generate new calls for service for the City. The analysis conservatively assumes 50% of the above General Commercial calls for service will be net new calls for service for the City.

4. Costs to provide services to the development are estimated at s 1,430.44 per call for service. This is estimated using total fire expenditures between FY 2011-12 and FY 2015-16 divided by total calls for service during this period. This includes costs for Administration, Emergency Services, and Training and Safety. Estimated costs are inflated 3% annually.

The Quarry

Fiscal Impact Analysis-City of Sparks

			-		STREET M	STREET MAINTENANCE COST PROJECTIONS	COST PROJE	CHONS				
				M	MAINTENANCE	×			RE	REPAIR		
YEAR	ADDED SQUARE <u>FEET</u>	ADDED LINEAR CI FEET	SEWER CLEANING <u>COST</u>	CATCH BASIN COST	STREET SWEEP COST	STRIPING COST	TOTAL	SLURRY/ CRACK SEAL COST	3 INCH OVERLAY COST	ROAD REHAB <u>COST</u>	TOTAL ANNUALIZED COST	TOTAL MAINT. <u>COST</u>
2018	•	\$	\$	•	•	•	•	69	•	•	•	63
2019	274,780	6,970	•	Ŷ	522	•	522	•	'		•	522
2020	•	•	870	6	532	363	1,774	•	•	•	818,038	819,813
2021	174,080	5,120	888	6	942	370	2,209	•	•	•	818,038	820,247
2022	270,912	7,968	1,570	16	I,594	654	3,835	•	•		818,038	821,873
2023	289,508	7,782	2,657	28	2,256	1,107	6,049		•	•	818,038	824,087
2024	·		3,762	39	2,302	1,568	7,671	114,495	•	•	818,038	825,709
2025	•		3,838	40	2,348	1,599	7,824		•		818,038	825,862
2026	•	•	3,914	41	2,395	1,631	7,981	75,466	a.	•	818,038	826,019
2027		•	3,993	42	2,442	1,664	8,140	119,793			818,038	826,179
2028	•	4	4,072	42	2,491	1,697	8,303	130,576	•		818,038	826,341
2029	•	•	4,154	43	2,541	1,731	8,469	•	1,365,251		818,038	826,507
2030	•	•	4,237	44	2,592	1,765	8,638	•	•	•	818,038	826,677
2031	•	•	4,322	45	2,644	1,801	8,811		899,863		818,038	826,850
2032	•		4,408	46	2,697	1,837	8,987	•	1,428,421	•	818,038	827,026
2033	•	•	4,496	47	2,751	1,873	9,167		1,557,000		818,038	827,206
2034	•	e	4,586	48	2,806	1,911	9,351	139,569	,		818,038	827,389
2035	•		4,678	49	2,862	1,949	9,538	à	,	•	818,038	827,576
2036	•	•	4,771	50	2,919	1,988	9,728	91,993	•	,	818,038	827,767
2037	ï	•	4,867	51	2,977	2,028	9,923	146,027	•	10,292,313	818,038	827,961
TOTAL	000 100 1	01020	2 101 P									

The development is projected to construct approximately the year shown above.

Ekay Economic Consultants, Inc.

1,009,280 square feet of streets to be dedicated to the City for maintenance in 27,840 linear feet or

December 2017

The Quarry

Fiscal Impact Analysis-City of Sparks

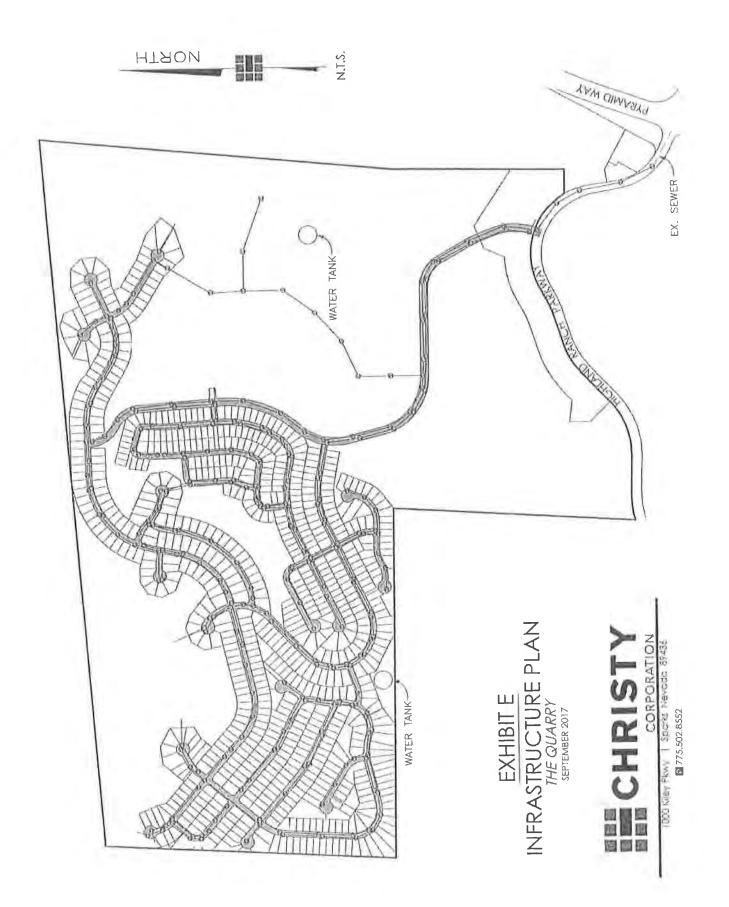
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	per square foot	per square foot	luare foot	near foot Note: 2/3 of the cost is added annually	ile Note: 3/5 of the cost is added annually	per mile Note: cost is multiplied by 12 annually	tear foot
	per so	persc	per so	per li	perm	perm	per li
		\$4.00					
Frequency		10 years				30 days	1 year
Item	Slurry/Crack Scal	3 Inch Overlay	Road Rehabilitation	Sewer Cleaning	Catch Basin Cleaning	Street Sweeping	Striping

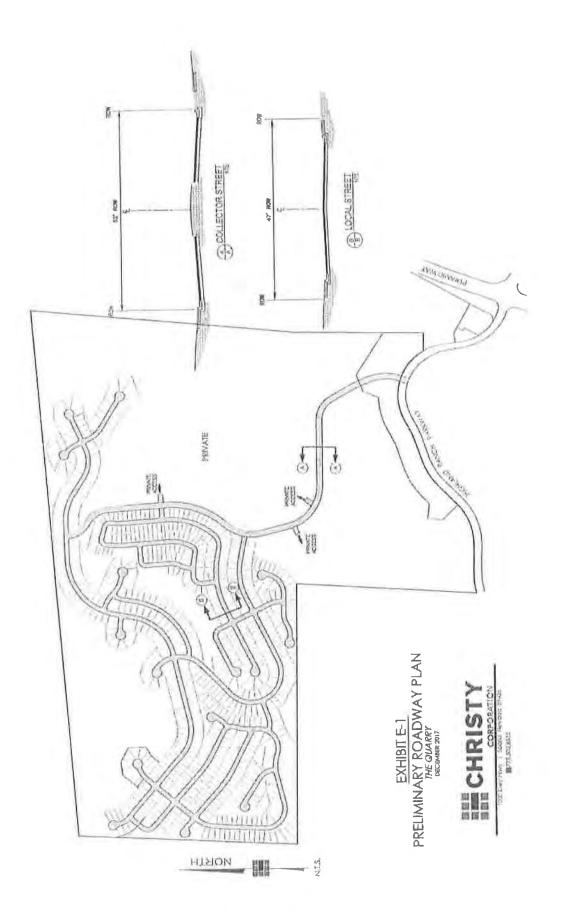
outpug 1 year ov.0 per intear toot Costs are inflated 2% annually. Source: City of Sparks Community Services Department. Estimated repair (extraordinary maintenance) costs are annualized by taking the total estimated costs over the 20-year period and dividing by 20 years.

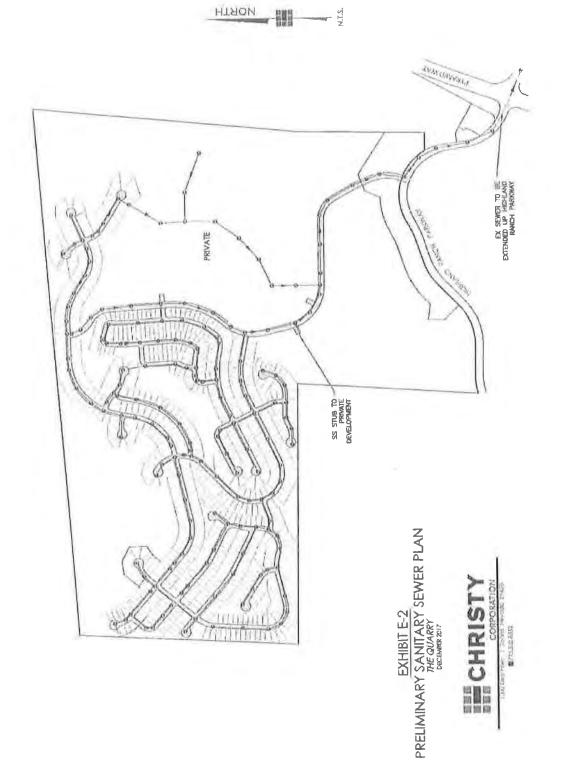
Ekay Economic Consultants, Inc.

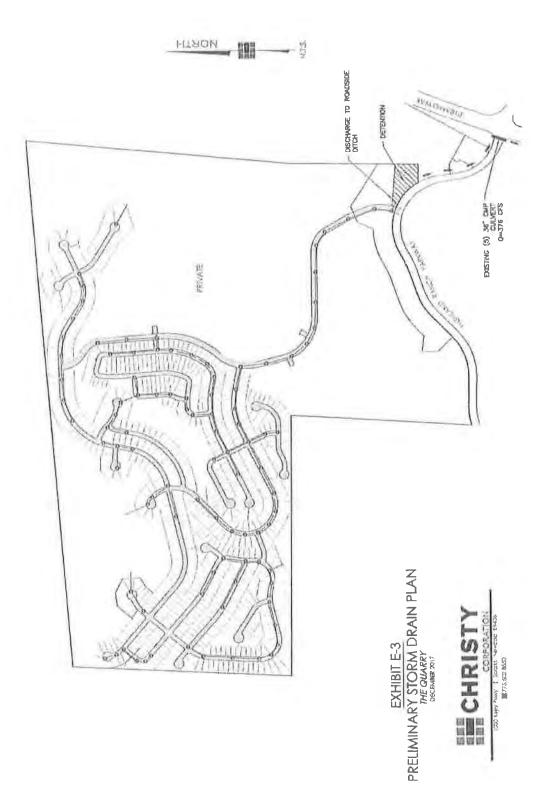
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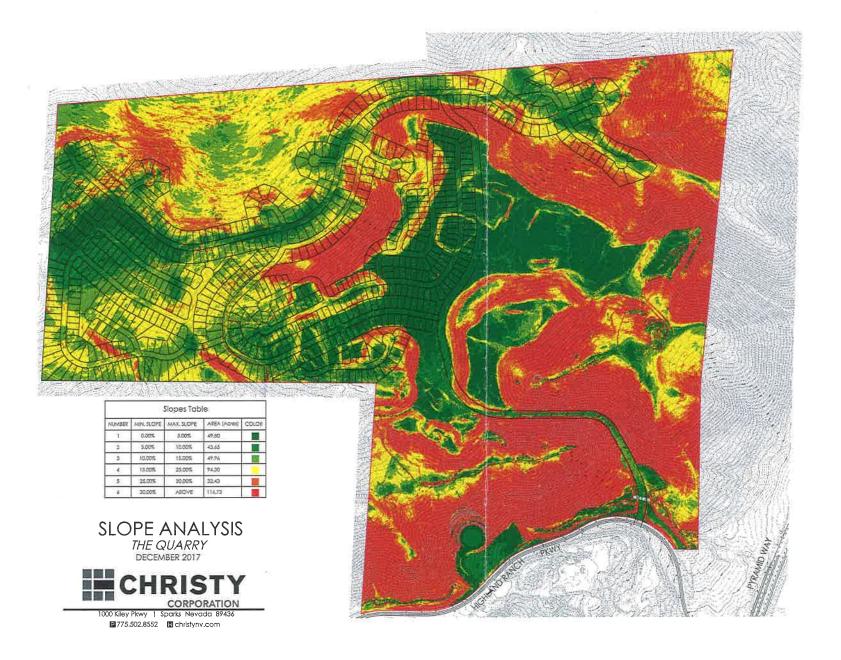


J











Jon E.

#### SOLAEGUI ENGINEERS

March 12, 2018

RECEIVED-CITY OF SPARKS

MAR 1 2 2018 COMMUNITY SERVICES ADMINISTRATION

Karen Melby, AICP City of Sparks Community Services Planning Division 431 Prater Way Sparks, Nevada 89431

RE: The Quarry (NDOT Pre-Permit No. 207543-18)

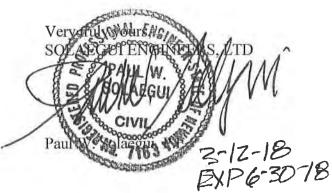
Dear Karen:

This letter addendum is in response to comments submitted to you by the Nevada Department of Transportation in a letter dated February 22, 2018 regarding the above captioned traffic study. A copy of the letter is attached. The comments generally focus on 1) determining the dwelling unit threshold that would maintain LOS E operation at the Pyramid Highway/Sparks Boulevard/ Highland Ranch Parkway intersection without capacity improvements and 2) providing intersection capacity improvement recommendations necessary to maintain LOS E operation for buildout of the full 1,800 single family dwelling units proposed for the development.

In response to comment 1, a total of 650 dwelling units can be constructed while maintaining LOS E operation at the Pyramid Highway/Sparks Boulevard/Highland Ranch Parkway intersection. The AM and PM peak hour capacity analysis worksheets are attached.

In response to comment 2, the improvements discussed in the original traffic study will provide LOS E or better operation at the Pyramid Highway/Sparks Boulevard/Highland Ranch Parkway intersection with the construction of 1,800 dwelling units. These improvements include dual left turn lanes, two through lanes, and one free right turn lane at the east and west approaches and dual left turn lanes at the south approach. The AM and PM peak hour capacity analysis worksheets are attached.

We trust that this information will meet your requirements. Please call if you have any questions or comments.



Enclosures Letters/Sparks/The Quarry Addendum

Solaegui Engineers Ltd. • 715 H Street • Sparks, Nevada 89431 • 775/358-1004 • FAX 775/358-1098

Civil & Traffic Engineers e-mail: psolaegui@aol.com



BRIAN SANDOVAL

Governor

## STATE OF NEVADA

District II 310 Galletti Way Sparks, Nevada 89431 (775) 834-8300 FAX (775) 834-8319

February 22, 2018

RUDY MALFABON, P.E., Director

City of Sparks Department of Planning/Comm. Devlop. 1675 E Prater Way #107 Sparks, NV 89434

DA18-0001/AX16-0003/ MPA17-00005/RZ17-0006 Jackling Aggregates, LLC/QK, LLC The Quarry Development

Attention: Ms. Karen Melby, Planner

Dear Ms. Melby:

The Nevada Department of Transportation (NDOT), District II has reviewed the following administrative review requests:

- (1) DA17-0001 A request for a Development Agreement between the City of Sparks and Jackling Aggregates, LLC and QK, LLC; and
- (2) AX16-0003 A request for voluntary annexation into the City of Sparks. Upon annexation the parcel shall convert from Washoe County Designation GR (General Rural) to City of Sparks A40 (Agriculture); and
- (3) MPA 17-0005 A request to change the land use designations from Open Space (OS), Commercial (C) and Employment Center (EC) to Intermediate Density Residential (1DR) and Commercial (C); and
- (4) RZ17-0006 A request to rezone the site from A40 (Agriculture) to SR 6 (Single Family Residential 6,000 square feet lots) and C2 (General Commercial) zoning.

The Quarry Development traffic impact study was provided by the applicant to support the proposed requests. The Quarry Development is proposed to be annexed into the City of Sparks. The project is located northwest of Highland Ranch Parkway and Pyramid Highway (State Route 445) intersection.

- The project is proposed to contain 1,223 single-family detached homes and a 13-acre mini storage facility. The Kiley Ranch land use assumptions consist of two convenience stores with gas pumps, three fast-food restaurants totaling 10,500 square feet, 30,000 square feet of retail buildings and two automotive service buildings totaling 16,000 square feet, a 4-bay car wash and 8 acres of additional mini-storage.
- The Quarry land use will generate approximately 10,974 daily trips, 900 a.m. and 1,046 p.m. peak hour trips. Based on the land use assumptions used in the study, the Kiley Ranch development will generate 15,936 daily trips, 1,003 a.m. and 1,092 p.m. peak hour trips.

- NDOT officially report Annual Average Daily Traffic (AADT) just north of Highland Ranch Parkway is 36,000 vehicles per day.
- > The City's adopted level of service (LOS) standard for Pyramid Highway is a LOS E (arterial with moderate access control).
- NDOT reviewed the traffic impact study submitted on October 10, 2017. A technical review was completed on October 16, 2017 addressing concerns with the technical analyses and the project regional impacts.

NDOT District II has the following comments, specifically for the MPA 17-000- map amendment request:

- 1. The Quarry Development is classified as a project of regional significance as defined by NRS 278.026 5. (d)(6) and should be evaluated to determine if the project impacts any current programmed significant projects.
- 2. Based on the submitted traffic impact study, NDOT is requesting an addendum. The study revision should include proposed project phasing and its direct traffic impact to the level of service (LOS) at the intersection of Pyramid Highway and Highland Ranch Parkway.
  - On page 17 through 20 of the traffic study, the LOS for the intersection degrades from an existing LOS D to a LOS F (existing plus project). No traffic failure threshold is presented in the report.
  - The addendum should denote the threshold (number of units) that may trigger the LOS F condition to the intersection.
  - > For the intersection, please provide recommendations for capacity improvement necessary to maintain LOS E.
- 3. The Quarry Development constitutes a new community development not previously account in the RTC Long Range Transportation Plan. The project should provide short term intersection improvements that will mitigate its traffic impact at the Pyramid Highway and Highland Ranch Parkway intersection.
  - NDOT does not have any capacity projects anticipated at this location in the near future. Additionally, the RTC Washoe Long Range Transportation Plan does not appear to have any programmed improvement for this intersection until the year 2027+.
  - The project should provide the necessary 10-year improvements that will maintain LOS E for the intersection.

Other comments specific to the future development/ permitting process:

- 4. An occupancy permit is required for facilities within the NDOT Right-of-Way. Please see the *Terms and Conditions Relating to Right of Way Occupancy Permits* booklet available online at nevadadot.com. Contact the Permit Office at (775) 834-8330 for more information regarding an occupancy permit.
- 5. The applicant is encouraged to coordinate with the NDOT District Permit Office early for any required standards occupancy permit. NDOT's permit processing time may vary based on project complexity; however, the processing time is approximately 45 working days. This does not include any revision time needed to make necessary changes in the design.

- An effective strategy to minimize delay is taking advantage of the District Permit Office's pre-permit process. Preliminary plans and associated engineering documents may be submitted in advance for NDOT review and comment. This service does not require a processing fee. Please contact the Permit Coordinator, Paula Diem, at (775) 834-8330 for any questions or comments regarding the pre-permit process.
- 6. For any non-permanent activities or temporary traffic control such as placement of cones, static signs, and portable electronic signs within NDOT right-of-way will require a temporary permit. Please submit temporary permit applications at least 4 weeks prior to the scheduled activity or work. Contact the Permit Office, (775) 834-8300 for more information.
- 7. The state defers to municipal government for land use development decisions. Public involvement for project related improvements within the NDOT right-of-way should be considered during the municipal land use development public involvement process. Significant public improvements within the NDOT right-of-way developed after the municipal land use development public involvement. It is the responsibility of the permit applicant to perform such additional public involvement. We would encourage such public involvement to be part of a municipal land use development process.

Thank you for the opportunity to review this community development proposal. NDOT reserves the right to incorporate further changes and/or comments as the design review advances. I look forward to working with you and your team, and completing a successful project. If you have any further questions or comments, please contact the Senior Traffic Engineer, Richard Oujevolk, at (775)834-8300.

Sincerely,

DocuSigned by: 32CC95D129D1479...

02/23/2018

Thor A. Dyson, PE District Engineer

TAD:rmo

cc: Jae Pullen, Engineering Services Richard Oujevolk, Traffic Office Paula Diem, Permit Office NDOT Planning NDOT Engineering NDOT Traffic Ops RTC Washoe Karen Melby, City of Sparks File

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1. 目前的是一些一些一个		871 <u>1</u> 48	1.543	9		3240	and the			40.4	0.0	0.0	40.4	05.5	10.1
Back of Queue (Q), vo			17.6	48.6	ATT A MARTING	0.7	10.		a 24 cm 62	10.4	9.0	0.6	12.1	25.5	12.4
Queue Storage Ratio (	And the second sec	tile)	0.00	0.00	Carlos and	0.00	0.0		14/45	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s	the state of the s	Accession of the local	49.0	46.0	The second	55.5	49.	_	ALCO DA	51.9	24.2	20.7	47.0	30.8	24.7
Incremental Delay ( d 2		用加州	37.9	184.8	and the second	0.2	8.6	-	活動的	23.5	0.7	0.1	7.0	7.8	3.2
Initial Queue Delay ( d	CONTRACTOR OF A DESCRIPTION OF A DESCRIP		0.0	0.0	11.1.1.	0.0	0.0	_	di Lintan	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/v		Marth	86.9	230.8	Solen 3	55.7	57.	_	They of	75.4	24.9	20.8	53.9	38.6	27.9
Level of Service (LOS)	the second s	1100 THEY	F	F	Contraction of the local division of the loc	E	E	_	-	E		C	D		C
Approach Delay, s/veh		Service 1	180.	4	F	57.	1	120	E	36.	D	D	40.3	5	D
Intersection Delay, s/ve	eh / LOS	attay of	-		6	9.5	i.E.t	1		TERR	100-20	6-6-64	E	C. Aporta at	The Party of
Multimodal Results	and the second	1. 21 1	Contraction of the second	EB		1	W	В		12.3	NB	a standard and		SB	时期的
Pedestrian LOS Score	/LOS		2.4	5	В	2.7	5		С	2.3	5	В	1.9	5	В
Bicycle LOS Score / LO	the second s	e de la de	1.8	8	В	0.7	6	11	А	1.1	1	А	2.3	7	В

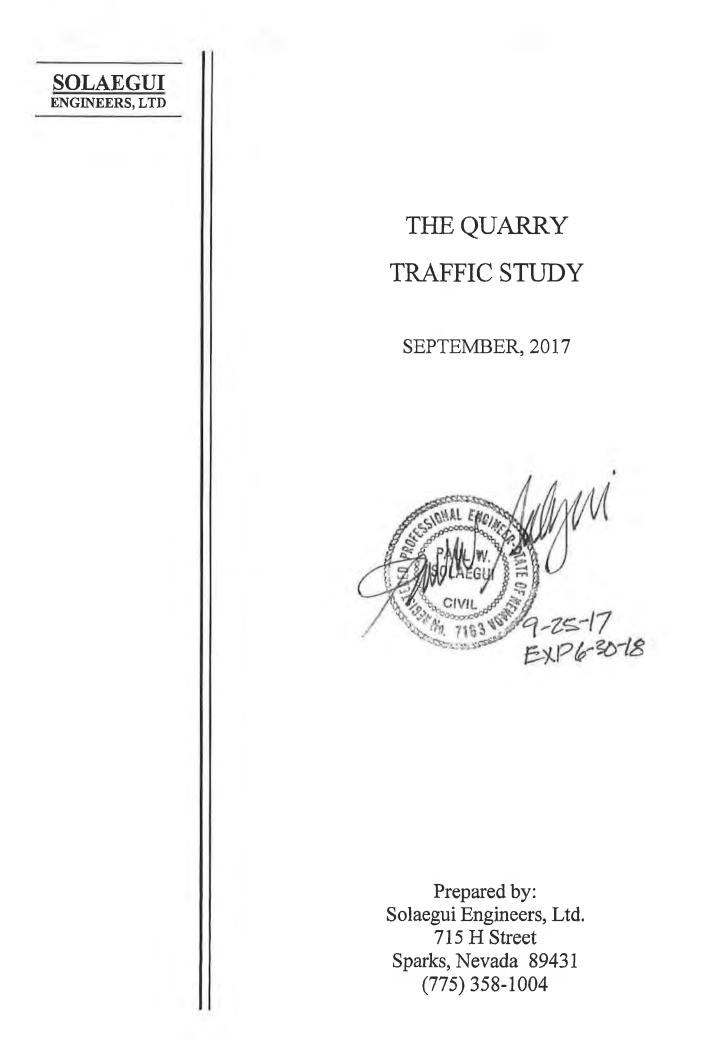
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and other the second sectors.		HCS	7 1	nalized	d Inte	rsecti	on R	esult	s Su'	nary	the set of			1.2.2.31.7	Contraction of the
			Sal and		1212	and the					et and the			1247.1	
General Inform	nation							Intersection Information					111 L L		
Agency		Solaegui Engineers							uration,		0.25		1	25.13.2	
Analyst		MSH		Analysi		Mar 8,			rea Type		Other		-	*	4
Jurisdiction		City of Sparks		Time P		PM Pe			HF		0.92		1	1	5.1
Urban Street			Analysi	s Year	(650 Lo	Existing + Project (650 Lots)		nalysis F	Period	1> 7:0	0		ካተተሰ	4	
Intersection		Pyramid & Sparks		File Na	me	PySp1	7pw650	xus					51	1444	11
Project Descrip	tion				-			THE R. OF	Contraction in the	and the P	Sector Sector	1000000000	L	and the second second	and the second
					ED	ter and	10-24		and the second	pini.	ND	har with the	All of State	SB	
Demand Inform	A DE PROPERTY AND	REAL PROPERTY INCOME	12.23	11111	EB		See and	WB		1	NB			T	D
Approach Move		THE REAL PROPERTY AND A DESCRIPTION OF A	with the second	L	Т	R	L	T	R	L	T	R			R
Demand (v), v	reh/h		- seator	356	299	210	32	345	ALCON KIN	366	1325	20	252	667	221
Oliver Linformer			-	23.15.20		1	1.11	Carling In		Real Property in		2 all parties			and the second
Signal Informa	A REAL PROPERTY AND A REAL	Defense Dhara			2		1 MA	10	1	1.			D	-	11
Cycle, s	130.0	Reference Phase	2	-	5	517	1 11		R	5	1.25	4	1 2	i a a	N A
Offset, s	0	Reference Point	End	Green	12.0	10.0	46.0	6.0	15.0	21.0	-		- 1 W	1.12 1	4
Uncoordinated	No	Simult. Gap E/W	On	Yellow		0.0	4.0	4.0	0.0	4.0	1.0	1			1000
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	1.0	A CAN				8
Timer Results	CONTRACT OF		1-	EBL		EBT	WBL		WBT	NBL		NBT	SBL		SBT
Assigned Phas	12.000		120.00 200	7	Line Lines	4	3	1	8	5	And Provide State	2	1		6
Case Number	C.	and any state of the state of	elun inter	2.0	200 2003	4.0	2.0		4.0	2.0	and the second	3.0	2.0	tes pro	3.0
Phase Duration	12/11/2/2/04	A STATE OF THE THE CAL	ants 1001.5	26.0		41.0	11.0	NUMBER OF STREET	26.0	27.0	the state of the s	61.0	17.0		51.0
Change Period	STREET, STREET	10	en al ca	0.0		5.0	5.0	0.0	5.0	0.0		5.0	5.0	521 223	5.0
Max Allow Hea		the second division of	124 11 1	3.1	CHEFT.	3.1	3.0	1000	3.1	2.9		0.0	2.9	Contra Contra	0.0
Queue Clearar			0181911	28.0		38.0	3.3	201 724	23.0	29.0		95809	12.1		1993
Green Extensio			C Gt DI	0.0	and the second se	0.0	0.0	ALC: NO. IN	0.0	0.0		0.0	0.0	and the second	0.0
Phase Call Pro	Contraction of the local distance of the loc	the second s	R. H. T	1.00	summer of the local division of the local di	1.00	1.00	W9 063	1.00	1.00		SIL NO	1.00	BC 6 7003	ALC: NO.
Max Out Proba	oscientino (10/11)	A CONTRACTOR OF A CONTRACT		1.00	POLICE PROPERTY	1.00	1.00		1.00	1.00	and the second se		1.00		
and a state dans			1 2000	121.5		No. And	12.2.5	SPID A	Selfar State	REFE	TAD HI	2 Martin	A Partie		
Movement Gr	oup Re	sults	13.32	1000	EB			WB	Alt a star	122.52	NB	中央部員	A BRIDE	SB	1. 1. 1.
Approach Mov				L	Т	R	L	Т	R	L	Т	R	L	T	R
Assigned Move	ement		S. Sale	7	4	14	3	8	10.00	5	2	12	1	6	16
Adjusted Flow	Rate ( v	/ ), veh/h		387	499		35	375		398	1440	22	274	725	197
Adjusted Satur	ation FI	ow Rate (s), veh/h/	ſIn	1781	1745	NUTER OF	1730	1870		1781	1781	1557	1730	1781	1534
Queue Service		the second design of the local day is a second day of the second d		26.0	36.0		1.3	21.0	-	27.0	50.2	1.0	10.1	21.5	12.4
Cycle Queue 0	Clearand	ce Time (g c), s	22233	26.0	36.0	Carl a	1.3	21.0	NOVE 1	27:0	50.2	1.0	10.1	21.5	12.4
Green Ratio (	g/C)			0.20	0.28		0.05	0.16	-	0.21	0.43	0.43	0.09	0.35	0.35
Capacity (c),	veh/h		1. 1. 1.	356	483		. 160	302		370	1534	671	319	1260	543
Volume-to-Capacity Ratio (X)										0 020	0.032	0.858	0.575	0.362	
Volume-to-Cap		the second se		1.086	1.032		0.218	1.241		1.075	0.939			2.0	207.7
Volume-to-Cap Back of Queue	e (Q), f	t/in ( 95 th percentile		684.2	770.1		25.1	793.8		675.9	772.9	17.4	224.7	357.3	and the second second
Volume-to-Cap Back of Queue Back of Queue	e (Q), f e (Q), v	t/In ( 95 th percentile veh/In ( 95 th percent	tile)	684.2 26.9	770.1 30.3		25.1 1.0	793.8 31.3		675.9 26.6	772.9 30.4	17.4 0.7	224.7 8.8	14.1	8.2
Volume-to-Cap Back of Queue Back of Queue Queue Storage	e ( Q ), f e ( Q ), v e Ratio (	t/In(95 th percentile reh/In(95 th percent ( <i>RQ</i> )(95 th percen	tile)	684.2 26.9 0.00	770.1 30.3 0.00		25.1 1.0 0.00	793.8 31.3 0.00		675.9 26.6 0.00	772.9 30.4 0.00	17.4 0.7 0.00	224.7 8.8 0.00	14.1 0.00	8.2 0.00
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay	e (Q), f e (Q), v e Ratio (d1), s	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh	tile)	684.2 26.9 0.00 52.0	770.1 30.3 0.00 47.0		25.1 1.0 0.00 59.7	793.8 31.3 0.00 54.5		675.9 26.6 0.00 51.5	772.9 30.4 0.00 35.4	17.4 0.7 0.00 21.4	224.7 8.8 0.00 58.2	14.1 0.00 34.1	8.2 0.00 31.1
Volume-to-Cap Back of Queue Back of Queue Queue Storage	e (Q), f e (Q), v e Ratio (d1), s	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh	tile)	684.2 26.9 0.00 52.0 72.7	770.1 30.3 0.00 47.0 49.5		25.1 1.0 0.00 59.7 0.3	793.8 31.3 0.00 54.5 133.5		675.9 26.6 0.00 51.5 68.3	772.9 30.4 0.00 35.4 12.4	17.4 0.7 0.00 21.4 0.1	224.7 8.8 0.00 58.2 19.3	14.1 0.00 34.1 1.9	8.2 0.00 31.1 1.9
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay	e (Q), f e (Q), v e Ratio (d1), s elay (d	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh	tile)	684.2 26.9 0.00 52.0 72.7 0.0	770.1 30.3 0.00 47.0 49.5 0.0		25.1 1.0 0.00 59.7 0.3 0.0	793.8 31.3 0.00 54.5 133.5 0.0		675.9 26.6 0.00 51.5 68.3 0.0	772.9 30.4 0.00 35.4 12.4 0.0	17.4 0.7 0.00 21.4 0.1 0.0	224.7 8.8 0.00 58.2 19.3 0.0	14.1 0.00 34.1 1.9 0.0	8.2 0.00 31.1 1.9 0.0
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental Do Initial Queue D Control Delay	e (Q), f e (Q), v e Ratio (d1), s elay (d Delay (d (d), sA	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh reh	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7	770.1 30.3 0.00 47.0 49.5 0.0 96.5		25.1 1.0 0.00 59.7 0.3 0.0 60.0	793.8 31.3 0.00 54.5 133.5 0.0 188.0		675.9 26.6 0.00 51.5 68.3 0.0 119.8	772.9 30.4 0.00 35.4 12.4 0.0 47.8	17.4 0.7 0.00 21.4 0.1 0.0 21.4	224.7 8.8 0.00 58.2 19.3 0.0 77.5	14.1 0.00 34.1 1.9 0.0 36.0	8.2 0.00 31.1 1.9 0.0 33.0
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue D Control Delay Level of Service	<ul> <li>(Q), f</li> <li>(Q), v</li> <li>(Q), v</li> <li>Ratio</li> <li>(d1), s</li> <li>elay (d</li> <li>Delay (a</li> <li>(d), sA</li> <li>(LOS</li> </ul>	t/In ( 95 th percentile veh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh veh )	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7 F	770.1 30.3 0.00 47.0 49.5 0.0 96.5 F		25.1 1.0 0.00 59.7 0.3 0.0 60.0 E	793.8 31.3 0.00 54.5 133.5 0.0 188.0 F		675.9 26.6 0.00 51.5 68.3 0.0 119.8 F	772.9 30.4 0.00 35.4 12.4 0.0 47.8 D	17.4 0.7 0.00 21.4 0.1 0.0 21.4 C	224.7 8.8 0.00 58.2 19.3 0.0 77.5 E	14.1 0.00 34.1 1.9 0.0 36.0 D	8.2 0.00 31.1 1.9 0.0 33.0 C
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue D Control Delay Level of Servic Approach Dela	(Q), f (Q), v (Q), v (d), s elay (d) Delay (d) (d), sA (d), sA ce (LOS ay, s/vel	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh reh ) 1 /LOS	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7	770.1 30.3 0.00 47.0 49.5 0.0 96.5 F		25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 1777.	793.8 31.3 0.00 54.5 133.5 0.0 188.0 F		675.9 26.6 0.00 51.5 68.3 0.0 119.8	772.9 30.4 0.00 35.4 12.4 0.0 47.8 D	17.4 0.7 0.00 21.4 0.1 0.0 21.4 C E	224.7 8.8 0.00 58.2 19.3 0.0 77.5 E 45.0	14.1 0.00 34.1 1.9 0.0 36.0 D	8.2 0.00 31.1 1.9 0.0 33.0
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue D Control Delay Level of Service	(Q), f (Q), v (Q), v (d), s elay (d) Delay (d) (d), sA (d), sA ce (LOS ay, s/vel	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh reh ) 1 /LOS	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7 F 108.	770.1 30.3 0.00 47.0 49.5 0.0 96.5 F	The second second	25.1 1.0 0.00 59.7 0.3 0.0 60.0 E	793.8 31.3 0.00 54.5 133.5 0.0 188.0 F		675.9 26.6 0.00 51.5 68.3 0.0 119.8 F	772.9 30.4 0.00 35.4 12.4 0.0 47.8 D	17.4 0.7 0.00 21.4 0.1 0.0 21.4 C E	224.7 8.8 0.00 58.2 19.3 0.0 77.5 E	14.1 0.00 34.1 1.9 0.0 36.0 D	8.2 0.00 31.1 1.9 0.0 33.0 C
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental Do Initial Queue D Control Delay Level of Servic Approach Dela Intersection Do	e (Q), f e (Q), v e Ratio (d1), s elay (d Delay (d Delay (d Celay (c (d), s/v ce (LOS ay, s/veh elay, s/v	t/In ( 95 th percentile reh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh reh ) 1 /LOS	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7 F	770.1 30.3 0.00 47.0 49.5 0.0 96.5 F 8	The second second	25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 1777.	793.8 31.3 0.00 54.5 133.5 0.0 188.0 F 1		675.9 26.6 0.00 51.5 68.3 0.0 119.8 F	772.9 30.4 0.00 35.4 12.4 0.0 47.8 D	17.4 0.7 0.00 21.4 0.1 0.0 21.4 C E	224.7 8.8 0.00 58.2 19.3 0.0 77.5 E 45.0	14.1 0.00 34.1 1.9 0.0 36.0 D	8.2 0.00 31.1 1.9 0.0 33.0 C
Volume-to-Cap Back of Queue Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue D Control Delay Level of Servic Approach Dela	(Q), f (Q), v (Q), v $(d_1), s$ $(d_1), s$ $(d_2), s/v$ (d), s/v (d), s/v	t/In ( 95 th percentile reh/In ( 95 th percent ( RQ ) ( 95 th percent s/veh 2 ), s/veh / 3 ), s/veh / 4 ) n / LOS reh / LOS	tile)	684.2 26.9 0.00 52.0 72.7 0.0 124.7 F 108.	770.1 30.3 0.00 47.0 49.5 0.0 96.5 F 8 EB	The second second	25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 1777.	793.8 31.3 0.00 54.5 133.5 0.0 188.0 F 1 WB		675.9 26.6 0.00 51.5 68.3 0.0 119.8 F	772.9 30.4 0.00 35.4 12.4 0.0 47.8 D 0	17.4 0.7 0.00 21.4 0.1 0.0 21.4 C E	224.7 8.8 0.00 58.2 19.3 0.0 77.5 E 45.0	14.1 0.00 34.1 1.9 0.0 36.0 D D SB	8.2 0.00 31.1 1.9 0.0 33.0 C

and the second se		HCS	7′ ]I	nalized	d Inte	rsect	ion R	esult	s Su'	nary	SYS CHORN	· Prety	WHITE I	PAR IN	100 To
all as the state of the				a de la	saug.		No see	REAL				Bert Line-		41414	C.
General Inform								_	ntersect			n		JIILL	
Agency		Solaegui Engineers							ouration,		0.25		-		1.1.
Analyst		MSH		Analysi			_		геа Туре	)	Other		-3		=
Jurisdiction		City of Sparks		Time P			ak Hour	_	PHF		0.92			RIF	5
Urban Street			Analysi	s Year	Existin (1800 I			Analysis Period		1> 7:00		No.	<u>ና ካ ተ ተ ፖ</u>		
Intersection		Pyramid & Sparks		File Na	me						_		1	41448	1971
Project Descrip	otion	w/Improvements												1.1.1	
	- 19 C	の自然になっていた。	100	1200	Line 1	And the second				M. T.S.	Carl Carl	al the	the Ball and	123	No.
Demand Infor	mation	A AND A PARAMANA	. 1	11023	EB	12,-12	10100	WB	J.C.A.	A STATE	NB	1		SB	
Approach Mov	ement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v),	veh/h	ANT THE PARTY OF	h   = 0	364	431	S.NU.S	23	229		251	514	18	470	1284	474
Martin States		Condition of America			131	1 111	STREET.	1218-13	CONTRACT OF		13/201	A CONTRACT		1. C. C.	A. H.T.
Signal Information	the second s			4	5	elle	14	73	n n	1.			tz.	-	
Cycle, s	120.0	Reference Phase	2		3		T	1		-	1	2 11	2		-
Offset, s	0	Reference Point	End	Green	16.0	3.0	47.0	10.0	5.0	19.0	100	-		NALL ON	5
Uncoordinated	l No	Simult. Gap E/W	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0	K	14	1.10	1	11-17
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	1.0	STATISTICS.	6	5	T.	
The second states			the set of	EDI	19900	EBT	WBI	0.5	WBT	NBL	ALL STAT	NBT	SBL	ANT PRO	SBT
Timer Results			1 Bin I	EBL	1251 1573		to a construction of the second	-100-028	8	5	- AND SOLL	2	1	27.430 AD-878	6
Assigned Phas	se		_	7	Contraction in Contract	4	3	0.000 0.000							3.0
Case Number	言語	the subser sharks		2.0	THE R. LANSING MICH.	4.0	2.0	125 166	4.0	2.0		3.0	2.0 24.0		55.0
Phase Duratio	And a state of the			20.0	_	29.0	15.0	-	24.0	21.0		52.0			
Change Period		the second s	14 ( ) - 1	0.0		5.0	5.0		5.0	5.0		5.0	0.0		5.0
Max Allow Hea		and the second se		3.1	and the second second	3.0	3.0	-	3.0	2.9		0.0	2.9		0.0
Queue Cleara	nce Time	e (gs), s	San Stall	14.9	Cardina State State	16.5	2.8		9.6	10.9			18.6	the local division in which the	
Green Extensi	on Time	(ge), s		0.5	-	1.2	0.0		1.3	0.3	-	0.0	0.6		0.0
Phase Call Pro	obability	A DATA LAND		1.00	and the second second	1.00	1.00	1	1.00	1.00	and the second second	in the wa	1.00		1411
Max Out Proba	ability	and the state of the	The Real Property lies	0.21	N FORMATING	80.0	0.00		0.03	0.10		SVEN DOR	0.17	Million and	PER STATUT
Movement Gr	OUD Res	sults		10-17	EB	and the state	Contrast.	WB			NB	In the No		SB	
Approach Mov			and the second s	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Mov		1	E.C.	7	4	Aging	3	8	1 State	5	2	12	1	6	16
Adjusted Flow	and the second second	() veb/b		396	468	Part and a	25	249		273	559	20	511	1396	407
		ow Rate (s), veh/h/	/In	1730	1781	RESERVE	1730	1781	100.00	1730	1781	1556	1730	1781	1556
Queue Service		the second se	1	12.9	14.5	ALTER ACTIVITY	0.8	7.6	112	8.9	13.6	0.9	16.6	45.1	24.8
the second day of the second d		g s), s ce Time (g c), s	5 2200	12.9	14.5	ANS AREA	0.8	7.6	A Laws	8.9	13.6	0.9	16.6	45.1	24.8
A DECEMBER OF A	and the second second second	e nine (ge), s	100	0.17	0.20	KI INCOM	0.08	0.16	A REAL PROPERTY	0.13	0.39	0.39	0.20	0.42	0.42
Green Ratio (				577	712	Eth North	288	564	STAR S	461	1395	609	692	1484	648
Capacity (c),		tie (V)	1 top	0.686	0.658	1-1-1-1-1	0.087	0.441	a source (	0.592	0.401	0.032	0.738	0.941	0.62
Volume-to-Ca		NAME AND ADDRESS OF TAXABLE PARTY.	1	-0	272.2	(SPA-10)	15.6	150.4		172.5	239.4	15.5	292.6	705.2	363.
Deal CO	and the second diversion of th	NAME AND ADDRESS OF TAXABLE PARTY.		245.4		0-2		5.9	1912 (1913)	6.8	9.4	0.6	11.5	27.8	14.3
Back of Queue	e(Q), V	eh/ln (95 th percen	the second se	9.7	10.7	(mile and	0.6	0.00	1200 110		0.00	0.00	0.00	0.00	0.00
Back of Queue	and the	Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	124-41	0.00	_	-	0.00	26.3	22.5	45.1	33.6	27.6
Back of Queue	Address of the Owner, which the Owner, w	A STATUTE IN COLUMN TWO IS NOT THE OWNER.	Uniform Delay ( d 1 ), s/veh		44.2	1200,00000	50.8	45.7	a legral to pa	48.9				12.9	4.5
Back of Queue Queue Storag Uniform Delay	r ( d 1 ), s	s/veh	20010022	47.0	10		0.0	0.2	A CONTRACTOR	1.4	0.9	0.1	3.7 0.0	Contract of the lot of the	
Back of Queue Queue Storag Uniform Delay Incremental D	r ( d 1 ), s relay ( d	s/veh 2 ), s/veh		2.8	1.8	0-1-1-1		00		- ()()	. (1()			0.0	0.0
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I	/ ( <i>d</i> 1 ), s elay ( <i>d</i> Delay ( <i>d</i>	s/veh 2 ), s/veh 1 3 ), s/veh		2.8 0.0	0.0	1.05.7	0.0	0.0	NY STAR					105	000
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay	(d1),s elay(d Delay(d (d),s/v	s/veh 2), s/veh /3), s/veh reh		2.8 0.0 49.9	0.0 46.0		0.0 50.8	45.9	19830	50.3	27.2	22.6	48.7	46.5	
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servio	( d 1 ), s elay ( d Delay ( d ( d ), s/v ce (LOS	s/veh 2 ), s/veh / 3 ), s/veh /eh )		2.8 0.0 49.9 D	0.0 46.0 D		0.0 50.8 D	45.9 D		50.3 D	27.2 C	22.6 C	48.7 D	D	С
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servin Approach Dela	r ( d 1 ), s relay ( d Delay ( d ( d ), s/v ce (LOS ay, s/vet	s/veh 2 ), s/veh / 3 ), s/veh /eh ) 1 / LOS		2.8 0.0 49.9	0.0 46.0 D	D	0.0 50.8 D 46.4	45.9 D	D	50.3	27.2 C	22.6 C	48.7 D 44.5	D	
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servio	r ( d 1 ), s relay ( d Delay ( d ( d ), s/v ce (LOS ay, s/vet	s/veh 2 ), s/veh / 3 ), s/veh /eh ) 1 / LOS		2.8 0.0 49.9 D	0.0 46.0 D		0.0 50.8 D	45.9 D		50.3 D	27.2 C	22.6 C	48.7 D	D	С
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue D Control Delay Level of Servic Approach Dela Intersection D	r ( d 1 ), s relay ( d Delay ( d ( d ), s/v ce (LOS ay, s/veh relay, s/v	s/veh 2 ), s/veh / 3 ), s/veh /eh ) 1 / LOS		2.8 0.0 49.9 D	0.0 46.0 D 3		0.0 50.8 D 46.4	45.9 D 4	D	50.3 D	27.2 C 5	22.6 C	48.7 D 44.5	D 5	
Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servin Approach Dela	r ( d 1 ), s relay ( d Delay ( d ( d ), s/v ce (LOS ay, s/veh relay, s/v Results	s/veh 2 ), s/veh / 3 ), s/veh / eh ) n / LOS eh / LOS		2.8 0.0 49.9 D	0.0 46.0 D 3 EB		0.0 50.8 D 46.4	45.9 D 4 WB	D	50.3 D	27.2 C 5 NB	22.6 C	48.7 D 44.5	D 5 SB	С

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<b>General Information</b>								ntersecti			1		JIIII	
Agency	Solaegui Engineers						_	Duration,		0.25				LOC L
Analyst	MSH		Analysi	s Date	Mar 8, 2			Area Type		Other				ΞÂ
Jurisdiction	City of Sparks		Time Po	eriod	PM Pea	ak Hour	F	PHF		0.92				
Urban Street			Analysi	s Year	Existing (1800 L		ect	Analysis F	Period	1> 7:00	C	114		e e
Intersection	Pyramid & Sparks		File Na	me								-50	4.1.45715	1
Project Description	w/Improvements	Strature.	1000		Charles Ma	Martin C	N.C.		NE WE	C. P. S. S.	14:507	a marte		P.G.C. M
Demand Information	1			EB	<u> </u>		WE	3		NB	a personal de la constante de		SB	
Approach Movement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), veh/h			404	378	1	32	479	Ð	607	1325	20	252	667	302
	Man Marine State		1.24	and the party of the	A SALAS	TI	113	States In the	Jan Stra	A REAL	2022	all a second	1.57	ie
Signal Information				2	1	124	2	-	1.	- 5		tz	-	
Cycle, s 130.	the second se	2		5	ST	i îr	1			1-1	. 1	12	3	· 4
Offset, s 0	Reference Point	End	Green		14.0	40.0	6.0	the second s	22.0		1	3.00	1.2.5	4
Uncoordinated No	Simult. Gap E/W	On	Yellow		0.0	4.0	4.0		4.0		1 4		/	T-
Force Mode Fixe	d Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	1.0	North State	6	Classica P	7.	Burn Ch
Timer Results			EBL		EBT	WBL		WBT	NBL		NBT	SBL	5 60	SBT
Assigned Phase			7		4	3		8	5		2	1		6
Case Number		- 10 A 10 A	2.0	18 1 (STO	4.0	2.0	1	4.0	2.0		3.0	2.0	138 625	3.0
Phase Duration, s	and the second second second second		24.0		40.0	11.0		27.0	34.0	1	59.0	20.0	4	45.0
Change Period, (Y+	R <sub>c</sub> ) s	STREET,	0.0	and in case of the local division of the loc	5.0	5.0	13. 7	5.0	0.0	14.8 1.51	5.0	5.0	14 . 14	5.0
Max Allow Headway		1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 -	3.1		3.0	3.0		3.0	2.9		0.0	2.9		0.0
Queue Clearance Tir	the second se	11-1-1-1-	17.4		14.4	3.3	朝鮮的	20.5	24.6	10.00	17-SAV	11.9	142 230	31.1
Green Extension Tim	Name of Street, or other Designation of Street, or other Desig	10 - 0 - 20 kg	0.7	Statute Institute	2.1	0.0		0.5	1.2	_	0.0	0.2		0.0
Phase Call Probabilit	of the local division of the local divisiono	A STATE OF	1.00	_	1.00	1.00	DAN D	1.00	1.00	-	te starte	1.00	12.3	1.20%
Max Out Probability	Y		0.08		0.00	1.00		1.00	0.02			0.83		
	hanne litre	Saren Saren		EB	io autorio	Constant of the	WB			NB			SB	Thur A
Movement Group R		AND	CONTRACTOR OF THE	T	R	Contrast Contrast	T	R	1	Т	R	1	Т	R
Approach Movement	the second se	ALC: NO	7	4	IN .	3	8	No. S. C. S.	5	2	12	1	6	16
Assigned Movement		1.2.1	- internet	Contraction of the second	800-5743	35	521	2000000	660	1440	22	274	725	263
Adjusted Flow Rate	the second se		439	411	10:00000	1730	178		1730	1781	1556	1730	1781	1553
The second s	Flow Rate (s), veh/h	nn.	1730	1781	A STATE		1/0	AND PROPERTY AND ADDRESS OF ADDRE	1750	1/01	1000	1100	101	
And in case of the local division in the loc	Queue Service Time ( $g_s$ ), s			10 4					226	516	11	00	23.0	18.4
Cycle Queue Cleara	A day of the second sec	The state of	15.4	12.4	In the Real Property in the International Property in the Internat	1.3	18.5	5	22.6	51.6	1.1	9.9	23.0	18.4
			15.4	12.4		1.3 1.3	18.5 18.5	5	22.6	51.6	1.1	9.9	23.0	18.4
Green Ratio (g/C)	nce Time (g∘), s		15.4 0.18	12.4 0.27	and we have	1.3 1.3 0.05	18.5 18.5 0.17	5 5 7	22.6 0.26	51.6 0.42	1.1 0.42	9.9 0.12	23.0 0.31	18.4 0.31
Green Ratio (g/C) Capacity (c), veh/h	nce Time (g c), s		15.4 0.18 639	12.4 0.27 959	and the second	1.3 1.3 0.05 160	18.5 18.5 0.17 603	5 5 7	22.6 0.26 905	51.6 0.42 1479	1.1 0.42 646	9.9 0.12 399	23.0 0.31 1096	18.4 0.31 478
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity	nce Time ( g ₀ ), s Ratio ( X )		15.4 0.18 639 0.688	12.4 0.27 959 0.429		1.3 1.3 0.05 160 0.218	18.5 18.5 0.17 603 0.86	5 5 7 4	22.6 0.26 905 0.729	51.6 0.42 1479 0.974	1.1 0.42 646 0.034	9.9 0.12 399 0.686	23.0 0.31 1096 0.662	18.4 0.31 478 0.551
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q)	nce Time (g ₀), s Ratio (X) , ft/ln (95 th percentile		15.4 0.18 639 0.688 282.9	12.4 0.27 959 0.429 234.6		1.3 1.3 0.05 160 0.218 25.1	18.5 18.5 0.17 603 0.86 355.	5 5 7 4 2	22.6 0.26 905 0.729 371.6	51.6 0.42 1479 0.974 823.8	1.1 0.42 646 0.034 18	9.9 0.12 399 0.686 198.3	23.0 0.31 1096 0.662 386.5	18.4 0.31 478 0.551 296.3
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q)	nce Time (g c), s Ratio (X) , ft/ln (95 th percentile , veh/ln (95 th percen	tile)	15.4 0.18 639 0.688 282.9 11.1	12.4 0.27 959 0.429 234.6 9.2		1.3 1.3 0.05 160 0.218 25.1 1.0	18.5 18.5 0.17 603 0.86 355. 14.0	5 5 7 4 2 0	22.6 0.26 905 0.729 371.6 14.6	51.6 0.42 1479 0.974 823.8 32.4	1.1 0.42 646 0.034 18 0.7	9.9 0.12 399 0.686 198.3 7.8	23.0 0.31 1096 0.662 386.5 15.2	18.4 0.31 478 0.551 296.3 11.7
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio	nce Time ( $g \circ$ ), s Ratio (X) , ft/In (95 th percentile , veh/In (95 th percentile o ( $RQ$ ) (95 th percen	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00	12.4 0.27 959 0.429 234.6 9.2 0.00		1.3 1.3 0.05 160 0.218 25.1 1.0 0.00	18.5 18.5 0.17 603 0.86 355. 14.0 0.00	5       5       7       4       2       0       0	22.6 0.26 905 0.729 371.6 14.6 0.00	51.6 0.42 1479 0.974 823.8 32.4 0.00	1.1 0.42 646 0.034 18 0.7 0.00	9.9 0.12 399 0.686 198.3 7.8 0.00	23.0 0.31 1096 0.662 386.5 15.2 0.00	18.4 0.31 478 0.551 296.3 11.7 0.00
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ration Uniform Delay (d 1)	nce Time ( $g \circ$ ), s Ratio (X) , ft/In (95 th percentile , veh/In (95 th percentile o ( $RQ$ ) (95 th percentile o, s/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2		1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5	5       5       7       4       2       0       0       5	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3	1.1 0.42 646 0.034 18 0.7 0.00 22.5	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1	18.40.314780.551296.311.70.0037.5
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d1) Incremental Delay (	nce Time (g c), s Ratio (X) , ft/ln (95 th percentile , veh/ln (95 th percen o (RQ) (95 th percen o, s/veh d z), s/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1		1.3           1.3           0.05           160           0.218           25.1           1.0           0.00           59.7           0.3	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.9	5       5       7       4       2       0       5       5       9	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d 1) Incremental Delay ( Initial Queue Delay (	nce Time ( $g \circ$ ), s Ratio (X) , ft/ln (95 th percentile , veh/ln (95 th percentile o ( $RQ$ ) (95 th percentile o ( $RQ$ ) (95 th percentile o ( $RQ$ ), s/veh ( $d \circ$ ), s/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0		1.3           1.3           0.05           160           0.218           25.1           1.0           0.00           59.7           0.3           0.0	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.5 0.0	5       5       7       4       2       0       5       5       6	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5 0.0
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ration Uniform Delay (d1) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s	nce Time ( $g \circ$ ), s Ratio (X) , ft/ln (95 th percentile , veh/ln (95 th percentile , veh/ln (95 th percentile o ( $RQ$ ) (95 th percentile)	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4		1.3           1.3           0.05           160           0.218           25.1           1.0           0.00           59.7           0.3           0.0           60.0	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.5 0.0 64.4	5       5       7       4       2       0       5       5       6	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3	18.4           0.31           478           0.551           296.3           11.7           0.00           37.5           4.5           0.0           42.0
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s Level of Service (LO	nce Time $(g \circ)$ , s Ratio $(X)$ , ft/ln (95 th percentile , veh/ln (95 th percentile , veh/ln (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(xQ)$ (95 th percentile o $(xQ)$ (95 th	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1 D	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4 D		1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7 0.3 0.0 60.0 E	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.9 0.0 64.4 E	5       5       7       4       2       0       0       5       9       0       4	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4 D	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2 E	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6 C	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3 E	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3 D	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5 0.0 42.0 D
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s Level of Service (LO Approach Delay, s/v	nce Time $(g c)$ , s Ratio $(X)$ , ft/In (95 th percentile , veh/In (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(a_2)$ , s/veh $(a_3)$ , s/veh s/veh S/veh S/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4 D		1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 64.2	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.9 0.0 64.4 E	5       5       7       4       2       0       5       5       6	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2 E	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3 E 45.5	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3 D	18.4           0.31           478           0.551           296.3           11.7           0.00           37.5           4.5           0.0           42.0
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Gueue Storage Ratio Uniform Delay (d) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s Level of Service (LO	nce Time $(g c)$ , s Ratio $(X)$ , ft/In (95 th percentile , veh/In (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(RQ)$ (95 th percentile o $(a_2)$ , s/veh $(a_3)$ , s/veh s/veh S/veh S/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1 D	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4 D	and the second second second	1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7 0.3 0.0 60.0 E	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.9 0.0 64.4 E	5       5       7       4       2       0       0       5       9       0       4	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4 D	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2 E	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6 C	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3 E	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3 D	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5 0.0 42.0 D
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d 1) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s Level of Service (LO Approach Delay, s/v Intersection Delay, s	nce Time ( $g \circ$ ), s Ratio ( $X$ ) , ft/ln (95 th percentile , veh/ln (95 th percentile , veh/ln (95 th percentile , s/veh $d \circ 2$ ), s/veh ( $d \circ 3$ ), s/veh	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1 D	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4 D	and the second second second	1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 64.2	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.9 0.0 64.4 E	5       5       7       4       2       0       55       9       0       44       E	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4 D	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2 E	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6 C	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3 E 45.5	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3 D	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5 0.0 42.0 D
Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Back of Queue (Q) Back of Queue (Q) Queue Storage Ratio Uniform Delay (d) Incremental Delay ( Initial Queue Delay ( Control Delay (d), s Level of Service (LO Approach Delay, s/v	nce Time (g c), s Ratio (X) , ft/ln (95 th percentile , veh/ln (95 th percentile , veh/ln (95 th percentile o (RQ) (95 th	tile)	15.4 0.18 639 0.688 282.9 11.1 0.00 49.5 2.6 0.0 52.1 D	12.4 0.27 959 0.429 234.6 9.2 0.00 39.2 0.1 0.0 39.4 D 39.4 D	and the second second second	1.3 1.3 0.05 160 0.218 25.1 1.0 0.00 59.7 0.3 0.0 60.0 E 64.2	18.5 18.5 0.17 603 0.86 355. 14.0 0.00 52.5 11.5 0.0 64.4 E	5       5       7       4       2       0       55       9       0       44       E	22.6 0.26 905 0.729 371.6 14.6 0.00 43.8 2.6 0.0 46.4 D	51.6 0.42 1479 0.974 823.8 32.4 0.00 37.3 17.9 0.0 55.2 E 1 NB	1.1 0.42 646 0.034 18 0.7 0.00 22.5 0.1 0.0 22.6 C	9.9 0.12 399 0.686 198.3 7.8 0.00 55.2 4.1 0.0 59.3 E 45.5	23.0 0.31 1096 0.662 386.5 15.2 0.00 39.1 3.1 0.0 42.3 D 2 	18.4 0.31 478 0.551 296.3 11.7 0.00 37.5 4.5 0.0 42.0 D

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## THE QUARRY TRAFFIC STUDY

#### EXECUTIVE SUMMARY

The Quarry will be located in the City of Sparks, Nevada. The project site is located north of Highland Ranch Parkway and west of Pyramid Highway. This study also includes analysis of Kiley Ranch land uses located west of Pyramid Highway between Highland Ranch Parkway and Lazy 5 Parkway. The purpose of this study is to address the project's impact upon the adjacent street network. The Highland Ranch Parkway/Pyramid Highway, Highland Ranch Parkway/Project Access, and Highland Ranch Parkway/Frontage Road intersections have been identified for AM and PM peak hour capacity analysis for the existing, existing plus project, existing plus project plus Kiley Ranch, 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios. The Pyramid Highway intersections with Los Altos Parkway and Lazy 5 Parkway have been identified for trip distribution and assignment analysis only. Pyramid Highway and Highland Ranch Parkway in the vicinity of the site have been identifies for roadway capacity analysis for the 2035 base, 2035 base plus project, and 2035 base plus project analysis for the site have been identifies for roadway capacity analysis for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch Parkway in the vicinity of the site have been identifies for roadway capacity analysis for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios.

The Quarry will include the construction of 1,223 single family detached homes and a 13 acre ministorage facility. The Kiley Ranch land uses will consist of two convenience stores with gas pumps for a total of 8,000 square feet, three fast food restaurants with drive-through lanes totaling 10,500 square feet, two sit-down restaurants totaling 10,000 square feet, 30,000 square feet of retail buildings, two automotive service buildings totaling 16,000 square feet, a car wash with 4 bays, and an 8 acre mini-storage facility. The Quarry is anticipated to generate 10,974 average weekday trips with 900 trips occurring during the AM peak hour and 1,046 trips occurring during the PM peak hour. Kiley Ranch is anticipated to generate 15,936 average weekday trips with 1,003 trips occurring during the AM peak hour and 1,092 trips occurring during the PM peak hour.

Traffic generated by The Quarry will have some impact the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping or traffic control improvements comply with City of Sparks and Nevada Department of Transportation requirements.

It is recommended that Highland Ranch Parkway be widened to four lanes from Pyramid Highway to the Project Access.

It is recommended that the Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection be improved to include dual left turn lanes, two through lanes, and one right turn lane at the east and west approaches and dual left turn lanes at the south approach. The dual left turn pocket at the west approach should contain 545 feet of storage/deceleration length and the dual left turn pocket at the south approach should contain 740 feet of storage/deceleration length.

It is recommended that the Highland Ranch Parkway/Project Access intersection be improved as three-leg traffic signal controlled intersection with one left turn lane and one through lane at the west approach, one through lane and one right turn lane at the east approach, and dual left turn lanes and one right turn lane at the north approach. The left turn pocket at the west approach should contain 370 feet of storage/deceleration length and the dual left turn pocket at the north approach should contain 365 feet of storage/deceleration length.

#### INTRODUCTION

#### STUDY AREA

The Quarry will be located in the City of Sparks, Nevada. The project site is located north of Highland Ranch Parkway and west of Pyramid Highway. Figure 1 shows the location of the project site. This study also includes analysis of Kiley Ranch land uses located west of Pyramid Highway between Highland Ranch Parkway and Lazy 5 Parkway. The purpose of this study is to address the project's impact upon the adjacent street network. The Highland Ranch Parkway/Pyramid Highway, Highland Ranch Parkway/Project Access, and Highland Ranch Parkway/Frontage Road intersections have been identified for AM and PM peak hour capacity analysis for the existing, existing plus project, existing plus project plus Kiley Ranch, 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios. The Pyramid Highway intersections with Los Altos Parkway and Lazy 5 Parkway have been identified for trip distribution and assignment analysis only. Pyramid Highway and Highland Ranch Parkway in the vicinity of the site have been identified for roadway capacity analysis for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch Scenarios.

#### EXISTING AND PROPOSED LAND USES

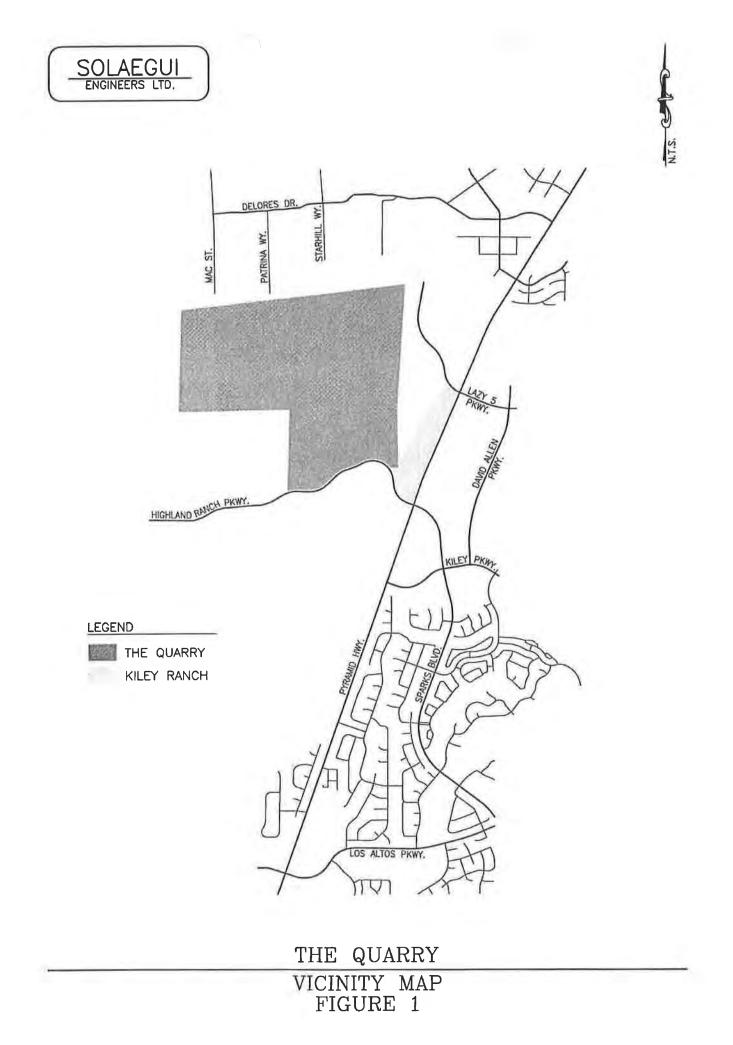
The project site encompasses an old gravel pit and undeveloped land. Adjacent properties generally include undeveloped land with some scattered dwelling units to the north and west. The Quarry will include the construction of 1,223 single family homes and a 13 acre mini-storage facility. The Kiley Ranch land uses will consist of two convenience stores with gas pumps totaling 8,000 square feet, three fast food restaurants with drive-through lanes totaling 10,500 square feet, two sit-down restaurants totaling 10,000 square feet, 30,000 square feet of retail buildings, two automotive service buildings totaling 16,000 square feet, a 4-bay car wash, and an 8 acre mini-storage facility.

#### EXISTING AND PROPOSED ROADWAYS AND INTERSECTIONS

Pyramid Highway is a four-lane roadway with two through lanes in each direction in the vicinity of the site. The speed limit is posted for 55 miles per hour in the vicinity of the site. Roadway improvements include bicycle lanes, striped edge lines, and paved shoulders on both sides of the roadway. A striped centerline exists south of Highland Ranch Parkway and a raised center median exists north of Highland Ranch Parkway.

Highland Ranch Parkway is a two-lane roadway with one through lane in each direction west of Pyramid Highway. The speed limit is posted for 45 miles per hour with a 35 mile per hour advisory speed limit near the project site. Roadway improvements include striped edge and center lines and paved and graded shoulders.

Sparks Boulevard is a four-lane roadway with two through lanes in each direction east of Pyramid Highway. The speed limit is posted for 40 miles per hour. Roadway improvements include curb, gutter, sidewalk, and bike lanes on both sides of the street and a raised center median with left turn pockets at major intersections.



The Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection is a signalized fourleg intersection with protected phasing for all left turn movements. The north approach contains dual left turn lanes, two through lanes, and one right turn lane. The south approach contains one left turn lane, two through lanes, and one right turn lane. The east approach contains dual left turn lanes, one through lane, and one free right turn lane with a northbound acceleration lane. The west approach contains one left turn lane and one shared through-right turn lane with a southbound acceleration lane. Pedestrian crosswalks exist at all approaches.

The Highland Ranch Parkway/Project Access intersection is an unsignalized three-leg intersection with stop control at the north approach. The intersection contains one shared left turn-through lane at the west approach, one shared through-right turn lane at the east approach, and one shared left turn-right turn lane at the north approach. The north approach served a gravel pit but is now gated.

The Highland Ranch Parkway/Frontage Road intersection does not currently exist but is anticipated to be a typical three-leg intersection with full turning movements allowed. The Highland Ranch Parkway/Frontage Road intersection will provide access to Kiley Ranch.

#### TRIP GENERATION

In order to assess the magnitude of traffic impacts of the proposed project on the key intersections, trip generation rates and peak hours had to be determined. Trip generation rates were obtained from the Ninth Edition of *ITE Trip Generation* (2012). Trip generation was calculated for the peak hours occurring between 7:00 and 9:00 AM and 4:00 and 6:00 PM which correspond to the peak hours of adjacent street traffic. The Quarry will include the construction of 1,223 single family homes and 13 acres of mini-storage. ITE Land Uses 151: Mini-Warehouse and 210: Single Family Detached Housing was used to calculate trips generated by The Quarry. Table 1 shows a summary of the average daily traffic (ADT) volumes and peak hour volumes generated by The Quarry.

	TABLI THE QUARRY TRIF		RATION					
		AM	PEAK I	HOUR	PM PEAK HOUR			
LAND USE	ADT	IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family (1,223 DU) Mini-Warehouse (13 AC) Total	10,513 <u>461</u> 10,974	217 <u>15</u> 232	649 <u>19</u> 668	866 <u>34</u> 900	630 <u>23</u> 653	370 <u>23</u> 393	1,000 <u>46</u> 1,046	

Kiley Ranch will consist of two convenience stores with gas pumps for a total of 8,000 square feet, three fast food restaurants with drive-through lanes totaling 10,500 square feet, two sit-down restaurants totaling 10,000 square feet, 30,000 square feet of retail buildings, two automotive service buildings totaling 16,000 square feet, a car wash with 4 bays, and an 8 acre mini-storage facility. ITE Land Uses 151: Mini-Warehouse, 820: Shopping Center, 843: Automobile Parts Sales, 848: Tire Store, 853: Convenience Market with Gasoline Pumps, 932: High-Turnover (Sit-Down) Restaurant, 934: Fast Food Restaurant with Drive-Thru, and 947: Self-Service Car Wash were used to calculate trips generated by Kiley Ranch.

KILEY	TABLI RANCH TRI		RATION	Į				
		AM	PEAK H	IOUR	PM PEAK HOUR			
LAND USE	ADT	IN	OUT	TOTAL	IN	OUT	TOTAL	
Convenience Market w/Gas (8,000 SF)	6,765	164	163	327	204	203	407	
Fast Food w/Drive-Thru (10,500 SF)	5,209	243	234	477	178	165	343	
Sit-Down Restaurant (10,000 SF)	1,272	59	49	108	59	40	99	
Shopping Center (30,000 SF)	1,281	18	11	29	53	58	111	
Auto Parts Sales (8,000 SF)	495	9	9	18	24	24	48	
Tire Store (8,000 SF)	199	14	9	23	14	19	33	
Car Wash (4 Bays)	432	0	0	0	11	11	22	
Mini-Storage (8 AC)	283	9	12	21	<u>15</u>	14	29	
Total	15,936	516	487	1,003	558	534	1,092	

Table 2 shows a summary of the average daily traffic (ADT) volumes and AM and PM peak hour traffic volumes generated by Kiley Ranch.

#### TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project trips to the key intersections was estimated based on existing and future peak hour traffic patterns and the locations of attractions and productions in the area. Separate trip distribution schemes were developed for The Quarry and Kiley Ranch. The trip generation volumes were subsequently assigned to the key intersections based on the trip distribution. Figure 2 shows the trip distribution and assignment for The Quarry. Figure 3 shows the trip distribution and assignment for Kiley Ranch. Access to Kiley Ranch will be provided from Highland Ranch Parkway and Lazy 5 Parkway via the Frontage Road and from Pyramid Highway via two right-in/right-out only driveways.

#### EXISTING AND PROJECTED TRAFFIC VOLUMES

Figure 4 shows the existing traffic volumes at the key intersections during the AM and PM peak hours. The existing traffic volumes were obtained from weekday counts conducted in September of 2017. Figure 5 shows the existing plus project traffic volumes during the AM and PM peak hours. Figure 6 shows the existing plus project plus Kiley Ranch traffic volumes at the key intersections. Figure 7 shows the 2035 base traffic volumes. The 2035 base average daily traffic volumes were obtained directly from RTC's traffic forecasting model and the peak hour volumes were then estimated based on the average daily traffic volumes. Peak hour factors and directional splits obtained from actual hourly traffic data on Pyramid Highway, Sparks Boulevard, and Highland Ranch Parkway were applied to the average daily traffic volumes in order to obtain peak hour directional link volumes at each leg of the intersection. Peak hour intersection turning movements were then estimated based on manually balancing entering and departing volumes at the intersection. Figure 8 shows the 2035 base plus project traffic volumes at the key intersections during the AM and PM peak hours. Figure 9 shows the 2035 base plus project plus Kiley Ranch traffic volumes at the key intersections during the AM and PM peak hours.

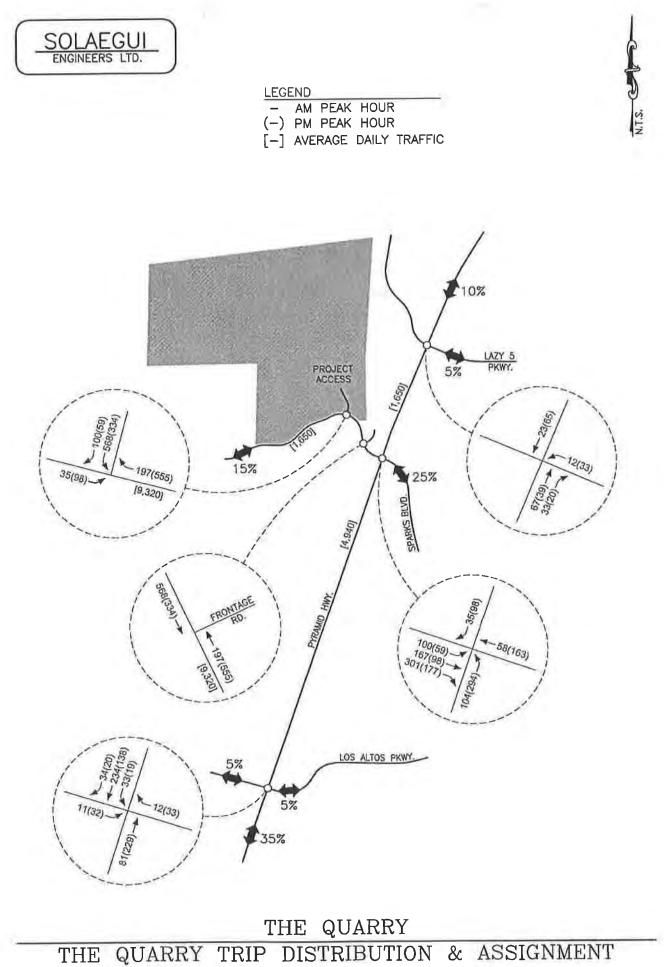


FIGURE 2

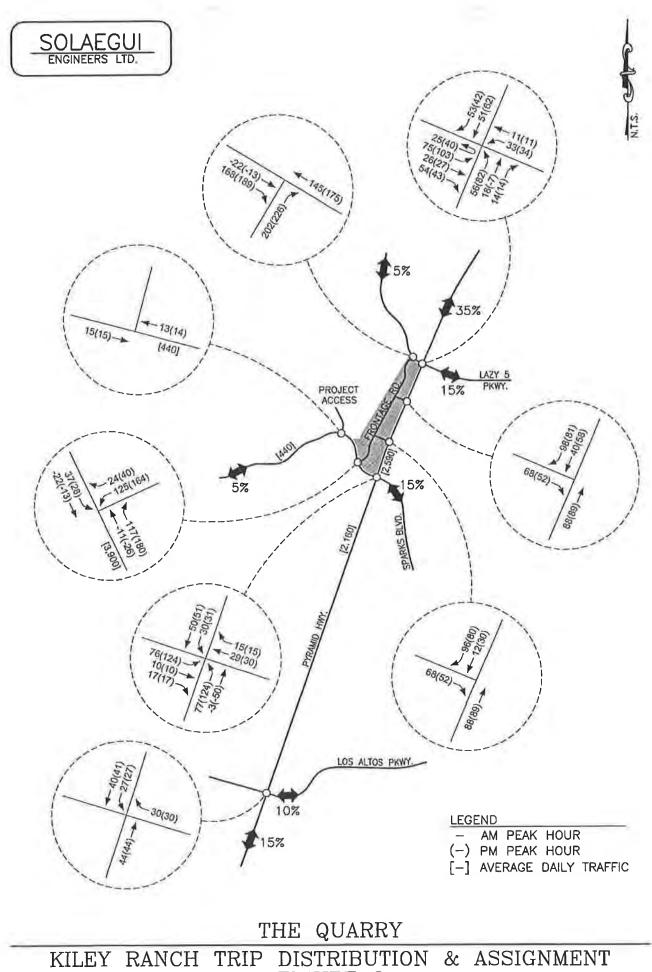
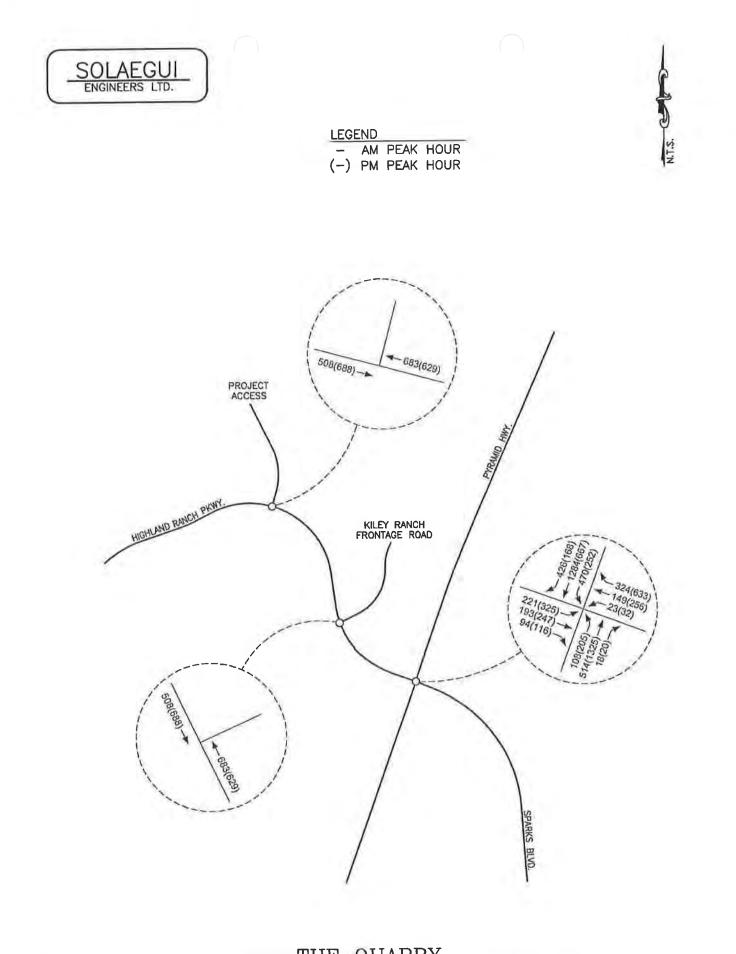
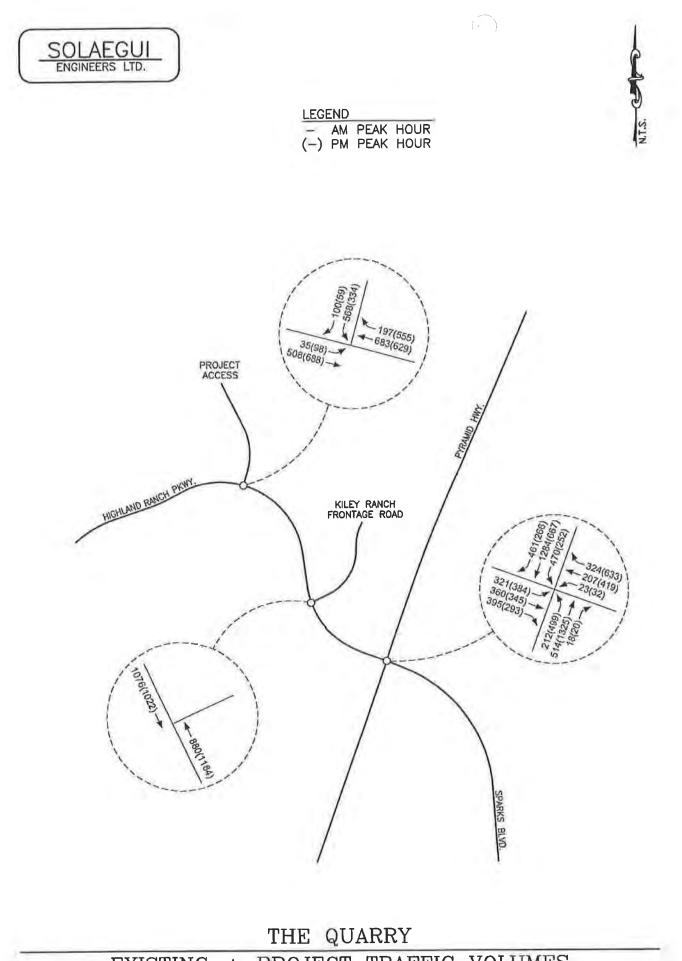


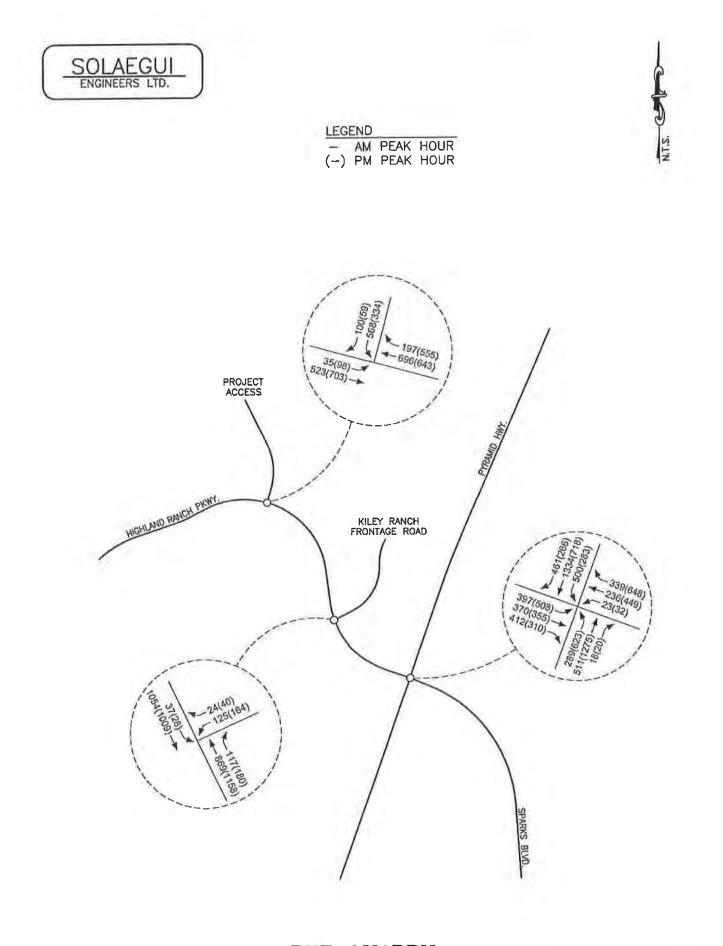
FIGURE 3



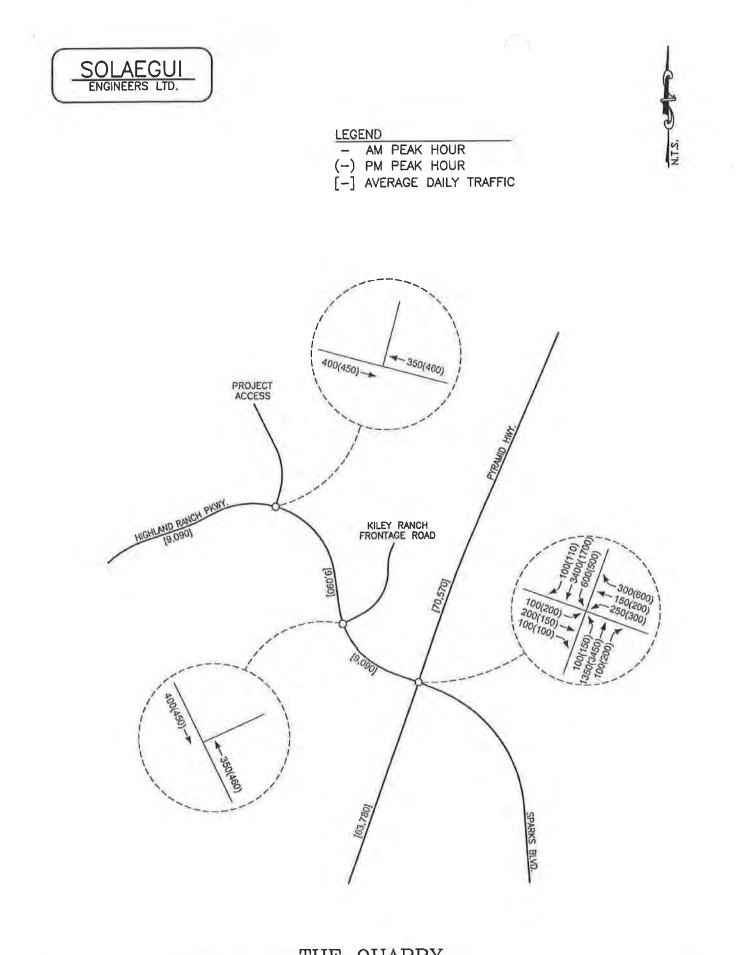
THE QUARRY EXISTING TRAFFIC VOLUMES FIGURE 4



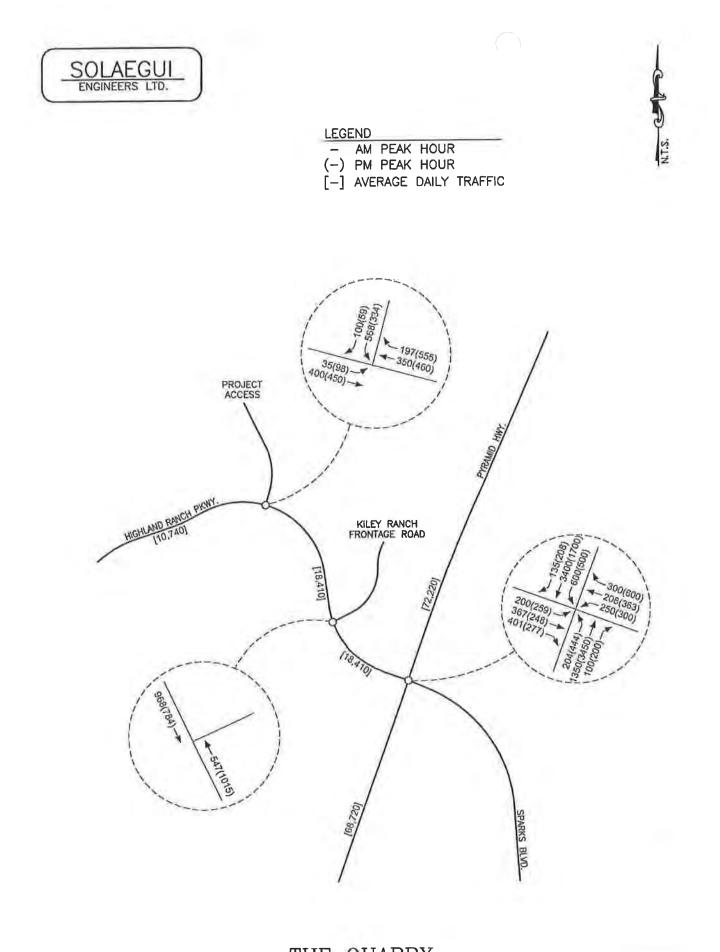
EXISTING + PROJECT TRAFFIC VOLUMES FIGURE 5



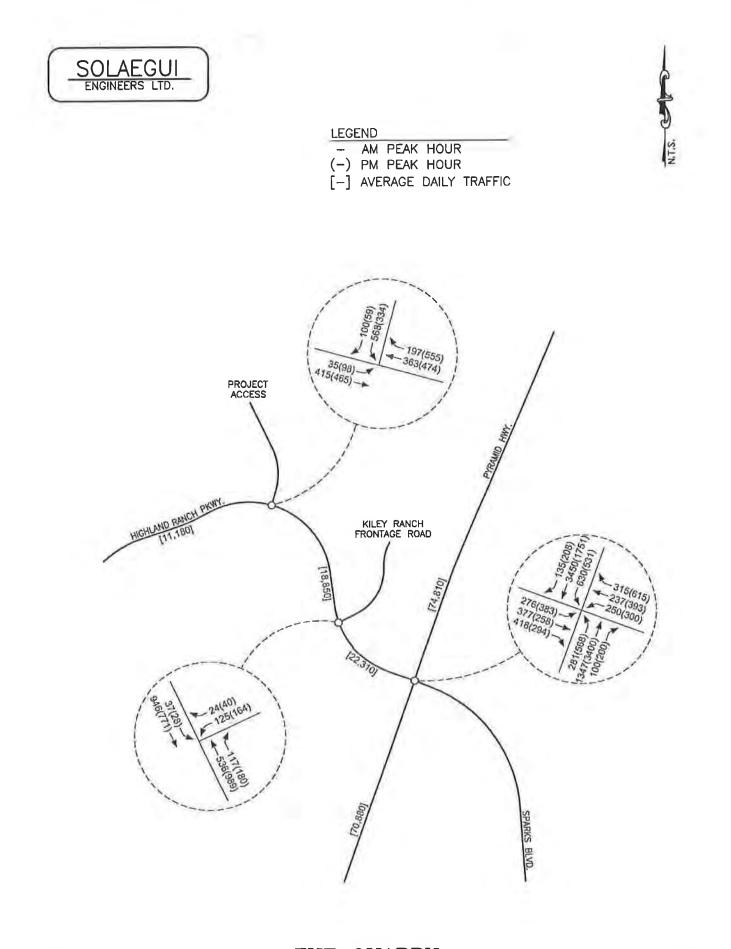
THE QUARRY EXISTING + PROJECT + KILEY RANCH TRAFFIC VOLUMES FIGURE 6



THE QUARRY 2035 BASE TRAFFIC VOLUMES FIGURE 7



THE QUARRY 2035 BASE + PROJECT TRAFFIC VOLUMES FIGURE 8



THE QUARRY 2035 BASE + PROJECT + KILEY RANCH VOLUMES FIGURE 9

## ROADWAY CAPACITY ANALYSIS

Pyramid Highway and Highland Ranch Parkway in the vicinity of the site were identified for roadway capacity analysis. Roadway capacity is based on average daily level of service thresholds established by the Regional Transportation Commission. The 2040 Regional Transportation Plan indicates that LOS standards used for assessing the need for street and highway improvements at a planning level are LOS D for all regional roadway facilities projected to carry less than 27,000 ADT and LOS E for all regional roadway facilities projected to carry 27,000 or more ADT. The LOS standard is LOS D for Highland Ranch Parkway and LOS E for Pyramid Highway based on the 2035 base traffic volumes. The 2040 Regional Transportation Plan indicates that Pyramid Highway is classified as an arterial with high access control and Highland Ranch Parkway is classified as an arterial with moderate access control. Table 3 shows the average daily level of service thresholds for high and moderate access control arterials.

LEVEL OF SERV	TABLE 3 VICE CRITERIA FOR ROADWAY SEGMENTS								
	AVERAGE DAILY TRAFFIC VOLUME								
FACILITY/LANES	LOS C	LOS D	LOS E	LOS F					
Arterial with High Access Control 4 Lanes 6 Lanes 8 Lanes	≤36,100 ≤54,700 ≤73,200	36,101-38,400 54,701-57,600 73,201-76,800	38,401-40,600 57,601-60,900 76,801-81,300	>40,600 >60,900 >81,300					
Arterial with Moderate Access Control 2 Lanes 4 Lanes 6 Lanes	≤14,800 ≤32,200 ≤49,600	14,801-17,500 32,201-35,200 49,601-52,900	17,501-18,600 35,201-36,900 52,901-55,400	>18,600 >36,900 >55,400					

Pyramid Highway and Highland Ranch Parkway were subsequently reviewed for capacity based on the 2035 average daily traffic volumes presented on Figures 7-9 and the level of service thresholds presented above. Table 4 shows a summary of the roadway segment level of service results for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch traffic volumes.

	ABLE 4 EVEL OF SERVICE RESULTS									
	2035 H	BASE	2035 E + PRO		2035 H + PRO + KII	JECT				
ROADWAY SEGMENT	ADT	LOS	ADT	LOS	ADT	LOS				
Pyramid Highway north of Highland Ranch 4-Lane High Access Control Arterial (Existing) 6-Lane High Access Control Arterial 8-Lane High Access Control Arterial (Needed)	70,570 70,570 70,570	F F C	72,220 72,220 72,220	F F C	74,810 74,810 74,810	F F D				

TABLE 4 (CON ROADWAY SEGMENT LEVEL		ICE RE	SULTS			
	2035 F	BASE	2035 E + PRO		2035 E + PRO + KII	JECT
ROADWAY SEGMENT	ADT	LOS	ADT	LOS	ADT	LOS
Pyramid Highway south of Highland Ranch 4-Lane High Access Control Arterial (Existing) 6-Lane High Access Control Arterial 8-Lane High Access Control Arterial (Needed)	63,780 63,780 63,780	F F C	68,720 68,720 68,720	F F C	70,880 70,880 70,800	F F C
Highland Ranch between Pyramid and Frontage Road 2-Lane Moderate Access Control Arterial (Existing) 4-Lane Moderate Access Control Arterial (Needed)	9,090	с	18,410 18,410	E C	22,310 22,310	F C
Highland Ranch between Frontage Road & Project Access 2-Lane Moderate Access Control Arterial (Existing) 4-Lane Moderate Access Control Arterial (Needed)	9,090	с	18,410 18,410	E C	18,850 18,850	F C
Highland Ranch west of Project Access 2-Lane Moderate Access Control Arterial (Existing)	9,090	с	10,740	с	11,180	с

As shown in Table 4, the existing four-lane segment of Pyramid Highway north and south of Highland Ranch Parkway operates at LOS F for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch traffic volumes. This roadway segment will need to be widened to eight lanes in order to maintain policy LOS E or better operation based on the high access control arterial level of service thresholds. However, RTC's 2040 Regional Transportation Plan indicates that the US-395 Connector is planned to be constructed to Pyramid Highway in the 2027-2040 timeframe. The Pyramid Highway/US-395 Connection Project indicates that a six-lane "high speed" high access control arterial is the preferred alternative for the Pyramid Highway/US-395 Connector north and south of Sparks Boulevard. Capacity thresholds for a high speed high access control arterial are not available but it is anticipated that the proposed six-lane section for this new roadway will provide LOS E or better operation for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios.

The existing two-lane segment of Highland Ranch Parkway from Pyramid Highway to the Project Access operates at LOS C for the 2035 base traffic volumes, LOS E for the 2035 base plus project traffic volumes, and LOS F for the 2035 base plus project plus Kiley Ranch traffic volumes and the existing two-lane segment west of the Project Access operates at LOS C for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch traffic volumes. This segment of Highland Ranch Parkway will therefore need to be widened to four lanes in order to maintain policy LOS D or better operation for the 2035 base plus project and 2035 base plus project plus Kiley Ranch scenarios. No capacity improvements are planned for Highland Ranch Parkway in RTC's 2040 Regional Transportation Plan. It is recommended that Highland Ranch Parkway be widened to four lanes from Pyramid Highway to the Project Access in order to serve project traffic volumes.

# INTERSECTION CAPACITY ANALYSIS

The key intersections were analyzed for capacity based on procedures presented in the *Highway Capacity Manual (6th Edition)*, prepared by the Transportation Research Board, for unsignalized and signalized intersections using the latest version of the Highway Capacity Software.

The result of capacity analysis is a level of service (LOS) rating for each signalized intersection, roundabout, all-way stop controlled intersection, or minor movement at a two-way stop controlled intersection. Level of service is a qualitative measure of traffic operating conditions where a letter grade "A" through "F", corresponding to progressively worsening traffic operation, is assigned to the intersection or minor movement.

The *Highway Capacity Manual* defines level of service for two-way stop controlled intersections in terms of computed or measured control delay for each minor movement. Level of service is not defined for the two-way stop controlled intersection as a whole but is assigned to all-way stop controlled intersections and roundabouts. The level of service criteria for unsignalized intersections is shown in Table 5.

TABLE 5 LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS				
LEVEL OF SERVICE	DELAY RANGE (SEC/VEH)			
A	≤10			
В	>10 and ≤15			
С	>15 and ≤25			
D	>25 and ≤35			
E	>35 and ≤50			
F	>50			

Level of service for signalized intersections is stated in terms of the average control delay per vehicle for a peak 15 minute analysis period. The level of service criteria for signalized intersections is shown in Table 6.

	TABLE 6
LEVEL OF SERVICE O	CRITERIA FOR SIGNALIZED INTERSECTIONS
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (SEC)
A	≤10
В	>10 and <20
С	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Table 7 shows a summary of the level of service and delay results for the existing, existing plus project, existing plus project plus Kiley Ranch, 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios. The capacity worksheets are included in the Appendix.

INT	ERSEC	CTION	LEVEL		BLE 7 ERVICE	AND	DELAY	( RESU	JLTS			
	EXIS	TING	EXIS + PRC		EXIS + PRC + KI	JECT	2035	BASE		BASE + JECT	2035 B PROJI KIL	ECT +
INTERSECTION	AM	РМ	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Pyramid/Highland Ranch Signal w/Exist. Lanes Signal w/Added Lanes Interchange w/Signal NB Ramps SB Ramps	D40 N/A N/A N/A	D54 N/A N/A N/A	F136 D43 N/A N/A	F137 D49 N/A N/A	F165 D46 N/A N/A	F189 D50 N/A N/A	F193 C34 B16 C23	F327 D52 C21 B19	F321 D38 B17 C23	F359 E58 C22.0 B19	F349 D42 B17 C23	F376 E66 C24 B20
Highland Ranch/Access Signal	N/A	N/A	C23	B19	C24	B20	N/A	N/A	B18	B19	B18	B19
Highland Ranch/Frontage Stop at North Leg EB Left SB Left SB Right	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	B11 F353 B12	B13 F999 B14	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	A9 F61 B10	B12 F392 B13

Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard Intersection

The Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection was initially analyzed as a signalized four-leg intersection with the existing approach lanes for all scenarios. The intersection currently operates at LOS D with a delay of 40 seconds per vehicle during the AM peak hour and 54 seconds per vehicle during the PM peak hour. For the existing plus project traffic volumes the intersection operates at LOS F with a delay of 136 seconds per vehicle during the AM peak hour and 137 seconds per vehicle during the PM peak hour. For the existing plus project plus Kiley Ranch traffic volumes the intersection operates at LOS F with a delay of 165 seconds per vehicle during the AM peak hour and 189 seconds per vehicle during the PM peak hour. The intersection will continue to operate at LOS F with high delays for the 2035 base, 2035 base plus project plus Kiley Ranch traffic volumes.

The signalized Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection was subsequently re-analyzed for capacity with additional approach lanes. For the existing plus project and existing plus project plus Kiley Ranch traffic volumes the intersection operates at LOS D during the AM and PM peak hours with dual left turn lanes, two through lanes, and one free right turn lane at the east and west approaches and dual left turn lanes at the south approach. For the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch traffic volumes the intersection operates at LOS E or better during the AM and PM peak hours with dual left turn lanes, four through lanes, and one right turn lane at the north and south approaches and dual left turn lanes, two through lanes, and one free right turn lane at the east and west approaches.

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Four through lanes at the north and south Pyramid Highway approaches is consistent with the roadway capacity results that require an eight-lane high access control arterial for all 2035 scenarios. However, as previously discussed, the Pyramid Highway/US-395 Connection Project indicates that a six-lane "high speed" high access control arterial is the preferred alternative for the Pyramid Highway/US-395 Connector north and south of Sparks Boulevard. The Pyramid Highway/US-395 Connection Project and RTC's 2040 Regional Transportation Plan also indicate that a gradeseparated interchange is planned for construction at the Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection in the 2027-2040 timeframe. The Pyramid Highway/ Highland Ranch Parkway/Sparks Boulevard intersection therefore re-analyzed for capacity as two separate signalized ramp intersections. The northbound and southbound ramp intersections operate at LOS C or better during the AM and PM peak hours for the 2035 base, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios. The northbound ramp intersection was analyzed with dual left turn lanes and two through lanes at the west approach, two through lanes and one right turn lane the east approach, and dual left turn lanes and one right turn lane at the south approach. The southbound ramp intersection was analyzed with dual left turn lanes and two through lanes at the east approach, two through lanes and one right turn lane the west approach, and dual left turn lanes and one right turn lane at the north approach.

Storage and deceleration requirements were reviewed for the needed dual left turn lanes at the west and south approaches based on the existing plus project plus Kiley Ranch traffic volumes. 325 feet of storage length is required for each left turn lane at the west approach and 375 feet is required for each left turn lane at the south approach based on the Poisson method for signalized intersections with a 95th percentile confidence level and 130 second cycle length. For desirable conditions 220 feet of deceleration length is needed for the left turn pocket at the west approach based on the 45 mile per hour speed limit on Highland Ranch Parkway and 365 feet of deceleration length is needed for the left turn pocket at the 55 mile per hour speed limit on Pyramid Highway.

It is recommended that the Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection be improved to include dual left turn lanes, two through lanes, and one right turn lane at the east and west approaches and dual left turn lanes at the south approach in order to serve project buildout traffic volumes. The dual left turn pocket at the west approach should contain 545 feet of storage/deceleration length and the dual left turn pocket at the south approach should contain 740 feet of storage/deceleration length.

#### Highland Ranch Parkway/Project Access Intersection

The Highland Ranch Parkway/Project Access intersection was analyzed as a signalized three-leg intersection for the existing plus project, existing plus project plus Kiley Ranch, 2035 base plus project, and 2035 base plus project plus Kiley Ranch scenarios. The intersection meets traffic signal warrant 3 per the latest edition of the *Manual on Uniform Traffic Control Devices* (MUTCD). For the existing plus project traffic volumes the intersection operates at LOS C during the AM peak hour and LOS B during the AM Peak hour. For the existing plus project plus Kiley Ranch traffic volumes the intersection continues to operate at LOS C during the AM peak hour and LOS B during the AM peak hour with slight increases in delay.

For the 2035 base plus project traffic volumes the intersection operates at LOS B during the AM and PM peak hours. For the 2035 base plus project plus Kiley Ranch traffic volumes the intersection continues to operate at LOS B during the AM and PM peak hours. The intersection was analyzed with one left turn lane and one through lane at the west approach, one through lane and one right turn lane at the east approach, and dual left turn lanes and one right turn lane at the north approach for all scenarios.

Traffic signal spacing requirements were reviewed for the Highland Ranch Parkway/Project Access intersection. RTC's access management standards indicate that traffic signals on arterials with moderate access control (Highland Ranch Parkway) shall be spaced a minimum of 1,590 feet apart. The centerline spacing on Highland Ranch Parkway between Pyramid Highway and the Project Access is  $\pm 1,500$  which very nearly meets the signal spacing standard.

Storage and deceleration requirements were reviewed for the needed left turn lanes at the west and north approaches. Approximately 150 feet of storage length is required for the left turn lane at the west approach and 250 feet is required for each left turn lane at the north approach based on the Poisson method for signalized intersections with a 95th percentile confidence level and 90 second cycle length. For desirable conditions 220 feet of deceleration length is needed for the left turn pocket at the west approach based on the 45 mile per hour speed limit on Highland Ranch Parkway and 115 feet of deceleration length is needed for the left turn pocket at the north approach based on an assumed speed limit of 35 miles per hour.

It is recommended that the Highland Ranch Parkway/Project Access intersection be improved as three-leg traffic signal controlled intersection with one left turn lane and one through lane at the west approach, one through lane and one right turn lane at the east approach, and dual left turn lanes and one right turn lane at the north approach. The left turn pocket at the west approach should contain 370 feet of storage/deceleration length and the dual left turn pocket at the north approach should contain 365 feet of storage/deceleration length.

#### Highland Ranch Parkway/Frontage Road Intersection

The Highland Ranch Parkway/Frontage Road intersection was analyzed as an unsignalized threeleg intersection with stop sign control at the north approach for the existing plus project plus Kiley Ranch and 2035 base plus project plus Kiley Ranch scenarios. For the existing plus project plus Kiley Ranch traffic volumes the southbound left turn movement operates at LOS F during the AM and PM peak hours. For the 2035 base plus project plus Kiley Ranch traffic volumes the southbound left turn movement continues to operate at LOS F during the AM and PM peak hours. The intersection was analyzed with one left turn lane and two through lane at the west approach, two through lanes and one right turn lane at the east approach, and one left turn lane and one right turn lane at the north approach for all scenarios. Traffic signal warrant and signal spacing requirements were subsequently reviewed at the intersection. Peak hour traffic signal warrant 3 per the latest edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) is met at the intersection for the existing plus project plus Kiley Ranch traffic volumes. However, the intersection does not meet RTC's 1,590 feet signal spacing requirement. The left turn movements at the intersection may ultimately need to be restricted.

## RECOMMENDATIONS

Traffic generated by The Quarry will have some impact the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping or traffic control improvements comply with City of Sparks and Nevada Department of Transportation requirements.

It is recommended that Highland Ranch Parkway be widened to four lanes from Pyramid Highway to the Project Access.

It is recommended that the Pyramid Highway/Highland Ranch Parkway/Sparks Boulevard intersection be improved to include dual left turn lanes, two through lanes, and one right turn lane at the east and west approaches and dual left turn lanes at the south approach. The dual left turn pocket at the west approach should contain 545 feet of storage/deceleration length and the dual left turn pocket at the south approach should contain 740 feet of storage/deceleration length.

It is recommended that the Highland Ranch Parkway/Project Access intersection be improved as three-leg traffic signal controlled intersection with one left turn lane and one through lane at the west approach, one through lane and one right turn lane at the east approach, and dual left turn lanes and one right turn lane at the north approach. The left turn pocket at the west approach should contain 370 feet of storage/deceleration length and the dual left turn pocket at the north approach should contain 365 feet of storage/deceleration length.

APPENDIX

	Avera	age Daily	Trips		Peak Ho nt Street	-		Peak Ho nt Street	
ITE Land Use	Enter	<u>Exit</u>	<u>Total</u>	<u>Enter</u>	<u>Exit</u>	Total	<u>Enter</u>	<u>Exit</u>	Tota
210 SFHOUSE 1 1223 Dwelling Units	5257	5256	10513	217	649	866	630	370	1000
Unadjusted Volume	0	0	0	0	0	0	0	0	0
Internal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

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Project: New Project Alternative: Alternative 1						•		9/14/20 9/14/20	
	Avera		Peak Ho nt Street		PM Peak Hour of Adjacent Street Traffic				
ITE Land Use	Enter	<u>Exit</u>	<u>Total</u>	Enter	<u>    Exit    </u>	<u>Total</u>	<u>Enter</u>	Exit	<u>Tota</u>
151 MWAREHOUSE 1 13 Acres	231	230	461	15	19	34	23	23	46
Unadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total PM Peak Hour Internal Capture = 0 Percent

	Avera	age Daily	Trips		Peak Ho Int Street			Peak Ho ent Street	
ITE_ Land Use	Enter	_Exit_	_Total_	Enter	_Exit_	Total	<u>Enter</u>	Exit	_Tota
853 CONVMARKETGAS 1	3383	3382	6765	164	163	327	204	203	407
8 Gross Floor Area 1000 SF									
Unadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	103	103	206	135	134	269
Volume Added to Adjacent Streets	0	0	0	-103	-103	-206	-135	-134	-269

Project: New Project Alternative: Alternative 1							n Date: is Date:	9/19/20 9/19/20	
	Avera	ige Daily	Trips		Peak Ho nt Street			Peak Ho Int Street	
ITE_ Land Use	Enter	Exit	Total	Enter	Exit	Total	Enter	_ <u>Exit</u> _	Tota
934 FASTFOODDT 1	2605	2604	5209	243	234	477	178	165	343
10.5 Gross Floor Area 1000 SF									
Jnadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	119	115	234	89	82	171
• •	0	0	0	-119	-115	-234	-89	-82	-171

Total PM Peak Hour Internal Capture = 0 Percent

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Project: New Project Alternative: Alternative 1							n Date: s Date:	9/19/20 9/19/20	
	Avera	ge Daily	Trips		Peak Ho nt Street			<sup>D</sup> eak Ho nt Street	
ITE Land Use	Enter	Exit	_Total_	_Enter_	Exit	Total	Enter	Exit	Tota
932 RESTAURANTHT 1	636	636	1272	59	49	108	-59	40	99
10 Gross Floor Area 1000 SF									
Jnadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total PM Peak Hour Internal Capture = 0 Percent

	Avera	ge Daily	Trips		Peak Hou nt Street			Peak Ho nt Street	
ITE Land Use	Enter	Exit	Total	Enter	Exit	Total	<u>Enter</u>	<u>Exit</u>	Tota
<ul><li>820 CENTERSHOPPING 1</li><li>30 Gross Leasable Area 1000 SF</li></ul>	641	640	1281	18	11	29	53	58	111
Jnadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

	Avera	ge Daily	Trips		Peak Ho nt Streel			Peak Ho nt Street	
ITE Land Use	Enter	_Exit	Total	Enter	Exit		Enter_	Exit	Tota
843 SALESAUTOPARTS 1 8 Gross Floor Area 1000 SF	248	247	495	9	9	18	24	24	48
Unadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total PM Peak Hour Internal Capture = 0 Percent

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	Avera	ge Daily	<sup>,</sup> Trips		<sup>D</sup> eak Ho nt Street			Peak Ho nt Street	
ITE Land Use	Enter	Exit	Total	Enter	_Exit_	Total	Enter	<u>Exit</u>	_Tota
848 STORETIRE 1 8 Gross Floor Area 1000 SF	100	99	199	14	9	23	14	19	33
Jnadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total PM Peak Hour Internal Capture = 0 Percent

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	Avera	ge Daily	Trips		Peak Ho Int Street			Peak Ho nt Street	
ITE Land Use	Enter	<u>Exit</u>	Total	Enter	Exit	Total	Enter	Exit	Tota
947 CARWASH 1 4 Wash Stalls	216	216	432				11	11	22
Jnadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Alternative: Alternative 1					Peak Ho	ur of	PMI	9/19/20 Peak Ho	ur of
	Avera	ge Daily	Trips	Adjace	nt Street	Traffic	Adjace	nt Street	
ITE Land Use	Enter	<u>Exit</u>	Total	Enter	Exit	Total	Enter	Exit	<u>Tota</u>
151 MWAREHOUSE 1	142	141	283	9	12	21	15	14	29
8 Acres									
Inadjusted Volume	0	0	0	0	0	0	0	0	0
nternal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total PM Peak Hour Internal Capture = 0 Percent

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HCS7TM Streets Version 7.3

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Uncoordinated	No	Simult. Gap E/W	On	Green		10.0	47.0	6.0	15.0	20.0			1.1	*	+
	Fixed	Simult. Gap N/S	On	Yellow Red	14.0	0.0	1.0	1.0	0.0	1.0	-	] . ["			
Force Mode	Fixed	Simult. Gap 14/5	Ch	TNOU	1.0	10.0	T tio	11.0	1010	-11	Frendit	1=2:4	Start L	STE .	1950
Timer Results	1115,-15	and the second s		EBL		EBT	WBL		WBT	NBL		NBT	SBL		SBT
Assigned Phas	0			7	-	4	3		8	5		2	1		6
Case Number				2.0		4.0	2.0		4.0	2.0		3.0	2.0		3.0
Phase Duration				26.0		40.0	11.0	1	25.0	27.0		32.0	17.0	0	52.0
Change Period		al s		0.0	-	5.0	5.0	1	5.0	0.0		5.0	5.0		5.0
Max Allow Hea	and a support of the local division of the	the second		3.1	the second second	3.0	3.0		3.0	2.9		0.0	2.9		0.0
		the second data and		27.7		26.8	3.3		21.2	16.7			12.1		
the second se	the Clearance Time ( $g_s$ ), s en Extension Time ( $g_e$ ), s					0.9	0.0	-	0.0	0.3		0.0	0.0		0.0
and the second s	and the second se					1.00	1.00		1.00	1.00			1.00	al local de la companya d	
and the second se	se Call Probability					0.07	1.00		1.00	0.00	and the second second		1.00		
Max Out Troba	Silence	A CALLER AND	Nel liet	Sur Al	C THE	2312-	- illin	150	1	(117) 40 (12) 40	15.63	Hinda	1000	13:Na	2.10
Movement Gr	oup Res	sults		-	EB			WB			NB		-	SB	
Approach Mov	ement			L	Т	R	L	T	R	L	T	R	L	T	R
Assigned Move	ement			7	4	14	3	8		5	2	12	1	6	16
Adjusted Flow	Rate (	/ ), veh/h		353	367		35	278		223	1440	22	274	725	139
Adjusted Satur	ation FI	ow Rate (s), veh/h/	/In	1781	1772		1730	1870	1	1781	1781	1557	1730	1781	1535
Queue Service	Time (	g s), s		25.7	24.8		1.3	19.2		14.7	49.6	1.0	10.1	21.2	8.3
Cycle Queue C	learand	ce Time (g c), s		25.7	24.8		1.3	19.2		14.7	49.6	1.0	10.1	21.2	8.3
Green Ratio (	g/C)			0.20	0.27		0.05	0.15		0.21	0.44	0.44	0.09	0.36	0.36
Capacity (c),	veh/h			356	477		160	288		370	1561	683	319	1287	555
Volume-to-Cap	acity R	atio (X)		0.992	0.770		0.218	0.96	7	0.602	0.922	0.032	0.858	0.563	0.251
Back of Queue	e (Q), f	t/In ( 95 th percentile	)	567.9	439.5		25.1	458.	9	269.9	752	17.2	224.7	352.9	140.9
		eh/in ( 95 th percen		22.4	17.3		1.0	18.1		10.6	29.6	0,7	8.8	13.9	5.5
The second se		(RQ) (95 th percer		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay		And and a loss of the loss of		51.9	43.8		59.7	54.7	1	46.6	34.4	20.8	58.2	33.3	29.1
Incremental De	and the second division of the	And the second se		45.3	6.8		0.3	43.7		2.0	10.5	0.1	19.3	1.8	1.1
Initial Queue D	and the second second	the second s		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	-	and the second s		97.1	50.6		60.0	98,4		48.6	44.9	20.9	77.5	35.1	30.2
Level of Service	a number of the state of the state	and the second se		F	D		E	F		D	D	C	E	D	C
Approach Dela		the second s		73.4	4	E	94.	1	F	45.	1	D	44.	7	D
Intersection D	elay, s/v			1		54	4.2		-	1	-		D	VCI INVE	S TOUTO
11日1日1日日	Number of Street, or other		2 State	1. 1. 27 4	E.K.	1917	15 all	No. Co	A.	1200		all a	TE The	00	here and
Multimodal R				-	EB	-	-	WE		-	NB	~	-	SB	
Pedestrian LO		statistic states and s		3.0		С	3.1	the state of the s	C	3.4		C	2.3		В
Bicycle LOS S	core / L	OS		1.7		В	0.3	5	A	1.9		В	1.4	<u> </u>	A

HCS7<sup>TV</sup> Streets Version 7.3

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E P P	CONCERNS	a layout a shirt	and the second	Real Service	1 100	a alla	1-2-51	esul	136	May	N CATE	TAL.	E 6	Sector)	26 6 33	SOLU.
General Inform	ation	and an and a second second	and mea	1000	and the second	and the second	and the second		Inte	ersecti	on Info	rmatio	n	1	1	4
Agency		Solaegui Engineers					×		Dur	ation,	h	0.25			ittre	and the second
Analyst		MSH		Analysi	is Date	Sep 13	3. 2017		-	а Туре		Other		4	17-14-18-	
Jurisdiction		City of Sparks		Time P		Acres in the second	ak Hou	-	PH			0.92		1	-	1
Urban Street		City of Oparks		Analysi	and the second	- mail and	g + Pro	and the second second	-	alysis F	Period	1> 7:0	0	-	0	Sec.
Intersection		Pyramid & Sparks		File Na		-	7aw.xus	tions in the	1 410	any one i		1			5440	
Project Descrip		Fyraniid & Opaika		The Ne		1 1001	Turona		-					1 3	41445	1
Project Descrip	tion	MALES - MALES ALL SI	Denie and	18-5 C.M.	Bally.	APPANDA	200	Sol.	14.1	Anstra S	the state	Vin C	Part	121-22	TOP S	A Sec
Demand Inform	nation				EB			W	В			NB		1	SB	
Approach Move	ement			L	Ť	R	L	T		R	L	T	R	L	T	R
Demand (v), v	eh/h			321	360	395	23	20	7	-	212	514	18	470	1284	461
Stat-Lasta	In the last	State - SLA	112 22	1-7-1-	FILL (B	and the	35 2.0	The seal		12.2		Securit	1100	1385	17 march	3.114
Signal Informa	ation			1	5	10 ho	1	1 91		12				+-	-	
Cycle, s	120.0	Reference Phase	2		7		î	n T	v	R	13			r	-	V
Offset, s	0	Reference Point	End	Green	14.0	3.0	50.0	5.0	)	11.0	17.0		1			-
Uncoordinated	No	Simult, Gap E/W	On	Yellow		0.0	4.0	4.0	)	0.0	4.0	K	14	-	1	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0,0	1.0	1.0	)	0.0	1.0	-	1		T	and the second
	or the	A Contraction of the	1	100	1 jul	17 - J. E	a Alter	-104	City .	12	and the		1.4	New Is	- Stur	
Timer Results	1			EBL		EBT	WBI	L	_	/BT	NBL		NBT	SBL	-	SBT
Assigned Phas	е			7	_	4	3			8	5		2	1	_	6
Case Number				2.0		4.0	2.0		-	.0	2.0	-	3.0	2.0		3.0
Phase Duration	1, S			21.0		33.0	10.0		_	2.0	19.0	_	55.0	22.0	_	58.0
Change Period	, ( Y+R	c), S	_	0.0	100	5.0	5.0		_	0.	5.0	_	5.0	0.0		5.0
Max Allow Hea	dway ( I	MAH ), s		3.1	1	3.2	3.0		_	.2	2.9		0.0	2.9		0.0
Queue Clearar	nce Time	e (gs), S		23.0		30.0	2.8		-	3.1	16.0	the second second		19.0		
Green Extensio	en Extension Time ( g e ), s se Call Probability					0.0	0.0		-	.3	0.0		0.0	0.4		0.0
Phase Call Pro	se Call Probability					1.00	1.00			00	1.00	and in some		1.00		
Max Out Proba	the second se				)	1.00	1.00		1.	.00	1.00		-	0.94	+	1000
A PARTY OF A PARTY	Out Probability					1000	all the second	14.00		12015	1. 1. 2.	NID	aller Area	and an	SB	0.000
Movement Gr		sults	_	1	EB			WE	5	-		NB T	R	L	T	R
Approach Mov	and the second se				Т	R		8	+	R	L 5	2	12	1	6	16
Assigned Move		N 1.4		7	4	14	3 25	225	-		230	559	20	511	1396	392
Adjusted Flow		the second		.349	793			-	-		1781	1781	1556	1730	1781	153
1.000.000.000000		ow Rate (s), veh/h/	In	1781	1692		1730	187	-			13.0	0.9	17.0	43.2	22.9
Queue Service		the second se	_	21.0	28.0		0.8	14.1			14.0 14.0	13.0	0.9	17.0	43.2	22.9
		ce Time (g c), s		21.0	28.0		0.8		_		0.12	0.42	0.42	0.18	0.44	0.44
Green Ratio (	A DECEMBER OF THE OWNER	41-100 (million)		0.18	0.23	-	0.04	0.14			208	1484	648	634	1573	679
Capacity (c),		-11- ( )()		312	395		144	265		-	1.109	0.377	0.030	0.806	0.887	0.57
Volume-to-Cap	And in case of the local division of the loc	the second se		1.119	ALC: NO. OF CO.	-	0.173	1			450.5	229.3	14.7	306.6	647.7	333
Back of Queue	e (Q), fl	l/In ( 95 th percentile	)	630.4	2486. 8		16,5	319.	7		430.5	223.3	1.4.1	000.0	Unit.	000
Back of Queue	(0)	eh/In ( 95 th percent	ile)	24.8	97.9	-	0.7	12.0	6		17.7	9.0	0.6	12.1	25.5	13.
and the second se		(RQ) (95 th percen		0.00	0.00	1	0.00	0.00	-		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay	and the second se			49.5	46.0	-	55.5	50.	تبر المتحد		53.0	24.2	20.7	47.0	30.8	25.
Incremental Delay	and the same of th	the second se		87.1	463.2		0.2	21.	the second second		94.6	0.7	0.1	7.0	7.8	3.6
Initial Queue D		and the second se		0.0	0.0		0.0	0.0		1	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	and the second data	The second se		136.6	509.2		55.7	71.			147.6	24.9	20.8	53.9	38.6	28.
Level of Service	the state of the s			F	F	1	E	E	_		F	C	C	D	D	C
Approach Dela		the second se	-	395.	And second	F	69.	1		E	59.8	1	E	40.3	1	D
Intersection Dela	and the second se	NAMES OF TAXABLE PARTY.		0.00		the second second	35.6							F		
Intersection De		April 1 per - start and	514 57	Ser inc	A.C. AP	* W	Alter of	ATTEN .	in.	f. Lat	Real P	Sector 1	Stat 8	131/201	and to a	3.72
Multimodal R	esults	PERSONAL PROPERTY AND INCOME.	and and the	I	EB	No. of Concession, Name	-	VVE	3	and and and	1	NB			SB	
Pedestrian LO		LOS		3.0		С	3.2	2		С	2.9		С	2.3		в
Fedestilan LO				and the second se	and the second se		-		-				A			В

to public a particular st	50.00	MC STORAGE	1015	alized	a mite	13000	FATTCAT	<b>B</b>	Stares	Trately	a dan a	Uniter	6811	191.192	SE
General Inform	ation	Contraction of the second	1000	and the second	Denoi41	and the second	Letter P	In	tersec	tion Info	rmatio	n		d John I P	
and the second se		Solaegui Engineers						D	uration	h	0.25			httre	Aler.
Agency	-	MSH		Analyci	e Date	Sep 13	2017	-	rea Typ	A	Other			5.25	
Analyst		City of Sparks		Time P		PM Pe	and the second s	And in case of the local diversion of the loc	HF		0.92		1	- ie -	-
Jurisdiction		City of Sparks		Analysi		Existing				Period	1> 7:0	0	-		
Urban Street		Duramid 9 Coortes		File Na	and the second s	PySp1	The second second		itary oro	1 01100	10 348			5++0	and a second
Intersection Project Descript	ion	Pyramid & Sparks		File Na	ine	Pyopi	/pw.xus						1	41444	e e
Project Descript		A STATE OF STATE	Salt	The ser	Tid St	5-1 5-	SWIN	The state	For	Constant (	2.500	HE DAY	1	的资源	- Trans
Demand Inform	nation			1	EB			WB		1	NB	1 2		SB	-
Approach Move	ment			L	Т	R	L	T	R	L	T	R	L	T	R
Demand (v), ve	əh/h	and an excitation for	C. NOTING THE	384	345	293	32	419	1	499	1325	20	252	667	266
1 States and	1945 6	the designed state	1. Julio	and the second	233 전 등	19441	1 II	States.	12	and the second	and the second	201/272	1	Districtions.	-
Signal Information				1	14	1.1	1	11.	22	1.	- 5		D	-	1
Cycle, s	130.0	the second se	2	-	13	517	1		FS	5		1	2	3	Y
Offset, s	0	Reference Point	End	Green	a country of the second se	10.0	47.0	6.0	15.0		_				+
Uncoordinated	No	Simult, Gap E/W	On	and the second second second second	4.0	0.0	4.0	4.0	0.0	4.0		1 4		1	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	11.0	10.0	11.0	and the second	Pro Tres	NAN AND	NO.WE	(ATA)
Timer Results	HUN TEL	The set of the second second		EBL	Contrained	EBT	WBI		WBT	NBL	San Partie	NBT	SBL	0.000000	SBT
and been and the second s	-			7		4	3	-	8	5	-	2	1		6
Assigned Phase	3			2.0		4.0	2.0		4.0	2.0		3.0	2.0		3.0
Case Number			-	26.0		40.0	11.0		25.0	27.0		52.0	17.0		52.0
Phase Duration		1		0.0		5.0	5.0		5.0	0.0		5.0	5.0		5.0
Change Period,	and the second design of the	and the second se		3.1	and a second second	3.1	3.0		3.1	2.9	and the second	0.0	2.9	Address of the owner	0.0
Max Allow Head				28.0		37.0	3.3	-	22.0	29.0		4.4	12.1		-
Queue Clearan				0.0	mint in from the	0.0	0.0		0.0	0.0	the second second	0.0	0.0	and the second	0.0
state with the second state of the second stat	en Extension Time ( g e ), s se Call Probability				and in the second	1.00	1.00		1.00	1.00	and the second s		1.00		No.
and a sublicity of the official damages of the	A REAL PROPERTY AND A REAL				I MARGINAL PROPERTY.	1.00	1.00	_	1.00	1.00			1.00	the second day is not	
Max Out Proba	Out Probability				NIST IN	1.00	Carlo a	Merry	1000	674 TR-2	1 (2)	a la la	the second data	Catanelli	199.45
Movement Gro	up Res	sults	- 100 - 10	T	EB	1	-	WB	the local state	1	NB		1	SB	
Approach Move	and the local diverse of the	32.117		L	Т	R	L	T	R	L	Т	R	L	T	R
Assigned Move		- Contractor Maria		7	4	14	3	8		5	2	12	1	6	16
Adjusted Flow		(), veh/h		417	666		35	455	1	542	1440	22	274	725	246
second	the local division of	ow Rate (s), veh/h/	In	1781	1716		1730	1870		1781	1781	1557	1730	1781	1535
Queue Service				26.0	35.0		1.3	20.0		27.0	49.6	1.0	10.1	21.2	15.8
the state of the s		ce Time (gc), s	-	26.0	35.0		1.3	20.0		27.0	49.6	1.0	10.1	21.2	15.8
Green Ratio ( g		10 11		0.20	0.27	1	0.05	0.15	1	0.21	0.44	0.44	0.09	0.36	0.36
Capacity ( c ), V				356	462		160	288		370	1561	683	319	1287	555
Volume-to-Cap	and the second damage of the s	atio (X)		1.172	1.442		0.218	1.583		1.466	0.922	0.032	0.858	0.563	0.44
		t/In ( 95 th percentile	)	808.1	1603. 7		25.1	1231. 3		1335. 2	752	17.2	224.7	352.9	253.
Back of Queue	(Q).V	reh/In ( 95 th percen	tile)	31.8	63.1		1.0	48.5	1	52.6	29.6	0.7	8.8	13.9	10.0
		(RQ) (95 th percer		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay		and the second		52,0	47.5		59.7	55.0	-	51.5	34.4	20.8	58.2	33.3	31.5
Incremental De	and the second s	the same of the		103.1	211.0		0.3	278.3		224.1	10.5	0,1	19.3	1.8	2.6
Initial Queue D	elay ( d	1 3 ), s/veh		0.0	0.0		0.0	0.0	1	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (		and the second se		155.1	258.5		60.0	333.3		275.6	and the second division of	20.9	77.5	35.1	34.1
Level of Servic	e (LOS	)		F	F		E	F	1	F	D	C	E	D	C
Approach Dela				218	7	F	313	.9	F	107	.1	F	44.	2	D
Intersection De		and the second se				13	7.0	in the second	and the passes	Jam	diaman and	COMPANY IN	F	The state of	
And And	2545		W: Jugh	Condiana -	S all	alfore the	Yar -	1 the ch	Free lifes	Partie 10	1	Style Shit	diam's	00	10 10
Multimodal Re	Contraction of the local division of the loc			-	EB	-		WB		1 .	NB	0	-	SB	P
Pedestrian LOS	the second s	And the second second second second second		3.0		С	3.1		C	3.4		C	2.3		B
Bicycle LOS St	core / L	.0S	_	2.3	1	В	0.6	5	A	2.1		В	1,5	2	В

HCS7<sup>TM</sup> Streets Version 7,3

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## HCS7 Signalized Intersection Results Summary

V MARCONE	1657	2	Sal V	C. J. Martin	1.20	1.110.0	1. A.	grant and			Alex	in official sector	1.	4 2	1.
General Inform	nation									ion Info		1		I I I L L	
Agency		Solaegui Engineers	2					-	uration,		0.25		2		137
Analyst		MSH		Analysi	s Date			in the second second	rea Typ	and the second se	Other		* *	4.	-
Jurisdiction		City of Sparks		Time P	eriod	AM Pe	ak Hour		HF		0.92		14		5
Urban Street				Analysi	s Year	Ex. + F Kiley	Project +	A	nalysis	Period	1> 7:00	)	P.C	5.117	
Intersection		Pyramid & Sparks		File Na	me	PySp1	7awo.xu	IS					1	41444	r
Project Descrip	tion	and the second second	2015	-	120	1.000	358/11	1000	1000	163		102.00	- ath	MR	S. A.
Demand Inform	nation				EB			WB			NB			SB	-
Approach Move	ement			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	the state of the s			397	370	412	23	236	1	289	511	18	500	1334	461
25 Standline	The second	CALCERSON NOTICE	R ALL	E 2 4	12/31	6	Contraction of the	ipon 2	1	1 2 1	1000	C. C	-	A COLORED	MICCON.
Signal Informa	ation				4	ell's	14	2	2	1 4	44		10	-	
Cycle, s	120.0	Reference Phase	2		1	1.1	11	1	R	3	3	·	1	-	V.
Offset, s	0	Reference Point	End	Green	14.0	3.0	50.0	5.0	11.0	17.0		1			-
Uncoordinated	No	Simult, Gap E/W	On	Yellow		0.0	4.0	4.0	0.0	4.0	5	14	-	/	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	1.0		8	6	1	-
de la compañía	1.6.6	All Street Street	al and	EDI	13/15/2	EBT	WBL	1	WBT	NBL	11	NBT	SBL		SBT
Timer Results			_	EBL 7		4	3		8	5		2	1	_	6
Assigned Phas	ie								4.0	2.0	-	3.0	2.0	1	3.0
Case Number				2.0		4.0	2.0	-		and the second s		55.0	22.0		58.0
Phase Duration				21.0	the second se	33.0	10.0	-	22.0	19.0	the second se	and the second s		_	5.0
Change Period	I, ( Y+R	c), S		0.0		5.0	5.0	-	5.0	5.0		5.0	0.0		
Max Allow Hea	idway (	MAH), s		3.1	-	3.2	3.0	_	3.2	2.9		0.0	2.9		0.0
Queue Clearan	nce Tim	e (gs), s		23.0		30.0	2.8	_	18.4	16.0			20.3		
Green Extensi	en Extension Time ( g ₀ ), s se Call Probability					0.0	0.0	_	0.0	0.0		0.0	0.3		0,0
Phase Call Pro	se Call Probability					1.00	1.00		1.00	1.00	_	-	1.00		
Max Out Proba	se Call Probability Out Probability					1.00	1.00	1	1.00	1.00			1.00	1	-
C. T. B. T.	free - 1	the second second	The .	2022	in la		2,000	14.00	2000	10.00	NID		2101-0	SB	12.15
Movement Gr	oup Re	sults		-	EB			WB	1 0		NB	D	1	T	R
Approach Mov	ement			L	Т	R	L	T	R	L	T	R	<u> </u>		the second se
Assigned Mov	ement			7	4	14	3	8	1	5	2	12	1	6	16
Adjusted Flow	Rate (	v), veh/h		432	823		25	257	1.	314	555	20	543	1450	392
Adjusted Satu	ration F	low Rate (s), veh/h/	/In	1781	1691	-	1730	1870		1781	1781	1556	1730	1781	1538
Queue Service	Time (	g s), S		21.0	28.0		0.8	16.4	-	14.0	12.9	0,9	18.3	46.0	22.5
Cycle Queue	Clearan	ce Time (g c), s		21.0	28.0		0.8	16.4	-	14.0	12.9	0.9	18.3	46.0	22.9
Green Ratio (				0.18	0.23	1	0.04	0.14	-	0.12	0.42	0.42	0.18	0.44	0.44
Capacity ( c ),				312	395		144	265	-	208	1484	648	634	1573	679
Volume-to-Ca		atio (X)		1.384	2.086		0.173		-	1.512	0.374	0.030	0.857	0.922	0.57
	and the second sec	ft/In ( 95 th percentile	e)	1000. 9	2636.		16.5	412.5		824.2	227.7	14.7	334.9	697.9	333
	e (Q),	veh/In ( 95 th percen	tile)	39.4	103.8		0.7	16,2		32.4	9.0	0.6	13.2	27.5	13.
Back of Queu				0.00	0.00		0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
	e Ratio			49.5	46.0		55.5	51.2		53.0	24.2	20.7	47.5	31.6	25.
Queue Storag		eue Storage Ratio ( <i>RQ</i> ) ( 95 th percentile) form Delay ( <i>d</i> 1 ), s/veh			1.00		0.2	46.1		253.5	0.7	0.1	10.7	10.4	3.6
Queue Storag Uniform Delay	(d1).	s/veh		191.7	497.2				1	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storag Uniform Delay Incremental D	(	s/veh 2), s/veh		and successive design of the local diversion	497.2		0.0	0.0	1	0.0	0.0	and the owner where the party is not the party of the par			
Queue Storag Uniform Delay Incremental D Initial Queue I	(d1), elay(d Delay(d	s/veh 2 ), s/veh d 3 ), s/veh		191.7	0.0		0.0	0.0	1-	306.5	24.9	20.8	58.2	42.0	A COLORADO
Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay	(d1), elay(d Delay(d (d),s/	s/veh 2), s/veh d3), s/veh veh		191.7 0.0	0.0		- Branning		-	·	and in case of the local division of the loc	and the owner where the party is not the party of the par			C
Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servi	(d 1), elay (d Delay (d (d), s/ ce (LOS	s/veh 2), s/veh d 3), s/veh veh S)		191.7 0.0 241.2	0.0 543.2 F		55.7	97.3 F	F	306.5	24.9 C	20.8	58.2	42.0 D	And in case of the local division of the loc
Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay	(d +), elay (d Delay (d (d), s/ ce (LOS ay, s/ve	s/veh 2), s/veh d 3), s/veh veh 5) h / LOS		191.7 0.0 241.2 F	0.0 543.2 F .3	F	55.7 E	97.3 F	1	306.5 F	24.9 C	20.8 C	58.2 E	42.0 D	28. C D
Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servi Approach Del Intersection D	( d 1 ), elay ( d Delay ( d ( d ), s/ ce (LOS ay, s/ve elay, s/ve	s/veh 2), s/veh d 3), s/veh veh 5) h / LOS		191.7 0.0 241.2 F 439	0.0 543.2 F .3	F	55.7 E 93.0	97.3 F 6	F	306.5 F	24.9 C 3	20.8 C	58.2 E 43.4	42.0 D 5	C
Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Servi Approach Del	(d 1), elay (d Delay (d (d), s/ ce (LOS ay, s/ve elay, s/ve elay, s/ve	s/veh 2), s/veh d 3), s/veh veh s) h / LOS veh / LOS	. A.S	191.7 0.0 241.2 F 439	0.0 543.2 F .3 EB	F	55.7 E 93.0	97.3 F 6   WB	F	306.5 F	24.9 C 3 NB	20.8 C	58.2 E 43.4	42.0 D 5	C

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HCS714 Streets Version 7.3

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NEW YOUNG	Secol 1	The state of the state of the	U.V.S.E.	1. 18.	REEL	rsecti	STATE!	Par	177-150	IT I BUILT	-11-15-52	572	- Start	Marght-	2 Con
General Infor	nation	State of the second second	100000	participation (1257)	descutto.	1000	option parts	In	tersect	ion Info	rmatio	1	1 1	4.4.4.1.4	1
the second second second second	and the second second	Solaegul Engineers							uration,	the second second	0.25			ittre	
Agency		MSH		Analysi	e Date	Sep 13	2017	the local division	rea Typ		Other				
Analyst		the second distance is not a second sec		Time P		PM Pea	Conception of the local division of the loca		HF		0.92		1	the state	-
Jurisdiction		City of Sparks		and the second states	and the second se				nalysis	Period	1> 7:0	0	14		-
Urban Street				Analysi		Kiley	-		narysis	renou	1-1.0			httr	
Intersection		Pyramid & Sparks		File Na	me	PySp1	7pwo.xu	S						41499	1
Project Descri	otion	Contraction of the local division of the loc	-	Constants			attribus to an	NAME AND A	CONTRACTOR OF	of the second	CONTRACTOR OF	STREET,	ACCREMENT.	ALL DOCTOR	Relevan
C. S. C. LINS	1.1. 29		11-1	ALL ALLAND	100	(3 <sup>1</sup> % (1))	Had Alth	LA IT	10,000	1.0.19.10	NB	ALC: NOT	The Cores	SB	an inter
Demand Infor	a second second				EB			WB	1.0	L	T	R	L	T	R
Approach Mov	and the second se			L	Т	R	L	T	R	-		-		718	266
Demand (v),	veh/h	Contraction of Street of Street		508	355	310	32	449	Louis	623	1275	20	283	1 / 10	200
	Ner Start	Letter and a little with the	() - 若() ()	an der a	0306000	A COLONIA DE	1.11	1 and a state	a second	1041.103	1	(Linese	1		
Signal Inform	and the second value of th	D ( Dhane	0	1	21	1.1	14	2	200	1.0	- 5		to	-	-
Cycle, s	130.0	Reference Phase	2 End		3	STC	17		2	1		1	2	3	Y
Offset, s	0	Reference Point	End	Green	12.0	10.0	47.0	6.0	15.0						+
Uncoordinated		Simult. Gap E/W	On	Yellow		10.0	4.0	4.0	0.0	4.0	- 3	1 4	-	1	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	10.0	1.0	1.0	10.0	11.0	CODE LE	1.211	O'SE T		Wine.
All is marke	-311233	Aller - Aller	- Bartin	EDI	C.S. M.L.	EBT	WBL	-part	WBT	NBL	alige state	NBT	SBL	- Partie	SBT
Timer Result				EBL 7		4	3		8	5		2	1	-	6
Assigned Pha	se					-	2.0		4.0	2.0	-	3.0	2.0		3.0
Case Number				2.0		4.0	-			27.0		52.0	17.0		52.0
Phase Duratio				26.0	-	40.0	11.0		25.0	and a second second	tion of the local division of the local divi	ACCRET AND ADDRESS OF	And the Owner of the		5,0
Change Perio		and been a second se		0.0	-	5.0	5.0	-	5.0	0.0		5.0	5.0		-0.0
Max Allow Hea				3.1	-	3.1	3.0		3.1	2.9	in the second se	0.0	2.9		0.0
Queue Cleara	nce Time	e (gs), s		28.0		37.0	3.3	_	22.0	29.0			13.5		
Green Extens	en Extension Time ( g ₀ ), s ase Call Probability				_	0.0	0.0	-	0.0	0.0		0.0	0.0	And in case of	0.0
Phase Call Pr	ase Call Probability					1.00	1.00		1.00	1.00			1.00		
Max Out Prob	Manual and a second sec			1.00		1.00	1.00		1.00	1.00		TANK IN	1.00		DRM RE
	x Out Probability			the second second	EB	a cardender	20012230	WB	and the second	Planwide .	NB	15-1-1	and and the second	SB	and a
Movement G	and the second se	suits		-	T	R	LI	T	R	L.	T	R	L	T	R
Approach Mo	A Designation of the local division of			L					10	5	2	12	1	6	16
Assigned Mov		A		7	4	14	3	8 488		677	1386	22	308	780	246
Adjusted Flow	Concession of the local division of the loca	and the second se		552	696		35	and the second second	-	Contraction of the local division of the loc	1781	1557	1730	1781	153
and the second	Contraction of the local division of the loc	ow Rate (s), veh/h/	in	1781	1713		1730	1870		1781	46.5	1.0	11.5	23.3	15.8
Queue Servic	in the second	the state of the s		26.0	35.0		1.3	20.0			46.5	1.0	11.5	23.3	15.8
		ce Time (g c), s		26.0	35.0		1.3	20.0	-	27.0				0.36	0.30
Green Ratio (				0.20	0.27		0.05	0.15		0.21	0.44	0.44	0.09	and the second	555
Capacity (c)				356	461	frances	160	288	-	370	1561	683	319	1287	-
Volume-to-Ca		sector description of the descri		1.550	1.508		0.218	1.696		1.830	0.888	0.032	0.963	0.606	-
Back of Queu	e (Q), fl	l/In (95 th percentile	)	1453.	1756.		25,1	1392	1	2013.	698.7	17.2	276	382.1	253
Dealersto	-101	able ( OE the second		1	2		1.0	54.8		79.3	27.5	0.7	10.9	15.0	10.0
and the second se		eh/ln (95 th percent		57.2	69.1		0.00	0.00	1-	0.00	0.00	0.00	0.00	0.00	0.0
and the second sec		(RQ) (95 th percen	me)	0.00	0.00		Concession and the set	55.0		51.5	33.6	20.8	58.8	33.9	31.
Uniform Delay		and the second se		52.0	47.5		59.7	327.8	-	384.1	7.9	0.1	40.2	2.1	2,6
Incremental D	And in case of the second s	THE R. LEWIS CO., NAME AND ADDRESS OF TAXABLE PARTY.		261.0	A contract on the local diversion of the loca		0.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue	and the local division of the local division	and the second se		0.0	0.0	1		382.8		435.6		20.9	99.0	36.1	34.
Control Delay		and a state of the		313.0	287.2	-	60.0	382.8 F		435.0 F	D	20,9 C	99.0 F	D	C
Level of Serv		and the second se		F	F	1	E			- <u>-</u>	1	F	50.		D
Approach De	and the second se	the second se		298.	6	F	361.	3	F	169.	3	F		4	U
Intersection D	elay, s/v	eh/LOS	and the second	Camanon .	Papar	18	9.1	Wand	Contraction of the	ATT OWN	in lest	1917-	F	TTP STO	Cinton a
Malata	a han hard	14 Martin Contraction	Station of the	R and a	ÉB	State -	Lo Links	WB	2.	- Stan	NB	1	The ste	SB	and states
Multimodal I Pedestrian LO		11.00		0.0	in a surger of the	6	0.4		С	3.4		С	2.3	and the second	В
	JS Score	1105		3.0		C	3.1	1	C	0,4		V	L.5		

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Thursday of the	15 Steal	Contraction of the second	7 Siyi	S. T.S.	19	at with	15 8	TAVIUS	1. 1-11	E USE	4-	S - 1 =	and a state	ST.S.M.	Rai
General Inform	ation		1000	Se o refere	ALC: NO			In	tersecti	on Info	rmatior	1	2.	الما والمحالية	
		Solaegui Engineers			_				uration,		0.25			ITTE	Anna .
Agency		MSH		Analysi	s Date	Sen 13	2017	10141	еа Туре		Other	-	-		
Analyst	i i i i i i i i i i i i i i i i i i i	City of Sparks		Time P		and street over 1	ak Hour		HF	-	0.95		1	464.1	-
Jurisdiction		City of Sparks		Analysi	and service of	2035 B		No. of Concession, Name	nalysis I	Period	1> 7:00	0	7		
Urban Street		Pyramid & Sparks		File Na			5ax.xus	17.0	nunj ele i				Ti-	5++0	and '
Intersection	lene -	Pyramio & oparks		The Iva	ine	il yopo.	JUNINUS						1	1 1 4 4 1	7
Project Descript	lion	A STREAM STREAM	Con St	No. of A	1.1.1.1	a) 1,0 . 0	1000	Carle al	1. 200	10. 200	1216	- M	Estate.	R. THE	100
Demand Inform	ation		Constant of the	Constanting of the	EB	Argument Car	T	WB		T	NB			SB	
Approach Move				L	T	R	L	T	R	L	T	R	,L	T	R
Demand (v), v	the second se			100	200	100	250	150	1	100	1350	100	600	3400	100
Demanu (V), V	enn	The state of the	0.00	100	1.00	1000	- BTCB	Dr. S	1000	THE PAR	The los	al-in-	12015	11-1-1	Store -
Signal Informa	tion	The second se	-	1	L.	216	14	1						_	
Cycle, s	120.0	Reference Phase	2	1		Bur the state	1000	2.			)		P	-	+
Offset, s	0	Reference Point	End	Carrow	1	15.0	63.0	9.0	3.0	10.0		1	2		
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		15.0	4.0	0.0	0.0	4.0	5			1	+
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	0.0	0.0	1.0		1		7	
r orde mede	1 Heart		3.57	2.4.	1.3-	71-11-	- Jan (14)	Nord	1 1 50	0.00	624	22		have ?	
Timer Results	and the second			EBL		EBT	WBL		WBT	NBL		NBT	SBL	. 5	SBT
Assigned Phase	e			7		4	3		8	5		2	1		6
Case Number				2.0		4.0	2.0		4.0	2.0		3.0	2.0		3.0
Phase Duration	5			9.0		15.0	12.0		18.0	10.0	6	68.0	25.0	8	33,0
Change Period		c) S		0.0		5.0	5.0		5.0	5.0		5.0	0.0		5.0
Max Allow Hear	and had not sense in case	Carlo and the second se		3.1	and the second	3.1	3.0		3.1	2.9	1	0.0	2.9		0,0
A PROPERTY OF A	Name of Concession, name			9.0		12.0	9.0		11.9	7.0			23.2		
	ue Clearance Time ( g s ), s en Extension Time ( g s ), s					0.0	0.0		0.1	0.0		0.0	0.4		0.0
and the second se	and the second se					1.00	1.00		1.00	1.00			1.00	5	
And in case of the second s	se Call Probability Out Probability					1.00	1.00		1.00	1.00	0.0		1.00	5	_
Wax Out 1000	in the second se	TAN SAFET PARA	10	1.00	Sec.12	13539	TS MAL	- There	-	732 7	8123	3.975	Mar de	S. S. Car	215 -
Movement Gro	oup Res	sults		1	EB			WB	1.001		NB	_		SB	
Approach Move				L	Т	R	L	Т	R	L	Т	R	L	T	R
Assigned Move	and the second second			7	4	14	3	8		5	2	12	1	6	16
Adjusted Flow	the second se	/), veh/h		1 105	289		263	158	-	105	1421	105	632	3579	79
the second se	and the second se	ow Rate (s), veh/h/	In	1781	1759	1.	1730	1870		1781	1781	1558	1730	1781	1543
Queue Service				7.0	10.0		7.0	9,9		5.0	37.8	4.1	21.2	78.0	2.3
or the second state operation of the distance of the local		ce Time (g c), s		7.0	10.0		7.0	9.9		5.0	37.8	4.1	21.2	78.0	2.3
Green Ratio (	and the second se	and the second second		0.08	0.08		0.06	0.11		0.04	0.52	0.52	0.21	0.65	0.65
Capacity ( c ),	and the second rest of the second			134	147		202	203		74	1870	818	721	2315	1003
Volume-to-Cap	the second s	atio (X)		0.788	1.975		1.304	0.779		1.418	0.760	0.129	0.876	1.546	0.07
	and the second se	t/In (95 th percentile	.)	183	940.6		334.3	234.4		323.5	534.5	64.3		4134.4	31
THE PARTY NAMES IN COLUMN 2 IN	and the second se	veh/In ( 95 th percen		7.2	37.0		13.2	9.2		12.7	21.0	2.5	14.9	162.8	1.2
		(RQ) (95 th percer		0.00	0.00		0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0,00
Uniform Delay	the design of the lot	and the party of the second seco		54.6	55.0		56.5	52.1		57.5	22.5	14.5	46.0	21.0	7.7
Incremental De	and the second se	the second se		24.3	462.3		168.0	16.0		250.1	3.0	0.3	11.4	247.9	0.2
Initial Queue D		and the second diversion of th		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	of the local division of the	and a second sec		78.9	517.3		224.5	68.1	1	307.6	25.5	14.8	57.4	268.9	7.9
Level of Service	and the second second			E	F		F	E		F	C	В	E	F	A
Approach Dela	the second s	and the second se	-	400	4	F	165.	9	F	43.0	D	D	233	.0	F
Intersection De	Contraction of the local division of the loc	and the second se		1	-	19	2.6	and the second second					F		
1	or the second	0-01	1.013	1 2 2 2 2	and the state	Carrier M	E. Jephili	2. 2	Ser. 1	A AND	1.000	191 -	N.P.	OL PLOYER	1 aug
Multimodal R	and the second second			1	EB		1	WB	-		NB			SB	
Pedestrian LO		e/LOS		3.0		С	3.1		С	2.9		С	2.3	3	В
	core / L	and the second se		1.1		A	1.1		A	1.8		В	4.0	1	D

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Same and a second	ALL LAND	STATE AND AND AND A	10000	nalize	Carola Car	TARDING ST	TR TO	SAWERS	2000	101210	AN AST	All Contraction	-	A NEW YORK	1-70
General Inform	ation	STATISTICS -		2. Wint	25.1.23	7 Put 213	C. S. C.	l le	atorsoc	tion Info	ormatio	n	1 2	41.444	9.
the same provide the same set of the same set	hation	Calescul Englances							Juration		0.25			111CC	
Agency		Solaegul Engineers		LAnalua	is Date	ISon 12	2017	And in case of the local division of the loc	Concern real pro-		Other		1		
Analyst		MSH		- V-interior	the second damage	the second se			rea Typ	)e	0.95			4	÷
Jurisdiction		City of Sparks		Time P		-	ak Hou		PHF	Dated	-	0		1.14	~
Urban Street					is Year				nalysis	Period	1> 7:0	00	- 53		
Intersection		Pyramid & Sparks		File Na	ame	PySp3	5px.xus	5						<u>1110</u>	
Project Descrip	tion	and the second second second second	-	IN COMPANY	No. of Lot of Lo	100	Conception in the	10000	and state	1000	21715	-	1 sources	4 1 4 7 7	e r
Demand Inform	nation		1.1.2	1985-1	EB	1000	alter a	WB	and the	SVS-IN	NB	de luis	1	SB	23/14Cit
Approach Move				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v				200	150	100	300	200		150	3450	200	500	1700	110
A STANDE STAN	1.29.19	A. Same Pranting	- alle	Estate	-Ster al	10000	S. 190 - 1	1753	1002	The second	AL ALLAND	in the	ALL AND	at the	1000
Signal Informa	ation				5	1	11							_	
Cycle, s	130.0	Reference Phase	2	1	75	15 m	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	n -2	et	2-2		*	P	-	-
Offset, s	0	Reference Point	End		100	- STY			110	100		1	2	3	×
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		10.0	54.0 4.0	22.0	0 1.0	16.0				2	+
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	0.0	0.0		-	1.	+		
Torbe mode	TIMOL		EXIANCE.	11155	1098	The and	19. 102	122		PISCE	AN THE	PAR S	- 22.47		WEN.
Timer Results	a la citali i a	and a straight of the straight	A POST DE C	EBL	-	EBT	WB	LI	WBT	NBI	- 1	NBT	SBL		SBT
Assigned Phas				7		4	3	1	8	5		2	1		6
Case Number	-			2.0	1	4.0	2.0		4.0	2.0		3.0	2.0		3.0
Phase Duration	1.6			22.0	index and instants in	21.0	23.0		22.0	27.0	1000	69.0	17.0		59.0
Change Period		a) E		0.0	and the second division of the second divisio	5.0	5.0		5.0	0.0		5.0	5.0		5.0
and the second se	-			3,1	and in such	3.1	3.0	and the second	3.1	2.9		0.0	2.9	_	0.0
Max Allow Hea		a line was a line of the second		-			10.00			12.0		0.0	14.0		0.0
Queue Clearar		and the second s		16.5	- in the second s	18.0	13.3		16.3	-		0.0	D- excercise		0.0
and the local day is a second day of the local day of the	en Extension Time ( g e ), s se Call Probability				- in the second	0.0	0.3		0.1	0.2		0.0	0.0		0.0
and the second se	the second se					1.00	1.00	the lot of	1.00	1.00	taxaati (amoo		1.00	_	
Max Out Proba	Out Probability					1.00	0.19		1.00	0.00		-	1.00		
Movement Gr	Out Probability				EB	A NOTICE	Sauces,	WB	Secon	L'ORING	NB	1110 10	1 million	SB	815. F
Approach Mov				L	T	R	L	T	R	L	T	R	L	T	R
the second se				7	4	14	3	8		5	2	12	1	6	16
Assigned Move		N - F //-	_	-		14		211	-	158	3632	211	526	1789	89
Adjusted Flow				211	237		316				TORCHUCKS I		and the state of		153
	and the state of t	ow Rate (s), veh/h/	In	1781	1743		1730	1870		1781	1781	1558	1730	1781	-
Queue Service				14.5	16.0		11.3	14.3		10.0	64.0	10.3	12.0	54.0	4.7
and the second se	California and and and	e Time (gc), s		14.5	16.0		11.3	14.3		10.0	64.0	10.3	12.0	54.0	4.7
Green Ratio (	and the second division of the second divisio			0.17	0.12	-	0.14	0.13	-	0.21	0.49	0.49	0.09	0.42	0.42
Capacity ( c ),				301	214		479	245	-	370	1753	767	319	1479	638
Volume-to-Cap		second		0.698			0.659		- and the second second	0.427	2.071	0.275	1.648	1.210	0.14
Back of Queue	e ( Q ), ft	/In ( 95 th percentile	)	285	484.1		218.8	329.4		195.4	5829. 9	168	757.9	1533.8	78
Back of Queue	(Q), V	eh/In (95 th percent	tile)	11.2	19.1		8.6	13.0	1	7.7	229.5	6.6	29.8	60.4	3,1
Queue Storage	e Ratio (	RQ) (95 th percen	itile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.0
Uniform Delay		the same is the same of the		50.9	57.0		53.1	55.3		44.8	33.0	19.4	59.0	38,0	23.0
Incremental De	and the second se	the second division of		5.9	92.2		2.7	24.4	1	0.3	484.1	0.9	305.4	100.9	0.5
Initial Queue D		and the second sec		0.0	0.0	1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay				56.8	149.2		55.8	79.7		45.1	517.1	20.3	364.4	138.9	24.
and the second se	the second s	and the second s		E	F	-	E	E	1	D	F	C	F	F	C
Level of Servic				105.	1	F	65.3	1	E	472	-	F	184.		F
Level of Servic Approach Dela							7.1			1			F	- la	
Approach Dela	alay chu					04	CONTRACTOR OF THE OWNER.	COLUMN STATE	A DESCRIPTION OF	CONTRACTOR OF	perturbed.	100	1000	-	111
	and the second second second		1. 1. 1. 1. 1.	5-1-11-1	N TEL CI 24	2.2.093	CALCAL PR	A. 10	<ul> <li>11</li> </ul>	THE CALLES			C. C. Lake		ALC: NOT THE OWNER OF
Approach Dela Intersection De	a she		10,520		FB	2.2.2	mela	WB	- P	Total Color	NB	den i -i	NIPLACED.	and in case of the local division of the loc	AL ILS
Approach Dela Intersection De	esults			3.0	EB	С	3.1	WB	С	3.4	NB	С	2.3	SB	В

HCS71# Streets Version 7.3

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		Carpender and a second se	100 - 31	15.51.69	W.Finis	1.20	the first				2 3 3	Without .	E 182 1-	R RADA	JACK Y
General Inform	ation	No 19	1001.000	100 -00	Alabert	A States 1		In	tersect	ion Info	rmatio	n	1	4.2.4.1.6	4
		Solaegui Engineers							uration,	and the second second	0.25			11111	-
Agency		strength on the ball of the local data and the loca		Analysi	e Data	Con 15	2017		rea Typ		Other		-		100
Analyst		MSH		Time P	the second second second		ak Hour		HF	0	0.95			1	-
Jurisdiction		City of Sparks			and the second division of the second divisio	2035 E		the second second	nalysis	Period	1> 7:0	0	14	1.00	
Urban Street				Analysi		Projec			narysis	renou	1- 7.0			httr	ſ
Intersection		Pyramid & Sparks		File Na	me	PySp3	5aw.xus						1	4 1 45 77 15	1
Project Descript	tion		_		_	_			and and the local division	CALIFORNIA CON	141.000	-	-	the start	-
- 1 an 1 31	Tallan	and the second second	- 1º -	10 11-	1.34	CT IN CON	1	14/2	2.1 1/2	and Caros	NIT	100	and the second	SB	a gy g
Demand Inforn	Constant of States				EB			WB	1 -		NB	1		T	R
Approach Move				L	T	R	L	T	R	L	T	R	L		-
Demand (v), v	eh/h			200	367	401	250	208	1	204	1350	100	600	3400	135
- 11	10	the second second	24.11	1. N. P	191023	T HI	TH	13 1-110	10 540	R. AVEL	Contraction of the local division of the loc	ALC: NO	-		and the second
Signal Informa	tion in concerning the party			1	5	212	Rf.	La.	1 m	1.	- 1		12	-	
Cycle, s	120.0	Reference Phase	2		5		Î	0	R	R		1	12	T	V.
Offset, s	0	Reference Point	End	Green	6.0	15.0	55.0	6.0	4.0	14.0					-
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0		14	-		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	1.0	1	1	6	1	
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Jora Ma		1211		-11-1	S. 2	3,94	Night B	in the	12.18	1422	- Anna	25-21		
Timer Results				EBL	- 1 1	EBT	WBL	- 1	WBT	NBL		NBT	SBL		SBT
Assigned Phase	e			7		4	3		8	5		2	1		6
Case Number			-	2.0	1.1	4.0	2.0		4.0	2.0		3.0	2.0		3.0
Phase Duration	. 5			15.0		23.0	11.0		19.0	11.0	(	30.0	26.0	5 7	75.0
Change Period	Concession of the local division of the loca	c). s		0.0		5.0	5.0		5.0	5.0		5.0	0.0		5.0
the second se	ax Allow Headway (MAH), s			3.1		3.2	3.0		3.2	2.9		0.0	2.9		0.0
the second se	ueue Clearance Time (g s), s			16.1		20.0	8.0	-	16.0				23.0	5 1	
and the second se		and the second se		0.0		0.0	0.0	-	0,0	8.0	0.0		0.6		0.0
Green Extensio	And in case of the local division of the loc	(90),5		1.00		1.00	1.00	-	1.00	1.00		114	1.00		
Phase Call Pro				1.00	Concession of the owner owner own	1.00	1.00		1.00	1.00			0.96		
Max Out Proba	Dility	Non 21 P. Harrison Contraction		1.00	30	1.00	1.00	Mandante	1.00	1.00	1075	to ale	0.00	1. J. 15. 5	(and
Movement Gro	Dun Pos	sulte	1000	1	EB	Citicatile .	STORE OF STREET	WB	CONTRACTOR OF	Therease	NB	CO. VIII CO.	Concentration of the local division of the l	SB	-
Approach Move	the second se	Suits		L	T	R	L	Т	R	L	T	R	L	T	R
				7	4	14	3	8		5	2	12	1	6	16
Assigned Move	and the second se	·				14	263	219		215	1421	105	632	3579	116
Adjusted Flow		state of the second state of t	16	211	782					1781	1781	1557	1730	1781	1542
the second se	المتاجات المتطابع والمستغل	ow Rate (s), veh/h/	in	1781	1687		1730	1870				4.7	21.0	70.0	4.1
Queue Service				14.1	18.0		6.0	14.0	-	6.0	43.2	4.7	21.0	70.0	4.1
and the second data was not second as a second data was a second data was a second data was a second data was a	and particular	e Time (gc), s		14.1	18.0		6.0	14.0		6.0	43.2	100000000000000000000000000000000000000	and the second division of		
Green Ratio ( g				0.12	0.15		0.05	0.12	-	0.05	0.46	0.46	0.22	0.58	0.58
Capacity ( c ), v				223	253	-	173	218	-	89	1632	714	750	2077	899
Volume-to-Cap		and the second division of the second divisio		0.945	3,091		1.521	1.003	and the same of th	2.411	0,871	0.147	0.843	-	0.129
Back of Queue	(Q), ft	/In ( 95 th percentile	)	353	2920. 4		385.3	390.6		782.3	637.2	76.4	366.1		
Back of Queue	(Q), V	eh/in (95 th percent	ile)	13.9	115.0		15.2	15.4	1	30.8	25.1	3.0	14.4	188.5	2.4
		RQ) (95 th percen		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0,00	0.00	0.00
Uniform Delay		the second second in the local second s		52.1	51.0		57.0	53.0		57.0	29.3	18.9	45.0	25.0	11.3
Incremental De				44.7	951.5	1	261.9	61.8		667.8	6.7	0.4	8.2	327.3	0.3
Initial Queue D		Contraction of the second s		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (		and a second sec		96.8	1002.		318.9	114.8		724.8	36.0	19.3	53.2	352.3	11.6
Level of Servic	e (LOS	)		F	F		F	F	1	F	D	B	D	F	В
Approach Dela		the second se		810.		F	226.		F	119.		F	299	.5	F
Intersection De		the second se		0.0		-1	20.6	-		- interest		-	F		
intersection De	nay, siv	STARCE CONTRACTOR	11 -1	ALC: NO	Alla.		Party and	WARE .	a avrage	STR.	211	a Blog	Part. C	Service I	0,907
Multimodal Re	esults		Nos La	1	EB	at topy	-	WB		T	NB	ALC: NOT		SB	
Pedestrian LO		/108		3.0		C	3.1	and the second	С	2.9		C	2.3		В
Pedestrian											-	-		_	

## HCS7 Signalized Intersection Results Summary

El Mars Witz S	Sec. 24	The 15- 201 115 11	11.1.1	1475	-	0.00000	2.00	11	terner	Non Info	rmatio	Carles State	1	41.414	5
General Inform	ation	1							200	tion Info	- Carlos and a state of the local division o	0		JIILL	-
Agency		Solaegui Engineers					TAXES OF		uratior	-	0.25		-	小学工作	100
Analyst		MSH				Sep 13			rea Ty	pe	Other		÷		
Jurisdiction		City of Sparks		Time P	eriod	PM Pe	ak Hour	-	HF		0.95		1	- : t	-
Urban Street				Analysi	s Year	2035 B Project		A	nalysis	s Period	1> 7:0	0		atte	
Intersection		Pyramid & Sparks		File Na	me	PySp3	5pw.xus					_	1	* 1 4 4 4	Ċ
Project Descrip	tion	The second second second	- 11	Same	1000	Sec.	1994	11.2	THE		N.F.	Ser. S	A THE PARTY	1- 300	N.S.M.
Demand Inform	nation	and the second of the second o			EB			WB	-		NB	1		SB	
Approach Move	ment			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	eh/h			259	248	277	300	363	-	444	3450	200	500	1700	208
Signal Informa	tion	A NEW CASE AND	and the same	dial a la	L.	Contraction of	14	T	1	U.Selemon	11	1			
Cycle, s	130.0	Reference Phase	2	1	24	0.007	1000	-71	5	2 -	)		P	-	-
Offset, s	0	Reference Point	End	1	7	NT?	1 Tr		100	HC D	-	-1	.2	3	X
Uncoordinated	No	Simult. Gap E/W	On	Green		10.0	54.0	22.0	1.0		- 4			1	+
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	0.0	0.0		-	].			
CHAS NOUS	101	The second reading of	See.	19922	Filed	To Sec	1.5	e 1907	States		Ripel	1. 21-1		4	ODT
<b>Timer Results</b>				EBL		EBT	WBI	-	WBT	NBL		NBT	SBL		SBT
Assigned Phas	e			7	_	4	3		8	5		2	1	-	6
Case Number				2.0		4.0	2.0		4.0	2.0		3.0	2.0	and the second second	3.0
Phase Duration	1, S			22.0	1	21.0	23.0		22.0	27.0	_	69.0	17.0	the second se	59.0
Change Period	(Y+R	c), S				5.0	5.0		5.0 0.			5.0	5.0		5.0
Max Allow Hea	dway ( l	MAH), s		3.1	1	3.1	3.0		3.1	2.9		0.0	2.9		0,0
Queue Clearance Time (g s), s				21.5		18.0	13.3	_	19.0	29.0			14.0		
Green Extensio	n Time	(ge),s		0.0		0.0	0.3		0.0	0.0		0.0	0.0		0.0
Phase Call Pro	bability			1.00		1.00	1.00		1.00	1.00	and the second		1.00		
Max Out Proba	bility			1.00		1.00	0.19		1.00	1.00		-	1.00	)	
	Millen .	a second and the	1. 1. 1. 1.	1	ED	Section 24		WB	a de	Aparticipa (	NB	2.220	17.050	SB	SALE.
Movement Gro		sults		-	EB	R	L	T	R	L	T	R	L	T	R
Approach Move	and the second second	1		L 7	4	14	3	8	1 18	5	2	12	1	6	16
Assigned Move		N		273	526	14	316	382	-	467	3632	211	526	1789	193
Adjusted Flow			11.0		1684	-	1730		-	1781	1781	1558	1730	1781	1537
and the second se	And in case of the local division of the loc	ow Rate (s), veh/h/	in	1781	the second s	-	11.3	17.0	1	27.0	64.0	10.3	12.0	54.0	10.9
Queue Service	Name and Address of the Owner, where the	the second s		19.5	16.0		11.3	17.0		27.0	64.0	10.3	12.0	54.0	10.9
the second se		ce Time $(g_c)$ , s		19.5	16.0		0.14	0.13		0.21	0.49	0.49	0.09	0.42	0.42
Green Ratio (g				0.17	0.12		479	245	-	370	1753	767	319	1479	638
Capacity ( c ),		atio (V)		0.904	the second second	-	0.659	A CONTRACTOR OF	-	1.263	2.071	0.275	1.648	1.210	0.302
Volume-to-Cap Back of Queue		t/In ( 95 th percentile	e)	417.7	1881		218.8			972.1	5829.	168	757.9	1533.8	-
Back of Queue	(Q).v	eh/In ( 95 th percent	tile)	16.4	74.1	-	8.6	40.8	1	38.3	229.5	6.6	29.8	60.4	7.2
and the second state of th		(RQ) (95 th percer	the second se	0.00	0.00		0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay	_	and a second sec		53.0	57.0		53.1	56.5		51.5	33.0	19.4	59.0	38.0	25.4
Incremental De		Contraction of the local division of the loc		28.1	706.9		2.7	272.0	and a summaries	138.5	484.1	0.9	305.4	100.9	1.2
Initial Queue D	Contraction of the local division of the loc	and the second s		0.0	0.0	1	0.0	0.0	1	0.0	0.0	0.0	0.0	0,0	0.0
Control Delay	and the second second second second	8.75-0	-	81.1	763.9	1.0	55.8	328.5	5	190.0	517.1	20.3	364.4	138.9	26.6
Level of Service	And in case of the local division of the loc	the state of the s		F	F		E	F	1	F	F	C	F	F	C
and the second s	the second second second	state and a data was not in the second state of the second state of the second state of the second state of the		530.		F	205.		F	457.	.4	F	177	6	F
Approach Dela	Contraction of the second second	the second se					8.9			1		-	F		-
Approach Dela Intersection De	sindy, or v		and the second se	C. C.	CTAILT !!						20100	ALC: YAR	IS MINT		
Intersection De	There	15-26-5	ul (PA	Thinks		2 11 30 2	-	14/12		1	ND	and the second s	1	SP	-
the second se	esults		al (Pro	3.0	EB	С	3.1	WB	С	3.4	NB	С	2.3	SB	В

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ALL DOLLAR DURING	A STRAN	GIE GIE	1.11	20 3 7 6	Seal All a	a grade	12250	States.	(年初十百	Mailan.	1 1	1 Per	Party and		S. al
General Inform	nation	Children Constant (250	3 . Alt.	Contrast Contrast	1100141	ALC: NO.	(24)E(121(21)	Ir	tersec	tion Info	rmation	3	1	4	
Agency		Solaegui Engineers			_			-	uration	ALC: NO.	0.25			itte	
Analyst		MSH	1-0-1	Analysi	s Date	Sep 13	. 2017	and the second	rea Typ	Contraction in the local division of the	Other				
Jurisdiction		City of Sparks		Time P			ak Hour		HF		0.95	_	1	A MARINE	-
Urban Street		City of Sparks		Analysi		2035 B			nalysis	Period	1> 7:00	0	- 10		
Urban Street				/ trialy at	5 100	Project	t + Kiley							htte	-
Intersection		Pyramid & Sparks		File Na	me	PySp3	5awo.xu	IS					1	91444	1
Project Descrip	otion	28. 51155 Madrids 12.3	STR. POST	Con Martin	Wat-I	1997	SUL W	NO FOR	Contraction of	C SILLE	Far	191 t		New Star	13/14
Demand Infor	mation		(minines	-	EB	and the second se		WB		1	NB			SB	_
Approach Mov				L	Т	R	L	Т	R	L	T	R	L	T	R
Demand (v),				276	377	418	250	237	1	281	1347	100	630	3450	135
Contra Survey	P. M. R.	All the state of the		10 35	時位	1.00	1.0	A.C.S.	23-1 M	200 8	2000	SPORTER ST	A Salat	(Carlowed)	ALC INC
Signal Inform	1	D. Courses Dhese		1	2	211	14	7	13	1.	- 5		D	-	-
Cycle, s	120.0	Reference Phase	2 End		3		11		S	-3		1	12	3	Y
Offset, s	0	Reference Point	End	Green	8.0	13.0	55.0	5.0	6.0	13.0					+
Uncoordinated		Simult. Gap E/W	On	The second	4.0	0.0	4.0	4.0	0.0	4.0	-	1 4	-	1	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	10.0	11.0	11.0	10.0	11.0	NOR HELY	CALCONNO.	e Rha	TT. SA	The W
Timer Results	al success		dulleren	EBL	C.F. Brown	EBT	WBL	HT PLANE	WBT	NBL	. 1	NBT	SBL	- 1	SBT
Assigned Pha				7		4	3		8	5		2	1		6
Case Number				2.0		4.0	2.0		4.0	2.0	13	3.0	2.0		3.0
Phase Duratio	ns			16.0	-	24.0	10.0		18.0	13.0	6	50.0	26.0	1 7	73.0
Change Period		c) S		0.0		5.0	5.0	1	5.0	5.0	00 000	5.0	0.0		5.0
Max Allow Headway ( MAH ), s				3.1	-	3.2	3.0	1	3.2	2.9		0.0			0.0
	hax Allow Headway ( <i>MAH</i> ), s Queue Clearance Time ( $g_s$ ), s			18.0		21.0	7.0	1	15.0	10.0			24.3	3	
Green Extensi				0.0		0.0	0.0		0.0	0.0		0.0	0.4		0.0
Phase Call Pro		(90)10		1.00		1.00	1.00		1.00	1.00			1.00	5	
Max Out Prob				1.00		1.00	1.00		1.00	1.00			1.00	2	
	I WARE T	and a subby?	String.	All good	5. 540	Leve	2.5.0	Auch	1408	1 Span	A DE INTE	" will	The work	12 See	. Alle
Movement G	oup Res	sults		-	EB			WB		1	NB			SB	-
Approach Mov			-	L	T	R	L	T	R	L	Т	R	L	T	R
Assigned Mov	ement			7	4	14	3	8	1	5	2	12	1	6	16
Adjusted Flow	Rate ( v	/), veh/h		291	811		263	249		296	1418	105	663	3632	116
Adjusted Satu	ration Fl	ow Rate (s), veh/h/	In	1781	1686		1730	1870		1781	1781	1557	1730	1781	1541
Queue Service	e Time (	g s), S		16.0	19.0		5.0	13.0		8.0	43,0	4.7	22.3	68.0	4.2
Cycle Queue	Clearanc	ce Time (g c), s		16.0	19.0	-	5.0	13.0		8.0	43.0	4.7	22.3	68.0	4.2
Green Ratio (	g/C)			0.13	0.16	2271	0.04	0.11		0.07	0.46	0.46	0.22	0.57	0.57
Capacity ( c ),	veh/h			238	267		144	203	-	119	1632	714	750	2018	873
Volume-to-Ca	pacity Ra	atio(X)		1.223	3.036		1.826	1.231		2.491	0.869	0.147	0.885	1.800	0.133
Back of Queu	e (Q), fl	l/In ( 95 th percentile	)	616.1	3013.		437.6	546.8		1059.	634.3	76.4	394.9	5086.2	63.2
Back of Queu	e(Q).v	eh/In ( 95 th percent	tile)	24.3	118.6		17.2	21.5	1	41.7	25.0	3.0	15.5	200.2	2.5
the state of the s		(RQ) (95 th percen		0.00	0.00		0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay		and the second sec		52.0	50.5		57.5	53.5		56.0	29.3	18.9	45.5	26.0	12.2
Incremental D		and the second s		132.0	926.2		397.4	139.4	1	695.3	6.6	0.4	11.8	361.8	0.3
Initial Queue		and the second division of the second divisio		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0,0	0.0
Control Delay	and the second s	Contractioners and the set of the		184.0	976.7		454.9	192.9		751.3	35.8	19.3	57.4	387.8	12.5
Level of Servi	The second s	the second se		F	F	-	F	F	1	F	D	В	E	F	B
Approach Del	and the second s	state of some of some of the source of the local division of the l		767.		F	327.	4	F	151.	2	F	328	.3	F
Intersection D	and the second s	NAME OF CONCERNMENT OF CONCERNMENT.		1		and in the second	8.8	- the		T			F		
A STATE	118491		P. P. A	China Land	Mr. la	THE	Stands	En D	Series on	13.5	- 52	in the	Sue of	Buch	alte
Multimodal F	Results			1	EB			WB			NB	-		SB	
Pedestrian LC	S Score	LOS		3.0		C	3.1		C	2.9		С	2.3	5	В
	Score / L	00		2.3	5	B	1.2		A	2.0		В	4.1		D

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1 101 3610	In Side	the state of the state of the			58 100	in the		1.00	2-01		5.13	23319	12. 1. 2	N. Pro	225	1 - 11
General Inform	nation	W contract and the	10.0	-	Your Dev	A STREET, STRE		1	nte	rsecti	on Info	rmation	1	1	بالم المعارك ال	1.
Agency		Solaegui Engineers								ation,		0.25			JIILL	-
Analyst		MSH		Analysi	s Date	Sep 13	2017			а Туре	Surveyore in Surve	Other	-	4	S MOAN	132
Jurisdiction		City of Sparks		Time P	and the second se	And in case of the local division of the loc	ak Hour		PHF			0.95			-1	C
Urban Street		ony of oparies		Analysi		2035 B		the second s		lysis F	Period	1> 7:0	0	-		
						Project	+ Kiley							7	1110	L.
Intersection		Pyramid & Sparks		File Na	me	PySp3	5pwo.xu	IS							41472	e
Project Descrip	otion	State of the local division of the	an a	Conception of the local division of the loca	CONTRACTOR INCOME		00000000	tio and the second	0.007	VICTOR	or a lock	ALCONO.	CALCULAR OF	Longon -	The second	- Dette
Charles 1 - 2 - 2		the second second	tel -	and the second second	EB	and the second	Carla Carlo	WB		NP 10	AN. MARTING	NB		1000	SB	the second second
Demand Infor				L	T	R	1 1	I T	-	R	L	T	R	L	T	R
Approach Mov	the second s				-		300	393	-	K	568	3400	200	531	1751	208
Demand (v),	veh/h		COLUMN STREET	383	258	294	300	393	2	ince	000	1 3400	200	001	1751	200
Signal Inform	ation	and the standard and and and		Constant Constant	L.	Contract of the	11	T	100	and the second	1					-
Cycle, s	130.0	Reference Phase	2	1		1000	1.000	13	1.		C >	)		P	-	-
Offset, s	0	Reference Point	End	-	100	111		and the fact that we have	0	10	100	-	1	2	2	N
Uncoordinated	_	Simult. Gap E/W	On	Green		0.0	54.0	22.0		1.0	16.0	-	1		1	+
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	0.0		0.0	1.0	1	1.		7	
Force Mode	TIXED	Simult Out fare	1.11	1100	1110	TOTO NOT	NAST -	De	56	1.3	00112			137.2	St.	1.1.1
Timer Results	PRIVACE NO.	And And the state of the		EBL	. 11	EBT	WBL	- 1	W	BT	NBL	1	NBT	SBL		SBT
Assigned Phas				7	1	4	3		8	3	5		2	1		6
Case Number			-	2.0		4.0	2.0		4.	0	2.0		3.0	2.0		3.0
Phase Duratio	ns			22.0		21.0	23.0		22	.0	27.0	6	39.0	17.0	6	59.0
	Change Period, (Y+R c), s			0.0		5.0	5.0			0	0.0	2123	5.0	5.0		5.0
Max Allow Headway ( MAH ), s				3.1		3.1	3.0		3.1		2.9		0.0	2.9		0.0
/lax Allow Headway ( MAH ), s Queue Clearance Time ( g s ), s				24.0		18.0	13.3		19		29.0			14,0	1	
Green Extensi				0.0		0.0	0.3		0.		0.0	_	0.0	0.0		0.0
Phase Call Pro	and in case of the local division of the loc	(90),3		1.00	_	1.00	1.00	-	1.0	the second second	1.00	-		1.00		
Max Out Proba			-	1.00	The second division of	1.00	0.19		1.0		1.00			1.00	-	
Max Out F100	a binty	A State Contract	64111	MERICE	Sector S		-	ane.	31	11	Children of	C	- her	ALC: NO	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.2
Movement Gr	oup Res	sults		1	EB			WB				NB			SB	-
Approach Mov	rement			L	Т	R	L	Т		R	L	T	R	L	Т	R
Assigned Mov				7	4	14	3	8			5	2	12	1	6	16
Adjusted Flow	Contraction of the local division of the loc	), veh/h		403	555		316	414			598	3579	211	559	1843	193
and the second se		ow Rate (s), veh/h/	in	1781	1682		1730	1870			1781	1781	1558	1730	1781	1537
Queue Service		Comments of the local distribution of the second state (in the second state (in the second state)).		22.0	16.0		11.3	17.0			27.0	64.0	10.3	12.0	54.0	10.9
	interest in succession in the succession of the	e Time (g c), s		22.0	16.0		11.3	17.0	)		27.0	64.0	10.3	12.0	54.0	10.9
Green Ratio (				0.17	0.12		0.14	0.13	3	- 5	0.21	0.49	0.49	0.09	0.42	0.42
Capacity ( c ).	and the second se			301	207		479	245			370	1753	767	319	1479	638
Volume-to-Ca	1000	atio (X)		1.337	2.680		0.659	1.69	1		1.616	2.041	0.275	1.750	1.246	0.30
		/In ( 95 th percentile)	)	933.4	2015. 8		218.8	1191.	.4		1613. 3	5687. 7	168	837.4	1666.5	182.
Back of Queu	e(Q) v	eh/In (95 th percent	ile)	36.7	79.4		8.6	46.9			63.5	223.9	6.6	33.0	65.6	7.2
		RQ) (95 th percen		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay		the second s		54.0	57.0	1	53.1	56.5	_		51.5	33.0	19.4	59.0	38.0	25.4
Incremental D				172.6	Long and the same	-	2.7	328.			289.5		0.9	350.4	116.6	1.2
Initial Queue I		and all some of the second sec		0.0	0.0		0.0	0.0	in the second		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	the second second second	and a second sec		226.6	And in case of the local division of the loc	-	55.8	384.	-	- 7	341.0		20.3	409.4	154.6	26.6
Level of Servi	a la management de la companya de la	and the second s		F	F	-	E	F	1		F	F	C	F	F	C
Approach Del		the second se	-	574.		F	242.	<u> </u>	1	F	458.		F	199.	9	F
Intersection D				1	7		5.6	- 1	-					F	1	
Intersection D	Stuy, arv		in the second	12mg	A Second	Section 2		5655	273	CIE -	Marine	1.1-1	The State	State State	2 militar	The state
Multimodal F	Results	Con Viller College	a black set	1	EB	and/sort		WB	3			NB			SB	
Pedestrian LC	and the second second	/LOS		3.0		С	3.1		1	С	3.4	T	C	2.3		В
		os		2.1	_	B	1.0		-		4.1		D	2.6		C

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SUPPORT NOT	200 200	A STATISTICS	医疗学	100 m 11	C. H.	Building		100,000	112 3	nmد. y	al to the	No Stall	15-35	1000	die Di
General Inform	ation		11000		all and a second	1 CROCK	CILCULAR DAL	Un	tersect	ion Info	rmatio	n	3	·1	516
Agency	And Andrewson of States	Solaegui Engineers						D	uration,	h	0.25				
Analyst		MSH		Analys	is Date	Sep 18	3. 2017		геа Туре	-	Other		4	1.1	
Jurisdiction		City of Sparks		Time P			ak Hour	-	HF		0.95		4 <b>.</b>	- 11	+
Urban Street		ony or openno		Analys		2035 E		-	nalysis I	Period	1> 7:0	0			
Intersection		Pyramid/Sparks NB	Ramp	File Na		NB35a		1.					1	557	ർദ്
Project Descrip	tion	i fiamaropanto no	Ttarrip	1 10 110		1								4 1 4 4	14.
Floject Descrip	CUPONS!	A DALLAN A STORE	PATT	10 10 IV	A	140.15	Tener.	1999	ST 833	C TO THE	可此	- S.	2010	The state	2.2
Demand Inform	nation	A REAL PROPERTY AND A REAL PROPERTY AND A	annu Bri		EB			WB			NB			SB	
Approach Move	ment			L	Т	R	L	T	R	L	T	R	L	T	F
Demand (v), v				100	800		1	400	300	100		100			
	NE AL		N.BIN-	C. C. C.	12183	218	ALL REAL	8:00%	N. L. Par	11	100	- She	+1-21-1	1	1923
Signal Informa	tion					R				1					10
Cycle, s	80.0	Reference Phase	2		¥	->	52					-	+		-
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0		1	K	-	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	and the second s	4.0	4.0	0.0	0.0	0.0		7			K
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0		8		1	
No 10 to 1	AL ST. ST.	the second of stars	and allow	11557	10"F	Set in	( Colored	1	2 12 -	21010	191		Net P	and a	CT FS
<b>Timer Results</b>				EBL		EBT	WBL		WBT	NBL		NBT	SBL		SBT
Assigned Phas	e			5		2			6			8			
Case Number				2.0		4.0			7.3		_	9.0			
Phase Duration	, S			20.0		55.0			35.0		_	25.0			
Change Period	, ( Y+R	c ), S		5.0		5.0			5.0		-	5.0	-	_	
Max Allow Hea	lax Allow Headway ( MAH ), s			3.1		0.0			0.0		_	3.2		_	
Queue Clearan	ueue Clearance Time (gs), s			4.0								6.3			
Green Extensio	n Time	(ge), s		0.1		0.0			0.0			0.4			
Phase Call Pro	bability	[		1.00	)							1.00			
Max Out Proba	bility			0.00								0.00	-		in least
	dia in		The Press	12/20/20	13 13		12.5.2	11.00	372.00	Ste State		The second	540.33	00	7124
Movement Gro		sults			EB			WB			NB			SB	1
Approach Move				L	T	R	L	T	R	L	Т	R		Т	F
Assigned Move				5	2			6	16	3		18			+
Adjusted Flow		and shift by second division of the second		105	842			421	316	105		105			
		ow Rate (s), veh/h/	In	1730	1781	-		1781	1585	1730		1585			
Queue Service	the second se	AT 1000 IN 1000 IN 1000 IN 1000		2.0	9.3			6.7	12.4	1.9	-	4.3			+-
	the second second	ce Time $(g_c)$ , s	_	2.0	9.3			6.7	12.4	1.9		4.3			
Green Ratio (g	and the second se			0.19	0.62			0.38	0.38	0.25		0.25			
Capacity ( c ),				649	2226	-		1335		865		396			
Volume-to-Cap	and the second second second	the state of the s		0.162	0.378			0.315	And in case of the local division of the loc	0.122		0.266			
		t/In (95 th percentile		37.2	138.5		-	122.9	1	33.7		70.4			
		eh/In (95 th percent		1.5	5,5			4.8	8.4	1.3		2,8			
Name or Witness of Concession, Name of Street or other		(RQ) (95 th percen	itile)	0.00	0.00			0.00	0.00	0.00		24.1			
	iform Delay ( d + ), s/veh			27.2	7.4			17.7	19.5	23.2		0.1		-	
Incremental De	the second s	the second s		0.0	0.5	-		0.6	3,4	0.0		0.1			
Initial Queue D		the state of the s		0.0	0.0	-			22.9	23.2		24.2		-	
Control Delay	a second s	the descent of the local data and the local data an		27.3	7.9	-		18.3 B	C	23.2 C		C			
Level of Servic		Conception of the local division of the loca		C	A	L	20.3	_	C	23.7		C	0.0	1	_
Approach Dela		and the second set, in the second sec		10.0		B	5.5		0	23.1			B		
Intersection De	aay, s/v	en/LUS	NATURA ST	C. COL	11111	STORES.	0.0	56.300	AND ME	13720	D: 32	STR OTHER	山田秋田	THE P	-
Multimodal Re	aulte		and the	CONTRACTOR OF	EB	Se Alas	A CONTRACTOR OF CASE	WB	5. 10 A	Cold Street or other	NB	Trend Bride	all succession	SB	Constant of the
Pedestrian LO		1105		1,9		В	2.4		В	2,9		С	3.0	-	С
recestian LO	core / L	and the second sec		1.3		A	1.1		A	2,0		F	0.0		

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120 10 10 10 10 10	1.1.1		1 0151	Tanzey	ame	13000		Joan	s Sum	General P	325	2 m	- Color	19. 3	2157
Concernel Inform	ation		1 +1 (	All the search	B12 - 2	E Mark	Al of a later	li	ntersecti	on Info	rmatio	n	1	42.41	1. 4
General Inform	ation	Solaegui Engineers						and the second second	Juration,	the second second	0.25				-11-
Agency		MSH		Analuci	e Dote	Sep 18	2017	and the second second	rea Type		Other		1.1	13676	100
Analyst		the second se		Time P	COLUMN AND ADDRESS OF	A CONTRACTOR OF THE OWNER	ak Hour	a consideration	HF		0.95		1	1.	1
Jurisdiction		City of Sparks		A REAL PROPERTY AND A REAL		2035 E			nalysis F	Period	1> 7:0	0	÷	1.237	325
Urban Street		Pyramid/Sparks NB	Dama	File Na	the second se	NB35p		1	analysis i	onou	11-11-0			557	a starting
Intersection		Pyramid/Sparks NB	Ramp	File Na	me	Папар	A.AU3							1144	11
Project Descrip	tion	and the second second	10022212	1000 10	(Lar)'s	The second	12 - 23	n ha	- T. P.	20:025	1-1-12	State and	City Co	123	15.50
Demand Inform	nation	Care and a set	No. And Color	and the second	EB	Contraction of the	1	WB			NB	ALC: NO.	-	SB	
Approach Move				4	T	R	L	Т	R	L	T	R	L	T	R
Demand ( v ), v	and the second division of the second divisio			200	650		-	500	600	150	1	200		1	
Demand (V), V	en/n	CARACTER SA	State of	1.00	ashe as	ALL STREET	SCA.	THE YE	24/2 121	Constant of the	Care la	AV BG	NV26	1125	A low
Signal Informa	tion	A REAL PROPERTY AND AND AND AND		-		K	1	1	1					1000	
Cycle, s	80.0	Reference Phase	2	1	2		37					-	-		
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0			-		
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0	0.0		7	4		K
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0			6	1	
	(Traces)	A STREET STREET	William .	A SE OF	AL	hora	No fret	ANT -	The Carl	2512	Sale -	at 13	all allow		15-1
Timer Results	ad adding to \$1000			EBL		EBT	WBL		WBT	NBL	-	NBT	SB	L	SBT
Assigned Phas	e			5		2	1	1	6		1	8	-		
Case Number				2.0		4.0	1		7.3			9.0			
Phase Duration	1, S			20.0		55.0			35.0			25.0			
and the second sec	hange Period, (Y+R ₀), s			5.0	1	5.0			5.0			5.0			
lax Allow Headway ( MAH ), s				3.1		0.0			0.0			3.3		1	
the second se	ueue Clearance Time (g s), s			6.2								11.2			
Green Extensio		a sign in 1916 water of the second state of th	-	0.3		0.0		1	0.0			0.6			
Phase Call Pro		the second se		1.00	)							1.00			
Max Out Proba		and his Provide Landson in the land		0.00	)		1	1		1		0.02	1		
	Seater.	A LONG STREET	( dol)	ATE C	1 States	the fre	and -	-	al use	Nor-In	6633	GE 3 mg	Sta li	the sec	S. C. T.
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	T	R	L	T	E
Assigned Move	ement			5	2			6	16	3		18			
Adjusted Flow	the second se	/), veh/h		211	684			526	500	158		211	-		-
the second se		ow Rate (s), veh/h/	In	1730	1781			1781		1730		1585		-	1
Queue Service		the second se		4.2	7.1			8.7	23.0	2.9		9.2		-	-
Cycle Queue C	learand	ce Time (g c), s		4.2	7.1	1		8.7	23.0	2.9		9.2	-		-
Green Ratio (	g/C)			0.19	0.62			0.38	-	0.25		0.25		-	-
Capacity (c).	veh/h			649	2226			1335	and the second second	865		396		-	
Volume-to-Cap	a second s	atio(X)		0.325	0.307			0.394	the second s	0.183		0.531		-	-
and the second se	the second second	t/In ( 95 th percentile	)	76.9	105.9			159.5	5 388.6	51.4		153.8		1	1
Back of Queue	(Q), V	eh/In (95 th percent	tile)	3.0	4.2			6.3	15.3	2.0		6.1	-		
		(RQ) (95 th percen		0.00	0.00			0.00	the state of the local division of	0.00		0.00		-	
Uniform Delay		And and a lot of the second seco		28.1	7.0			18.3	the second s	23.6	-	25,9	-	-	
Incremental De		the second se		0.1	0.4			0.9	13.5	0.0		0.7	-	-	
Initial Queue D	elay ( o	1 3), s/veh		0.0	0.0			0.0	0.0	0.0		0.0	_		-
Control Delay		COLUMN TWO IS NOT THE OWNER.		28.2	7.3			19.2	36.3	23.6		26.7	-	-	-
Level of Servic	and the second second			C	A	1		В	D	C		C	-	1	1
Approach Dela	and the second se			12.3	2	В	27.5	5	С	25.	4	С	0.	2	
Intersection De	elay, s/v	eh / LOS				2	1.2			-	-	-	C	and the second	
	The start	Contraction of the second		anter ?!	-12	2/1-1	2.12	and a	a and	100	150.7	112 15	W. W.	2.2	Trail
Multimodal R	esults			-	EB		-	WB		-	NB	141	-	SB	-
Pedestrian LO	S Score	e/LOS		1.9	_	В	2.4		В	3.0		C	3.	0	С
<b>Bicycle LOS S</b>	core / L	OS		1.2		A	1.3		A	4		F			_

HCS7 \*\* Streets Version 7.3

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Walter Brussie	att at the	State State State State	32026	- Charles	ANT REAL	9000	New St	Tite 17	73 (P) (N)	115	1.2.2	1.8 + 10.	2 merz	1.520	
General Inform	ation	a second solution of the second second	is office &		VII. NO	1-10,40,000	0.000	lin	tersect	ion Info	rmatio	n	2	4	115
	ation	Solaegui Engineers							uration,		0.25				
Agency		the second s	1	Analusi	a Data	Sep 1	9 2017	and the second second	ea Type		Other		1		
Analyst		MSH		and in succession in succession	and the second designed	a state of the sta			HF		0.95			1	
Jurisdiction	-	City of Sparks		Time P		a los de la companya	eak Hour		and the second strends	Destant	1> 7:0	0	걸구		1
Urban Street					_	2035 E Projec	at		nalysis l	Period	1 > 7:0		-	<u>ነ</u> ገ ሰ	
Intersection		Pyramid/Sparks NB	Ramp	File Na	me	NB35a	aw.xus							4144	11
Project Descrip	tion		-	and the second	-	-	THE OWNER ADDRESS	_	-	and the second	rownizie	and the second	-	-	-
and the second	1.2.2.		L R Y	i'm the state	FIEL	100	12072	1501	1. 5. 6.1	231 22	AUD.	Stern St	Carlina.	OD	1.5.1
Demand Inform	nation				EB	-		WB	1	1	NB	1 -		SB	1
Approach Move	and the second se			L	T	R	L	T	R	L	T	R	L	T	F
Demand (v), v	eh/h			200	967			458	300	204	Lanna	100		-	-
1. 1. 1. 1. A. A.	ADT. IN THE	·····································	120	41.6 To	Co. Wat	41 - 21	9047	신스키	(41,23)	THE CLUB	2015	ACT TO C	112	(APRIL)	247
Signal Informa	tion														
Cycle, s	80.0	Reference Phase	2		P\$	-	51	á.	-			1	* 7	2	
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0			K		
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0	0.0		7	-		5
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0		\$	6	7	-
the and them they	1.5	SAN STREET	-	State Provent	55-0	MAN -	The bay	2 1.00	11/1	113	- Vier	Take to the	の書る	3/2 10	in the
Timer Results	1			EBL		EBT	WBL	. 1	NBT	NBL		NBT	SBL		SBT
Assigned Phase	e		-	5		2			.6			8	1000		
Case Number			-	2.0		4,0	1		7.3	1		9.0			
Phase Duration	e			20.0		55.0		1	35.0			25.0		-	
and the second s	hange Period, (Y+R c), s			5.0	-	5.0		-	5.0	-	-	5.0	-		
the second division of				3.1	tion of the local division of the local divi	0.0	-		0.0			3.2	a la casi inco		
the second se	/lax Allow Headway ( MAH ), s Queue Clearance Time ( g s ), s			Inclusion in success		0.0			0.0			6.3			
1		and the second se	-	6.2		0.0	-		0.0			0.6			
Green Extensio	And in case of the local division of the loc	(ge), S		0.3		0.0			0.0		-				
Phase Call Pro				1.00	in the second		<u> </u>					1.00			
Max Out Proba	bility	and that the other taken to the	-	0.00	And in case of the local division of the loc	or south the	Langer	and street	AND WHEN	on Avenue	D'SI ANTE	0.00	ACCURATE OF	In Column 2 and	ALC: NO.
		deres by the second second	2-02	Contrast.	EB	12.11.17	pist y	WB	Plot	- ALCON	NB	Solves and	141 354221	SB	a factor
Movement Gro	Concernance of the local division of the loc	sults			-	I D	1	T	R	11	T	R	L	T	F
Approach Move	the second s			L	T	R	L			L	-	18		-	+
Assigned Move	indo the property in case of the	the second s		5	2	-		6	16	3					1-
Adjusted Flow		A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY ADDRESS OF A REAL PR		211	1018			482	316	215		105			-
the second se	and the second se	ow Rate (s), veh/h/l	n	1730	1781			1781	1585	1730		1585		-	-
Queue Service		Concerning of the local division of the loca		4.2	12.0			7.8	12.4	4.0		4.3			
Cycle Queue C	learanc	e Time (gc), s		4.2	12.0		1	7.8	12.4	4.0	1-14	4.3			
Green Ratio ( g	7/C)			0.19	0.62			0.38	0.38	0.25		0.25			-
Capacity (c),	veh/h			649	2226			1335	594	865		396	1		_
Volume-to-Cap	acity Ra	atio (X)		0.325	0.457			0.361	0.531	0.248		0.266	1		-
Back of Queue	(Q), ft	/In (95 th percentile)	1	76.9	179.6			143.6	213.3	71.2	-	70.4	_		1.
		eh/In (95 th percent		3.0	7.1			5.7	8.4	2.8		2.8			1
CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTÓR DE LA CONTRACT		THE R. P. LEWIS CO., LANSING MICH.		0.00	0.00		1	0.00	0.00	0.00		0.00			
a local sector of the sector o	ueue Storage Ratio ( RQ ) ( 95 th percentile) Iniform Delay ( d 1 ), s/veh			28.1	7.9	1		18.1	19.5	24.0		24.1			
And and a second data	cremental Delay ( d 2 ), s/veh			0.1	0.7	1	1	0.8	3.4	0.1		0.1	1.1		1
second in the second second second second	itial Queue Delay ( $d_3$ ), s/veh			0.0	0.0	1	1	0.0	0.0	0.0		0.0			T
Control Delay (				28.2	8.6	-	-	18.8	22.9	24.0		24.2			1
				C	A	-	1	B	C	C	-	C		-	1
	evel of Service (LOS) Approach Delay, s/veh / LOS		11.9	the second second	В	20.4		C	24.	T	C	0.0	1	-	
	the second second second second	states which is a part of the second states of the		113		and the second second	Suma and time		0	C.41.			0.0 B		
Intersection De	And in case of the second second	en/LOS	1000	Toroset/10	C ITTO	1 Million	6.5	20000	1	1.19.5	ALC: NOT	Contraction of	Constitue S	5.3	10.00
		A SALE REAL ENTITION	- (MILELS	1 alter	ED	104,751	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	WB		Contra and the	NB	all states	The Hard	SB	and a start
Multimodal Results			EB		1	AAA			ND			90			
the second s	Pedestrian LOS Score / LOS		1.9	1	В	2.4	1	В	2.9		C	3.0	1	C	

HCS718 Streets Version 7.3

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CALL OF THE OWNER OF THE	100.000	THE REAL PROPERTY OF	10000	and the		ersect	11-2-2	17.1	CONTRACT OF	- Taylogi	E.	6 . 1 11	a list	Par de	19.81
A HAND SHE	-fier		CONTRACT OF	100	ation of the	the first of	10.78	lin	tersect	on Info	rmatio	n		د و طورته ا	2 N.
General Inform	ation	o los restantes							uration,		0.25		11/2		10
Agency		Solaegui Engineers				10 40	0047	ALC PROPERTY AND	on etcoire is maritured	alarra di	1000		- 0.35		
Analyst		MSH			and the second se	Sep 18		and the second second	rea Type		Other 0.95		-	10	-
Jurisdiction		City of Sparks		Time P	the second second	and the same of the	ak Hour		HF	<b>D</b> = - <sup>1</sup> = -1		0	1		1.00
Urban Street		_	_	Analys	is Year	2035 E Projec	t		nalysis I	riod	1> 7:0	0		ነንሮ	
Intersection		Pyramid/Sparks NB	Ramp	File Na	me	NB35p	w.xus						-C.	(1441	P.F.
Project Descript	lion							-		or the Address of the Owner of	_			-	-
With a mart	THUR AFT	11 39 PAND	10-21C	41	2,661	1911	1940	1/17-11:	5-13/3	2000	110	100	a the	0.0	
Demand Inforn	nation			-	EB		-	WB		-	NB	-		SB	1
Approach Move	ment			L	Т	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h			259	748	1	1	663	600	444	1	200		-	1
and the second second	The start	and the second second	24.5	ALL STREET	Pover	1.44	10.00	12.20	1. C. C. C.	Cepter 1	- di	all one	in the second	0.000	-1
Signal Informa	and the second second				3	4	=			1					
Cycle, s	80.0	Reference Phase	2		-	-	51	2	1			,	2	3	
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0		1	5		1
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0					5
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	-	S	6	Y NOT	CTUT N
	1-52		1234	C. THE	121-31	12 21 18	24.9	1.1		San Star	E-SA	NIDT	0.01	100	CDT
Timer Results			100	EBL		EBT	WBL	-	WBT	NBL	-	NBT	SBL		SBT
Assigned Phase	Θ			5	_	2		-	6		-	8		-	
Case Number				2.0		4.0			7.3	-		9.0			_
Phase Duration	, S			20.0		55.0			35.0			25.0		_	
Change Period, (Y+R c), s				5.0	1	5.0			5.0			5.0			
Max Allow Headway ( MAH ), s				3,1	1	0.0			0.0			3.2			-
Queue Clearan	and the second division of	and the second se		7.6								11.4			
Green Extensio		and the second se		0.4		0.0			0.0			1.2			
Phase Call Pro	the state of the local division of the local	and a second		1.00	)						100	1.00			
Max Out Proba				0.01				1				0.06			
India Corrienda	R. C.C. H	10 1 Mar 21	1 - Minis	Thing 24	ANT THE	ar <u>2</u> /76	1115-13	3 3 1	1. 2.1	Stre-Va	1	2 F	N. They	1 - New	Sec.
Movement Gro	oup Res	sults			EB		1	WB			NB	_		SB	
Approach Move	ement			L	Т	R	L	Т	R	L	T	R	L	Т	F
Assigned Move	the second se			5	2		1	6	16	3		18		-	1.
Adjusted Flow	and the second se	/), veh/h		273	787			698	500	467		211			1
Constant of the local division of the local		ow Rate (s), veh/h/	n	1730	1781	1000		1781	1585	1730		1585			
Queue Service	and the second second	and the second sec		5.6	8.5			12.2	23.0	9.4		9.2			1
A company of the second se		ce Time (g c), s		5.6	8.5	1		12.2	23.0	9.4		9.2			1
Green Ratio (g		19-11-		0.19	0.62			0.38	0.38	0.25		0.25			T
Capacity ( c ), v				649	2226	1		1335	594	865		396			T
Volume-to-Cap		atio (X)		0.420	0.354	-		0.523	0.841	0.540		0.531			
	-	t/In (95 th percentile	)	101.8	126.7			218.2	and statements in	169.5		153.8			T
		veh/ln (95 th percent		4.0	5.0	1		8.6	15.3	6.7		6.1		-	1
and the second se		the second se	and the second se	0.00	0.00			0.00	0.00	0.00		0.00			1
PROBATING COMPANY AND	Queue Storage Ratio (RQ) (95 th percentile)			28.7	7.2		-	19,4	22.8	26.0		25.9			1
and the second se	niform Delay ( d 1 ), s/veh premental Delay ( d 2 ), s/veh			0.2	0.4			1.5	13.5	0.4		0.7			1-
the second se	itial Queue Delay ( d 2 ), s/veh			0.0	0.0			0.0	0.0	0.0		0.0			1
the second s	and the second	- Arran		28.8	7.7		1	20.9	36.3	26.4		26.7			-
Control Delay (	Concession and Party Party			20.0 C	and the second s	-	-	20.5 C	D	C		C			1
Level of Servic		and a set of the set o		- Contraction of the local division of the l	A	P	27.3	-	C	26.5	5	C	0.0	-	-
the second se	Approach Delay, s/veh / LOS		13.		B			0	20.0			0.0			
Intersection De	ay, s/v	eh/LOS	The State of Contraction	V-DOWN	Terre	2	2.0	1125010	0.000	C C CIT	10-	125 Sizt	T-GI	1217/2	1.16
Multimodal Re	eulte	the state of the second	42.4	petati	EB	0.45.	Contraction of the	WB	141-1	Contraction of the	NB	- Cileran	and the second second	SB	and the
		1105		1.9		В	2.4	-	в	3.0	100000	C	3.0	and the second division of	С
Pedestrian LOS Score / LOS		1 200		1.4		A	1.5	and the second diversion of	A	0.0		F	0.0		-

Vite Harris 1	NOTE ?	1.2011年三月1日1日	12.12	机制度	Press.	C. C. T.	tion R	時代する	PULL P	14-4	and s	D.R.	12.00	228.21	10-1
General Inform	ation	and the other states of the second	COMPLEX	WALK-WEEK	0000000	0101252	CHARTER STORE	In	tersect	ion Info	rmatio	n	1	4.4.4.1	54
Agency	Contraction of the second	Solaegui Engineers							uration,		0.25		_		
Analyst		MSH		Analysi	s Date	Sen 18	8 2017	and a sub-	еа Туре		Other		فر ۱	1915	
		City of Sparks		Time P		And in case of the local division of the loc	ak Hour		HF		0.95		1	41	+
Jurisdiction		City of Sparks		Analysi					nalysis F	Period	1> 7:0	0			
Urban Street						Projec	t + Kiley		aryonan	CHOU				ን ነ ሰ	
Intersection		Pyramid/Sparks NB	Ramp	File Na	me	INB35a	aww.xus						1	4 1 4 4	E.C.
Project Descript	tion	THE R. P. LEWIS CO., LANSING MICH.	-	CONTRACTION AND AND AND AND AND AND AND AND AND AN	-	substitution of	constraints	Suffrance.	AND CONTRACTOR	COLUMN TWO IS NOT	-	-	SAUCE	Second Second	00460
Alt - wal his	L'and		NO. NO.	205033	CD	100	1	WB	1.9.1-10	arrist and	NB	1 1 10	and an inter	SB	No. of Street, or
Demand Inform					EB	1 0	1	T	R	L	T	R	L	T	R
Approach Move				L	T	R	L		1						
Demand (v), v	eh/h	CALL STREET, STREET, STR	CONTRACT OF	276	1007	and the second	10000000	487	315	281	No. of Concession, Name	100	STORE OF	108113	tions
Signal Informa	tion		All and all	D.S Infth	185000	L R		The Party	Contraction of the	-	allogates.	California	and the second second	CLUMMAN .	-
Cycle, s	80.0	Reference Phase	2		-21	4	=		1			_	4		
Offset, s	0	Reference Point	End				11	1	I HOL	-	1	1	2	7	
1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-			On	Green		30.0	20.0	0.0	0.0	0.0	-		2		
Uncoordinated	No	Simult, Gap E/W		Yellow		4.0	4.0	0.0	0.0	0.0					1
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	11.0	10.0	10.0	10.0	10000	1155 59	15 50 1	-14.0	THE P
Timer Results	2010	and an and the second	SUL	EBL	Norse:	EBT	WBL		NBT	NBL	1	NBT	SBL		SBT
Assigned Phase				5	-	2			6			8			
and the second s	e			2.0	-	4.0			7.3		1	9.0		-	
Case Number				20.0		55.0		in the second se	35.0		-	25.0			
Phase Duration	the state of the s				_	2011		and the second s	5.0			5.0			
Change Period	of the other design of the local division of			5.0		5.0			0.0	-		3.2			
Max Allow Head		and the second se		3.1	_	0.0		-	0.0			7.6			
Queue Clearan		state of the local division of the local div		8.0		0.0	1		0.0			0.8			
Green Extensio		(ge), s		0.4		0.0			0.0			1.00	-		-
Phase Call Pro			-	1.00	_										
Max Out Proba	bility	and the second sec	-	0.02	APPENDENT	The second	Anna	CISIONE M	NORMAN O	20100	No.	0.00	O.C. Dering	Contration in the	10.17
Movement Gro	un Ro	sulto	Salah	- Diale N	EB	11.204	1	WB	ALC: NO		NB	1	And in case of the local diversion of the local diversion of the local diversion of the local diversion of the	SB	
And in case of the local division of the loc	and the second division of the second divisio	Suits			Т	R	L	T	R	L	T	R	L	T	F
Approach Move	and the second division of			5	2	I N	-	6	16	3	-	18	-		1
Assigned Move				- marine in the	-				332	296		105			-
Adjusted Flow				291	1060			513	diversition of		-				-
Construction of the local division of the lo	a state of the sta	ow Rate (s), veh/h/l	n	1730	1781			1781	1585	1730		1585			-
Queue Service		and the second design of the s		6.0	12.7		-	8.4	13.2	5.6		4.3			+
		ce Time (g c), s		6.0	12.7		-	8.4	13.2	5.6		4.3			
Green Ratio (g	and the second se		_	0.19	0.62		-	0,38	0.38	0.25		0.25			+-
Capacity ( c ), 1				649	2226	-		1335	594	865		396			+
Volume-to-Cap		and the second second distance in the second s		0.448	0.476			0.384	0.558	0.342		0.266			+-
		t/In (95 th percentile)		109	190.1		-	154.6	224.7	100.6		70.4	-		-
		eh/In (95 th percent		4.3	7.5	-		6.1	8.8	4.0	-	2.8	10-0-0		-
a design of the second state of the second sta	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(RQ) (95 th percen	tile)	0.00	0.00		-	0.00	0.00	0.00		0.00			-
Uniform Delay		And in case of the local division of the loc		28.8	8.0		-	18,3	19.8	24.6		24.1			-
Incremental De				0.2	0.7		-	0.8	3.7	0.1		0.1			-
And in case of the local division of the loc	tial Queue Delay ( d ₃ ), s/veh			0.0	0.0		-	0.0	0.0	0.0		0.0		-	
the second s	ontrol Delay ( d ), s/veh			29.0	8.7	-	-	19.1	23.5	24.7		24.2		-	-
	evel of Service (LOS)			C	A	-	1	В	C	С		C		-	1
Address of the Party of the Owner, which we do not	pproach Delay, s/veh / LOS			13.1		В	20.8	3	C	24.6	3	C	0.0		
1	tersection Delay, s/veh / LOS				-	1	7.4	CRAME OF	-	-	-	ALCON DOLLAR	B	No. of Lot of Lot	Constant of the local division of the local
Intersection De	WERE AND THE REAL PROPERTY OF				9. 1 1 1 T		AN IN	COLUMN SALES	1.14	and the second	We allow	S. 31.14	Alf of	States	115 3
11241-2-2	and the		and a state of the	1	-			1.0.200			B.105				
Multimodal Re Pedestrian LO				1.9	EB	В	2.4	WB	в	2.9	NB	c	3.0	SB	С

HCS719 Streets Version 7,3

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1	王的南	STATES A TO SALA	1 1 P	The Party of	A RIL	5-1-1-1	12	Puls	The All	17 4 Th	1 - 10	1. 1.1-1	Sain la	The	1-21
General Inform	ation	and the second sec	and a summer	11 - 11 - 11	and the second	Conversion of		In	tersecti	on Info	rmatio	n	1.	4 20-4-4 4	1.
Agency	actori	Solaegui Engineers						D	uration,	h	0.25		-		15
Analyst		MSH		Analys	is Date	Sen 1	8, 2017		rea Type	the second second	Other				
Jurisdiction		City of Sparks		Time P	11 - 1 - 1 - 1	-	ak Hour		HF		0.95		*		TE +
Urban Street		City of Oparks		Analys			Base +	-	nalysis F	Period	1> 7:0	00			20
	_					Projec	t + Kiley							110	
Intersection		Pyramid/Sparks NB	Ramp	File Na	me	NB35	ww.xus	_					1.	4144	1.1
Project Descript	tion		-		-	-	mani penera	and and and and	COLOR STREET,	and the second se	en ém la	-	-	and the second	
2 5 5 15 6	- AND		sull.	REAM	19 101	Va. C	Million C	14/17	- 1 - L-L-	1	NID	AVE THE		SB	1235
Demand Inform					EB	-	-	WB	1 -		NB	1.0		-	1 0
Approach Move				L	T	R	L	T	R	L	T	R	L	Т	F
Demand ( v ), v	eh/h	Contraction of the local division of the loc		383	789	1		693	615	568	-	200		-	-
10 9 G. (*)	「アデリ	Charles Contraction	2.33	1252	4510	20-20	1-1-1-5	1	- S - 1	11 242 15	300000	C C C C C C C C C C C C C C C C C C C	Sugar	1 carp	-
Signal Informa	the state of the s	1	-		71	4	=	1						1.2.1	
Cycle, s	80.0	Reference Phase	2	1	+	+	SP	2					+ .	2	
Offsel, s	0	Reference Point	End	Green		30.0	20.0	0.0	0.0	0.0		. 10	5		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0			221	1	K
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	10.0	0.0	0.0	CONST.	3	9	7	1000
and the start of	H Paul		111.24	20.2.21	1 - 5	183	( Nation		10,24	a think	S. P.	Accent to		Saught	250
<b>Timer Results</b>				EBL		EBT	WBL	- 1	WBT	NBL	-	NBT	SBL		SBT
Assigned Phase	e			5		2		-	6		_	8			
Case Number				2.0	1.1	4.0			7.3			9.0			
Phase Duration	, S			20.0		55.0			35.0	_		25.0			
Change Period	(Y+R	c), S		5.0		5.0			5.0			5.0			
Max Allow Head		Conception of the local division of the loca		3.1		0.0			0.0			3.2			
Queue Clearan	the second se	the second se		10.6			1					14.5			
Green Extensio		the distance of some successive statements in a successive statement		0.5		0.0			0.0			1.2			
Phase Call Pro				1.00			-					1.00			
Max Out Proba				0.36							-	0.37		-	
Max Out, 1100a	Dinty	11. TEAL & CART	V.C.	Tank Cost in	Services	1557530	Transa and	ALC: NO	11 1 1 1	the los N	ALC: NO	10.020	18.20	all for	ALES!
Movement Gro	oup Re	sults	acourses.	1	EB		1	WB			NB			SB	
Approach Move	Section approximate			L	T	R	L	Т	R	L	Т	R	L	Т	F
Assigned Move				5	2		1	6	16	3		18			
Adjusted Flow		() veh/h		403	831	-	1	729	516	598		211		-	1
	and the second second	ow Rate (s), veh/h/	In	1730	1781		1	1781	1585	1730		1585			T
Queue Service		the second se		8.6	9.1		1-1	12.9	24.1	12.5		9.2			1
and the second s		ce Time (gc), s		8.6	9.1			12.9	24.1	12.5		9.2			T
		Se mile (9 c), s		0.19	0.62		1	0.38	0.38	0.25		0.25		-	+
Green Ratio (g				649	2226	-		1335	594	865		396		-	1
Capacity ( c ),	And in case of the local division of the loc	atio ( X)		0.622	0.373		-	0.546	0.868	0.691		0.531			1
Volume-to-Cap	and the second		\	- Contraction of the second se	136	-	1	228.2	412.3	224.6	-	153.8			+
		VIn (95 th percentile		161.3		-	-		16.2	8.8		6.1			-
and the second se		eh/ln (95 th percent		6.4	5.4		-	9.0		0.00		0.00		-	+-
second as pre-	And in the local division of	(RQ) (95 th percen	ule)	0.00	0.00			0.00	0.00			25.9			-
Uniform Delay	the state of the s	the second se		29.9	7.3		-	19.7	23.2	27.2					+-
Incremental De	COLUMN TWO IS NOT THE	And and a second s		1.4	0,5	-		1.6	15.7	2.0		0.7			-
for some other than the first state of the local data and the second state of the second state	tial Queue Delay ( d s ), s/veh			0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (	and the second division of the second divisio	And a state of the	_	31.3	7.8			21.3	38.9	29.2		26.7			-
and the second se	evel of Service (LOS)			C	A	1		C	D	C		C			
Approach Delay, s/veh / LOS				15.	5	B	28.0	5	C	28.5		C	0.0		
Intersection De	elay, s/v	eh / LOS	-	1		2	3.6	-	1.12	-	Van or a	(	3		Poet
					0.0		1 42	Contraction of the	加強に	FA SE	The spin	2.411	344	12/10	10725
Multimodal Pe	Iltimodal Results				EB		-	WB		3.0	NB	С	3.0	SB	C
And the owner of the owner owner	destrian LOS Score / LOS					В	2.4		В						0

HCS7<sup>TM</sup> Streets Version 7.3

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SAME AND A STATE	No. Tak		Contractor	21.223	10500	ersect	1000 100	76.97	11	100	- 49	Nor Chilling	Start's	Sold States	2200	TT L
General Inform	ation	and the subscription	The second	21	and a M	for the second	No. 2010 Sec	1	Inter	sectio	on Info	rmatior	1	1 1.	4	1.14
the second s	the second s	Solaegui Engineers					-	-		tion, h		0.25			111	-
Agency	successive section.	MSH		Analys	e Date	Sep 18	3 2017			Туре		Other		1		
Analyst		City of Sparks	-	Time P			ak Hou		PHF	1360		0.95			. die	
Jurisdiction		City of Sparks		and the second s		2035 E				ysis P	eriod	1> 7:00	0			
Urban Street		Pyramid/Sparks SB	Domo	File Na		SB35a		- 1.	nitali	y 010 1	chida	11-1.0			1016	
Intersection	Rate	Pyramid/Sparks SB	Ramp	I File Na	me	00000	A.AUS		1	COLUMN TRAVE					4144	20
Project Descrip	tion	THE REAL PROPERTY OF	Attent	10000	90 E 108	0.000	THURSDAY &	THE OWNER	STY.	SAN	127	10230101	PERSON	and states	1264	·
Demand Inform	nation		COLUMN STREET	1	EB	COLD IN STREET	T	WE	3		Los Carros	NB		Contraction of the	SB	
Approach Move				L	T	R	L	T	T	R	L	T	R	L	T	R
Demand (v), v					300	100	250	250	0	-			1	600		100
Demand ( V), V	Chin	and Constant and	1000	. Turn to		100	A RAZE	SUNE!	P-S	505	STA	行行の方向の	in the second	1 Transit	Curris	OF ST
Signal Informa	tion	The space of the strength of the strength		-		1	175	1		_						1
Cycle, s	80.0	Reference Phase	2	1	2							-	-	+		K X
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	-	0.0	0.0	-	1		3	
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0		0.0	0.0	-				
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	11.0	0.0		0.0	0.0		5	4	+	
Constant and	El ante	THE STREET	15-15	22000	A BAS	16314	Charles !!	1428	No. C	132	and the second	126.	12°	1.2.14	2.3	- 1963
Timer Results	and the second se			EBL	. 1	EBT	WBI	.	WB	T	NBL	.   1	VBT	SBL		SBT
Assigned Phas	e			1		2	1		6					1		4
Case Number	-					7.3	2.0		4.0					1		9.0
Phase Duration	1. 5			1		35.0	20.0		55.0	0						25.0
and the second se	ange Period, (Y+R c), s					5.0	5.0		5.0					1		5.0
provide and the second s	ax Allow Headway ( MAH ), s					0.0	3.1		0.0	)		1		T		3.2
Queue Clearan				1			7.4					1.1				15.4
Green Extensio	and the second se					0.0	0.4		0.0			-		1		1.0
Phase Call Pro		13-11-					1.00	)	-					1		1.00
Max Out Proba	and the second se						0.01					1		1		0.50
max out 1000	and the second data and the se	Warp and L S.	E PL CAPIN	(Derecht	distantia in	1 THE	- TOPE	5-110	See.	Since	and the	Enter	1.1		Refer	一些使用
Movement Gro	oup Res	sults		1	EB		0	WB	k.			NB		1	SB	
Approach Mov	ement			L	T	R	L	T		R	L	Т	R	L	Т	R
Assigned Move	ement			1	2	12	1	6						7		14
Adjusted Flow	Rate ( v	/), veh/h		1	316	105	263	263						632		105
Adjusted Satur	ation Fl	ow Rate (s), veh/h/	'In		1781	1585	1730	178	1					1730		1585
Queue Service	Time (	g s), S			4.9	3.6	5.4	2.4	1	1				13.4		4.3
Cycle Queue C	learanc	e Time (gc), s		1	4.9	3.6	5.4	2.4			1			13.4	_	4.3
Green Ratio (		and a second design of the second		1	0.38	0.38	0,19	0.62	2				1	0.25		0.25
Capacity ( c ).	the same of the				1335	594	649	2226	3	1			2	865		396
Volume-to-Cap		atio(X)			0.236	0.177	0.406	0.11	8	1				0.730		0.26
		l/In ( 95 th percentile	)		88.8	60.4	97.9	35.5	5					239.5		70.4
	and the second second	eh/In ( 95 th percent		1	3.5	2.4	3.9	1.4	-					9.4		2.8
the second s		(RQ) (95 th percen	and a state of the		0.00	0.00	0.00	0.00	)				0	0.00		0.00
Uniform Delay		No. of the local division of the local divis		1	17.1	16.7	28.6	6.1						27.5		24.1
The second s	cremental Delay ( d z ), s/veh				0.4	0.7	0.2	0.1					_	2.8		0.1
the reaction of the second sec	iitial Queue Delay ( d ₃ ), s/veh				0.0	0.0	0.0	0.0		1	2.23			0.0		0.0
NAMES OF TAXABLE PARTY.	ontrol Delay ( d ), s/veh				17.6	17.4	28.7	6.2	T					30.3		24.2
Level of Servic	the second s	the second s			В	B	C	A	1					C		C
Approach Dela		the second s		17.	5	В	17.	5	В		0.0			29.4		С
Intersection De	-	and the second se					2.7							С		
Salar Sear Se	2/4/1-		The state	S. T. do A	1-213	1.		No.	1.00	HT N	-15	1.5	A COL	2. 2.4	ala u	而此上
Multimodal Re	ultimodal Results				EB			WE	3			NB	-	1	SB	
Pedestrian LO	S Score	LOS		2.4		В	1.9		В		3.0		С	2,9		С
Bicycle LOS S	core / L	OS		0.8		A	0.9		A							F

HCS718 Streets Version 7.3

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THE OF DEAL	1000 A		and the second	A DIAL	SEM03	The US	Sec. 20	3. 5	s Sum	012303	100.5	N.C.	1. 22. 7	5 20	10-15
General Inform	nation	in the second	2-11-6-24	1.	1000	STREAM	1.70.00	lir	ntersecti	on Info	ormatio	n	2.	itt	÷1.
and the second second	nation	Solaegui Engineers							uration,		0.25			111	
Agency		MSH		Analys	is Date	Sep 18	2017		rea Type		Other		*		
Analyst Jurisdiction		City of Sparks		Time P		the second second	ak Hou	and the second second	HF		0.95			- nfi	+
	-	City of Sparks		Concession in the local diversion of the loca	is Year				nalysis I	Period	1> 7:0	0	1.7		1.5-
Urban Street		Durantid/Charles CD	Domo	File Na		SB35p	and the second se	17	analysis i	anou	11. 1.0			10	12-
Intersection	llon	Pyramid/Sparks SB	Ramp	File Na	me	lapaab	X.XU5							144	1.1
Project Descrip	JUON	A STATE STATE	1. The second	Station St	1. 19	17 2.0	2-10	1500	A STATE	anne	6.000	31101	1017930	1233	1.19
Demand Infor	mation	A REAL PROPERTY AND		1	EB	Collecto	1	WB			NB			SB	
Approach Mov	ement			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v),	veh/h				350	100	300	350		1	1	1	500	-	110
all and a stand int	Till and	的复数形式 加速器	A.M.	- 1 - 1 -	in the	1100	ALC: NO.	APRIL .		so lire	in the second	12.5	Sandal	14.20	1-tea
Signal Inform	1			1	1	+	2 3					-	-	- 1	2
Cycle, s	70.0	Reference Phase	2		K	R		1				1	4	5	
Offset, s	Ö	Reference Point	End	Green	15.0	20.0	20.0	0.0	0.0	0.0					-
Uncoordinated		Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0				1	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	1	1	6	1	-
ALL STATES	Service W	at Recharge and	La King	E EDI	1.7080	COT	WBI	9.92	WBT	NBL	-	NBT	SBL		SBT
Timer Results				EBL	-	EBT 2	1	-	6	INDI	-	NDT	ODL	-	4
Assigned Phas	se			-		7.3	2.0		4.0				1		9.0
Case Number		· · · · · · · · · · · · · · · · · · ·				25.0	20.0		45.0		-				25.0
Phase Duratio	ange Period, (Y+R c), s				_	5.0	5.0		5.0						5.0
						0.0	3.1		0.0					-	3.2
	x Allow Headway ( <i>MAH</i> ), s leue Clearance Time ( <i>g</i> s ), s					0.0	7.5		0.0						11.0
		and the second design of the s				0.0	0.5		0.0						1.2
Green Extensi		(ge), S		-		0.0	1.00		0.0				1	+	1.00
Phase Call Pro							0.02	of the local division of					1	1-	0.04
Max Out Proba	ability		Driver	CERTAIN AND	STREET,	C.Lawrence	0.02		12.82.114	22	STORE N	1701 9	and they	12 - 1	1.01
Movement Gr	oup Res	sults	- Louis a	1	EB	LINE AFE		WB			NB		T	SB	
Approach Mov		3.00.0		L	T	R	L	T	R	L	T	R	L	Т	R
Assigned Mov				1	2	12	1	6		1			7		14
Adjusted Flow	and the second se	), veh/h		1	368	105	316	368					526		116
		ow Rate (s), veh/h/	/In	1	1781	1585	1730	1781					1730		1585
Queue Service		and the second provide the secon		1	5.8	3.6	5.5	3.5					9.0		3.9
the second se		e Time (gc), s			5.8	3.6	5.5	3.5					9.0		3.9
Green Ratio (					0.29	0.29	0.21	0.57		1			0.29		0.29
Capacity ( c ),				1	1017	453	741	2035	1				988		453
Capacity (C),					0.362	0.232	0.426	0.181		1			0.533		0.25
Volume-to-Caj	pacity Ra					A DESCRIPTION OF		51.4	1				154.6		62.1
Volume-to-Ca	COMPACT. OF LOT	//n (95 th percentile	)	-	107.5	62.4	97.3	1 0 1 4	1				0.4		2.4
Volume-to-Cap Back of Queue	e (Q), ft	and the second se		-	107.5 4.2	62.4 2.5	97.3 3.8	2.0	1				6.1	-	
Volume-to-Cap Back of Queue Back of Queue	e (Q), ff e (Q), v	i/In ( 95 th percentile	tile)										0.00		-
Volume-to-Cap Back of Queue Back of Queue	e (Q), ft e (Q), v e Ratio (	/In ( 95 th percentile eh/In ( 95 th percent ( RQ ) ( 95 th percent	tile)		4.2	2.5	3.8	2.0							0.00
Volume-to-Cap Back of Queue Back of Queue Queue Storag	e (Q), ft e (Q), v e Ratio ( r (d1), s	/In ( 95 th percentile eh/In ( 95 th percent ( <i>RQ</i> ) ( 95 th percent ( <i>RQ</i> )	tile)		4.2 0.00	2.5 0.00	3.8 0.00	2.0					0.00		0.00
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay	e (Q), ff e (Q), v e Ratio ( (d1), s elay (d)	//n ( 95 th percentile eh/in ( 95 th percent ( RQ ) ( 95 th percent s/veh 2 ), s/veh	tile)		4.2 0.00 19.9	2.5 0.00 19.1	3.8 0.00 23.8	2.0 0.00 7.2					0.00 21.1 0.3 0.0		0.00 19.3 0.1 0.0
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D	e (Q), ff e (Q), v e Ratio ( (d1), s elay (d Delay (d	/In ( 95 th percentile eh/In ( 95 th percent ( RQ ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh	tile)		4.2 0.00 19.9 1.0	2.5 0.00 19.1 1.2	3.8 0.00 23.8 0.1	2.0 0.00 7.2 0.2					0.00 21.1 0.3 0.0 21.4		0.00 19.3 0.1 0.0 19.4
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue D	e (Q), ff e (Q), v e Ratio ( (d1), s elay (d Delay (d (d), s/v	/In ( 95 th percentile eh/In ( 95 th percent <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh eh	tile)		4.2 0.00 19.9 1.0 0.0	2.5 0.00 19.1 1.2 0.0	3.8 0.00 23.8 0.1 0.0	2.0 0.00 7.2 0.2 0.0					0.00 21.1 0.3 0.0 21.4 C		0.00 19.3 0.1 0.0 19.4 B
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue D Control Delay	e(Q), ff e(Q), v $e Ratio( (d_1), selay(d_2)Oelay(d_3), s/vce(LOS)$	/In ( 95 th percentile eh/In ( 95 th percent <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh eh	tile)	20.8	4.2 0.00 19.9 1.0 0.0 20.9 C	2.5 0.00 19.1 1.2 0.0 20.3	3.8 0.00 23.8 0.1 0.0 23.9	2.0 0.00 7.2 0.2 0.0 7.4 A	B	0.0			0.00 21.1 0.3 0.0 21.4 C 21.0	1	0.00 19.3 0.1 0.0 19.4
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue I Control Delay Level of Service	e (Q), ff e (Q), v e Ratio ( $e (d_1), s$ $e lay (d_2)$ $O e lay (d_3), s/v$ C e (LOS) ay, s/veh	//n ( 95 th percentile eh/in ( 95 th percent ( RQ ) ( 95 th percent /veh 2 ), s/veh 3 ), s/veh eh ) 1 / LOS	tile)	20.8	4.2 0.00 19.9 1.0 0.0 20.9 C	2.5 0.00 19.1 1.2 0.0 20.3 C C	3.8 0.00 23.8 0.1 0.0 23.9 C	2.0 0.00 7.2 0.2 0.0 7.4 A	B	0.0			0.00 21.1 0.3 0.0 21.4 C	1	0.00 19.3 0.1 0.0 19.4 B
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue D Control Delay Level of Servic Approach Dela Intersection D	e (Q), ff e (Q), v e Ratio ( $r (d 1), se lay (d 2)Oelay (d 3)Oelay (d 3)r (d 3), s/vr (LOS)ay, s/vehe lay, s/veh$	//n ( 95 th percentile eh/in ( 95 th percent ( RQ ) ( 95 th percent /veh 2 ), s/veh 3 ), s/veh eh ) 1 / LOS	tile)	20.8	4.2 0.00 19.9 1.0 20.9 C 3	2.5 0.00 19.1 1.2 0.0 20.3 C C	3.8 0.00 23.8 0.1 0.0 23.9 C 15.0	2.0 0.00 7.2 0.2 0.0 7.4 A 0	B	0.0	5-27		0.00 21.1 0.3 0.0 21.4 C 21.0	12	0.00 19.3 0.1 0.0 19.4 B
Volume-to-Caj Back of Queue Back of Queue Queue Storag Uniform Delay Incremental D Initial Queue D Control Delay Level of Servic Approach Dela	e (Q), ff e (Q), v e Ratio (Q), v e R	/In ( 95 th percentile eh/In ( 95 th percent <i>RQ</i> ) ( 95 th percent s/veh 2 ), s/veh 3 ), s/veh eh ) 1 / LOS eh / LOS	tile)	20.8	4.2 0.00 19.9 1.0 20.9 C 3 EB	2.5 0.00 19.1 1.2 0.0 20.3 C C	3.8 0.00 23.8 0.1 0.0 23.9 C 15.0	2.0 0.00 7.2 0.2 0.0 7.4 A 0	B	0.0	NB	C	0.00 21.1 0.3 0.0 21.4 C 21.0	SB	0.00 19.3 0.1 0.0 19.4 B

HCS719 Streets Version 7.3

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ALC: NO. THE R.	and the second	an in any mint of	Distant.	EN VISIO	STATES.	Partiti	Ale	PER	Sec. Siles	nm ر	13	a loss in	The start	1.20	1 miles
General Inform	ation		Time .	or the second	1012	121 11 123	201001205	Concession in which the	ntorsoc	tion Info	rmatio	n		4	1
	ation	Calendui Engineese			teredes				Duration		0.25		-	JLL	Sec.
Agency		Solaegui Engineers		Analus	in Data	0 40	0.047	-	COLUMN SAFETY & SHOW NO	11)-11-11-1	-				
Analyst		MSH		1	and international states		A Design of the second second	The second second second	Area Ty	be	Other			1	1
Jurisdiction		City of Sparks		Time F			ak Hou		PHF		0.95		-45		5
Urban Street					is Year	2035 E Projec		1	Analysis	Period	1> 7:0	00	Š.		
Intersection		Pyramid/Sparks SB	Ramp	File Na	ame	SB35a	w.xus						32	1144	· · · ·
Project Descrip	tion							-			-	-	1.	-	
	1-01× 6		No.	1 California	A BALLAN	12 3 1/20	and the second	Ret	1.562		11-11	2911 2	in the second	50	1
Demand Inform	nation			1	EB			WE			NB			SB	
Approach Move	ement			L	T	R	L	Т	R	L	T	R	L	T	R
Demand (v), v	eh/h				567	401	250	412	2	1		_	600		135
the burner of the		·王二百万百 1000	112	The state	in sut	2 21/2 70	-	An hi	Sample .	1 States	Grand .	545	to Mars	1	and the second second
Signal Informa	tion	,			6		18 3				1.0	-			L
Cycle, s	80.0	Reference Phase	2		1	=	1				K		♦.		
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0		-			
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Red	11.0	1.0	1.0	0.0	0.0	0.0	1	9	6	7	-
A. Mathelian	151.70		南江	10	517/1	(12)	-1-14	TRE	1996 3	Sale and	S average	N. A.D.	RAIN.	5-1 E	1 11
Timer Results	Concentry of	and an and the second second	and the second	EBL	-	EBT	WB		WBT	NBI	- 1	NBT	SBL		SBT
Assigned Phas	e			1	-	2	1		6	-			Î	1	4
Case Number				1		7.3	2.0		4.0				1		9.0
Phase Duration	e e			1		35.0	20.0	_	55.0	1			1		25.0
	-	10	-	1	_	5.0	5.0		5.0	1			1		5.0
the second s	nange Period, (Y+R c), s ax Allow Headway (MAH), s			-			3.1		0.0					-	3.2
and the second s		and all a static branch in the second state of				0.0			0.0		_			-	15.4
Queue Clearan		and the second se					7.4		0.0						1.0
Green Extensio				-		0.0	0.4		0.0					-	and the second second
Phase Call Pro	the set of the local data						1.00	_		1		-		_	1.00
Max Out Proba	bility		-	1			0.01		MAN-D-TUNE	-		SCHEME IN	-	-	0.52
	1 10 13		10.5 - 1	Canal and	11 11 11	LON YOUR	And the state	14.00	1257 127	1. Sectores	NIC	1.00	1 contraction	SB	1000
Movement Gro		sults			EB	-		WB	In		NB	L m	1.1	T	
Approach Move				L	T	R	L	T	R	L	T	R	L		R 14
Assigned Move					2	12	1	6	1	-			7		
Adjusted Flow				-	597	422	263	434		-			632		142
and some statements are a string as which it is not stored.	Contraction of the local division of the loc	ow Rate ( s ), veh/h/l	n	-	1781	1585	1730	1781	-				1730		158
Queue Service		and the second se			10.1	18.1	5.4	4.2	1	1			13.4		5.9
Cycle Queue C	learanc	æ Time (g ₀), s		1	10.1	18.1	5.4	4.2			-		13.4		5.9
Green Ratio (g	1/C)			1	0.38	0.38	0.19	0.62		1			0.25		0.28
Capacity ( c ),	veh/h				1335	594	649	2226	5			-	865	-	396
Volume-to-Cap	acity Ra	atio (X)		1	0.447	0.710	0.406	0.19	5				0.730		0.35
	the second s	In (95 th percentile)	)		185.8	299.7	97.9	61.7					239.5		97.8
the second secon	COLUMN TWO IS NOT	eh/In ( 95 th percent		1	7.3	11.8	3.9	2.4					9.4		3.8
in the second se		(RQ) (95 th percen		1	0.00	0.00	0.00	0.00	_	1			0.00		0.00
Uniform Delay		the second s		1	18.8	21.3	28.6	6.4	and the second second	1		1	27.5		24.7
the second se	A CONTRACTOR OF A CONTRACTOR O	the Rest of the Local Division of the Rest		-	1.1	7.0	0.2	0.2	-	1	-	1	2.8		0.2
	icremental Delay ( d ₂ ), s/veh			1-	0.0	0.0	0.0	0.0	-	-		-	0.0		0.0
the second se	itial Queue Delay (d 3), s/veh			1-	19.9		28.7	6.6	-				30.3		24.9
In case of the local division of the local d	ontrol Delay ( d ), s/veh					28,3	28.7 C	6.6 A	-			-	00.3 C		C
the second se	evel of Service (LOS)			00	B	C	0	And the second	D	0.0			- Contractor		c
the subscription of the second second	Approach Delay, s/veh / LOS			23.	4	C	15.0		В	0.0	1.		29.3		U
Intersection De	ay, s/v	en/LOS	No mile	-	The local day	22	2.9	Name of	-0.12 -=	S INCOME	Children th	1 EXCH	C	1000	1100 M
the second s				and and	1300	N. W. C.	2.12	14.00	12 112	T and	NIC	AT AC	Pro-Alla	SB	10.200
54.141	ultimodal Results														
Multimodal Re Pedestrian LO	of the local division in which the local division in which the local division in the loc	(100		2.4	EB	В	1.9	WB	В	3.0	NB	С	2.9	1	C

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1. 15 B. Out 1 St.	102 503	5 11 S	ALL -	2 Th	Same.	approx -	铜片窗	1.50	19 5	14	13	1. 25		and the second	- 24	一下下
General Inform	ation	A BRITCH STATE			any series of	and the second second	and the second second	11	nters	ection	Info	rmatio	n	1 1	d dank b	54
Agency	auon	Solaegui Engineers		_					Durati			0.25			111	
and the state of t		MSH	-	Anolye	is Date	Son 15	2017	Concession in such states	Area 1	11a 18 - 11		Other		- <b>*</b> C.S.	an Ibre in	- 11-
Analyst		City of Sparks		Time P			ak Hou		PHF	ype		0.95			di	
Jurisdiction		City of Sparks		and a second second						sis Peri	od	1> 7:0	0			
Urban Street					is Year	Projec	t	'	Analys	bis ren	ou	1- 1.0				
Intersection		Pyramid/Sparks SB	Ramp	File Na	ime	SB35p	w.xus				_			1 7.	4144	1.1
Project Descrip	tion								_		-	and the local division of		1		
Maren and Later	H 17 1		84. JP	Lynn	2 1500	1.00	, units in	36	1,197	310		115	10 P.	A DOWNERS	00	State and
Demand Inform	nation	1			EB			WE	the second s	-		NB	1	1	SB	1 .
Approach Move	ement			L	T	R	L	T	and second	2	L	T	R	L	T	R
Demand (v), v	eh/h		-		507	277	300	807	7	_	-	1	-	500	-	208
	with the	一百年之 印刷 马马马马	1.1.5	1.1.1.	299.6	195	A			12	1.1	Coulto	octorie	1 1 1	ALC: NO	22.00
Signal Informa	tion			1	=	4	12 5						-			L
Cycle, s	80.0	Reference Phase	2	1	8	=		1		_		×		4		· · ·
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0	.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0	.0	0.0			-		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0	.0	0.0	-	5	6	7	-
ALL NELLY -	- Second	BUST IN THE	11.12	4.4	175 OF H	ALC:	T PERSON			JUN				-	100	1000
Timer Results		CITE OF THE PROPERTY OF		EBL	-	EBT	WBI	-	WBT		NBL	- 1	NBT	SBL		SBT
Assigned Phas	e				1	2	1		6	1	_		-			4
Case Number	F			1		7.3	2.0		4.0	1						9.0
Phase Duration	S		-			35.0	20.0		55.0	1	_			1		25.0
And in case of the local division of the local division of the	ange Period, (Y+R c), s					5.0	5.0		5.0	-	-			1		5.0
Name and Address of the Owner, or Ow	nange Period, (Y+Rc), s ax Allow Headway (MAH), s					0.0	3.1	-	0.0			-				3.2
	and the second second	state in the second s				0.0	8.5		0.0					1		12.8
Queue Clearan	and the lot of the lot	and shared in the second se		-		0.0	0.4		0.0					1		1.3
Green Extensio		(ge), s		-		0.0	-		0.0							1.00
Phase Call Pro				-	_		1.00	_			-					0.15
Max Out Proba	bility	and the lot of the second second	-	-	-	of the second	0.05		1000	and the second	1200	No.	00000	And Personnel	-	0.15
11	Contract of the	and the second sec		P. ash	EB	Charles and	ALL HC22	WB	-	49/201		NB	2 - N	1	SB	and the second
Movement Gro		Suits		L	T	R		T	TF		L	T	R	LI	T	IB
Approach Move				L				Address of the	1	-	-	-	ix	7		14
Assigned Move	and the second				2	12	1	6	-	-						219
Adjusted Flow				-	534	292	316	849	_					526		
the second se	Station According to Annual State	ow Rate (s), veh/h/	n		1781	1585	1730	1781	_					1730		1585
Queue Service		and the second se	_		8.8	11.3	6.5	9.4	_		-			10.8		9.6
		the Time $(g_{\alpha})$ , s	1.1	-	8.8	11.3	6.5	9.4		-				10.8		9.6
Green Ratio ( g	g/C)				0.38	0.38	0.19	0.62	_	_				0.25		0.25
Capacity ( c ),	veh/h				1335	594	649	2226	_		_			865		396
Volume-to-Cap	acity Ra	atio ( X )		1	0.400	0.491	0.487	A THE OWNER	-					0.609		0.55
Back of Queue	(Q), ft	I/In ( 95 th percentile	),	1	162.1	196.4	119.6	139.	7					196		162.4
Back of Queue	(Q), V	eh/In ( 95 th percent	ile)		6.4	7.7	4.7	5.5						7.7	1.1	6.4
		(RQ) (95 th percen		i	0.00	0.00	0.00	0.00		1				0.00		0.00
Uniform Delay		and the second se		1	18.4	19.1	29.1	7.4						26.5		26.1
the second se		and which have been a second of a providence of the second		1	0.9	2.9	0.2	0.5		1			-	0.9		1.0
and the second se	ncremental Delay ( d ₂ ), s/veh			1	0.0	0.0	0.0	0.0	_	1				0.0		0.0
a second s	ontrol Delay ( d ), s/veh			1	19.3	22.0	29.3	7.9						27.4		27,1
The second se	evel of Service (LOS)				B	C	C	A		T	-			C		C
	pproach Delay, s/veh / LOS				2 1	C	13.	مشار احتصاب ا	В		0.0	I		27.3		C
Table of the local division of the local div	Approach Delay, s/veh / LOS ntersection Delay, s/veh / LOS						9.4				210			B		
intersection De	ay, s/v		1-10	Acaret	are to	37 19	And in case of the local division of the loc	1000	100	ERX A	11	537.2	1	10-398	-36-1	121,00
Multimodel D	eulte	AND	all a	1	EB	Sey Land	1	WE	1 Barbara	1	-10	NB	222	T	SB	A
Multimoual Re	ultimodal Results					В	1.9		В		3.0		С	2.9		С
Dodestrian I O	destrian LOS Score / LOS vycle LOS Score / LOS					H			B		1.00					

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-1-7-84	10000	の同時に見ていた。		A Start	E LET	REAL	Real Press	5772	79.77	SCA TH	风尔防	12:00	えい時間	State .	2245	N. K.S.
General Inform	ation	2.12.15.51;56(5)20,0005;	- 1 A.I.	in the second	HURS LODO	1 A State of the	and the second second	11	nter	sectio	n Info	rmatio	n	2.	JLL	14
Agency	Contraction of the local division of the loc	Solaegui Engineers			-		~ ~ ~			tion, h		0.25			166	
Analyst		MSH		Analys	is Date	Sep 18	3. 2017			Туре	-	Other		-		
Jurisdiction		City of Sparks		Time P			ak Hou		PHF	1760		0.95		12	du	
Urban Street		City of Sparks		Analys		2035 E		-		ysis Pe	eriod	1> 7:0	0			¥ •~~
Urban Street			_	1		Projec	t + Kiley		anary	y 510 T 4	onou	1.0			1	
Intersection		Pyramid/Sparks SB	Ramp	File Na	ime	SB35a	ww.xus		_						1 4 4	¥ (*
Project Descript	tion	ALL	-	IN STRUCTURE	-	NUMBER	200.0	10.000	TV:TU	torn to	contract of	The second	TO DE LA	THE OWNER	100-00	CHINES IN
Demand Inform	antion	10. 11. 140 A. 14 A.	a straight	1 COLORED	EB	No. of Contraction	discaning a	WE	10070	19cgay	Non-Hole	NB		Notest Owned	SB	WELDEND'S
Approach Move				L	T	R	L	T		R	L	T	R	L	Т	R
and the second se					653	418	250	518	2	-		1		630		135
Demand (v), v	en/n	and the state of the state	A Service	10月15日	000	410	200	1 510	RINT	Val a	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Sec.S.	i sille	000	mar .	100
Signal Informa	tion	and the second	Concerning of	1	-	1.	125	T		0040600	1		_			L
Cycle, s	80.0	Reference Phase	2	1	Z	1	]					×	-	4		КЛ
Offset, s	0	Reference Point	End	0	150	20.0	20.0	0.0	-	0.0	0.0	-	1	21 2	1	
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		<u>30.0</u> 4.0	20.0	0.0		0.0	0.0	-	1			
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	11.0	10.0		0.0	0.0		5		1	
Torde mode	- Mad	CARE A TRADE OF A TRADE OF	2.20.50	NOF 8 38	1.5		1112	200	11/18	F. S.	Section !!	1214	Nil De	Parta	ES	A Jul
Timer Results	and the second distances of th		ad Association	EBL		EBT	WBI	. [	WB	TÌ	NBL		NBT	SBL		SBT
Assigned Phase	e			1	1	2	1		6	1						4
Case Number				1		7.3	2.0	-	4.0					1		9.0
Phase Duration	L S			1	1 3	35.0	20.0		55.0	0				1		25.0
And in case of the	ange Period, (Y+R c), s				a design of the local division of the	5.0	5.0		5.0		-				1	5.0
and a local data was a local data w	ange Period, (Y+R c), s ax Allow Headway (MAH), s			1	and some of the local division of	0.0	3.1		0.0					1		3.2
Queue Clearan		a strate over 1 hours of the strate over 1 hours	-	-			7.4	1				-				16.2
Green Extensio		the state of the s		1	-	0.0	0.4	-	0.0							0,9
Phase Call Pro		(90),5		1		0.0	1.00			-		-				1.00
Max Out Proba				-		-	0.01	-		-				1		0.76
Max Out Floba	a state	ALL PROPERTY AND INCOME.	13 13 23	STATE AND	ISIC IT	ALC: NO.	THE ASSAULT	1500	5147	135580	21-11	STATING STATIS	ALC: N	CHAMPINE.	and in	The
Movement Gro	oup Res	sults	COLUMN 1	1	EB			WB		1		NB		1	SB	
Approach Move	the second se			L	T	R	L	Т	T	R	L	Т	R	L	Т	R
Assigned Move					2	12	1	6		1			1.11	7		14
Adjusted Flow		), veh/h			687	440	263	545	1	1				663		142
		ow Rate (s), veh/h/	n		1781	1585	1730	1781						1730		1585
Queue Service	a first of the difference of	the second se		1	12.0	19.2	5.4	5.4	T					14.2		5,9
		e Time (g c), s		1	12.0	19.2	5.4	5.4						14.2		5.9
Green Ratio (g				1	0.38	0.38	0.19	0.62	-	1				0.25		0.25
Capacity ( c ), v	PROFESSION INCOME.		-	1	1335	594	649	2226	_	1				865	-	396
Volume-to-Cap	and the second data was not	atio (X)			0.515	-	0.406		-	-	1			0.767		0.35
		/In ( 95 th percentile	)	1	214.8	317.6	97.9	80.2		-	-			254.7	_	97.8
and a second sec		eh/In ( 95 th percent		1	8.5	12.5	3.9	3.2	_	1	-		1	10.0		3.8
		RQ) (95 th percen		1	0.00	0.00	0.00	0.00		-			-	0.00		0.00
Uniform Delay		Contraction of the Association o		1-	19.4	21.6	28.6	6.6		-				27.8		24.7
Incremental De		the state of the s		1	1.4	8.1	0.2	0.3		-				3.8		0.2
the second se	state of the local division of the	the local division of		1	0.0	0.0	0.0	0.0		-				0,0		0.0
a second and the second se	itial Queue Delay ( d ϶ ), s/veh ontrol Delay ( d ), s/veh			-	20.8	29.7	28.7	6.9		-	-			31.6	1	24.9
Level of Servic	and the second sec	And the Real Property in the second state of t		1-	C	C	C	A	-	-1				C		C
Approach Dela	and the second se	And in the second		24.3		C	14.0		B	-1	0.0	1		30.4	T	C
Intersection Dela		the second s		24.0	-		3.1	<u> </u>	ų	-	0.0			C		
milersection De	ay, arv		(the second	annad	To the	ES (There	12-12	4.11	de s	175	We Law	80	1000	TEL Law	37307	NUL YE
Multimodal Re	ultimodal Results				EB	and a second	1	WB		Y	and a second	NB	ATA A	T	SB	All reacher dies
Construction of the local division of the lo		/LOS		2.4	and a second sec	В	1.9		В		3.0		С	2.9	T	С
	destrian LOS Score / LOS ycle LOS Score / LOS					-			-		2.9		1	-		F

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AND THE BOY	20-5	Dr. Mingar James	1403	F. C. F. F.	State.	Said	15.5	1ECD	- Same	E PAR ING	ping all		1 Ar and a		12 12 9
General Inform	ation	and any other states of the second	CALLS AND	Address to the local data	1011		and the second second	ltr	ntersect	ion Info	ormatic	n	1.	1	+ 1.
Agency		Solaegui Engineers	_					E	Duration,	h	0.25			ງເເ	
Analyst		MSH		Analys	is Date	Sep 18	2017		Area Typ		Other		1.	76	
Jurisdiction		City of Sparks		Time P	a second second second	And in case of the local division of the loc	ak Hou		PHF		0.95			- Tu	
		City of Sparks			is Year			-	Analysis	Doriod	1> 7:0	0	- <u>1</u>	1.5	-
Urban Street						Project	+ Kiley		ากลางอาอ	renou	1- 14				
Intersection		Pyramid/Sparks SB	Ramp	File Na	me	SB35p	ww.xus						- 1.5	4.1+12	1. 6
Project Descrip	tion							-	-	-		artista da	CONTRACTOR OF	AT LOSS OF	
here in the later	2.2	的第三人称单数	R IVER	Walsh	2-21-3	100-1-1	per a las	1.10	WE FIL	The state of	LID	S. Star	and all and	00	2160
Demand Inform					EB	· ·····	1	WB			NB	1	1 . 1	SB	1
Approach Move	ement			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	eh/h				641	294	300	961		1	_	-	531	-	208
A STATE	C. C. P. L. C.	Mar Share	Same	WELL-	12.4	TUCSUI	7.97	10.05	NYE V	15 1 . 60	1.50	12.5	111 40	- Carry	- area
Signal Informa	tion				6	4	25				1	-			L
Cycle, s	80.0	Reference Phase	2		16	=	1				×		4		
Offset, s	0	Reference Point	End	Green	15.0	30.0	20.0	0.0	0.0	0.0	1				
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0	0.0		1	+		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	11.0	10.0	0.0	0.0		5	6	7	
and the second	1000 15	THE PROPERTY OF THE	5717	1000	10.00	194.07	29-3	5780	A. Tran	1-1-14	Carl	125	11-7530		CAN'S ST
Timer Results	100	Contraction of the second	C and Call	EBL		EBT	WBI		WBT	NBL		NBT	SBL	1	SBT
Assigned Phas	e			1		2	1		6				1		4
Case Number				-	-	7.3	2.0		4.0			-	1		9.0
and the second se						35.0	20.0		55.0	-			1	_	25.0
Phase Duration		10				5.0	5.0	-	5.0	-	-		1		5.0
Change Period	and the second damage of the s	and a local data and a lo			_	College -	and the second second						1		3.2
Max Allow Hea		and the second se		-		0.0	3.1		0.0						13.6
Queue Clearan	in the second second			-			8.5	_							
Green Extensio		(ge), s			-	0.0	0.4		0.0	<u> </u>			-		1,3
Phase Call Pro							1.00				-		him		1.00
Max Out Proba	bility			L			0.05	5	-				Lunn	_	0.23
the second	in the second	A TOTAL STATE IN	Sec. 2	State of	the local division in which the	-21-1-		14.075	- 11/26	and the second	NID	allan a	man	SB	
Movement Gro	and the second second	sults	_		EB		-	WB	10		NB	10	1 1	Construction of the second	1 6
Approach Move				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Move	ement		_	1	2	12	1	6		-	-	-	7		14
Adjusted Flow	Rate (v	/), veh/h			675	309	316	1012	-				559		219
Adjusted Satur	ation Fl	ow Rate ( s ), veh/h/	In	1	1781	1585	1730	1781	A Real Property lies and the local division of the local divisiono			-	1730	-	1585
Queue Service	Time (	g s), S			11.7	12.1	6,5	11.9			1		11.6		9.6
Cycle Queue C	learanc	ce Time (g c), s			11.7	12.1	6.5	11.9					11.6		9.6
Green Ratio (	g/C)			1	0.38	0.38	0.19	0.62					0.25		0.25
Capacity (c),				1	1335	594	649	2226					865		396
Volume-to-Cap	the second se	atio (X)		1	0.505	the second second	0.487	and the second second		1			0.646	1	0.55
Contraction of the Owner of the	the second s	/In ( 95 th percentile	)	1	210.9	208.9	119.6					1	208.9		162.
and the second		eh/In (95 th percent		1	8.3	8.2	4.7	7.0	1		-		8.2		6.4
		(RQ) (95 th percen		1-	0.00	0.00	0.00	0.00				1	0.00	-	0.00
Uniform Delay	and the second s	the second se	110/	1	19.3	19,4	29.1	7.9		-			26.8		26.1
		the second se		1-	-	3.2	0.2	0.7	1		-	-	1.3		1.0
the second se	cremental Delay (d 2), s/veh				1.4		0						0.0		0.0
COMPANY OF THE OWNER	itial Queue Delay ( d 3 ), s/veh				0.0	0.0	0.0	0.0				-	-		
the second se	ontrol Delay ( d ), s/veh				20.6	22.7	29.3	8.5		-	-		28.2		27.1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	evel of Service (LOS)				C	C	C	A	1		1		C		C
	Approach Delay, s/veh / LOS				3	C	13.5		В	0.0			27.9	1	С
Approach Dela		ab /105		1		19	9.6	_		1		-	В	-	AND DO NOT
	elay, s/v	envicos	and the second second	No. of Concession, name	The second second	the second se		and the second se							
Approach Dela Intersection De	1. 12		1212	a to the second	1. 219	4-12-1	121 - 19 -	510	10 10	1. 191 -	Sec.	all set	September 10	111	100 C
Approach Dela	esults		1812 8	2.4	EB	в	1.9	WB	В	3.0	NB	С	2.9	SB	С

HCS7<sup>38</sup> Streets Version 7.3

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111 1 212 1 21	HAR AND	noo	1012	ananze	u mie	FISECL		caun	ts Sun	Million y	No formation		1172	Selle.	VIEROSI
A AN ARESIGNA	Else (	ALL ALL ALL AND		1792			Martin.	STR WAL	ntersect	an Infa	un ette	115	Carbon L.	ا مارول ا	4.1
General Inform	ation											'n	- 0	JLL	
Agency		Solaegui Engineers	6			10 10		-	Duration,		0.25				
Analyst		MSH	_			Sep 13			Area Type	)	Other				•
Jurisdiction				Time P		AM Pe		_	PHF		0.92				
Urban Street						Existin	a grant man	the second second	Analysis I	Period	1> 7:0	00	-		
Intersection		Highland Ranch & A	Access	File Na	ame	HrPa1	7aw.xus						_	-	EL.
Project Descrip	lion	and the second second second	WENDER	animistics.	NTA THE O	-	Distant Ga	Series)		10.55A	ATAMAA	in the second	1 and	4 1 4 4	N.C.
Demand Inform	nation		(ny )		EB	2.2.419	anst	WB	194 C. 194	1212	NB	UI3025	Contract of	SB	5 T.D.D
Approach Move				L	T	R	LL	ΙT	R	L	T	R	L	Т	R
Demand (v), v	this go an Life or some			35	508		-	683		-		1	568	5	100
Demand (V), V	Contra Contra	The well and the	24	CONSULT	al Stores	112:28 . 1	ENTE	(ILLIN)	Statistics.	al and	VELO	Sec. 11	TYPE T	2.50	1.1.110
Signal Informa	tion	and the second second second second		1	1	5	JUL		T	1					1
Cycle, s	85.0	Reference Phase	2	1	2		1					-			KX
Offset, s	0	Reference Point	End	Comor	10.0	40.0	20.0	0.0	0.0	0.0	-	1	2	3	
Uncoordinated	Yes	Simult. Gap E/W	On	Green		40.0	4.0	0.0	0.0	0.0	-	2	4		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	-		ia .	7	
9 - 19 - 10 - 10	ENT	and the state of the state	FT- TRI			1110	Terre	164	Sen à	10 are	Rose.	Guiges	112		AN M
Timer Results	No. Post			EBL		EBT	WB		WBT	NBL		NBT	SBL		SBT
Assigned Phase	e			5	-	2	-	_	6						4
Case Number				2.0		4.0			7.3						9,0
Phase Duration	. S			15.0	and in the second	60.0	1		45.0	1			1		25.0
	ange Period, (Y+R c), s					5.0	-		5.0	_			1		5.0
and the second s					1	3.1		1	3.1	-		-	1		3.2
	x Allow Headway ( <i>MAH</i> ), s eue Clearance Time (gε), s				-	14.6		-	31.6					-	16.1
Green Extensio	and the second second	and the second se		3.6	man and the second	3.2		-	2.5				1	1	0.8
Phase Call Pro	-	(90),0		1.00		1.00		-	1.00				1	-	1.00
Max Out Proba		and the second sec		0.00	and the state of t	0.01		-	0.32				-		0.70
Max Out 11000	Unity		1925.7		Cherche Long	C.C.	To all	DO-	California -	1.1E/-	26 833	disit.	States !!	5000	READ
Movement Gro	oup Res	sults	and a second	1	EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	T	R
Assigned Move	the second s			5	2			6	16				7		14
Adjusted Flow	Rate (v	/), veh/h		38	552			742	171				617		109
Adjusted Satur	ation FI	ow Rate (s), veh/h/	In	1781	1870			1870	1585				1730		158
Queue Service		and the second s		1.6	12.6			29.6	5.4				14.1		4.8
the second se		ce Time (gc), s		1.6	12.6			29.6	5.4				14.1		4.8
Green Ratio ( g	A CONTRACTOR OF A CONTRACTOR A			0.12	0.65			0.47	0.47			· · · · ·	0.24		0.24
Capacity ( c ), v				210	1210			880	746				814		373
Volume-to-Cap		atio ( X )		0.182	0.456			0.843	0.229				0.759		0.29
Could be an	the second second	In (95 th percentile	)	31.9	189.5			489.4	the second second				255.4		80.4
Cardenal States of Long States and States in	-	eh/In (95 th percent	· · · · · · · · · · · · · · · · · · ·	1.3	7.5			19.3	3.2				10.1		3.2
And shares which the same state of the state of the same of the same state of the sa	the second se	(RQ) (95 th percen		0.00	0.00			0.00	0.00				0.00	-	0.00
Uniform Delay		the second s		33.8	7.5			19.8	13.3				30.3		26.
Incremental De	Statement of the local division of the local	the second se		0.2	0.1			7.1	0.1				3.7		0.2
	itial Queue Delay ( <i>d</i> ₃ ), s/veh				0.0			0.0	0.0				0.0		0,0
and the second design of the s	ontrol Delay ( <i>d</i> ), s/veh				7.6			26.9	13.4				34.0		26.
	evel of Service (LOS)				A			C	В				C	1	C
the second se	pproach Delay, s/veh / LOS					A	24.4	1 1	С	0.0			32.9	T	С
Intersection De	and the second division of the	All the second se					3.2	-					C		
11. 日本工作		a milita area and	States	100,000	1. 2.	Sector 12	and the	王子	al training	St. 11.	The second	1 201	THE STATES	They !	C Linn
Multimodal Re	ultimodal Results				EB			WB		2.5	NB			SB	
Pedestrian LOS	S Score	LOS		0.7		A	2.4		В	2.8		С	2.3	1	В
	estrian LOS Score / LOS cle LOS Score / LOS					A	2.0		В				1		F

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Land in the W	100		1 Sec	E911 E.		1	. H	12 12	20.00	- 11-	257	12-11	and the states	37463	S. C.S. C.
General inform	ation							lr	ntersecti	on Info	ormatic	on	1.	JLL	2. 12
Agency		Solaegui Engineers	P					C	Duration, I	h	0.25		1	2.44	
Analyst		MSH		Analys	is Date	Sep 13	, 2017	A	Area Type		Other	1	4		
Jurisdiction				Time F	Period	PM Pe	ak Hou	r F	HF		0.92		±_2	- Hr	-
Urban Street				Analys	is Year	Existin	g + Pro	ject P	Analysis F	Period	1> 7:0	00		i alt	
Intersection		Highland Ranch & /	Access	File Na	ime	HrPa1	7pw.xus	\$							
Project Descript	tion					1							2.	1144	ъc
P. U.f.	Sea St	a second day	2. 6.	160 and	EB	1 1 A	1-11-113	WB	12.1%	11-1-1-11	NB	0.00	T	SB	Sector
Demand Inform				L	T	R	L	T	R		T	R	101	T	R
Approach Move				98		1 N		629		-	1	- N	334	-	59
Demand (v), v	en/n	tout on the lot in the	and the second	98	688	Contra To	Server.	029	000	Seat	in the second	ROOME	334	12000	09
Signal Informa	tion		In Collect		Contraction of	L F	111	A CONTRACT	CAPITAL STREET	100-1	COLUMN ST		1	-	-
Cycle, s	85.0	Reference Phase	2	1	2	1	44.3	1							2
Offset, s	0	Reference Point	End		1	1		-				+	1	3	
Uncoordinated	Yes	Simult. Gap E/W	On	Green		40.0	20.0	0.0	0.0	0.0	_		A		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow Red	14.0	4.0	4.0	0.0	0.0	0.0					
T DICE MODE	TIXCU	Contrait. Cap 14/0	Sec.5	Tiou	11.0	1110	110	10.0	10.0	- Gill	The of	19145	Sarra	000	1. 医加二
Timer Results	2	All ALL SCORES AND	1	EBL	Name and A	EBT	WBI		WBT	NBL		NBT	SBL		SBT
Assigned Phase	a			5		2			6	1100-20	-		1	-	4
Case Number	-			2.0	1	4.0			7.3	-	-		1		9.0
Phase Duration	s			15.0		60.0			45.0			-	1		25.0
terror and the second s	ange Period, ( $Y+R_r$ ), s				and the second division of the second divisio	5.0			5.0		1		1	1	5.0
the second s	ange Period, (Y+R c), s x Allow Headway (MAH), s				-	3.1		-	3.1		-		1		3.2
Queue Clearan				3.1 6.8		22.0			27.9	-			1		9.6
Green Extensio		and the second se		0.0	and the second	4.6	- treates	-	4.0						0.8
Phase Call Prof		190710		1.00	the second data was not seen as a second data was a second data	1.00			1.00	_					1.00
Max Out Proba				0.87		0.13		and the second second	0.29				1		0.01
14. The E.H - 1	NIEU	and the second second	a land	-olayev	16005	1111	1221	Jahra	1.42.20		2 PM	aller 1	No. Andrew	1000	Sec. 1
Movement Gro	oup Res	sults			EB			WB	1		NB			SB	-
Approach Move	ement		_	L	Т	R	Ĺ	T	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	1		6	16				7		14
Adjusted Flow F	Rate ( v	r), veh/h		107	748			684	495	_			363		64
Adjusted Satura	ation Fle	ow Rate ( s ), veh/h/	In	1781	1870			1870	1585				1730	-	1585
Queue Service			-	4.8	20.0			25.9	20.4			-	7.6		2.7
Cycle Queue C	learanc	e Time (gc), s		4.8	20.0			25.9	20.4				7.6		2.7
Green Ratio (g	/C)			0.12	0.65			0.47	0.47				0.24		0.24
Capacity (c), v				210	1210		1	880	746				814		373
Volume-to-Cap	Contraction of the local division of the loc	and the second se		0.508	0.618			0.777					0.446		0.172
		/In (95 th percentile		94	280.1			420.4				-	139.3		46
the second s	Concernance of the local division of the loc	eh/In (95 th percent	Carl & Chief Street	3.7.	11.0		-	16.6					5.5		1.8
		RQ) (95 th percen	tile)	0.00	0.00			0.00	0.00				0.00		0.00
Uniform Delay		and the second sec		35.2	8.8			18.8	17.3			-	27.8		25.9
the second s	cremental Delay ( d ₂ ), s/veh				0.7	_		4.0	1.8				0.1		0.1
	tial Queue Delay ( d 3), s/veh							0.0	0,0				0.0		0.0
Control Delay (				36.0 D	9.5			22.8	19.1	-			27.9		26.0
a second s	evel of Service (LOS)				A	-		C	B				C		C
the second se	pproach Delay, s/veh / LOS				3	B	21.3	5	C	0.0			27.6		С
Intersection De	tersection Delay, s/veh / LOS					19	.4	19-10	No. of Concession	- MILL	1.158	2182-1	B	No. 12	(Calle)
Multimodal Re	Itimodal Results					the state	and all	WB	at one	ALL STREET	NB	House a	1 and the	SB	Cherry
Pedestrian LOS		/105		0.7	EB	A	2.4		B	2.9		С	2.3	T	В
	ore / L	Charles of the Charle		1.9	and the owner of the	В	2.4	_	B				1		F

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A state of the second	1630	The Decision		a the and		9360.01	1 1244	23		JUN PR	S 1	11 Mar		5:55	TON'C
General Inform	nation	And the second second	CEOREM CE	and the second se	ACC	NO YES	-	anse	Intersect	ion Info	rmatio	n	1 1	el ala ela k	3. 1.
Agency		Solaegui Engineers							Duration,	-	0.25			111	
Analyst		MSH		Analys	is Date	Sep 1	3 2017	And Street	Area Type	March & Book and Advisor	Other		12 550	國道	
Jurisdiction				Time P	A	and the second sec	ak Hou		PHF		0.92			1 Inter	•
Urban Street				and the second se	is Year		ig + Proj		Analysis I	Dariad	1> 7:0	0			
Orban Street				Analys	is real	+ Kiley		ect	Analysis	enou	1-1.0	0			
Intersection		Highland Ranch & A	ccess	File Na	ame	HrPa1	7awo.xu	IS				_	N	4 1.4-4	1 4 1
Project Descrip	tion	THE REAL PROPERTY AND INCOME.	ALC LODGE	NALE OF COLUMN	invenes.		STATES OF	-	and the second second	TOGMUN	A REAL	1.4	THE NUMBER	1111	200 1
Demand Inform	nation	C. Stations Date AL	Section of	Tale ton	EB	ASLA.	CANADARIA C	W	B	1	NB	112504.0	all strategy	SB	
Approach Move					T	R	L	TΤ		1 I	T	R	1L	Т	R
Demand (v), v	and the second second			35	523		1	69		-	1		568	1	100
NA DEAD OF	1419	W. Arrent Constant of the	57.25	1545 190	12 marts	1. 0	No.	201	A STREET	Langa	SE 167	3.0.9	1 30 M	108	146 VL
Signal Informa	tion				3	54	-26								X
Cycle, s	85.0	Reference Phase	2	1	3	->	-	1		1			→ ,		
Offset, s	0	Reference Point	End	Green	10.0	40.0	20.0	0.0	0.0	0.0	1		K		
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0	0.0		×			
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	Carrier and	5	.4	7	217 210
Timer Desults	Sale of		ALC: NO	EBL	i pi	EBT	WBL	1	WBT	NBL	1	NBT	SBL	S-yes	SBT
Timer Results Assigned Phas	0			5		2	VVBL		6 6	NDL	-	AD1	GOL		4
Case Number	e			2.0		4.0			7.3						9.0
				15.0		50.0		+	45.0	-					25.0
Phase Duration	ange Period, ( $Y+R_c$ ), s			5.0	eres and the set of	5.0		-	5.0					-	5.0
Contract Name and Address of Contract of C	ange Period, ( Y+R c), s x Allow Headway ( MAH ), s					The other Designation			3.1					-	3.2
And a state of the local data and the local data an				3.1		3.1		-							16.1
Queue Clearan	_	and the second sec		3.6		15.1			32.6						
Green Extensio		(ge), s		0.0		3.3		-	2.4						0.8
Phase Call Pro	COLUMN TWO IS NOT			1.00		1.00		_	1.00			_			1.00
Max Out Proba	bility	GT KA STRATTONIA	NUMBER	0.00	CONTRACTOR OF	0.01	CORPORTED IN	marter	0.40		STRAINS	TYPE	- Carlos and	-	0.70
Movement Gro	un Res	sults		Ne signe	EB	LUTERICS.	Contraction of	WE	COMPLUS.	19.20	NB		I	SB	- 13-3
Approach Move	and the second second second	- unio		L	Т	R	L	Т	R	LI	T	R	LI	т	R
Assigned Move	×			5	2			6	16	-			7		14
Adjusted Flow		() yeh/h		38	568			757					617		109
the second s		ow Rate ( s ), veh/h/l		1781	1870			1870					1730		158
Queue Service		and the second		1.6	13.1			30.6	in the second				14.1		4.8
		g s), s :e Time (g c), s		1.6	13.1			30.0					14.1	-	4.8
		e mile (yc), s		0.12	0.65			0.47	and the second second				0.24		0.24
Green Ratio (g				-									814		373
Capacity ( c ), v	and in case of the local division of the loc	atia (V)		210	1210			880					0.759		0.29
Volume-to-Cap		NAME AND ADDRESS OF TAXABLE PARTY.		0.182	0.470			0.86					255.4		80.4
The structure of the structure of the	1011 CT 11	In (95 th percentile)		31.9	196.1			509.	the second s					-	3.2
the state of the s	of the other designs, say the	eh/In (95 th percent		1.3	7.7			20.0	the second second				10.1		0.00
Include the second s	owners the sub-	(RQ) (95 th percen	uie)	0.00	0.00			0.00					0.00		26.7
Uniform Delay	and the second second	the second s		33.8	7.6			20.0	and the local division of the				30.3		
Incremental De		the second s		0.2	0.1			8.2					3.7		0.2
and the second se	itial Queue Delay ( d 3 ), s/veh			0.0	0.0			0.0	the state of the s				0.0		0.0
	ontrol Delay ( d ), s/veh			34.0	7.7			28.2	and the second second		in all		34.0		26.8
	evel of Service (LOS)			C	A			C	B				C		C
and the second is not with it was an	Approach Delay, s/veh / LOS ntersection Delay, s/veh / LOS			9.4		A 2'	25.5		C	0.0			32.9 C		C
muersection De	nay, s/V		11. 140	ALTER O	0.80 12	2.	3.5	1113	1 9 10 10 B	1000	1003	in the second	SING ST	13.1	TOPICS.
Multimodal Re	ultimodal Results				EB		1200.0	WE	3	- Co	NB	and one	1	SB	1200
And in case of the local data and the local data an		LOS		0.7		A	2.4		В	2.8		C	2.3		В
	lestrian LOS Score / LOS /cle LOS Score / LOS					A	2.0		В						F

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Contraction of the state	1.000	HUS	1 319	nalize	u inte	ersect	ION R	esu	115	Jum	illiai y	10.3-3	2005		2.782	-
Conservation		12. 网络普通新教	Serth	<u>- 6-</u>	利产力	7 21	10000	No. of Lot, No.	Inter	nonti	an Info	rmatic		1 1.	l Jane b	1.4
General Inform	nation								-			0.25	'n		յլլ	
Agency		Solaegui Engineers		1		10	0017		A REAL PROPERTY OF	tion, I	_	1			i.	8-37
Analyst		MSH		Contraction of the local division of the loc	and the second se	Sep 13			PHF	Туре		Other			1	~.
Jurisdiction		NDOT		Time F	The local division in which the		ak Hou	-	-	-	ariad	1> 7:0	0		Send	
Urban Street					is Year	+ Kiley	the party of the party of the		Anar	ysis P	enou	1-7.0	0	-		
Intersection		Highland Ranch & A	Access	File Na	ime	HrPa1	7pwo.xi	.15				145-			1.1.454	1 1
Project Descrip	tion	-	-		-		-		-		-	_	Contraction of the	-	ACC STREET	
Denne diafe	a shi su	(64 - 103 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	10	100	EB	Sold of	14 24	W	D		10100	NB	1 21	and the second second	SB	25460
Demand Inform Approach Move				L	T	R	L	T	- second	R	L	T	R	LI	T	R
1.				98	703	0		64	-	555		1	1	334		59
Demand (v), v	en/m	AL SALE MUCH STATE	200	90	103	and the state	Sectores.	04	10	000	in state	2	ALC: NO	004	to the	1.00
Signal Informa	ation	All and the state of the state of the	Concernance of	1 Contraction of the	Vislation I	3	111.	CREAT IN			1	distant in the	and the second	1	-	1
Cycle, s	85.0	Reference Phase	2		2	-> 4	= 2 4						-			$\sim$
Offset, s	0.0	Reference Point	End	-		1	-	-			0.0	_	1	2	3	-4,
Uncoordinated	Yes	Simult. Gap E/W	On	Green Yellow		40.0	20.0	0.0		0.0	0.0	-	2	4		
Force Mode	Fixed	and the second sec	On	Red	1.0	1.0	1.0	0.0		0.0	0.0				1	
I DICE MODE	Tixed	Tolinait. Oup 140	-11-11-11-1	TTOU	10100	Propaga to	GIEN AS	U.S.	-	in the	27.70	78212	11.5	1715 214	1.50	Wall Ist
Timer Results	4000mes	and the second of the	0	EBL		EBT	WBI		WB	TI	NBL	Competence of	NBT	SBL		SBT
Assigned Phas				5		2			6	1				1		4
Case Number	-			2.0		4.0	-		7.3	3				1		9.0
Phase Duration	). S			15.0		60.0		-	45.					1		25.0
Change Period		c) S		5.0		5.0	-		5.0					1	-	5.0
Max Allow Hea		and the second sec	-	3.1	-	3.1		-	3.1	-		-		1	-	3.2
Queue Clearan				6.8	_	22.7		-	28.	the second se		-				9.6
Green Extensio	and the second division of the second divisio	Committee of the second s		0.0		4.6			4.0					1	1	0.8
Phase Call Pro		- inter-		1.00		1.00	1	-	1.0			1		1		1.00
Max Out Proba				0.87		0.15	-		0.3					1		0.01
Max out 11000	ionity i	Sala and and	1 miles	Carllen 1	. Styles	Der 189	TAT	100	EG.		Side	ain I	12-3	to della	5.65	uniter a
Movement Gro	oup Re	sults		1	EB			WE	3			NB			SB	
Approach Move	ement			L	T	R	L	Т		R	L	Т	R	L	Т	R
Assigned Move	ement		at star	5	2			6	12	16				7		14
Adjusted Flow	Rate (v	/ ), veh/h		107	764	2.11		699	9 4	95	-			363		64
Adjusted Satur	ation FI	ow Rate (s), veh/h/	In	1781	1870		-	187	0 1	585				1730		1585
Queue Service	Time (	g s), S		4.8	20.7			26.8	8 2	0.4				7.6	_	2.7
Cycle Queue C	learanc	ce Time (g c), s		4.8	20.7			26.8	B 2	0.4	-			7.6		2.7
Green Ratio ( g	g/C)			0.12	0.65			0.47	7 0	.47				0.24		0.24
Capacity ( c ),	veh/h		_	210	1210			880	_	46				814		373
Volume-to-Cap	acity Ra	atio(X)		0.508	0.631			0.79		663		-	-	0.446		0.172
Back of Queue	(Q), f	Vin (95 th percentile	)	94	289.5			436.	7 29	91.8			-	139.3	_	46
Back of Queue	(Q), V	eh/In (95 th percent	ile)	3.7	11.4			17.2	2 1	1.5				5.5	_	1.8
Queue Storage	e Ratio	(RQ) (95 th percen	tile)	0.00	0.00			0.00	0 0	.00				0.00		0.00
Uniform Delay	(d1). :	s/veh		35.2	9.0			19.0	0 1	7.3				27.8		25.9
Incremental De	elay ( d :	2 ), s/veh		0.8	0.8	1		4.7		1.8				0.1		0.1
Initial Queue D	elay ( d	3), s/veh		0.0	0.0	1		0.0		0.0			1	0.0		0.0
Control Delay	(d), s/v	reh		36.0	9.8	12.2.1		23.7	7 1	9.1	_			27.9	-	26.0
Level of Servic	e (LOS)	)		D	A			C	-	B			1	C		C
Approach Dela	-	THE TOTAL CONTRACTOR OF TOTALO CONTRACTOR OF TOTAL CONTRACTOR OF TOTALO CONTRACTOR OF TOTAL CO		13.0		В	21.8	3	C		0.0			27.6		С
Intersection De	elay, s/v	eh / LOS	-	-	-	19	9.7	-	the second	1		1000		В	-	the former line
No.	C-7700	31 - 13 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		10.01	155-1	Citico	ST.L.S	He	331	1	C. L		236	1 states	3754	al line
Multimodal Re				1	EB			WE	11.5	-	-	NB	-	-	SB	
Pedestrian LOS		And the second se		0.7		A	2.4		B	P	2.9		C	2.3		B
	aara / l			10		D	25		D					1	1	in the second se

Bicycle LOS Score / LOS

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1.9

В

F

ALTA 19.41 (1-2-12)	611 813		all find	No. In	WW CE	E Jak	ATT ST	No.		Ly in the	- Call	4003	2 W. LANG	E.A.	18
General Inform	nation			and an and the last		Contraction of Contraction		1	ntersecti	on Info	ormatio	n	1 24	ا جاجه ا	1 le
Agency		Solaegui Engineers			_				uration,	h	0.25			111	
Analyst		MSH		Analys	is Date	Sep 1	3. 2017	- A A A A A A A A A A A A A A A A A A A	rea Type		Other		1	187 J	
Jurisdiction				Time P			eak Hou	the second s	HF		0.92			Calif.	
Urban Street					is Year	-	Base +		nalysis F	Period	1> 7:0	0	14 - A - A		1.251
orban oreet				ritarys	13 100	Projec			anaryoro i	onou	1. 1.0				
Intersection		Highland Ranch & A	ccess	File Na	ame	a secondario	5aw.xu	S			1		1 10	1144	11
Project Descrip	tion			1		1 constant						-			
	a di parte	States & Martin	1 Gril	1.1215-23	19 5.5	R. TS	O' F. U	ND XEL	- 24 9.40	Teren ?	1. 20	FARET	ACT -L	The se	A. R. F.
Demand Inform	nation	4		1	EB			WB			NB			SB	
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Demand (v), v				35	400		1	350	197				568	-	100
ST. ST.	ले । स	Strange Strange	21.12	1. () ( 1. H	762 22		1.1	234.14	THE PAR	9,27	1. Aller	1-1-11	a Chicard -		
Signal Informa	ation					5	- 1 4								
Cycle, s	70.0	Reference Phase	2	]		->	1000						→ .		<b>K</b> 3
Offset, s	0	Reference Point	End	Green	10.0	25.0	20.0	0.0	0.0	0.0			K	-	
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow		4.0	4.0	0.0	0.0	10.0		2	4		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	10.0	0.0		5	5		
And The Party	SAG	A Later Hard State	the second	Contraction of the second	in in	A Date	15-1-1		N. A.V	Jungal	1 de l'an	16.12	the file	1.1	all the
<b>Timer Results</b>				EBL		EBT	WB	L	WBT	NBL		NBT	SBL		SBT
Assigned Phas	е			5		2			6			-			4
Case Number				2.0		4.0			7.3						9.0
Phase Duration	1, S			15.0		45.0	1		30.0	1.00					25.0
Change Period	(Y+R	c), S		5.0		5.0			5.0						5.0
Max Allow Hea				3.1		3.1			3.1						3.2
Queue Clearan	and the second s			3.3		11.1			13.5				1	1	12.9
Green Extensio		the second s		0.0	all sold in the local division of the local	1.8	1		1.7		1		1		1.2
Phase Call Pro	and the second se	194710		1.00		1.00			1.00				1	-	1.00
Max Out Proba	and the second data in the second			0.00	_	0.02		-	0.05					-	0.14
Max Out 1 1000	Dinty	Same Barrent	The second	The second	Bar St		10-10-1	Sectors.	1.54.2	1-10	13	Sum S	CINE DI	121.7	- 11-7
Movement Gro	oup Res	sults	are care	1	EB			WB			NB		1	SB	
Approach Move	ement			L	T	R	L	T	R	L	Т	R	L	Т	R
Assigned Move				5	2		1	6	16		12.000		7	1	14
Adjusted Flow	the second s	), veh/h		38	435		-	380	171		2		617		109
the second s		ow Rate (s), veh/h/l	n	1781	1870	1	1	1870	1585				1730		1585
Queue Service		Contraction of the local division of the loc		1.3	9.1		1	11.5	5.4	1	1		10,9		3.7
A DESCRIPTION OF THE OWNER AND ADDRESS OF THE OWNER		e Time (g c), s		1.3	9.1			11.5	5.4				10.9		3.7
Green Ratio (g	and the second second	(3-1)-		0.14	0.57		1	0.36	0.36				0.29		0.29
Capacity ( c ),	COMPANY DESCRIPTION OF THE OWNER.			254	1069	1	-	668	566				988		453
Volume-to-Cap		atio (X)		0.150	0.407	1		0.570	and the summaries of the local division of t				0.625	1	0.24
The same is a subscription of the sa	or the other Designation of the other Designat	/In ( 95 th percentile)		24.4	137.1	-	1	206.8					190.9		58
the second se		eh/In (95 th percent		1.0	5.4			8.1	3.3				7.5	1	2.3
and the second s		(RQ) (95 th percen		0.00	0.00		1	0.00	0.00				0.00		0.00
Uniform Delay	and the second statements	successive a linear state of the second state		26.3	8.4		1	18.2	16.2				21.7		19.2
Incremental De	Colorest and the second	A statement of the local statement of t		0.1	0.1			0.7	0.1	- 11	1200		0.9	-	0.1
Initial Queue D		and the second se		0.0	0.0	1		0.0	0.0				0.0	1	0.0
Control Delay	a state of the local division of the			26.4	8.5	-	-	18.9	16.3				22.7		19.3
Level of Servic				C 20.4	A	-		B	B	-			C		B
Approach Dela	and the second second	second and a surrow second state of the second		9.9	-	A	18.	1	B	0.0			22.2	T	C
and the second		the second se		9.9	-		7.6		0	0.0	_		B		0
Intersection De	nay, s/V		M Para	The Visio	1551118	- Lourds	1.0	N/FE	Sel . 1	28 H	No. of Concession	190-	2000	1001	82.54
Multimodal Re	sulte	Barris and the stand of the stand	Contra Mar	Contraction of the	EB	a the deal	1 and	WB	ALL I	10-305	NB	harm	T	SB	
- manufilling and interest				-					in the second		1000	-	-		B
Pedestrian LO	S Score	1105		0.7		A	2.4		в	2.8		C	2.3		- H

		and the second	1000					And Inch		Sec. 1	Sures!	No. Starting	623	a la se
ation	All and a state of the	1.2. 1	14 1/21	20,24		#1105.5c	202.0	ntersect	ion Info	ormatic	n	1 .1.	1	1.1
auon	Solaequi Engineers												771	64
	the second s		Analue	e Data	Son 13	2017				state in succession			(† 15 s	1.21
	Man		-		-				9	and the second second		1.1		1.2
									Decind	-	0			1
					Project			Analysis	Period	1273	0			
	Highland Ranch & A	Access	File Na	ime	HrPa3	5pw.xus	1						1144	1. 1
ion	a man data and a second second	and the state		-	COLUMN NUMBER	-	-	-	-	-	100000280	-	and some	(WEARE
- Arrest	Contraction of the	Sec. 1	6 19 C	CD.	2. 1	NUC-	A ID	2010-22	1-1-110	NID	10-12-00	The Carl	SB	C
		-		110000	1 0	1	10-111		1	-	TP	111	_	IR
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eh/h	AT INCOMENTS	and the second	98	450	and the second	CODOWN.	460	0 000	Contractor of	SIRTER.	Serve.	334	15	09
tion	The second second	1. 1	se some	0.000	8	TJU	200100	1	C. MC STATE	And in case of the local division of the loc	Carl Colore		1	1
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	The second second second second second		-		1		-				11	2	7	1
		-	per Will, or / silv. per	Concernant of Additional Processing of Street,	25.0	20.0	0.0			_		4		
	and the second se			- Contractor in the local data										
Fixed	Simult. Gap N/S	On	Red	11.0	11.0	100	[0.0	10.0	10.0	The second	1000	DONE COL	-	10000
- will	A Carl and a co	al and	FRI	Server)	FBT	WBI	Page 1	WBT	NBI	and and the	NBT	SBI	1 and	SBT
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2					- market and the	N	-	- T				1		9.0
-			a interest of the second	and approximate	and the second second		-					1		25.0
and the second	<u>\</u>		( management of the second sec					and the second s						5.0
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in succession in			Concession of the local division of the loca	mine an inc								-		7.9
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oility	and the second se	-	0.25		0.11	Contractor of Contractor	-			-		Announce	-	0.00
un Der	ALL AND A	AR. INE	10023-10	ED	1-20-20	Cort V	10/12		CARDONAL CONTRACT	Station of Stations of Stationary	01-1	ALC: UNDER	SB	2.9.0
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			And in case of the local diversity of the local diversity of the local diversity of the local diversity of the	And in case of the local division of the loc		-		1						64
state in succession.	i and the second s							-						
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	e Time ( $g_c$ ), s		Contraction of				-	_	-					2.1
and the second second			and the second second			-		and the second division of			-	-		0.29
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	and and a state of the state of		0.419	0.458		-	and the second second	- Andrewson and the second						0.14
	the same of the second s		71.5	160				and it is not set of the local division of t			-			33.2
	and an end of the second	-	2.8	6.3		-					1			1.3
	the second se	tile)	0.00	0.00			1000				-	-		0.00
	And in case of the owner water w		27.3	8.7							-			18.6
			0.4	0.1			4.2	-						0.1
elay ( d	3), s/veh		0.0	0.0			0,0	0.0		-	-	0.0		0.0
d ), s/v	eh		27.8	8.8			23.9	21.9				20.0		18.7
e (LOS)			C	A			C	C				C		B
y, s/veh	/LOS		12.2	2	В	23.0	)	С	0.0			19,8		В
lay, s/v	eh/LOS				18	3.9						В		-
and and	Survey and	15-11		Styring	Var.	Jander	10.2	1- 1/21	115.965	and the second second	Sec. 1	Carl Frag	1.00	CONT.
				EB					-	NB			SB	
	/LOS		0.7		A	2.4		B	3.0		C	2.3		В
	dway ( <i>I</i> ce Time on Time bability bility bility bility bility bility bup Res ement ment Rate ( <i>v</i> ation Fk Time ( <i>I</i> learance <i>VC</i> ) reh/h acity Ra ( <i>Q</i> ), ft ( <i>Q</i> ), v Ratio ( ( <i>Q</i> ), ft ( <i>Q</i> ), v Ratio ( <i>d</i> ), s/v e (LOS) y, s/veh lay, s/veh sults	Solaegui Engineers MSH Highland Ranch & A tion mation ment eh/h tion 70.0 Reference Phase 0 Reference Phase 0 Reference Point Yes Simult. Gap E/W Fixed Simult. Gap N/S Simult. Gap N/S e a , S ( $Y+Rc$ ), S dway (MAH), S ce Time ( $gs$ ), S to app Results bability bility bility pup Results ement Rate ( $v$ ), veh/h ation Flow Rate ( $s$ ), veh/h/ Time ( $gs$ ), S learance Time ( $gc$ ), S //C) /eh/h acity Ratio ( $X$ ) ( $Q$ ), ft/In (95 th percentile ( $Q$ ), veh/ln (95 th percentile ( $Q$ ), s/veh elay ( $ds$ ), s/veh elay ( $ds$ ), s/veh elay, s/veh / LOS esults	Solaegui EngineersMSHHighland Ranch & Accesstionmationmenteh/h70.0Reference Phase20Reference PointYesSimult. Gap E/WYesSimult. Gap N/SOnFixedSimult. Gap N/SOnFixedSimult. Gap N/SOnFixedSimult. Gap N/SOnFixedSimult. Gap N/SOnParameteraA <t< td=""><td>Solaegui EngineersMSHAnalysImage: AnalysAnalysHighland Ranch &amp; AccessFile NationmationImage: AnalysmentLeh/h98tionImage: Analys70.0Reference Phase20Reference PointEndYesSimult. Gap E/WOnFixedSimult. Gap N/SOnFixedSimult. Gap N/SOnRedImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysbImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysbImage: AnalysImage: AnalyscImage: AnalysImage: AnalysbImage: AnalysImage: AnalysbImage: AnalysImage: AnalysbImage: AnalysImage: AnalyscImage: AnalysImage: AnalysbImage: Analys&lt;</td><td>Solaegui EngineersMSHAnalysis DateTime PeriodAnalysis YearHighland Ranch &amp; AccessFile NameionImentLTeh/h9870.0Reference Phase20Reference PointEndYesSimult. Gap E/WOnYesSimult. Gap N/SOnFixedSimult. Gap N/SOnRed1.0YesSimult. Gap N/SOnRed1.0yay (MAH), s3.1ce Time (g s), s5.0bability1.00bility0.25out ResultsEBementLTime (g s), s3.815.01.00bability0.1bability1.00ce Time (g s), s3.810.62corr (g s), s3.810.62corr (g s), s3.810.63.8filty0.25bability0.1171870Time (g s), s3.810.62.4(Q), tri/ln (95 th percentile)71.5160(Q), tri/ln (95 th percentile)(Q), tri/ln (95 th percentile)71.516027.8(Q), s/veh0.40.13.8reactic (RQ) (95 th percentile)71.516027.817.516017.516018.727.818.8COS</td><td>Solaegui EngineersMSHAnalysis DateSep 13Time PeriodPM PeAnalysis Year2035 EProjectAnalysis YearHighland Ranch &amp; AccessFile NameHighland Ranch &amp; AccessFile NamementLTReference Phase20Reference Phase210Red1.0111.01.0122.04.01313.11522.015.045.015.045.015.045.015.045.015.045.015.01001001.001017489ation Flow Rate (s), veh/h/in1774178701781187017811870178118701781187017811870178118701781187017811870178118701781187017811871</td><td>Solaegul EngineersMSHAnalysis DateSep 13, 2017Time PeriodPM Peak HouAnalysis Year2035 Base +Highland Ranch &amp; AccessFile NameHighland Ranch &amp; AccessFile NamePatternLTRaference Phase20Reference PointFixedSimult. Gap R/SOnRedFixedSimult. Gap N/SOnRedFixedSimult. Gap N/SOnRedFixedSimult. Gap N/SOnRed15.045.0(Y+R c). s5.05.05.0Juay (MAH), s3.13.13.1Cate (g s), s5.81.001.00Dility0.25OntEBPropertiesEBProperties2.4In Time (g e), s3.81.00LTime (g e), s3.81.011.02Dility0.25Ont25.4Ont25.4Ont25.4Ont25.4Ont26.4Ont27.5Sast1.26Dility0.25Ont26.4</td></t<> <td>Solaegui EngineersIMSHAnalysis DateSep 13, 2017Time PeriodPM Peak HourAnalysis Year2035 Base +ProjectProjectHighland Ranch &amp; AccessFile NameHighland Ranch &amp; AccessFile NamementLTRLTRLTPhylectYearToolReference Phase2OReference Phase2DReference Phase2ASolo1.00Itin SoloSoloItin SoloSoloItin Geo, s3.1Solo<td>Solaegul Engineers         Duration,           MSH         Analysis Date         Sep 13, 2017         Area Typ           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base +         Project         Analysis           Highland Ranch &amp; Access         File Name         HrPa3Spw.xus         Image: Constraint of the second secon</td><td>Solaegui Engineers         Duration, h           MSH         Analysis Date         Sep 13, 2017         Area Type           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base + Project         Analysis Period           Highland Ranch &amp; Access         File Name         HrPa35pw.xus           ion         EB         WB         Analysis Period           ment         L         T         R         L         T         R           70.0         Reference Phase         2         Creen         10.0         25.0         20.0         0.0         0.0         0.0           Yes         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.</td><td>Solaegui Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           Imme Period         PM Peak Hour         PHF         0.92           Analysis Year         2035 Base + Project         Analysis Period         1&gt; 7.0           Highland Ranch &amp; Access         File Name         HirPa35pw.xus         Analysis Period         1&gt; 7.0           Reference Phase         2         Imme 10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap E/M         On         Reference Point         End         Green         10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.0</td><td>Solaegui Engineers         Duration, h         0.25           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Time Period         PM Peak Hour         Analysis Year         2035 Base +         Project         Analysis Period         1&gt; 7.00           Highland Ranch &amp; Access         File Name         HirPa35pw.xus         Analysis Period         1&gt; 7.00           nement         L         T         R         L         T         R         L         T         R           70.0         Reference Phase         2         .         460         555        </td><td>Interaction in the interaction interaction in the interaction interac</td><td>Solaegul Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other         Other           Highland Ranch &amp; Access         File Name         HiPPa5bex.us         Analysis Period         1&gt; 7.00           Highland Ranch &amp; Access         File Name         HiPPa5bex.us         Analysis Period         1&gt; 7.00           Identified         L         T         R</td></td>	Solaegui EngineersMSHAnalysImage: AnalysAnalysHighland Ranch & AccessFile NationmationImage: AnalysmentLeh/h98tionImage: Analys70.0Reference Phase20Reference PointEndYesSimult. Gap E/WOnFixedSimult. Gap N/SOnFixedSimult. Gap N/SOnRedImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysbImage: AnalysImage: AnalysaImage: AnalysImage: AnalysaImage: AnalysImage: AnalysbImage: AnalysImage: AnalyscImage: AnalysImage: AnalysbImage: AnalysImage: AnalysbImage: AnalysImage: AnalysbImage: AnalysImage: AnalyscImage: AnalysImage: AnalysbImage: Analys<	Solaegui EngineersMSHAnalysis DateTime PeriodAnalysis YearHighland Ranch & AccessFile NameionImentLTeh/h9870.0Reference Phase20Reference PointEndYesSimult. Gap E/WOnYesSimult. Gap N/SOnFixedSimult. Gap N/SOnRed1.0YesSimult. Gap N/SOnRed1.0yay (MAH), s3.1ce Time (g s), s5.0bability1.00bility0.25out ResultsEBementLTime (g s), s3.815.01.00bability0.1bability1.00ce Time (g s), s3.810.62corr (g s), s3.810.62corr (g s), s3.810.63.8filty0.25bability0.1171870Time (g s), s3.810.62.4(Q), tri/ln (95 th percentile)71.5160(Q), tri/ln (95 th percentile)(Q), tri/ln (95 th percentile)71.516027.8(Q), s/veh0.40.13.8reactic (RQ) (95 th percentile)71.516027.817.516017.516018.727.818.8COS	Solaegui EngineersMSHAnalysis DateSep 13Time PeriodPM PeAnalysis Year2035 EProjectAnalysis YearHighland Ranch & AccessFile NameHighland Ranch & AccessFile NamementLTReference Phase20Reference Phase210Red1.0111.01.0122.04.01313.11522.015.045.015.045.015.045.015.045.015.045.015.01001001.001017489ation Flow Rate (s), veh/h/in1774178701781187017811870178118701781187017811870178118701781187017811870178118701781187017811871	Solaegul EngineersMSHAnalysis DateSep 13, 2017Time PeriodPM Peak HouAnalysis Year2035 Base +Highland Ranch & AccessFile NameHighland Ranch & AccessFile NamePatternLTRaference Phase20Reference PointFixedSimult. Gap R/SOnRedFixedSimult. Gap N/SOnRedFixedSimult. Gap N/SOnRedFixedSimult. Gap N/SOnRed15.045.0(Y+R c). s5.05.05.0Juay (MAH), s3.13.13.1Cate (g s), s5.81.001.00Dility0.25OntEBPropertiesEBProperties2.4In Time (g e), s3.81.00LTime (g e), s3.81.011.02Dility0.25Ont25.4Ont25.4Ont25.4Ont25.4Ont26.4Ont27.5Sast1.26Dility0.25Ont26.4	Solaegui EngineersIMSHAnalysis DateSep 13, 2017Time PeriodPM Peak HourAnalysis Year2035 Base +ProjectProjectHighland Ranch & AccessFile NameHighland Ranch & AccessFile NamementLTRLTRLTPhylectYearToolReference Phase2OReference Phase2DReference Phase2ASolo1.00Itin SoloSoloItin SoloSoloItin Geo, s3.1Solo <td>Solaegul Engineers         Duration,           MSH         Analysis Date         Sep 13, 2017         Area Typ           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base +         Project         Analysis           Highland Ranch &amp; Access         File Name         HrPa3Spw.xus         Image: Constraint of the second secon</td> <td>Solaegui Engineers         Duration, h           MSH         Analysis Date         Sep 13, 2017         Area Type           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base + Project         Analysis Period           Highland Ranch &amp; Access         File Name         HrPa35pw.xus           ion         EB         WB         Analysis Period           ment         L         T         R         L         T         R           70.0         Reference Phase         2         Creen         10.0         25.0         20.0         0.0         0.0         0.0           Yes         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.</td> <td>Solaegui Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           Imme Period         PM Peak Hour         PHF         0.92           Analysis Year         2035 Base + Project         Analysis Period         1&gt; 7.0           Highland Ranch &amp; Access         File Name         HirPa35pw.xus         Analysis Period         1&gt; 7.0           Reference Phase         2         Imme 10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap E/M         On         Reference Point         End         Green         10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.0</td> <td>Solaegui Engineers         Duration, h         0.25           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Time Period         PM Peak Hour         Analysis Year         2035 Base +         Project         Analysis Period         1&gt; 7.00           Highland Ranch &amp; Access         File Name         HirPa35pw.xus         Analysis Period         1&gt; 7.00           nement         L         T         R         L         T         R         L         T         R           70.0         Reference Phase         2         .         460         555        </td> <td>Interaction in the interaction interaction in the interaction interac</td> <td>Solaegul Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other         Other           Highland Ranch &amp; Access         File Name         HiPPa5bex.us         Analysis Period         1&gt; 7.00           Highland Ranch &amp; Access         File Name         HiPPa5bex.us         Analysis Period         1&gt; 7.00           Identified         L         T         R</td>	Solaegul Engineers         Duration,           MSH         Analysis Date         Sep 13, 2017         Area Typ           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base +         Project         Analysis           Highland Ranch & Access         File Name         HrPa3Spw.xus         Image: Constraint of the second secon	Solaegui Engineers         Duration, h           MSH         Analysis Date         Sep 13, 2017         Area Type           Time Period         PM Peak Hour         PHF           Analysis Year         2035 Base + Project         Analysis Period           Highland Ranch & Access         File Name         HrPa35pw.xus           ion         EB         WB         Analysis Period           ment         L         T         R         L         T         R           70.0         Reference Phase         2         Creen         10.0         25.0         20.0         0.0         0.0         0.0           Yes         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.	Solaegui Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           Imme Period         PM Peak Hour         PHF         0.92           Analysis Year         2035 Base + Project         Analysis Period         1> 7.0           Highland Ranch & Access         File Name         HirPa35pw.xus         Analysis Period         1> 7.0           Reference Phase         2         Imme 10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap E/M         On         Reference Point         End         Green         10.0         25.0         20.0         0.0         0.0         0.0           Yets         Simult. Gap N/S         On         Red         1.0         1.0         1.0         0.0	Solaegui Engineers         Duration, h         0.25           MSH         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Time Period         PM Peak Hour         Analysis Year         2035 Base +         Project         Analysis Period         1> 7.00           Highland Ranch & Access         File Name         HirPa35pw.xus         Analysis Period         1> 7.00           nement         L         T         R         L         T         R         L         T         R           70.0         Reference Phase         2         .         460         555	Interaction in the interaction interaction in the interaction interac	Solaegul Engineers         Analysis Date         Sep 13, 2017         Area Type         Other           MSH         Analysis Date         Sep 13, 2017         Area Type         Other         Other           Highland Ranch & Access         File Name         HiPPa5bex.us         Analysis Period         1> 7.00           Highland Ranch & Access         File Name         HiPPa5bex.us         Analysis Period         1> 7.00           Identified         L         T         R

HCS7<sup>Th</sup> Streets Version 7.3

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15	Filar S	A STATISTICS IN THE PARTY		THE A PARTY	128W	1000	77758	1000	ts Sun	Triagon	14170	1940	DURAN)	F. SIL	15 - 37
General Inform	ation		terra a	ALC: A	- Country	Q Que and	1.1.1.1.1	in the second	ntersect	ion Info	ormatio	n	ALC: NO.	42.443	1.1
	auon	Solaegul Engineers			-				Duration,		0.25			111	
Agency		and the second sec		Analus	la Data	Sep 13	2 2017	- Andrew Street	Area Type	Conception of the local division of the loca	Other				
Analyst	-	MSH							PHF	2	0.92				<b>~</b> _
Jurisdiction				Time F			ak Hou			Destad					
Urban Street	_				is Year	Project	t + Kile	y	Analysis I	Period	1> 7:0				18.00
Intersection		Highland Ranch & A	Access	File Na	ame	HrPa3	5awo.x	us					10	4144	1.1
Project Descrip	tion												1		_
1. California C	1.1	ALC: REPORT	100	3-11-1		國/27	Sul!	CALCO I	State of the state	Tates 1	NID	and Charles	P SHL TOPP	CD	Write
Demand Inform	Contraction of the second				EB	1 -		WE	in the second	1	NB	1 0	1.1	SB	1.0
Approach Move	the second second			L	T	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h	and the second second	CTRUCT IN	35	415	-	-	363	3 197	-	-	and a summer	568	-	100
Signal Informa	tion	and the second second second	011155	1	( to said !!	1 5	III	ADS/IN	the plants	-ton -to	20,800	Colores Col			al state
Cycle, s	70.0	Reference Phase	2			4	25.2					1.000	-		5
Offset, s	0	Reference Point	End	1	-	-	-	- Contractor Con	-	-		1	2	3	
Uncoordinated	Yes	Simult. Gap E/W	On	Green		25.0	20.0	0.0	0.0	0.0	_		2		
Contraction of the second s		the second se	the second second	Yellow	1.0	4.0	4.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	11.0	11.0	11.0	10.0	10.0	10.0	Sector The	Files	2.2.7.1	1000	16.92
Timer Results	the second second		451	EBI	A POST OF	EBT	WB	L	WBT	NBL	T	NBT	SBL		SBT
Assigned Phase	8			5		2			6		-	and b	1	-	4
Case Number	-			2.0		4.0		-	7.3				1		9.0
Phase Duration	c			15.0	_	45.0			30.0	-	-		1		25.0
Change Period		-) 0		5.0		5.0			5.0	-	-	-	1	-	5.0
Max Allow Hear	-	No. of Concession, Name of		3.1	the second strength of	3.1			3.1		-		-	+	3.2
Queue Clearan				3.3		11.5			14.0				-		12.9
Green Extensio				0.0		1.8			1.7	-					1.2
and the second se		(ge), s		1.00		1.00			1.00				1		1.00
Phase Call Pro		10 10 10 10 10 10						-	0.07				-		0.14
Max Out Proba	DIIITY	A COLORED AND A SUCCESSION	00340	0.00	141-150	0.03	N PACIN	100 M	0.07	diam'r.	-150	3.300	1 State	500.00	0.14
Movement Gro	oup Res	sults	Conception of the local distance of the loca	1	EB		HALF NO.	WB	Carping production in	Conceptual of	NB		1	SB	
Approach Move	ement			L	Т	R	L	T	R	L	Т	R	L	Τ	R
Assigned Move				5	2			6	16	1		-	7	-	14
Adjusted Flow I		), veh/h		38	451		-	395	171				617	_	109
manufactory of a second s		ow Rate (s), veh/h/	In	1781	1870	-	-	1870					1730		1585
Queue Service		the second s		1.3	9.5			12.0	and the second				10.9		3.7
and the second se		e Time (g c), s		1.3	9.5	-		12.0			-		10.9		3.7
Green Ratio (g	Contraction of the local data			0.14	0.57			0.36	-		-		0.29		0.29
Capacity ( c ), v		turber -		254	1069			668	566			-	988		453
Volume-to-Cap	of the local division of the local divisiono	atio $(X)$		0.150	0.422			0.591					0.625		0.240
-		/In ( 95 th percentile)	)	24.4	144			215.6					190.9	-	58
	and the second second	eh/ln (95 th percent		1.0	5.7			8.5	3.3	1			7.5		2.3
		RQ) (95 th percent	-	0.00	0.00			0.00					0.00		0.00
Uniform Delay		the second s		26.3	8.5			18.3					21.7		19.2
Incremental De	and the part of the second sec	A REAL PROPERTY AND ADDRESS OF AD		0.1	0.1			1.0	0.1			1	0.9		0.1
Initial Queue D				0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (	the second second	the second s		26.4	8.6			19.3				1	22.7		19.3
Level of Service		the second s		C	A			B	B				C		B
Approach Dela		and the second se		10.0		A	18.4	1000	B	0.0	1		22.2	-	C
Intersection De	or it was not in our other	a design of the second s		10.0			7.6			0.0	_		B		
Section De		State Aug	and S	Think	St. Car	Contract .	IT EVES	111	5 5 14 5	125	386.2	100	100000000	202	The Aven
Multimodal Re	sults			1	EB		1	WB			NB	-	1	SB	- and the state
Pedestrian LOS		/LOS		0.7		A	2.4	1	В	2.8		С	2.3	T	В
Bicycle LOS So	ore /10	28		1.3	and the second division of the second divisio	A	1.4	the second data	A				1		F

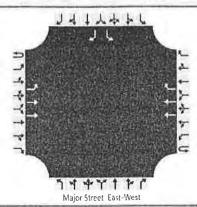
HCS7<sup>39</sup> Streets Version 7.3

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General Inform	nation		and the second second	and the second	Contraction of the local division of the loc		25-24, 104	1	ntersect	ion Info	ormatio	on	2	al 2. de 1	54
Agency		Solaegui Engineers						-	Duration,		0.25			յլլ	
Analyst		MSH		Analy	is Date	Sep 13	3 2017		Area Typ		Other				13
Jurisdiction				Time F		-	ak Hou		PHF	2	0.92			1	×
	- ï				10000			-		Destand	-	00			
Urban Street					sis Year	2035 E Projec	t + Othe		Analysis	eriod	1> 7:0	00	-		
Intersection		Highland Ranch & A	Access	File Na	ame	HrPa3	5pwo.xi	IS					1	1147	+1
Project Descrip	tion														
A Contraction of the	-26.2	S. TEANS MANY	Street.	The L C	till at	121 Th	James -	2012	1-31-2	BIT I	11 2 2	alle !!	A date	1. Series	mr R
Demand Inform				L	EB	-	1	WE		-	NB	-	-	SB	-
Approach Move	and the second second			L	T	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h	and the second s		98	465	1	1	474	4 555		1	-	334		59
the state of the	The Fair		2.2	1 dilling	211.18		12-1-2	1000	Start I	0.7 -	1. 1.1.1	1.5 (4)	1-32.30	SPEC.	NESS .
Signal Informa		La constantino		1	2	1	12 2								人
Cycle, s	70.0	Reference Phase	2	1	-	1	1	-				-	→ ,		
Offset, s	0	Reference Point	End	Green	10.0	25.0	20.0	0.0	0.0	0.0			A		
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0	_	1	-		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	11.0	0.0	0.0	0.0		. 5	4	7	10000000
Mart Martal	Ser.		Star all	1 Martin	E. Male	Enter	all -	2 1	FUT LIN		1 miles	- the state	-	242	- the
<b>Timer Results</b>	100			EBI	-	EBT	WBI	-	WBT	NBL	-	NBT	SBL		SBT
Assigned Phas	е			5		2			6	1.1			1		4
Case Number	_			2.0		4.0			7.3						9.0
Phase Duration	1, S			15.0		45.0			30.0				1		25.0
Change Period	(Y+R	c), S		5.0	1	5.0	-		5.0						5.0
Max Allow Hea	dway (/	MAH ), s		3.1	1	3.1			3.1			_			3.2
Queue Clearan	ce Time	e (gs), s		5.8		13.1	1		19.1				1		7.9
Green Extensio	n Time	(ge), s		0.1		2.7			1.9				1	11	0.8
Phase Call Pro				1.00		1.00	-		1.00		1			110	1.00
Max Out Proba			-	0.25	-	0.14			0.53			-			0.00
production of the	Sec	mart all all the	Since	in china	12	in stall	20.00	19415	40° M2	1000	C.C.	1.20	Mary -	1. 57	delle t
Movement Gro	oup Res	sults			EB		2	WB			NB			SB	
Approach Move	ement			L	T	R	L	Т	R	L	T	R	L	Т	R
Assigned Move	ment			5	2			6	16				7		14
Adjusted Flow I	Rate (v	), veh/h		107	505			515	386				363		64
Adjusted Satur	ation Flo	ow Rate (s), veh/h/l	n	1781	1870	-		1870	1585				1730		158
Queue Service	and the second second	and the state of the second		3.8	11.1		1	17.1	and the second se				5.9	-	2.1
	-	e Time (gc), s		3.8	11.1			17.1	14.5				5.9		2.1
Green Ratio ( g			~ ~	0.14	0.57			0.36				1	0.29	1.5	0.29
Capacity ( c ), v		Here	-	254	1069	-		668	566				988		453
Volume-to-Cap	the second s	atio (X)		0.419	0.473			0.771	-			1	0.367		0.14
	and the second division of the	/In ( 95 th percentile)		71.5	167.3	1000		307.9			1		100.4		33.2
the second s		eh/In (95 th percent		2.8	6.6			12.1					4.0		1.3
The second se		RQ) (95 th percent		0.00	0.00			0.00				1	0.00		0.00
Uniform Delay		the second state of the se		27.3	8.8			20.0	19.1		-	-	20.0		18.6
Incremental De		statements of the difference of the second		0.4	0.1			5.0	2.8				0.1		0.1
Initial Queue D		and the second se		0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (	and the second s	and a second sec		27.8	8.9			25.0	-				20.0		18.
Level of Service	Contraction of the local division of the loc	the second se		C	A			25.0 C	C				C		B
Approach Dela		the second se		12.2		В	23.7		C	0.0			19.8		B
Intersection De		a defendent of the second s		12.4	-	19		1.00	0	0.0			B 19.0	1	0
intersection De	ay, sive	ST / LOO	Tor March	STREET	Sel	18	And in case of the local division of the loc	1	5-3645	3 11	17.02-2	THO: Y	D.	15-110	19 1953
Multimodal Re	sulte	and the second second	12 305	the second	EB	1. 1. 1. 1. 1.	a land	WB	A STATES		NB	= 20.1	-	SB	141.00
manufioual Ne	In Conduct Statement	11.00	(	0.7		A	2.4	-	В	3.0		C	2.3	- 00	В
Pedestrian LOS	S Score	1108													

ieneral Information		Site Information	
Analyst	MSH	Intersection	Highland Ranch & Frontage
Agency/Co.	Solaegui Engineers	Jurisdiction	City of Sparks
Date Performed	9/15/2017	East/West Street	Highland Ranch Parkway
Analysis Year	2017	North/South Street	Frontage Road
Time Analyzed	AM Ex. + Project + Other	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25

#### Lanes



Approach		Easth	bound			West	bound			North	bound		
Movement	U	L	T	R	υ	L	Т	R	U	L	Т	R	U
Priority	10	1	2	3	40	4	5	6		7	8	9	
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0	
Configuration		L	Т				T	R					
Volume, V (veh/h)		37	1054				869	117	1				
Percent Heavy Vehicles (%)		2											
Proportion Time Blocked													
Percent Grade (%)													
Right Turn Channelized		t	No			1	NO			٢	10		
Median Type/Storage				Und	ivided								
Critical and Follow-up H	eadwa	ys											
Base Critical Headway (sec)													
Critical Headway (sec)													
Base Follow-Up Headway (sec)													
Follow-Up Headway (sec)	1												
Delay, Queue Length, an	d Leve	l of S	ervice		-								
	1	1	1		1	1	1	T	-	1	1	1	1

26 Flow Rate, v (veh/h) 40 136 646 91 538 Capacity, c (veh/h) 0.06 1,49 0,05 v/c Ratio 95% Queue Length, Q95 (veh) 0.2 10.5 0.2 352.5 12.0 Control Delay (s/veh) 10.9 Level of Service, LOS В F В Approach Delay (s/veh) 0.4 297.8 ۴ Approach LOS

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**Vehicle Volumes and Adjustments** 

Southbound

T

11

0

R

12

1

R

24

2

L

10

1

L

125

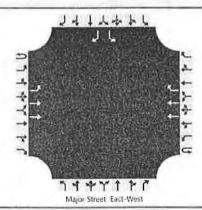
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0

No

General Information		Site Information	
Analyst	MSH	Intersection	Highland Ranch & Frontage
Agency/Co.	Solaegui Engineers	Jurisdiction	City of Sparks
Date Performed	9/15/2017	East/West Street	Highland Ranch Parkway
Analysis Year	2017	North/South Street	Frontage Road
Time Analyzed	PM Ex. + Project + Other	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

# Lanes

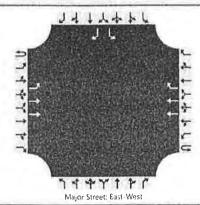


Vehicle	Volumes	and	Adjustments	

Approach		Easth	oound			West	tbound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0		1	0	1
Configuration		L	Т				Т	R			4.48			L		R
Volume, V (veh/h)		28	1009				1158	180						164		40
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked	1								5	1						
Percent Grade (%)								Apprent 1						(	)	
Right Turn Channelized		٢	No				No			٦	10			N	o	
Median Type/Storage	1			Undi	vided									-		
Critical and Follow-up H	leadwa	ys														
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)	-						1.0									
Follow-Up Headway (sec)																
Delay, Queue Length, an	nd Leve	l of S	ervice													
Flow Rate, v (veh/h)		30					T							178		43
Capacity, c (veh/h)		461	1111						1					60		424
v/c Ratio		0.07												2.97		0,10
95% Queue Length, Q95 (veh)		0.2					1.2							18,4		0.3
Control Delay (s/veh)		13,4												1036.1		14,4
Level of Service, LOS		В												F		В
Approach Delay (s/veh)		(	),4											837.3		
Approach LOS															F	

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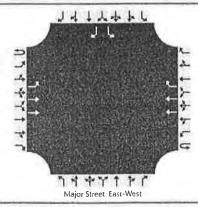
General Information		Site Information	
Analyst	MSH	Intersection	Highland Ranch & Frontage
Agency/Co.	Solaegui Engineers	Jurisdiction	City of Sparks
Date Performed	9/15/2017	East/West Street	Highland Ranch Parkway
Analysis Year	2035	North/South Street	Frontage Road
Time Analyzed	AM Base + Project + Other	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			



Approach		Easth	bound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	E	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9	1	10	11	12
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0		1	0	1
Configuration		L	T				Т	R						L	1	R
Volume, V (veh/h)		37	946				536	117						125		24
Percent Heavy Vehicles (%)		2										1.1		2		2
Proportion Time Blocked																
Percent Grade (%)				0		100								C	)	
Right Turn Channelized		M	lo			1	٧o		1	N	10			N	0	
Median Type/Storage				Undi	vided				1						_	
Critical and Follow-up H	eadway	eadways														
Base Critical Headway (sec)	T												1			
Critical Headway (sec)	1			100											1	
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T	39	1		1	1								132		25
Capacity, c (veh/h)		903						1						186		715
v/c Ratio		0.04												0,71		0,03
95% Queue Length, Q <sub>95</sub> (veh)		0.1												4.4		0.1
Control Delay (s/veh)		9.2												61.2		10,2
Level of Service, LOS		A												F		8
Approach Delay (s/veh)	1	C	).3											53	0,0	
Approach LOS														f	-	-

General Information		Site Information	
Analyst	MSH	Intersection	Highland Ranch & Frontage
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Date Performed	9/15/2017	East/West Street	Highland Ranch Parkway
Analysis Year	2035	North/South Street	Frontage Road
Time Analyzed	PM Base + Project + Other	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

#### Lanes



Vehicle Volumes and Adj Approach	Eastbound				Westbound				Northbound				Southbound			
Movement		L	Т	R	U	L	Т	R	U	L	Т	R	U	L	т	R
			2	3	-	-	5	6		7	8	9	0	10	11	12
Priority	10	1	-	-	40	4							-			12
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0		1	0	-
Configuration		L	Т				Т	R						L		R
Volume, V (veh/h)		28	771				989	180						164		40
Percent Heavy Vehicles (%)		2							( )	1			-	2		2
Proportion Time Blocked																
Percent Grade (%)														(	)	
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															
Critical and Follow-up H	eadway	ys														
Base Critical Headway (sec)																
Critical Headway (sec)							1.1									
Base Follow-Up Headway (sec)					1	1										
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	1	29					T							173		42
Capacity, c (veh/h)		562												106		501
v/c Ratio		0.05												1,63		0.08
95% Queue Length, Q <sub>95</sub> (veh)		0.2												13.2		0.3
Control Delay (s/veh)		11.7												392.3		12.8
Level of Service, LOS		В												F		В
Approach Delay (s/veh)	0,4									-				31	8.2	-
Approach LOS									-					-	-	

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