

LARAMIE COUNTY PLANNING & DEVELOPMENT DEPARTMENT

Planning • Building

MEMORANDUM

TO: Laramie County Board of County Commissioners

FROM: Cate Cundall, Associate Planner

DATE: June 17, 2025

TITLE: PUBLIC HEARING regarding the CK Gold Project Site Plan, located on

portions of Section 25 and 36, T14N, R70W, and Portions of Sections 28, 29,

and 32, and all of Section 31, T14N, R69W, Laramie County, WY.

EXECUTIVE SUMMARY

Gold King Corporation applied for approval of the CK Gold Project Site Plan located on the South ½ of Section 25 and all of Section 36, Township 14 North, Range 70 West, and Portions of Section 28, 29, and 32 and all of Section 31, Township 14 North, Range 69 West. The proposed site is located off Road 210 approximately 20 miles west of Cheyenne, Wyoming.

The project is the development of a gold and copper mine that will use an open pit, processing plant, waste rock facilities, and a tailings management facility. The subject property is owned by both private parties and the State of Wyoming. Access to the property will be via a gravel road to Road 210 approximately two miles west of Happy Jack Road. The access road easement will be fenced on both sides and the Project will also be fenced.

BACKGROUND

The subject parcels are situated in the LU – Land Use Zone District and is agricultural land. The Laramie County Comprehensive Plan identifies the area as Ag and Range Land (AGR).

Pertinent Statutes and Regulations include:

Section 2-2-133 governing the Site Plan process. Section 4-2-114 governing the LU – Land Use Zone District.

DISCUSSION

The project has obtained a WY DEQ Land Quality Division Regular Mine Operating Permit, WY DEQ Water Quality Division Pollutant Discharge Elimination System (WYPEDS) Permit,

DEQ Industrial Siting Division Air Quality Permit, and multiple pond and well use permits from the Wyoming State Engineer's Office.

The project will not have driveways, dedicated parking spots, or a landscaping plan. Site access roads with a running surface width of approximately 26 feet will connect the various mine features and buildings. General parking areas will be located next to each building. Haul roads will be separate from the access roads to allow for haul truck traffic to move material from the pit to the primary crusher or one of the pile facilities. Accesses to the buildings will be constructed following construction of the buildings. The largest building of the Project is the processing plant with a height of 100 feet. There are no dedicated floors, rather there are differing elevations for the equipment and machinery within the building.

The applicants is planning to use a fire suppression system supplied from a large water tank that will be located uphill and to the west of the Project. Additionally, the Project can utilize water trucks and heavy equipment in the event of a fire. Project trash will be collected in receptacles located near each building.

A reclamation plan has been developed. The plan generally describes the post-mining land use which is consistent with the pre-mining land use, contours, and methods to revegetate the disturbed area. DEQ approved 3 seed mixes for use in the revegetation process. Topsoil will be spread over graded areas prior to revegetation. Concurrent reclamation will be performed as the project progresses to reduce areas of disturbance.

Project drainage will follow existing flow paths towards either Middle Crow Creek or South Crow Creek. There are designed and permitted ponds to detain the water before using the water in the processing plant or testing the water quality for discharge.

Areas where the buildings will be built are the only areas considered impervious within the plant area. Geomembrane liners will also be installed for some of the material stockpiles. The remainder of the projects area will be compacted soils, gravel, or undisturbed ground.

Agency reviews are being completed. A development sign was posted, adjacent property owners notified, and a legal advertisement was placed in the Wyoming Tribune Eagle. No comments have been received.

RECOMMENDATION and FINDINGS

Based upon evidence provided, staff recommend the Laramie County Board of Commissioners find that:

- **a.** This application meets the criteria for Site Plans pursuant to section 2-2-133 of the Laramie County Land Use Regulations; and,
- **b.** This application is in conformance with Section 4-2-114 of the Laramie County Land Use Regulations governing the LU Land Use Zone District.

and that the Board may approve the CK Gold Project Site Plan on the condition that:

1. All agency comments must be addressed and corrections made to the Site Plan before a Certificate of Review is issued.

PROPOSED MOTION

I move to approve the CK Gold Project Site Plan with one condition and adopt the findings of fact a and b of the staff report.

ATTACHMENTS

Attachment 1: Location Map

Attachment 2: Applicant Justification Letter

Attachment 3: Pre-App Notes

Attachment 4: Agency Review Comments and Applicant Response

Attachment 5: Surface Owner's Agreement

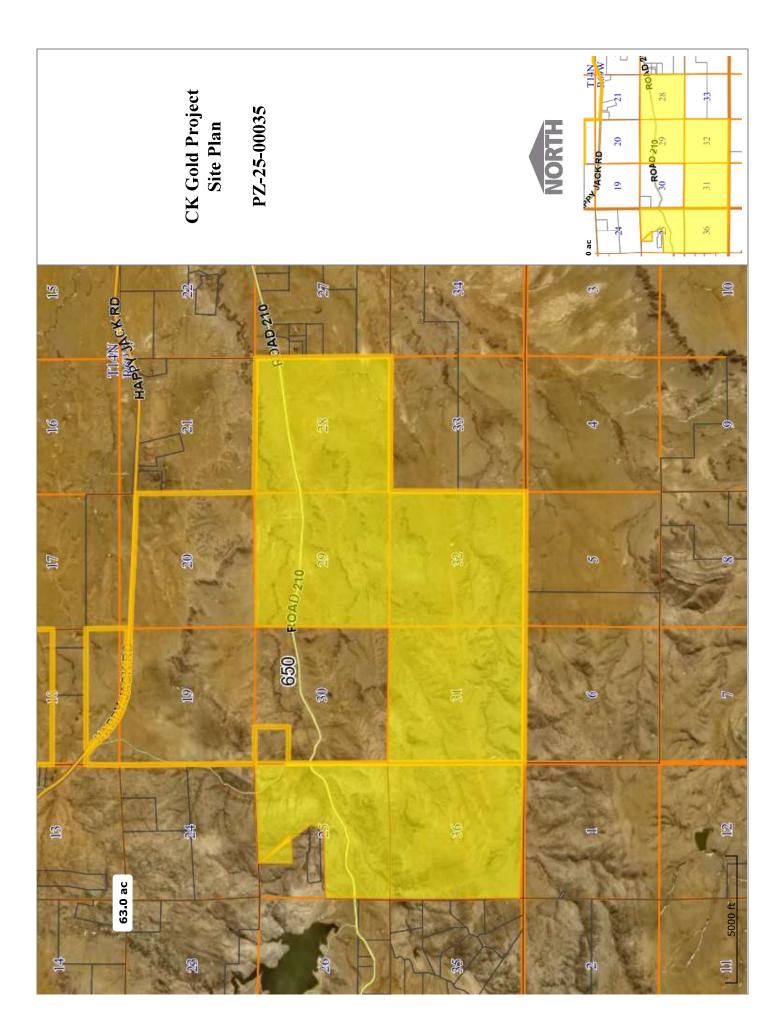
Attachment 6: Traffic Study

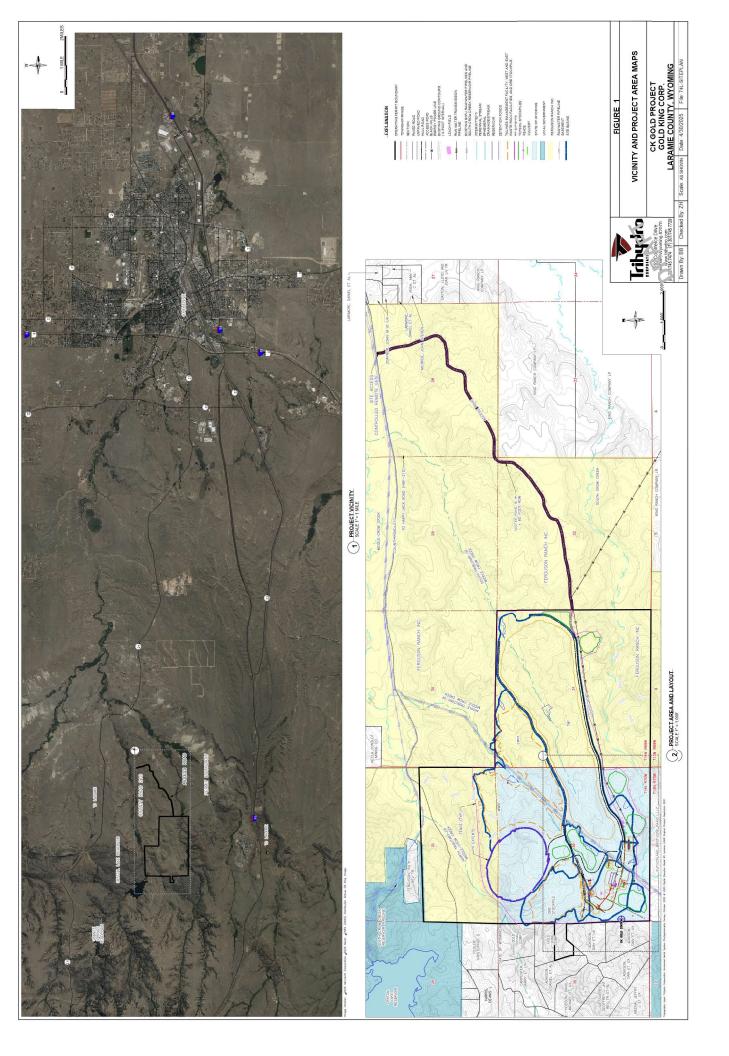
Attachment 7: Access Road Remote Gate Conceptual Plan

Attachment 8: WYPDES Permit

Attachment 9: Resolution

Attachment 9: Site Plan Exhibit







1807 Capitol Ave. Suite 206 Cheyenne, WY 82001

(307) 514-0638 🖀

May 2, 2025

Mr. Justin Arnold
Department Head of Laramie County Planning & Development
Program Manager
Archer Complex
3966 Archer Pkwy
Cheyenne, WY 82009

RE: Gold King Corp., CK Gold Project, Site Plan Application

Dear Mr. Arnold:

Enclosed please find the Laramie County Site Plan application for the Gold King Corp. CK Gold Project (Project) located approximately 20 miles west of Cheyenne in Laramie County, Wyoming (Figure 1). The application includes this letter, the filled out and signed application form, and two figures. The 2022 Laramie County Land Use Regulations were used in developing the figures for this application.

The CK Gold Project is located on S½ of Section 25 and Section 36 of Township 14 North (T14N) Range 70 West (R70W), Section 31 and parts of Sections 28, 29, and 32 of T14N R69W. The State owns Section 36 and the rest is privately owned. The Project is located in the unzoned regulatory area. The Project is a gold and copper mine that will use an open pit, processing plant, waste rock facilities, and a tailings management facility. Access to the Project will be via a 4.26-mile gravel access road to County Road 210 approximately 2 miles west of Highway 210 (Happy Jack Road). The access road will use a 26-foot running surface within a 60-foot easement. The road is designed with ditches on both sides. Access will be controlled by a remote gate near County Road 210 and the main gate near the plant facilities. The access road easement will be fenced on both sides and the Project will also fenced either by newly installed fence or fence along property boundaries. Figures 1 and 2 show the Project's vicinity to Cheyenne, the overall Project permit boundary, and main building features.

The Project has obtained multiple State level permits and are listed below:

- Wyoming Department of Environmental Quality (DEQ) Land Quality Division (LQD) Regular Mine Operating Permit (RMOP)
- DEQ Water Quality Division (WQD) Wyoming Pollutant Discharge Elimination System (WYPDES) Permit
- DEQ Industrial Siting Division (ISD) Industrial Siting Permit (ISP)
- DEQ Air Quality Division (AQD) Air Quality Permit (AQP)
- Wyoming State Engineer's Office (SEO) Multiple Pond and Well Use Permits

The Project will not have driveways, dedicated parking spots, or a landscaping plan. Site access roads with a running surface width of approximately 26 feet will connect the various mine features and buildings and general parking areas will be located near each building. Haul roads will be separate from the access roads to allow for haul truck traffic to move material from the pit to the primary crusher or one of the pile facilities. There will be no established setbacks for the buildings shown on the figures. The Project will construct access to the building following construction of the buildings. The largest building of the Project is the processing plant with a height of 100 feet. There are not dedicated floors, rather there are differing elevations for the equipment and machinery within the building. Areas where the buildings will be built are the only areas considered impervious within the plant area. Geomembrane liners will also be installed for some of the material stockpiles. The rest of the Project's land will be compacted soils, gravel, or undisturbed ground.

The Project is planning to use a fire suppression system supplied from a large water tank that will be located uphill and to the west of the Project. Additionally, the Project can utilize water trucks and heavy equipment in the event of a fire. Project trash will be collected in receptacles located near each building and the trash will be disposed of in the Laramie County landfill.

As part of the process to obtain the RMOP, the Project developed a reclamation plan. The plan generally describes the post-mining land use which is consistent with the pre-mining land use, contours, and methods to revegetate the disturbed areas. DEQ – LQD approved 3 seed mixes (i.e., primary, shrub, and marsh) for use in the revegetation process. Topsoil will be spread over graded areas prior to revegetation is performed. Also, as the Project progresses, concurrent reclamation may be performed to reduce areas of disturbance.

Project drainage generally follows existing flow paths towards either Middle Crow Creek or South Crow Creek. The Project has designed and permitted ponds to detain the water before using the water in the processing plant or testing the water quality for discharge. The RMOP and WYPDES permits provide the basis for Project water management.

Please contact me with any questions.

Sincerely,

Kevin Francis SME RM

Vice President Gold King Corp

Site Plan Application - Laramie County, Wyoming

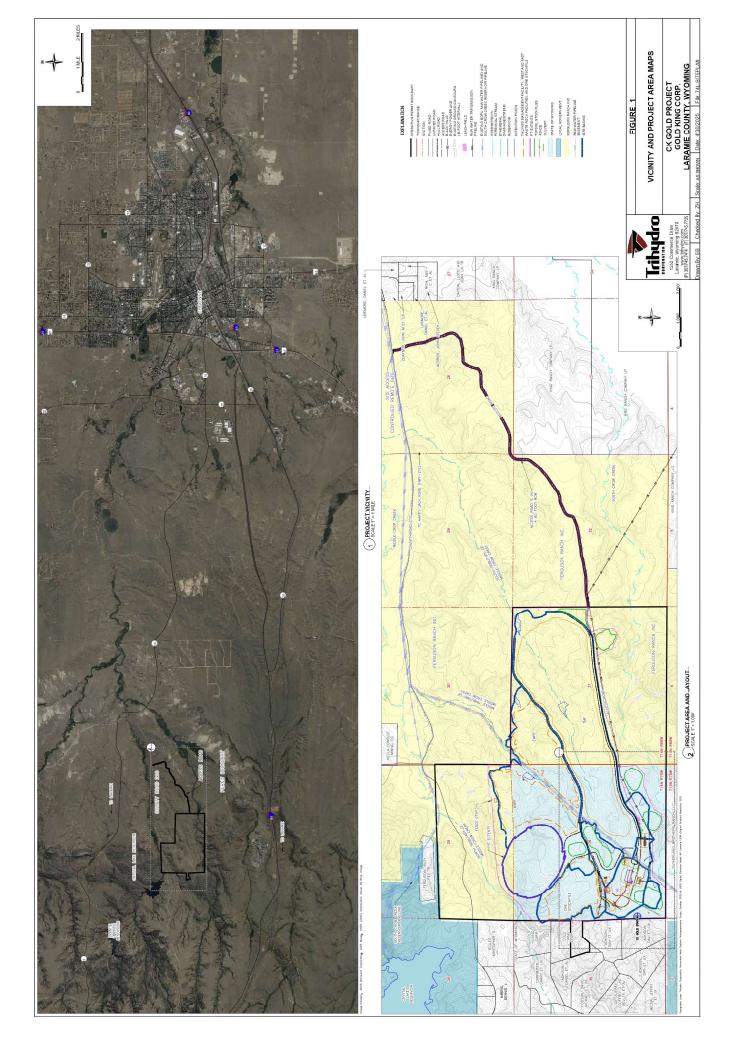


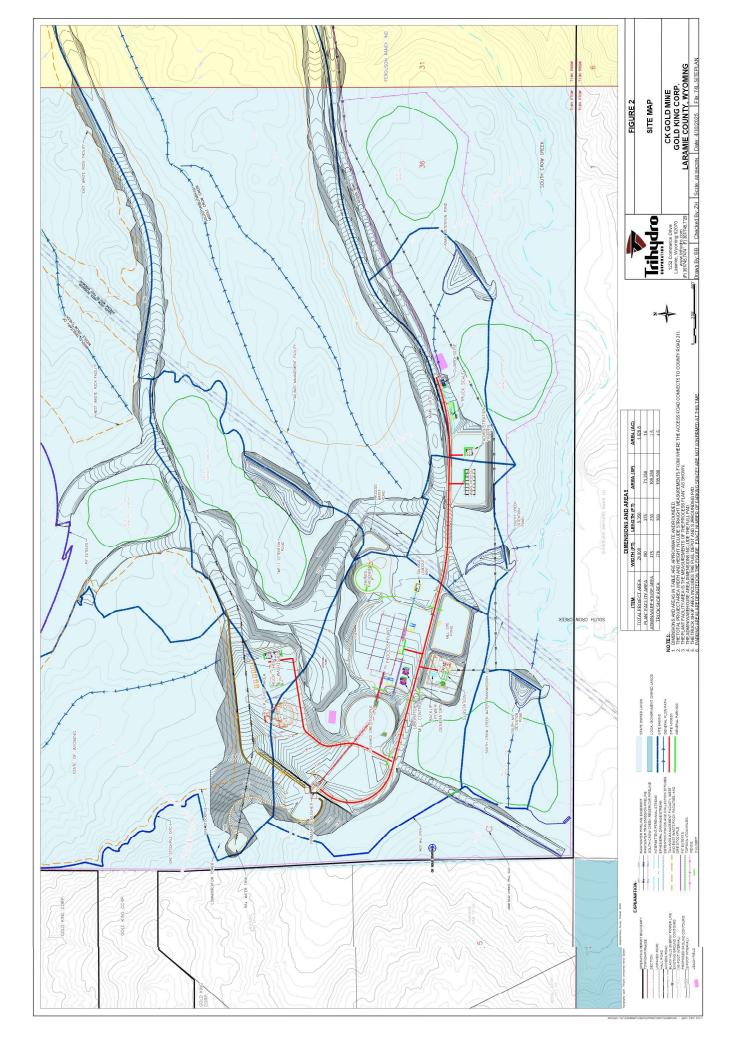
Give Application To:

Laramie County Planning and Development 3966 Archer Parkway – Cheyenne, WY 82009

planning@laramiecounty.com

Complete Application, Required Documents	and initial Payment K	equired at Tim	e of Filling.
Pre- Application Meeting Date January 16, 2025)		
Name of Project CK Gold Project			
OWNER ttach a separate sheet if there are addition Name Gold King Corp.	al property owners	Phone	(303) 350-0092
Address 1807 Capitol Avenue, Suite 206	City Cheyenne	State WY	_Zip Code_82001
Email kf@usgoldcorp.com	-		
APPLICANT			(202) 250 0002
Name_Kevin Francis		Phone	(303) 350-0092
Address PO Box 22565	_ _{City} Denver	_State_CO	_Zip Code_80222
_{Email} kf@usgoldcorp.com	=		
LOCATION			
Legal Description S1/2 S25 & S36 of T14N R70	N, S31 and parts of S	28, S29, & S	32 of T14N R69W
Site Address Site	e Area: Acres 1,628.8	or Site Square	e Feet
	Sito is approx 4	5 miles soutl	n southeast off of
Site Location Description (If Address is Unavailab			
CR-210, the access road connects with CR			
Current Zoning Unzoned Regulatory Area	Current Land Use	livestock grazir	ng and wildlife habitat
DEVELOPMENT INFORMATION			
Description of proposed use(s).	no		
Development of a copper and gold pit mi			
Required Documents/Initial fee due at time of s Site Plan Drawing, Landscape Plan Drawing, Digit		at Pre-Appli	cation meeting.
Pre-Application Notes, Project Narrative Letter, W.	arranty Deed.FAA App	roval, if neces	sary
GESC Permit Application, Drainage and or Traffic	Study or Waiver Requ	est Letter, Sig	n details.
I hereby certify that I am the owner/applicant named herein respect to the filing of this application and that the foregoing state documents are true and accurate to the best of my knowledge. I Planning and Development Office represents a commitment by n and all modification to the "Approved Site Plan" must be coordina at which time a determination will be made as to the need for an all also understand that the site will be examined during the final in NOTE: unapproved modifications to the site may be cause for no hereby agree to pay all fees associated with this application. It is SIGNATURE OF BOTH THE OWNER AND THE APPLICANT ARE REQUIRED	ements and answers contain understand that the Site Pla ne to carry out the construct ted through the Laramie Co amended Site Plan and/or a sspection for compliance with on-issuance of a "Certificate understood an incomplete si	ed on the applicate n approved by the ion of the project unty Planning and dditional Administ the "Approved S of Compliance". ubmittal will not be	tion and in required to Laramie County as represented. Any to Development Office, trative or Board review. tite Plan" of record. The undersigned do
Signature of Owner Printed Name Kevin Francis		Date 4	1/30/2025
Signature of Applicant Printed Name Kevin Francis		Date 4	4/30/2025







LARAMIE COUNTY PLANNING & DEVELOPMENT DEPARTMENT

3966 Archer Pkwy Cheyenne, WY 82009 planning@laramiecounty.com Phone (307) 633-4303 Fax (307) 633-4616



Pre-Application Meeting Notes

Disclaimer: These notes are intended as guidance only. Fee calculations are determined at the time of application, and issues that arise during review periods are not always anticipated at the pre-application stage.

Public Records Act: This document and any documents provided by the applicant to Planning may constitute a public record under W.S. § 16-4-201 et seq. Applicants are advised not to divulge any information at a pre-application meeting with Planning that they do not yet desire to be public information.

Date: 1-16-25 Staff: JA, CC, BH, SK-	C(LCPA) Property	Owner: State of MY
	ppermine	
Project Location/Address: (Custon)	603	P # 005 7035
ATTENDEES/AGENTS/PARTIES		
Applicant U.S. Gold Corp, George	Phone 800-557-4550	Email 960 usgoldcorp.gold
Other	Phone	Email
Other .	Phone	Email
APPLICATION TYPE(S)		Şe
Administrative Plat (Vacation? Appeal	The second of th	n LCUX\$ 1-1-133 F
Board Approval		n – For Records
Home Occupation	_ =	sion Exemption – Other
Family Exemption		sion Permit & Plat
Preliminary Development Plan	☐ Variance	
Public Hearing – No Approval	Zone C	(T)
Required (Xmission lines, O&C		9
APPLICATION GUIDANCE		
✓ Yes □ No	lication Fees:	
☑ Yes □ No Cop	y of Pre-Application Meeting No	tes:
∀ Yes □ No	ject Narrative Letter/Justification	Letter:
☑ Yes □ No Wa	rranty Deed/Lease Agreement:	
	t \Site Plan) Plot Plan / Record n / Route Map / Zone Change M	
☑ Yes □ No □ TBD	iinage Plans:	
Yes □ No □ Letter of Waiver □	ainage Study:	
Yes □ No □ Letter of Waiver	arriage study. Arealy completed Tready completed	



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Pre-Application Meeting Notes

□ Yes ☑ No	Community Facility Fees Acknowledgement Letter:
□ Yes ☑ No	Public Safety Fees Acknowledgement Letter:
□ Yes ☑ No □ TBD	WY DEQ Chapter 23 Study/Submittal Letter:
□ Yes □ No □ TBD	Development Agreement:
□ Yes □ No □ TBD	Roadway Maintenance Plan:
□ Yes □ No □ TBD	Road/Easement Use Agreement:
□ Yes □ No □ TBD	ROW Construction Permit:
☑ Yes □ No	Engineer Review – Paid by Applicant:
☑ Yes □ No □ TBD	Environmental Health Review / Approval:
□ Yes ☑ No □ TBD	Environmental and Services Impact Report:
☑ Yes □ No □ TBD	GESC/Grading, Erosion & Sediment Control Permit: Standard
□ Yes ☑ No □ TBD	Floodplain Development Permit:
☐ Yes ☑ No ☐ Letter of Consent	Perimeter Fence Construction per W.S § 18-5-319:
Public Notice Requirements	General Notes:
☑ Yes □ No	Public Notice Sign(s) Required – Posted/Paid by Applicant:
□ Yes □ No	Newspaper Legal Notice Required – Paid by Applicant:
☑ Yes □ No	Property Owner Notification Letter Required – Paid by Applicant:



LARAMIE COUNTY PLANNING & DEVELOPMENT DEPARTMENT 3966 Archer Pkwy Cheyenne, WY 82009 planning@laramiecounty.com Phone (307) 633-4303 Fax (307) 633-4616

Pre-Application Meeting Notes

Miscellaneous Notes:
Per Applicant:
N6 truks day estimated
- Dust control neasures implemented (40K tanks)
- No flufstack unissions
-WYDdes already obtained Nov 24
- Granty-Fed redundant Cistara (800K gal)
- Bash Fire mitigation measures implemented
- Will conduct local Ems training
- Leach field for employees
- OUA executed w/ city, Sourcing is still in discussion
- Bording a bready in place for plase I
Planning: Bis Stop will regime seperate site plan (as vsu these notes)
Publishers: Ensure traffic study included in submittents
PUB WKS: Ensure traffic study included in submitter's - New miner Mishaul training compaging for County steff (or escore
LCFA: Wald suggest closures on Rd 210 When blasting

Exago



AGENCY REVIEW #1

Permit Notes

Parcel Number: 14701030000300 Permit Number: PZ-25-00035

Site Address: UNKNOWN

Submitted: 05/06/2025 Technically 05/07/2025 Complete: Approved: Issued:

 Applicant:
 Francis, Kevin

 Owner:
 STATE OF WYOMING

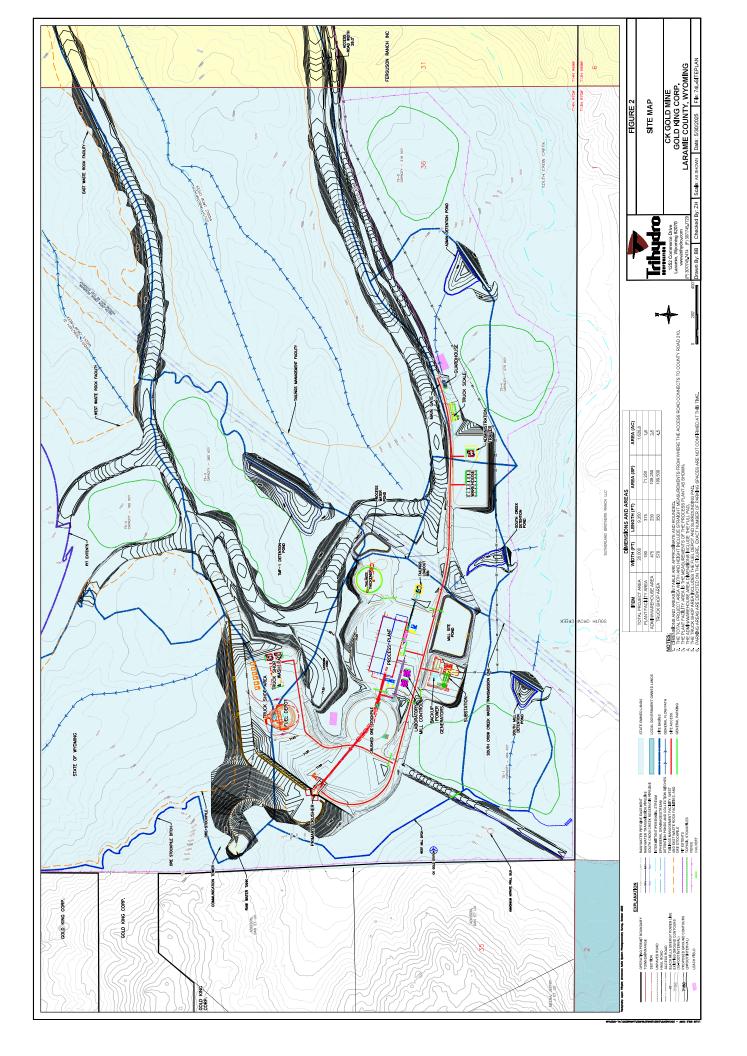
 Project Description:
 Copper and gold mine with an open pit, crushers, a processing plant, waste rock facilities, and a failings management facility.

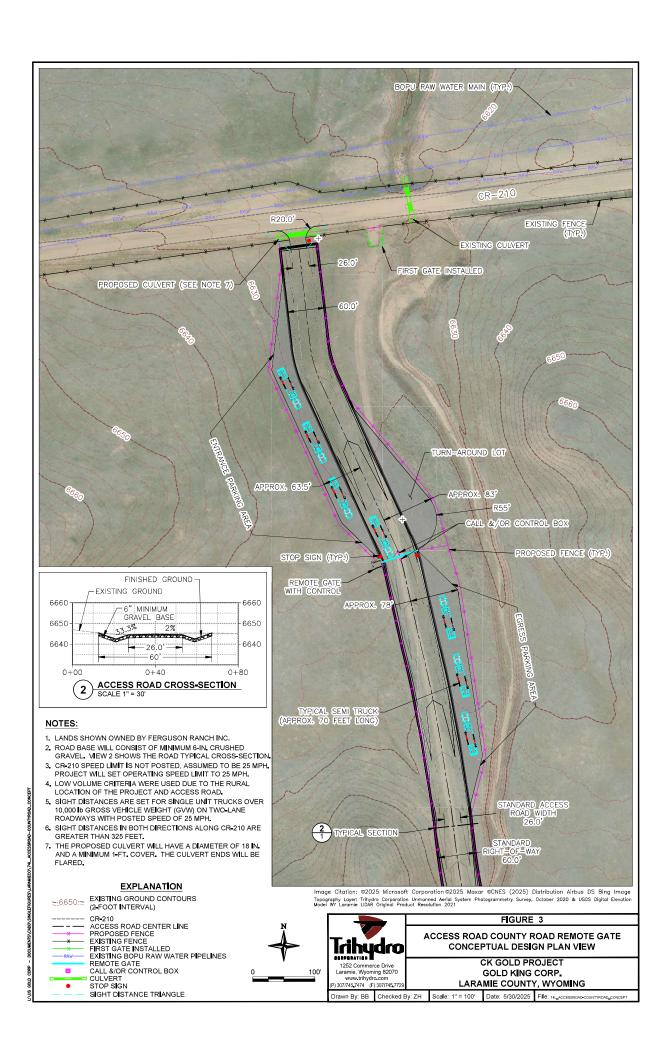
Begin Date 05/07/2025	End Date	Permit Area Application	Subject PZ-25-00035	<u>Note Type</u> GENERAL	Note Text Public Hearing before the BOCC will be June 17, 2025.	Created By CATHERINE.CUND ALL@LARAMIECO UNTYWY.GOV
05/08/2025		Application	PZ-25-00035	GENERAL	LCFA requests additional information on fire suppression MANUEL_MUZQUIZ water such as gallons available, hose connections, pump/flow @LARAMIECOUNT rates. LCFA would like to ensure there is a road maintenance/snow plan for the long gravel road leading to the site along with 24/7 gate entry/ access via code or Knox box.	MANUEL,MUZQUIZ @LARAMIECOUNT YWY,GOV
05/08/2025		Workflow	COUNTY REAL ESTATE OFFICE REVIEW	GENERAL	No comments	TERESA.LEMASTE R@LARAMIECOUN TYWY.GOV
05/12/2025		Application	PZ-25-00035	GENERAL	As this is not a subdivision review, we have no comments. When/if the SEO receives applications for ponds/water wells, we will review the project and make the appropriate decisions at that time.	SUE.KINSLEY@LA RAMIECOUNTYWY GOV
05/14/2025		Application	PZ-25-00035	GENERAL	WAPA has no conflict with this project.	ROGERS@LARAMI ECOUNTYWY.GOV
05/21/2025		Application	PZ-25-00035	GENERAL	Ensure that appropriate access for emergency services is accommodated. All LCLUR shall also be followed. Site safety emergency plans would be beneficial to have on file at the Emergency Management Office as well as at the other first responder departments that have jurisdiction,	MATTHEW BUTLE R@LARAMIECOUN TYWY GOV
05/21/2025		Application	PZ-25-00035	GENERAL	1st Review - 1. Please show the width of the access road on the site plan. For a rural commercial development, the minimum width of the roadway is 24. A proposed cross section detail would be helpful. Is the access road existing or proposed? 2. Please provide details (i.e., dimensions, radii, etc.) on the access road where it ties into Road 210.	SCOTT.LARSON@ LARAMIECOUNTY WY.GOV
05/21/2025		Workflow	ENVIRONMENTA GENERAL L HEALTH REVIEW	GENERAL	If wastewater holding tanks are utilized for construction, contact Environmental Health for a permit. Office buildings will require commercial wastewater permits and septic systems will need to be engineered. Contact Environmental Health for questions at (307) 633-4090.	TIFFANY, GAERTN ER@LARAMIECOU NTYWY, GOV

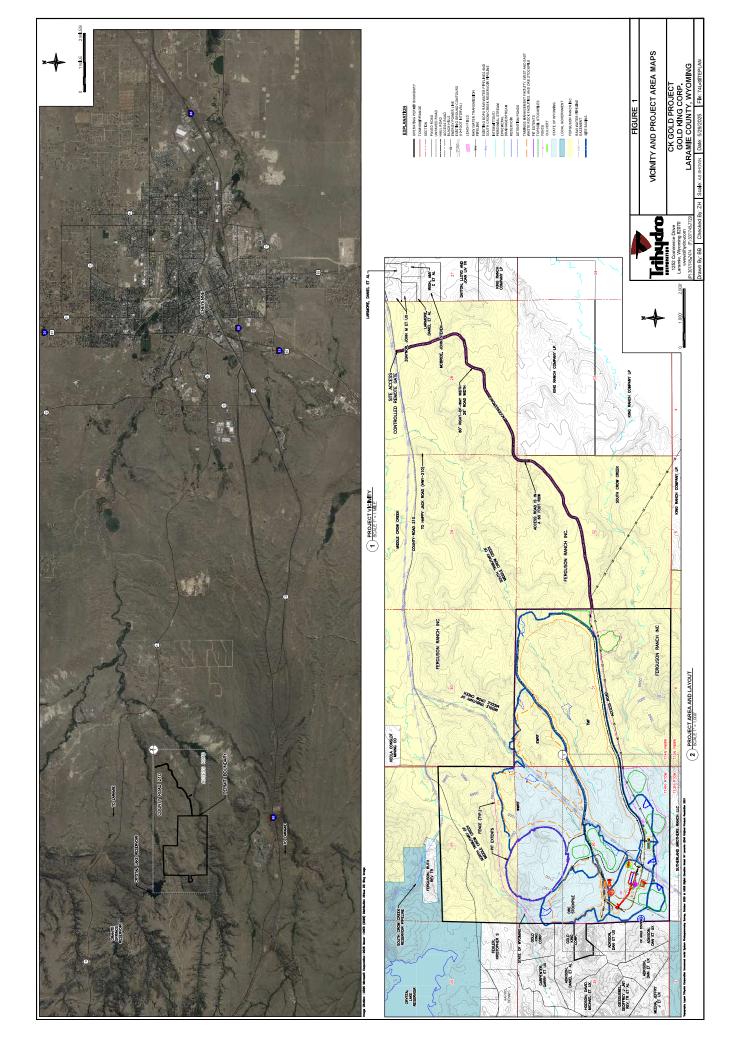
5/23/2025, 2:15 PM

AGENCY REVIEW #1

APPLICANT RESPONSE		Gold King Corp Response Gold King Corp Response Gold King Corp Response Admontedged	Fig. Water System feasibility level FIRE DESIGN CODE FIRE EVENT SYSTEM DESIGN CODE Fig. Specifies how the design for the Evaluate to Evaluate the Color of the Co	Acknowletged	SEO permits have been obtained for Project ponds and wells.	Adxinovledged	The safety emergency procedure carly preparation. Once completed they will be shared with relevant parties.	Site Plan Figures 1 and 2 have been updated accordingly. The conceptual department of the plan of the new Figure 3 (included).	Acknowledged
5/6/2025 5/7/2025		Gold	Erre Wate design par FIRE SUF The Fresh The Fr	Acknov	SEO ps Project	Acknow	The saf docume Once o	Site Ple updated design connect Figure	Acknow
Submitted Technically Complete		Created By Catherine cundall@laramiecountxwy.gov	manuel muzaniv@lenniscountvax ava	teresa.lemaster@laramiecountvwv.gov	sne kinsley@laraniecompswygov	rogers@laramiecountvwv.gov	natthew butler@lanniecourbww.gov.	scott larson/ilitamicecontivov.cov	isflany goertner@larantecountywy.gov
14701030000300 Unknown	Lataniec vouny, w r rotooo State of Wyoming Copper and gold mine with an open pit, crushers, a processing plant, waste rock facilities, and a tailings management facility	Note Text Public Hearing before the BOCC will be June 17, 2025	LCPA requests additional information on fire suppression where state as guilous auchide, those connectors, pump/flow rurset. LCPA would like to ensure there is a road maintenance/stow plan for the long gravel road leading to this also guilous with 247 gatte entry/ access via code or Knox box.	No comments	As this is not a subdivision review, we have no comments. When'tf the SEO receives applications for ponds/water wells, we will review the project and make the appropriate decisions at that time.	WAPA has no conflict with this project	Ensure that appropriate access for emergency services is accommediced. All LCLIV Bahall also be followed. Site sufery emergency plans would be beneficial to have on file at the Emergency Management Office as well as at the other first responder departments that have jurisdiction.	1st Review - I Please show the width of the access road on the site plan. For a trust conversal development, the minimum width of the read-way is 24. A proposed cross section detail would be helpful. Is the access road existing or proposed? 22 Please provide details (i.e., dimensions, radii, etc.) on the access road where it ties into Road 210.	If wastewater holding tanks are unitzed for construction, contact Environmental Health for a permit. Office buildings will require commercial wastewater permits and septic systems will need to be engineered. Contact Environmental Health for questions at (307) (333-4090).
Parcel Number Site Address	ıste rock facilities, a								
	cessing plant, wa	Note Type General	General	General	General	General	General	General	th General
	en pit, crushers, a prov	Subject PZ-25-00035	PZ-25-00035	County Real Estate Office Review	PZ-25-00035	PZ-25-00035	PZ-25-00035	PZ-25-00035	Environmental Health General Review
PZ-25-00035	Francis, Kevin State of Wyoming Copper and gold mine with an ope	End Date Permit Area Application	Application	Workflow	Application	Application	Application	Application	Workflow
Permit Number:	Applicant Owner Project Description	Begin Date 5/7/2025	S.R.2025	5/8/2025	5/12/2025	5/14/2025	\$/21/2025	5/21/2025	5/21/2025







SURFACE LANDOWNER'S CONSENT

I, <u>Jason Crowder</u>, <u>Deputy Director</u>, <u>Office of State Lands and Investments</u>, CERTIFY that the State of Wyoming holds surface rights on the following lands on which the State of Wyoming holds mineral estate rights:

Section 36	T. <u>14</u> N.	R. <u>70</u> W.
Section	TN.	RW.
Section	TN.	RW.

County of Laramie

I have examined the mining and reclamation plans, prepared by Gold King Corp. in compliance with the Wyoming Environmental Quality Act, and do hereby approve said plans, and reiterate certain provisions within the State of Wyoming Metallic and Non-Metallic Rocks and Minerals mining lease #0-40828 issued to Wyoming Gold Mining Company, Inc. (Section 1 and Section 4(A)), which grant the lessee's right to enter upon, occupy and enjoy such surface areas of the described tracts as are necessary for mining operations, along with other activities contemplated by the lease.

Dated this 18th day of October 2022.

Deputy Director – Office of State Lands and Investments (Signature)

Jason Crowder - Deputy Director

Name (printed or typed)

Witness (Signature)

Witness Name (printed or typed)

Form 8 – Surface Owner Consent Form Revised 6 2013 Land Quality Division

SURFACE LANDOWNER'S CONSENT

I, <u>Walter Ferguson</u> , CERT rights on the following lands on which proposes to conduct mine operation	ch <u>Gold King</u>	Corp. holds n	
Section (for use N. of access road) 60' Access Right-of Way 60' Access Right-of Way 60' Access Right-of Way South of County Road 210 60' Right-of-Way S.E. Corner State Section - Grazing Rights	Section 31, Section 31, Section 32, Section 28, Section 25, Section 29, Section 36,	Township 14 N., Township 14 N., Township 14 N., Township 14 N., Township 14 N., Township 14 N., Township 14 N.,	Range 69 W. Range 69 W. Range 69 W. Range 69 W. Range 70 W. Range 69 W. Range 70 W.
County ofLaramie			
I have examined the mining and wholly owned subsidiary of U.S. compliance with the Wyoming E 406(b)(xi), and do hereby approve out said mining and reclamation hereby grant access to the Access Boundary of the mine site to U.S. and invited guests, to enter said I	. Gold Corpor ENVIRONME we said plans, programs on s Road and al s. Gold Corpo	ration, for the CK GENTAL QUALITY and give my consensaid lands as proposed permitted areas wiration/CK Gold Mir	old Mine, in ACT W.S. 35-11- at to enter and carry sed therein. I do thin the Permit
Dated day of	Feb	, 20	23.
	Matter Surface Land	downer (Signature)	
	Walter Fergu Name (printe	uson, President, Ferged or typed)	guson Ranch Inc.
	Witness Nan	ne (printed or typed)	

yZdonsultants.com 307-733-2999

Nov 16, 2022

Mr. Kevin Francis, SME RM, Vice President for Exploration & Technical Services

1807 Capital Avenue, PO Box 4353, Cheyenne, WY 82001

Office: 303.495.2551 Cell/Text: 303.350.0092 kf@usgoldcorp.gold

RE: Traffic Impact Study for Proposed CK Gold Project (AKA "Gold King Mine") in Laramie County, Wyoming

Dear Mr. Francis,

This memorandum describes effects of traffic generated by and distributed from the proposed "CK Gold Project" with a mine access drive on Laramie County Road 210, 1.9 miles west of Happy Jack Road (Wyoming Highway 210) and a bus staging area located on the southwest corner of WYO 210 (Happy Jack Road) and WY 222 (Roundtop Road).

Background traffic and forecast growth were estimated using traffic counts taken August 2nd to 4th, 2022. These counts were grown using growth rates for road links in the Cheyenne Metropolitan Planning Organization (MPO) 2019 and 2045 traffic model to replicate "No-Build" background traffic for the years 2025 and 2035.

A gold mine is a rare land use not listed in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, so new traffic was estimated using planned construction and operations employment and trucking operations for the mine. Project traffic was added to background 2025 and 2035 traffic to estimate "Build" traffic scenarios.

Analysis of truck classes and weights for the project yields an estimated 175,000 Equivalent Single Axle Loadings (ESALs) over the 12-year duration of mine construction and operations. This represents a 45% increase over existing ESALs on Happy Jack Road. All trucks will follow CR-210 and Happy Jack Road from the mine entrance to Roundtop Road. Approximately 90% of trucks will follow Roundtop Road to I-80 and 10% will follow Happy Jack Road to I-25.

Analysis of existing and forecast traffic using the Highway Capacity Software (HCS), reveals that all intersection turn movements will operate at an acceptable level of service C or better for the duration of mine construction and operations. For this reason, Y2 has no recommendations for intersection capacity improvements.

If there are any questions regarding this traffic impact study, please do not hesitate to contact me.

Sincerely,

Edmund Waddell, MUP/MOAA

Community & Transportation Planner

Walled

Y2 Consultants

Atch: Traffic Impact Analysis Memorandum with Appendices A through C

Proposed Development: The proposed development is an open-pit gold and copper mine and ore processing plant with employee access by private bus. The employee parking lot will be at a bus staging area on the southwest corner of State Highway 210 (Happy Jack Rd) and State Highway 222 (Roundtop Road), with driveway access on McKinney Drive.

Project Location: The planned project is located on 2.5 square miles: a combination of 40% state and 60% private property 20 miles west of Cheyenne. Access to the site is via Laramie County Road 210 and Happy Jack Road (SH 210)

• Description: South side of Laramie County Road 210, 1.9 miles west of State Highway 210, Cheyenne, WY

• Lat Long: Latitude 41° 09' 28.55" N Longitude 105° 07' 18.03" W

• Township and Range: Section 36 and S ½ of Section 25 T14N R70W, and Section 31 of T14N R 69W,

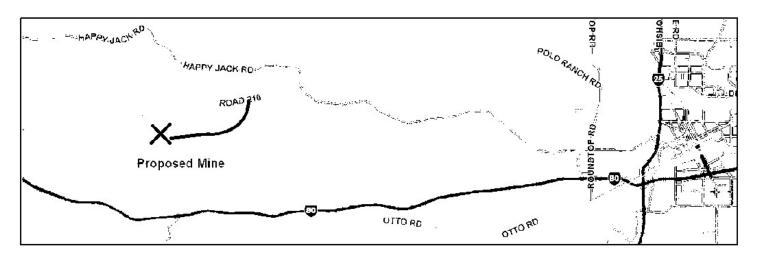
Laramie County, Wyoming

Street Address: 650 County Road 210, Cheyenne, WY

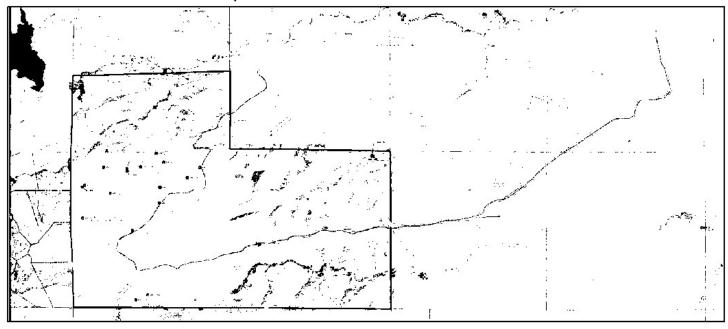
Aerial Road Map:



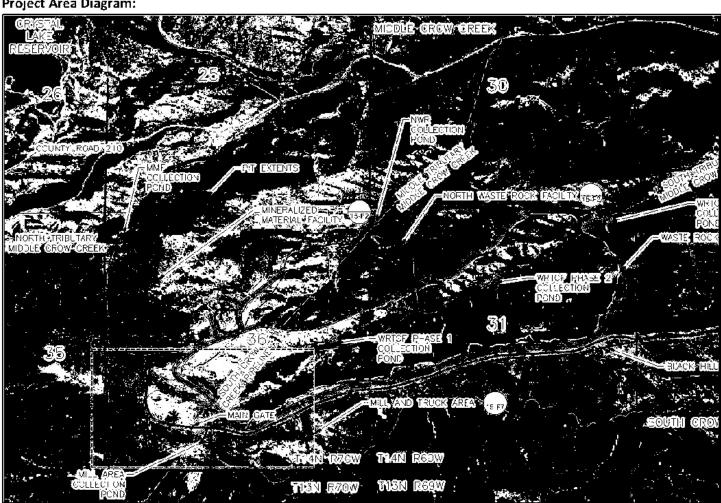
Roads and Lot Lines:



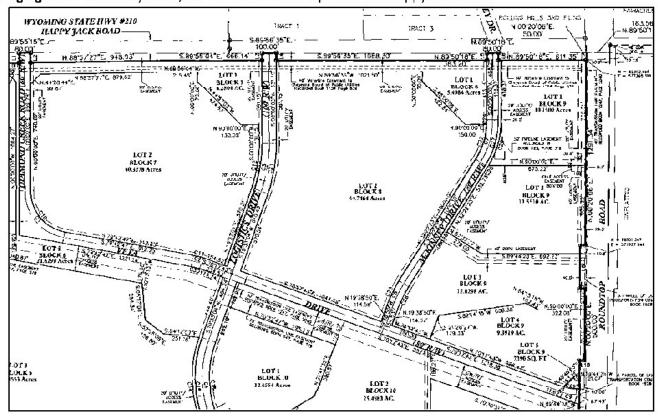
Mine Area and Access Drive to County Road 210:



Project Area Diagram:



Bus Staging Area: McKinney Drive, SW corner of Roundtop Road and Happy Jack Road.



Existing Land Use: Both existing parcels are vacant and do not generate traffic.

Site Access:

- The CK Gold Mine entrance gate is on the south side of Laramie County Road 210, 1.9 miles west of Happy Jack Road.
- Bus Staging Area will be in Lot 1 of the North Range Business Park 3rd Filing (excerpt above) with entrance drives on McKinney Drive south of Happy Jack Road.

Sensitive Location:

- Gilchrist Elementary School is at 1108 Happy Jack Rd. (on the north side of Happy Jack Road, 4,000 feet east of County Road 210). School starts at 8:35 and ends at 3:35. Principal Kristin Cavallier, stated that two buses and 20-30 parent drop-offs arrive before 8:35 AM and then depart. Two buses and 20-30 parent pick-ups arrive before 3:35 PM and depart after 3:35 PM. Principal Cavalier can be reached at (307) 771-2285
- Morning Traffic at Gilchrist Elementary School takes place after buses and light trucks have already reached the mine for the 8AM shift change.
 Returning buses will depart the mine at three-minute intervals and will not impact morning school traffic.
- Afternoon Traffic enters the school parking lot before 3:35 and departs after 3:35. Employee buses spaced at 3-minute intervals will arrive at the mine prior to 3:50 PM and then depart after 4:10 PM after school traffic is gone. *Project buses will not impact afternoon school traffic.*



Existing Traffic (2022):

• Existing peak hour turn movements and connecting link volumes were counted at study intersections during the week of August 4, 2022. The observed peak-hour turn movements are depicted in diagrams in Appendix A.

Available Traffic Vo	lume Counts,	Vehicle, Clas	ss, and Speed	ls (2022):	
Roadway Link	Average Weekday Traffic	Percent Trucks*	AM Peak Volume	PM Peak Volume	85 th Percentile Speed (MPH)
CR 210 west of Happy Jack Road	200	19%	11	26	42.0 EB 35.1 WB
Happy Jack Road north of CR 210	1,500	26%	97	126	65.9 NB 67.2 SB
Happy Jack Road south of CR 210	1,600	24%	95	147	61.7 NB 65.8 SB
*McKinney Drive south of Happy Jack Rd.	J	(-)	-	-	-
*Veta Drive west of Roundtop Rd.	-	-	-	-	-
Happy Jack Road west of Roundtop Rd	4,000	23.5%	265	310	59.4 EB 59.7 WB
Happy Jack Road east of Roundtop Road	3,750	22.5%	259	296	62.1 EB 59.8 WB
Roundtop north of Happy Jack	1,100	26.2%	83	104	42.2 NB 44.6 \$B
Roundtop south of Happy Jack	1,700	33.1%	123	148	49.7 NB 46.3 SB
Horizon Drive west of Roundtop Road	2,650	-	=	_	-
Roundtop south of Horizon Drive	3,750	-	-	-	17.
Westbound I-80 Off Ramp at Roundtop	1,490	19 <u>1</u> 19	10 <u>x</u>	-20	12
Westbound I-80 On Ramp at Roundtop	100	-	-		-
Eastbound I-80 Off Ramp at Roundtop	120	1121	=		121
Eastbound I-80 On Ramp at Roundtop	1,450	-	-	-	•
Roundtop south of I-80	600	29.7%	39	72	55.1 NB 58.6 SB
Southbound I-25 Off Ramp at Missile Drive	2,375	-	-	-	-
Southbound I-25 On Ramp at Missile Drive	515	-		-0	-
Northbound I-25 Off Ramp at Missile Drive	700		-	-1	
Northbound I-25 On Ramp at Missile Drive	2,500	1.	PA	-	•
Missile Drive east of I-25	7,950	20.4%	650	706	44.1 EB 46.2 WB

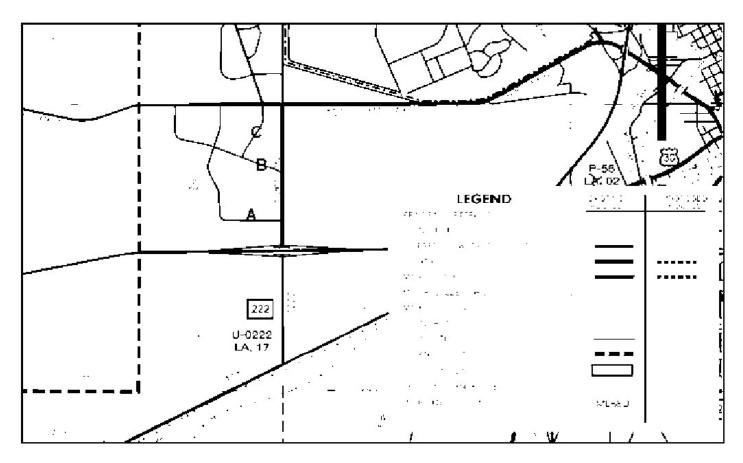
^{*} This percentage includes all vehicles Class 5 or above, which captures pickups with dual rear tires. These are not considered heavy vehicles for capacity purposes.

^{*} McKinney Drive and Veta Drive are recently platted access streets with no adjacent development and minimal traffic.

,	Existing (2022) Intersection AM and PM Peak Hour Factors (PHF)									
Intersection	Intersection	AM Peak Hour	PM Peak Hour							
#		Factor	Factor							
1	CR 210 at Mine Entrance Drive	.8981	.8547							
2	Happy Jack Road at CR 210	.8981	.8547							
3	Happy Jack Road at McKinney Drive	.8409	.8615							
4	Happy Jack Road at Roundtop Road	.8409	.8615							
5	Roundtop Road at Veta Drive	.8409	.8615							
6	Roundtop Road at Westbound I-80 Ramps	.8409	.7983							
7	Roundtop Road at Eastbound I-80 Ramps	.8889	.8164							
8	Happy Jack Road / Missile Drive at Southbound I-25 Ramps	.9452	.8631							
9	Happy Jack Road / Missile Drive at Northbound I-25 Ramps	.8971	.9222							

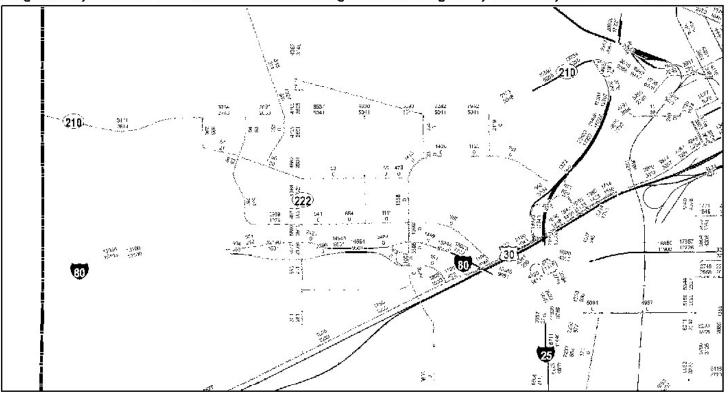
Existing Roadway Functional Classes: In 2015, Cheyenne Metropolitan Planning Organization (MPO) formally classified study area roads as follows:

I-80 and I-25: Interstate
 Happy Jack Road: Minor Arterial
 Roundtop Road north of I-80: Minor Arterial
 Roundtop Road south of I-80: Major Collector
 A (Horizon Drive / Logistics Drive): Major Collector
 B (Veta Drive) Local Street
 C (McKinney Drive)



Forecast Baseline (No-Build) Traffic (2025 and 2035): Future traffic growth was estimated using link-specific growth rates from the Cheyenne MPO fiscally constrained traffic model, shown below. The Base Year is 2019 and the Forecast Year is 2045. The traffic growth rate is assumed to be uniform year to year. Turn movement forecast used the percentage of model growth occurring between the base year 2022 and forecast years 2025 and 2035. Forecast turn movements are shown in diagrams in Appendix A.

Image of Cheyenne MPO Travel Demand Model showing Forecast Average Daily Traffic for years 2019 and 2045:



Trip Generation: The following employment data was used to estimate employee traffic at the mine, bus staging area, and connecting links during AM and PM peak periods:

Construction Phase Trip Estimates:

- Construction Phase Peak Hour Trip Generation: Construction at the mine site is planned for 2024-2025. Employee numbers will vary from month to month, with an expected average of 170 construction workers, and a maximum of 349 total employees during month 16 of construction (about June 2025).
- Construction Phase Maximum Traffic: Construction employment will peak in June 2025 and then taper off (chart below). In peak month 16 (about June 2025) 349 personnel will work the day shift from 8 AM to 4 PM, arriving at the project on 7 company buses. Fifty other employees will arrive at odd times via 24 light trucks.

This analysis uses that peak month combined with 2025 background traffic volumes for the worst-case construction traffic generation estimate. These generated trips were added to 2025 AM and PM background growth to develop construction phase "BUILD" traffic estimates.

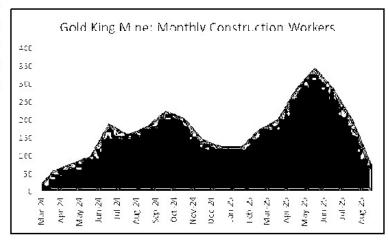


Table of Estimated Monthly Construction Employment:

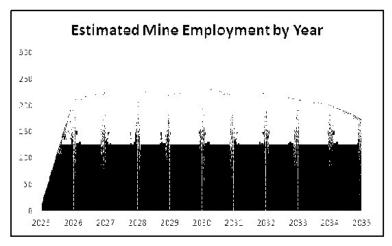
	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Duc-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-2
Construction Skill	•																		
Laborers	1	5	- 5	44	76	50	57	90	72	35	31	31	31	31	55	73	55	32	8
Öperators	7	23	26	.26	45	45	45	45	45	2.2	10	10	10	10	20	30	29	10	2
Ironworkers		Q		į.	211	20	35	35	35	35	35	35	35	48	68	75	68	31	2
Truck Drivers	5	16	16	16	16	10	10	10	8	8	4	4	4	4	8	8	8		
Electricians					20	20	50	30	30	30	31	30	35	49	70	90	70	70	-5
Craft Supervision				2	3	.3	- 3	3	- 3	.3	3	- 3	.3	3	-5	10	5	4	4
Construction Inspector/Engineer	1	1	2	2	2	2	2	2	2	2	2	2	4	4	8	8	4	4	4
Health and Safety Specialists	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Construction Management	1	1	1	1	1	2	2	2	2	2	2	2	2	2	4	4	2	2	2
Construction Total Employees	16	50	51	92	184	153	175	218	198	138	118	118	125	153	249	299	234	153	28
Quarterly Average	16		85		-	1/1			18h		2	121		2	231		,	139	
Owners Team/Mining during Const.																			
Mining and Geological Engineers	2	2	2	2	2	2	2	2	-	2	,	2	2	2	2	1	2	2	2
Excavating Loading Operators surf.	8	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Earth Dr Ilars			2	2	2	2	2	2	2	2	2	2	2	2	- 2	2	2	2	2
Explosive Workers		g 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Extractive Workers, All Other													10	10	10	10	79	10	10
Plant and System Operators				F			-	100		7	4 1		30	30	30	30	30	30	30
Owners Total Employees	10	10	10	19	10	10	10	10	10	10	10	10	50	50	50	50	50	50	50
Quarterly Average	19	e) - 1	10	<i>(5</i>)	0 1	10	e e	A1 8	10		61 8	24	Ø.	A1 2	50	0.5	63 8	50	98

Peak Hour Constru	ction Phase Traffic (Generation (Max Emp	oloyees in Month 16,	, Year 2025)
	AM Inbound	AM Outbound	PM Inbound	PM Outbound
	Vehicles	Vehicles	Vehicles	Vehicles
Mine Traffic	24 POV's in	0 POVs Out	0 POV's In	24 POV's Out
	7 Buses In	7 Buses Out	7 Buses In	7 Buses Out
MINE TOTAL	31 IN	7 OUT	7 IN	31 OUT
	7:30-8:30 AM	7:30-8:30 AM	3:30-4:30 PM	3:30-4:30 PM
Bus Staging Area Traffic:	349 POV's In	26 POV's Out*	26 POV's In	349 POV's Out
	0 Buses In	7 Buses Out	7 Buses In	0 Buses Out
BUS STAGING AREA TOTAL	349 IN	33 OUT	33 IN	349 OUT
	7:00-8:00 AM	7:00-8:00 AM	4:00-5:00 PM	4:00-5:00 PM

^{*}For estimation purposes, we assume 8% of employees will be dropped off and picked up at the staging area.

Mine Production Phase Trip Estimates:

• Mine Operations Phase Employment: During peak mining operations in about the year 2030, Gold King Mine is expected to operate with a maximum of about 234 daily employees, working three shifts. The day shift, from 8 AM to 4 PM, will have 106 employees. The swing shift from 4 PM to Midnight and midnight shift from Midnight to 8 AM are planned for 64 employees each. The larger day shift will create the AM peak and PM peak traffic volumes.



- **Travel time to the Mine:** The bus trip from Gold King Mine to the Staging Area takes about 25 to 30 minutes, so peak hours do not occur at the same time at the mine and the staging area.
- AM Traffic Operations during the Production Phase. The 106 day-shift employees will arrive at the bus staging area from I-25 and I-80 by private vehicles, and board 2-to-3 buses that will depart for the mine between 7:20 AM and 7:30 AM. Seven light trucks will carry 12 other non-shift personnel, including management, government staff, and visitors. Buses will arrive at the mine about 7:35 to 7:45 and the AM shift change will take place at 8 AM. Buses carrying 64 midnight shift workers will then depart the mine starting at about 8:10 AM and arrive back at the staging area between 8:35 and 8:45 AM.

AM Peak Hour at the Mine: At the mine, the AM peak will take place from 7:30 to 8:30 AM as the day shift buses and light trucks arrive and the night shift worker buses depart.

AM Peak Hour at the Bus Staging area: At the bus staging area, the AM Peak hour will take place as day shift workers arrive prior to 7:20 AM and board buses to the mine leaving between 7:20 AM and 7:25 AM. The smaller (64 worker) night shift will not return to the staging area until after 8:30 AM so they will not be part of AM Peak Hour traffic flows. The AM peak at the Bus Staging Area will be from 7AM to 8 AM.

• PM Traffic Operations during the Production Phase. The 64 swing-shift employees will arrive at the bus staging area by private vehicles and board 2-to-3 buses that will depart for the mine between 3:20 PM and 3:30 PM. Buses will arrive at the mine about 3:35 to 3:45 for the PM shift change at 4 PM. Buses carrying 106 day-shift workers will then depart the mine starting at about 4:10 PM and arrive back at the staging area between 4:35 and 4:45 PM. Seven light trucks will carry 12 other non-shift personnel, including management, government staff, and visitors. For a conservative estimate, we will include these vehicles in the PM Peak traffic. After 4:35 PM, day shift workers will then depart the bus staging area by private vehicle toward the I-25 and I-80 interchanges.

PM Peak Hour at the Mine: At the mine, the PM peak will take place from 3:30 to 4:30 PM as the swing shift arrives at the mine and day shift workers depart the mine.

• PM Peak Hour at the Bus Staging area: At the bus staging area, the PM Peak hour will take place as day shift buses arrive at the staging area between 4:35 and 4:45 PM and day-shift workers drive home. The PM peak at the Bus Staging Area will be from 4:30 PM to 5:30 PM. The smaller (64 worker) swing shift will arrive at the staging area prior to 3:20 and will not be part of the main PM Peak Hour traffic flows.

Peak Hour Production Phase Traffic Generation (Maximum Employees through the Year 2035)							
	AM Inbound Vehicles	AM Outbound Vehicles	PM Inbound	PM Outbound			
Mine Traffic	3 Buses 7 Light Trucks	3 buses	3 buses	3 buses 7 light Trucks			
MINE TOTAL	<u>10</u>	<u>3</u>	<u>3</u>	<u>10</u>			
	7:30-8:30 AM	7:30-8:30 AM	3:30-4:30 PM	3:30-4:30 PM			
Bus Staging Area Traffic:	106 POVs	9 POV's 3 Buses 7 Light Trucks	9 POVs 3 Buses 7 Light Trucks	106 POV's			
BUS STAGING AREA TOTAL	<u>106</u>	<u>19</u>	<u>19</u>	<u>106</u>			
	7:00-8:00 AM	7:00-8:00 AM	4:00-5:00 PM	4:00-5:00 PM			

Trip Distribution Calculations:

A spreadsheet gravity model was used to estimate traffic interaction with major labor markets. The largest city in each county was used to estimate the travel time to the Bus Staging Area. An adjustable friction exponent allows sensitivity testing to adjust for the travelers' perceived value of travel time. Generally, higher wages will make workers tolerate longer commutes. Model results are in the following tables:

Peak Employment Distribution based on Distance from Bus Staging Area

Units	Rate	Pi	Friction Exponent						
1	100	232	1						
Place	Size	Travel Time	F Factor	PiAjFij	Tij	Pct			
Laramie	38,664	40	0.025000	224251	7	3.0%	3%	Westbound	
Cheyenne	99,272	10	0.100000	2303110	71	30.7%	97%	Eastbound	
Denver	715,878	90	0.011111	1845374	5 7	24.6%			
Ft Collins	350,523	42	0.023810	1936222	60	25.8%			
Greeley	315,389	61	0.016393	1199512	37	16.0%			
				7508471	232	100%			
Units	Rate	Pi	Friction Ex	ponent					
1	100	232	1.5						
Place	Size	Travel Time	F Factor	PiAjFij	Tij	Pct			
Laramie	38,664	40	0.003953	35457	6	2.5%	3%	Westbound	
Cheyenne	99,272	10	0.031623	728307	120	51.6%	97%	Eastbound	
Denver	715,878	90	0.001171	194520	32	13.8%			
Ft Collins	350,523	42	0.003674	298766	49	21.2%			
Greeley	315,389	61	0.002099	153582	25	10.9%			
				1410632	232	100%			
Units	Rate	Pi	Friction Ex	ponent					
1	100	232	2						
Place	Size	Travel Time	F Factor	PiAjFij	Tij	Pct			
Laramie	38,664	40	0.000625	5606	4	1.7%	2%	Westbound	
Cheyenne	99,272	10	0.010000	230311	166	71.5%	98%	Eastbound	
Denver	715,878	90	0.000123	20504	15	6.4%			
Ft Collins	350,523	42	0.000567	46101	33	14.3%			
Greeley	315,389	61	0.000269	19664	14	6.1%			
				322186	232	100%			
Units	Rate	Pi	Friction Ex	ponent					
1	100	232	3						
Place	Size	Travel Time	F Factor	PíA]Fíj	Tij	Pct			
Laramie	38,664	40	0.000016	140	1	0.6%	1%	Westbound	
Cheyenne	99,272	10	0.001000	23031	215	92.8%	99%	Eastbound	
Denver	715,878	90	0.000001	228	2	0.9%			
Ft Collins	350,523	42	0.000013	1098	10	4.4%			
Greeley	315,389	61	0.000004	322	3	1.3%			
				24819	232	100%			

Gravity model sensitivity testing yields the following findings:

- Due to its greater distance and smaller population, only 3% or less employee trips will be produced in The City of Laramie or Albany County. This was the maximum percentage using any travel time coefficient.
- Modification of the value of travel time alters the percentage of workers from Cheyenne vs northern Colorado.
- Cheyenne/Laramie County produces from 31% to 93% of trips, averaging about 62%.
- Due to its large population, Denver County produces from 0.9% to 25% of trips, averaging about 12%.
- Fort Collins/Larimer County produces 4% to 26% of trips, averaging about 15%
- Greeley / Weld County produces 5.8% to 16.5% of trips with a mean of 11.0%.

Given these model results, we project that 97% of employee and contractor traffic will come from Cheyenne and the Front Range region, via Interstate 80 and Interstate 25. The remaining 3% will come from Albany County via the I-80 Roundtop Interchange.

Mode Choice: Given the lack of transit service and distance of the Bus Staging Area from regional labor markets, all commuting trips are assumed to arrive by privately owned vehicle "POV".

Vehicle Occupancy Rate: The typical US vehicle occupancy for work trips is 1.08 to 1.16 persons per vehicle.¹ Due to the potential long-distance commuting in Wyoming, we have assumed the lower rate of 1.08. So, for estimation purposes, we assume that 8% of shift employees will be dropped off and picked up at the bus staging area.

Traffic Assignment Methodology: Traffic was assigned using "All-or-Nothing" assignment to the shortest travel path to and from the Bus Staging Area. For simplicity, employee trips were split 50/50 between the I-25/Missile Drive and I-80/Roundtop Road interchanges. All mine trucks will be directed to the I-80/Roundtop interchange.

Traffic Forecast Scenarios: Detailed turn movements were estimated for the following traffic scenarios:

Year 2022 Counts

Year 2025 No-Build
 Year 2025 with Construction Traffic
 Year 2035 No-Build
 Year 2035 with Mine Operations Traffic

Capacity Analyses: Capacity analyses were conducted for the nine study area intersections using the Highway Capacity Software (HCS 2023) with capacity parameters in the *Highway Capacity Manual 7th Edition A Guide for Multimodal Mobility Analysis (2022).* Capacity Analyses were conducted for the following eight scenarios:

Year 2025 AM & PM No-Build
 Year 2025 AM & PM Build (with Construction Traffic)

Year 2035 AM & PM No-Build
 Year 2035 AM & PM Build (with Mining Traffic)

"No-Build" traffic scenarios assume the mine isn't built and existing traffic grows as projected in the Cheyenne MPO traffic model. "Build" scenarios assume that mine-generated traffic is added onto "no-build" traffic.

The output of capacity analysis is an estimate of seconds of delay and resulting "Level of Service" for each traffic movement at an intersection.

Explanation of "Level of Service:"

⁻

¹ Summary of Travel Trends, 2017 National Household Travel Survey, Federal Highway Administration Office of Policy and Governmental Affairs, Washington DC, 2017.

- Level of Service (LOS) is a measure of expected or actual delay or traffic density.
- Level of Service at intersections is based on seconds of delay per vehicle.
- Road agencies establish acceptable level of service performance for their road systems.
- Typically, a forecast LOS of D or better is considered acceptable.
- Level of Service is more restrictive at unsignalized intersections because drivers do not know when they can enter the intersection and may become impatient more quickly.

Level of Service: U	nsignalized Intersections	Level of Service: Signalized Intersections		
А	< 10 seconds	A	< 10 seconds	
В	10 to 15 seconds	В	10 to 20 seconds	
С	15 to 25 seconds	С	20 to 35 seconds	
D	25 to 35 seconds	D	35 to 55 seconds	
E	35 to 50 seconds	E	55 to 80 seconds	
F	> 50 seconds	F	> 80 seconds	

Capacity Findings:

- Capacity analysis was completed using the Highway Capacity Software for eight traffic scenarios at all nine intersections. Under all scenarios, every intersection turn movement operates at a Level of Service C or better.
- The following tables list the projected peak-hour level of service and seconds of delay for the worst-case traffic movement at each intersection, and the average for all vehicles in the intersection.

SIGNALIZED INTERSECTIONS (I-25 Interchange Ramp Terminals)							
Intersection	Scenario	AM Peak LOS & Max Delay	PM Peak LOS & Max Delay	AM Avg LOS & Average Delay	PM Avg LOS & Average Delay		
Happy Jack Road at I-25 Southbound Ramps	2025 No Build	LOS C 30.9 Secs	LOS C 27.6 Secs	LOS B 13.9 Secs	LOS B 19.6 Secs		
	2025 Build	LOS C 30.9 Secs	LOS C 28.0 Secs	LOS B 14.0 Secs	LOS B 17.9 Secs		
	2035 No Build	LOS C 30.7 Secs	LOS C 27.8 Secs	LOS B 15.0 Secs	LOS B 19.9 Secs		
	2035 Build	LOS C 30.7 Secs	LOS C 27.9 Secs	LOS B 15.0 Secs	LOS B 19.6 Secs		
Missile Drive at I-25 Northbound Ramps	2025 No Build	LOS C 27.0 Secs	LOS C 32.3 Secs	LOS A 9.5 Secs	LOS A 4.5 Secs		
	2025 Build	LOS C 28.2 Secs	LOS C 31.5 Secs	LOS B 12.1 Secs	LOS A 4.8 Secs		
	2035 No Build	LOS C 26.4 Secs	LOS C 31 Secs	LOS A 10.0 Secs	LOS B 5.0 Secs		
	2035 Build	LOS C 27.5 Secs	LOS C 30.9 Secs	LOS B 11.0 Secs	LOS A 5.1 Secs		

UNSIGNALIZED INTERSECTION CAPACITY ANALYSES						
Intersection	Traffic Scenario	AM Peak Level of Service & Max Delay	PM Peak Level of Service & Max Delay			
	2025 No Build	LOS A – 5.0 Secs	LOS A – 5.0 Secs			
Gold King Mine Access Road	2025 Build	LOS A – 8.4 Secs	LOS A - 8.5 Secs			
at CR 210	2035 No Build	LOS A – 5.0 Secs	LOS A – 5.0 Secs			
	2035 Build	LOS A - 8.4 Secs	LOS A - 8.4 Secs			
	2025 No Build	LOS A – 8.7 Secs	LOS A – 8.7 Secs			
County Road 210	2025 Build	LOS A – 8.7 Secs	LOS A – 8.7 Secs			
at Happy Jack Road	2035 No Build	LOS A – 8.7 Secs	LOS A – 8.8 Secs			
	2035 Build	LOS A – 8.8 Secs	LOS A - 8.7 Secs			
	2025 No Build	LOS B – 10.4 Secs	LOS B – 10.8 Secs			
Happy Jack Road	2025 Build	LOS C – 15.8 Secs	LOS B - 13.7 Secs			
at McKinney Drive	2035 No Build	LOS B – 10.8 Secs	LOS B - 11.0 Secs			
	2035 Build	LOS B – 12.2 Secs	LOS B — 11.6 Secs			
	2025 No Build	LOS B – 11.4 Secs	LOS B – 11.5 Secs			
Happy Jack Road	2025 Build	LOS A – 8.8 Secs	LOS B - 13.6 Secs			
at Roundtop Road	2035 No Build	LOS B – 12.1 Secs	LOS B – 12.2 Secs			
	2035 Build	LOS B – 13.6 Secs	LOS B – 13.6 Secs			
	2025 No Build	LOS A – 5.0 Secs	LOS A – 5.0 Secs			
Roundtop Road	2025 Build	LOS A – 8.8 Secs	LOS A – 9.7 Secs			
at Veta Drive	2035 No Build	LOS A – 5.0 Secs	LOS A – 5.0 Secs			
	2035 Build	LOS A – 9.0 Secs	LOS A – 9.1 Secs			
	2025 No Build	LOS B – 10.2 Secs	LOS B – 10.6 Secs			
Roundtop Road at	2025 Build	LOS B – 14.6 Secs	LOS B – 14.0 Secs			
I-80 Westbound Ramps	2035 No Build	LOS B – 11.0 Secs	LOS B – 11.5 Secs			
	2035 Build	LOS B – 11.7 Secs	LOS B - 13.3 Secs			
	2025 No Build	LOS A – 8.8 Secs	LOS A – 8.8 Secs			
Roundtop Road at	2025 Build	LOS A – 8.8 Secs	LOS A – 8.8 Secs			
I-80 Eastbound Ramps	2035 No Build	LOS A – 8.7 Secs	LOS A – 8.8 Secs			
	2035 Build	LOS A – 8.7 Secs	LOS A – 8.8 Secs			

Capacity Findings:

All intersection turn movements are projected to operate at level of service C or better for the duration of mine construction and operations. There were no capacity failures. All existing road and intersection capacities appear sufficient to accommodate projected traffic volumes resulting from the Gold King Mine.

Recommendations:

Y2 has no recommendations for roadway or intersection capacity improvements.

TRUCKS

Most truck trips take place during off-peak times, so they do not impact intersection capacity performance. The main potential impact of heavy trucks is due to their axle weights and cumulative effects on road pavements and bridge structures.

To avoid impacting the *Medicine Bow National Forest* and *Curt Gowdy State Park* recreation areas, the CK Gold Project will direct trucks east on Happy Jack Road to the Interstate-80 Roundtop Road Interchange for access to the interstate highway system.

In transportation analysis, the term "trip" is always one way, from point A to point B. The return from B to A is another "trip." Total vehicle trips during peak 24-hour mining operations will include vehicle types in the following table

Construction Phase Heavy Trucks: Each day of construction will generate about 16 truck trips (8 in and 8 out) of various types (cement, steel, equipment, surveyors, QA/QC, etc.). These trucks will be primarily owned, operated, and permitted by independent contractors.

Construction vehicles will include a variety of types for different purposes, mostly owned and operated by contractors. We expect that contractors will assure their own trucks are properly configured and permitted by WYDOT. The following table shows the approximate daily average number and weight of vehicles of each type.

Construction Phase (2024-2025): Average Daily Buses and Trucks							
Vehicle Type	FHWA Class	Axles	Average Personnel	Persons per Vehicle	Average Vehicle Trips Per Day	Average Vehicle Weight (lbs.)	Weight per Axle
Bus	4	2	207	50	10	Laden: 48,000 Unladen: 35,000	17,500 to 24,000
4- Tire Single-Unit Light Truck	3	2	50	2.5	48	6,000	3,000
Cement Truck	7	4+1	1	1	2	Laden: 66,000 Unladen: 26,000	6,500 to 13,500
Steel Truck 16 Wheel 5-Axle Tractor Trailer	9	5	1	1	1.0	Laden 80,000 Unladen 35,000	7,000 to 16,000
Equipment Truck 16 Wheel 5-Axle Tractor Trailer	9	5	1	1	6	Laden 80,000 Unladen35,000	7,000 to 16,000
QA/QC Truck	3	2	2	2	1	6 ,0 00	3,000
Surveyor Truck	3	2	1	1	2	6,000	3,000
TOTAL DAILY TRIPS	ss.				<u>73</u>		

Heavy Vehicles During Operations: Once construction is complete, the CK Gold project will operate three daily shifts 24/7 from 2026 through 2035. The facility is planned to process 20,000 tons of rock daily, producing 160 tons of metal ore concentrate. Metal ore concentrate will be loaded into industrial bags and shipped out on five, 5-axle "flatbed" or "dry-van" tractor-trailers, with each truck carrying 64,000 pounds (32 tons) of concentrate. Ore trucks will be selected to comply with the WYDOT truck size and weight regulation "Gold Book," December 2013.



Operations Phase Heavy Trucks.

- During operations, about nine delivery truck trips will take place daily (4.5 trips in and 4.5 trips out).
 These trucks will arrive laden and depart empty.
- Also, during operations, ten ore truck trips will take place daily: 5 trucks will arrive empty and depart with 25 tons of ore concentrate.

Equivalent Single Axle Loadings (ESALs):

"ESALs" are a measure of the pounding a pavement receives from vehicles passing over it. One ESAL is equivalent to the pavement stress caused by one 18,000-pound axle with four tires. Light vehicles have little effect on pavements, but as vehicles (and their axles) increase in weight, the stress on pavements increases exponentially.

Existing ESALs on WYO 210 (Happy Jack) west of WYO 222 (Roundtop Road) were estimated based on vehicle classification counts taken Tuesday, August 2, 2022. On that weekday, 3993 vehicles used Happy Jack Road, classified as follows:

Vehicle Class	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of Vehicles	47	1,907	1,054	39	876	32	0	17	16	3	1	0	1
Percent	1.2%	47.8%	26.4%	1.0%	21.9%	0.8%	0.0%	0.4%	0.4%	0.1%	0.0%	0.0%	0.0%

Based on existing vehicle volumes and a projected 2% growth rate for trucks, the estimated total "No-Build" ESALs for the next 12 years on Happy Jack Road are 390,000, or approximately 30,000 ESALs annually.²

Analysis of expected truck classes and loads weights yielded an estimate of $^{\sim}175,000$ additional Equivalent Single Axle Loadings (ESALs) resulting from the project over the 12-year duration of construction and operations. The average is about 14,600 ESAL's annually. 100% of trucks will follow CR-210 and Happy Jack Road from the mine entrance to Roundtop Road. About 90% of trucks will then follow Roundtop Road to I-80 and 10% will follow Happy Jack Road to I-25.

ESAL Finding: The effect of mine construction and operations on ESALs on Happy Jack Road is an estimated increase from 390,000 to 565,000 ESALs over the 12 years from 2024 through 2035, representing an increase of 45%.

² Source: Connecticut DOT:

HEAVY VEHICLE AND ESAL ESTIMATES

CONSTRUCTION PHASE (About Mar 2024 - Sep 2025: 19 months)

Vehicle Type	Cargo	FHWA Class	Axles	Weight Inbound	Number Per Year	ESALS (bit)	Weight Outbound	Number Per Year	ESALS (bit)	PHASE TOTAL ESALS (Bituminous)
BUSES	Employees	4	2	48,000	2,520	3,326	48,00 0	2520	3,326	10,534
TRUCKS										
	Cement	7	4+1	66,000	365	585	26,000	365	369	1,509
	Steel	9	5	80,000	183	433	35,000	183	188	982
	Equipment	9	5	80,000	1,080	2,560	35,000	1,080	1,112	5,814
PHASE TO	 TAL (19 Months)									18,839
			12 Month	19 Months			9.			
	Eastbound Total ESALs		4,995	7,909						
	Westbound Total ESALS		6,903	10,930		7	7d - 1			

PRODUCTION PHASE (About Oct 2025 - Sep 2035: 120 Months)

Vehicle Type	Cargo	FHWA Class	Axles	Weight Inbound	Number Per Year	ESALS	Weight Outbound	Number Per Year	ESALS	PHASE TOTAL ESALS (Bituminous)
BUSES	Employees	4	2	48,000	2160	1,253	48,000	2160	1,253	25,056
TRUCKS	Long Distance Deliveries (Incoming Via I-80)									
	Grinding Balls	9	5	75,000	329	944	35,000	329	339	12,831
	MIBC	9	5	67,000	25	51	35,000	25	26	768
	Collector 1	9	5	67,000	5	10	35,000	5	5	154
	Collector 2	9	5	67,000	5	10	35,000	5	5	154
	Flocculant	9	5	67,000	23	47	35,000	23	24	706
	Frother 2	9	5	67,000	5	10	35,000	5	5	154
	Coagulant	9	5	67,000	5	10	35,000	5	5	154
	Lime	9	5	75,000	1 10	316	35,000	110	1 1 3	4,290
	Mill/Crusher Liners	9	5	59,000	2	3	35,000	2	2	51
	Maintenance Spares	8	4	33,000	39.6	20	26,000	39.6	20	404
	Bentonite	8	5	80,000	36 5	86 5	35,000	365	621	14,856
	Local Deliveries (Incoming Via I-80 and I-25)						9			
	Emulsion (Neutral)	7	4+	48,000	500	660	20,000	500	500	11,600
	Explosive Consumables	6	3	10,000	12	1	3,300	12	1	24
	Drilling Consumables	6	3	40,000	12	2	26,000	12	12	139
	Truck Parts	6	3	10,000	12	0.1	3,300	12	1	13
	Tires	7	4+	45,000	6	7	33,000	6	6	136
	Fuel	7	5	80,000	227	539	35,000	227	239	7,773
	Ore Shipments (Outgoing Via I-80 West)						<i>2</i> 7 0			
	Gold Ore Concentrate	9	5	35,000	1898	3,227	80,000	1898	4,498	77,249
PHASE TO	TAL ESALs (10 years)				5741		2) S	5741		156,508
PHASE AN	INUAL ESALS						7			15,651
GOLD KIN	 G MINE TOTAL ESALS 2024-203 	36						8		175,348
			12 Month	10 Years	12 years		20 0 S) 0			
	Eastbound Total ESALs		7,676	76,757	84,666					
	Westbound Total ESALS		7,975	79,752	90,682		20 50			

³ Source: <u>Alaska Pavement Design Manual Chapter 6: Design Input - Equivalent Single Axle Loads,</u> Alaska DOT, July 2020.

Operations Phase (2026-2035): Average Daily Buses, Trucks, Axles and Weights									
Vehicle Type	FHWA Class	Axles	Personnel	Persons per Vehicle	Average Vehicle Trips Per Day	Average Vehicle Weight (lbs.)	Weight per Axle		
Workers and Visitors to and from Bus Staging Area									
Buses (all 3 shifts)	4	2	240	50	28	Laden: 48,000 Unladen: 35,000	17,500 to 24,000		
General Manager	3	2	1	1	4	6,000	3,000		
Government Officials	3	2	2	2	0.2	6,000	3,000		
Visitors	3	2	2	1	0.2	6,000	3,000		
TOTAL DAILY TRIPS					<u>33</u>				

Process Plant Op	erations -	- Delive	ries from De	enver/Salt La	ake via I-80	Roundtop Interch	nange
Vehicle Type	FHWA Class	Axles	Personnel	Persons per Vehicle	Average Daily Vehicle Trips	Average Vehicle Weight (lbs.)	Weight per Axle
Grinding Balls 5-Axle Tractor Trailer	9	5	1	1	1.8	Laden 75,000 Unladen 35,000	7,000 to 15,000
Methyl Isobutyl Carbinol (MIBC) 5-Axle Tractor Trailer	9	5	1	1	0.2	Laden 67,000 Unladen 35,000	7,000 to 13,400
Collector 1 5-Axle Tractor Trailer	9	5	1	1	0.04	Laden 67,000 Unladen 35,000	7,000 to 13,400
Collector 2 5-Axle Tractor Trailer	9	5	1	1	0.04	Laden 67,000 Unladen 35,000	7,000 to 13,400
Flocculant 5-Axle Tractor Trailer	9	5	1	1	0.2	Laden 67,000 Unladen 35,000	7,000 to 13,400
Frother 2 5-Axle Tractor Trailer	9	5	1	1	0.04	Laden 67,000 Unladen 35,000	7,000 to 13,400
Coagulant 5-Axle Tractor Trailer	9	5	1	1	0.04	Laden 67,000 Unladen 35,000	7,000 to 13,400
Lime 5-Axle Bulk Tanker	9	5	1	1	0.6	Laden 75,000 Unladen 35,000	7,000 to 15,000
Mill/Crusher Liners 5-Axle Tractor Trailer	9	5	1	1	0.02	Laden 59,000 Unladen 35,000	7,000 to 11,800
Maintenance Spares Various Classes	8	4	1	1	0.2	Laden 33,000 Unladen 26,000	6,500 to 8,500
Bentonite Bulk Tanker	9	5	1	1	2	Laden 80,000 Unladen 35,000	7,000 to 16,000
TOTAL DAILY TRIPS					<u>5</u>		•

Operations – Deliveries from Buckley Powder (Cheyenne) Denver & Salt Lake via I-80/Roundtop									
Vehicle Type	FHWA Class	Axles	Personnel	Persons per Vehicle	Average Vehicle Trips Per Day	Average Vehicle Weight (lbs.)	Weight per Axle		
Emulsion (Neutral) Bulk Tanker	7	4+	1	1	2.7	Laden 48,000 Unladen 20,000	5,000 to 12,000		
Explosives 3-Axle Single-Unit	6	3	1	1	.06	10,000	3,300		
Drilling Consumables 3-Axle Single Unit	6	3	1	1	.06	Laden 40,000 Unladen 26,000	8,700 to 13,300		
Truck Parts 3-Axle Single Unit	6	3	1	1	.06	10,000	3,300		
Tires 4+-Axle Single Unit	7	4+	1	1	.03	Laden 45,000 Unladen 33,000	8,250 to 11,250		
<u>Fuel</u> <u>Bulk Tanker</u>	7	5	1	1	1.3	Laden 80,000 Unladen 35,000	to 20,000		
TOTAL DAILY TRIPS					<u>4.5</u>				

Ore Concentrate Shipments from CK Gold Project to Salt Lake City via I-80 / Roundtop Interchange							
Vehicle Type	FHWA Class	Axles	Personnel	Persons per Vehicle	Average Daily Vehicle Trips	Average Vehicle Weight (lbs.)	Weight per Axle
Ore Concentrate 5-Axle Flatbed Semi	9	5	1	1	10	Laden 80,000 Unladen 35,000	7,000 to 16,000
TOTAL DAILY TRIPS					10		

FHWA Vehicle Classification Chart:

Class I Motorcycles Class 2 Passenger cars	₩	Class 7 Four or more axle, single unic .	
		Class 8 Four or less axlesingle trailer	
Class 3 Four tire, single unit		Class 9 S-Axle tractor semitrailer	
Class 4 Buses		Class 10 Six or more axle, single trailer Class 11	
Class 5 Two axic, six ture, single unit		Frve or less axic, multi-trailer Class 12 5ix axie, multi-trailer	
Class 6		Class 13 Seven or more axle, multi-trailer	
Three axie. single unst			

Existing System Descriptions and Photos:

TEE Intersection of CK Gold Project Access Drive at CR 210:

- The entry gate road for Gold King Mine intersects Laramie County Road 210 on the south 1.9 miles west of Happy Jack Road.
- **Gold King Mine Access Drive** is currently a one lane dirt road that extends about 4.5 miles southwest from County Road 210 to the mine.
- County Road 210 at the Mine Entrance Drive is a 30-foot-wide gravel road. A culvert crosses under Hwy 210 on the east leg of the intersection.
- CR 210 West of the Gold King Mine Road becomes a winding gravel/dirt road and crosses into Albany County before intersecting Interstate 80 at Buford, 11 Miles west of the mine entrance. Although the dirt road is well maintained, it is not suitable for heavy trucks or high traffic volumes and the maximum safe speed is about 30 MPH. Mine traffic will be directed east to Happy Jack Road.

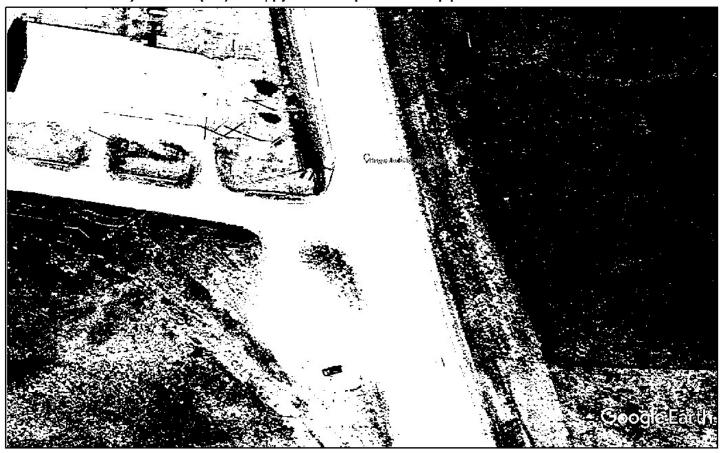
Looking west on CR 210 at CK Gold Project Entrance Drive on the left. (North is to the right.)



TEE Intersection of County Road 210 (CR-210) at Happy Jack Road (State Highway 210):

- This site may be confusing because State Highway 210 and County Road 210 have the same route number.
- **County Road 210** is a two-lane blacktop road 24 feet wide. The speed limit is not posted. The pavement is in poor condition and becomes gravel 380 feet west of Happy Jack Road. The 2-way weekday traffic volume is 191 vehicles with 20% trucks. 85th percentile speeds on the paved segment are 35.1 MPH westbound and 42.0 MPH eastbound. Hwy 210 is STOP controlled at the Happy Jack Intersection.
- **Happy Jack Road (SH-210)** at this location consists of two, 12' travel lanes with 8-foot shoulders. The speed limit is 55 MPH through the intersection, increasing to 65 MPH north of the intersection. A northbound left turn lane begins 250 feet southeast of Hwy 210. The right pavement edge lines have rumble stripes.
- Happy Jack Road North of CR 210 carries 1,486 vehicles on a weekday, including 26% trucks. 85th percentile speeds are 65.9 MPH northbound and 67.2 MPH southbound.
- Happy Jack Rd (SH 210) South of CR 210 carries 1617 vehicles per day with 23% trucks. The speed limit is 55 MPH. 85th percentile speeds are 61.7 MPH northbound and 65.8 MPH southbound.

Aerial view of County Road 210 (left) at Happy Jack Road (North is at top.)



Cross Intersection of Happy Jack Road at McKinney Drive:

- This intersection is located 750 feet west of Roundtop Road.
- The east and west legs of this intersection are Happy Jack Road (SH 210): a 55 MPH three-lane roadway with two 12' travel lanes, center left-turn-lane, and two 8' shoulders. Daily volume is about 4,000 vehicles and 85th percentile speeds are 59.4 MPH eastbound and 59.7 MPH westbound.
- The north leg of McKinney Drive is a residential access street serving about 15 single family homes and an estimated daily volume of 143 vehicles.
- The south leg of McKinney Drive is an undeveloped local access street planned to serve the *North Range Business Park 3rd Filing* subdivision. No adjacent lots have been developed yet so there is no traffic. The asphalt road is 36 feet wide and striped with two, twelve-foot travel lanes and 6-foot shoulders.

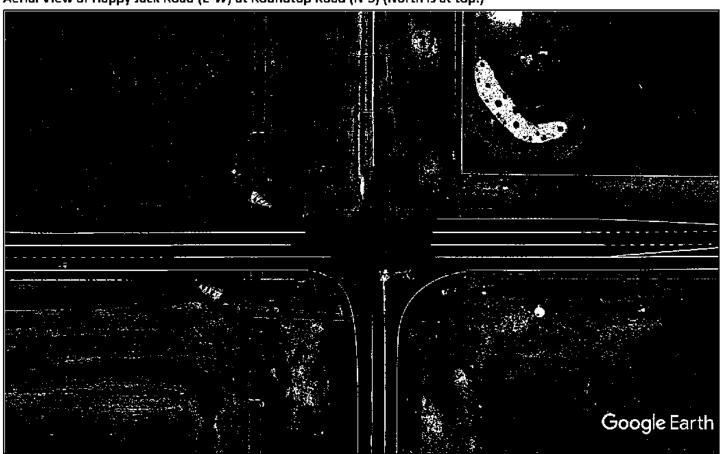
Aerial view of Happy Jack Road (E-W) at McKinney Drive. (North is at top.)



Cross Intersection of Happy Jack Road at Roundtop Road:

- The west leg of Happy Jack Road (SH 210) is a 55 MPH three-lane roadway with two 12' travel lanes, center left-turn-lane, and two 8' shoulders. The weekday volume is 3,993 vehicles, including 24% trucks. 85th percentile speeds are 59.4 MPH eastbound and 59.7 MPH westbound.
- The east leg of Happy Jack Road is signed at 55 MPH and consists of two 12-foot through lanes with westbound right turn and left turn bays, 200 feet long. This segment carries 3,745 vehicles on weekdays, including 23% trucks. 85th percentile speeds are 62.1 MPH eastbound and 59.8 MPH westbound.
- The north leg of Roundtop Road (SH 222) is a 55 MPH 24-foot asphalt roadway which flares to 90-feet wide at the intersection of Happy Jack Road. Roundtop Road is STOP controlled at Happy Jack Road. This intersection leg carries 1,096 vehicles on weekdays, including 26% trucks. 85th percentile speeds are 42.2 MPH northbound and 44.6 MPH southbound.
- The south leg of Roundtop Road (SH 222) is a 55 MPH two-lane asphalt road (two x 12-foot travel lanes with 3' shoulders), flaring to a three-lane roadway (northbound Thru-Left-lane and Right-turn-lane) 300 feet south of Happy Jack Road. This leg carries 1,706 vehicles on weekdays, including 33% trucks. 85th percentile speeds are 49.7 MPH northbound and 46.3 MPH southbound.

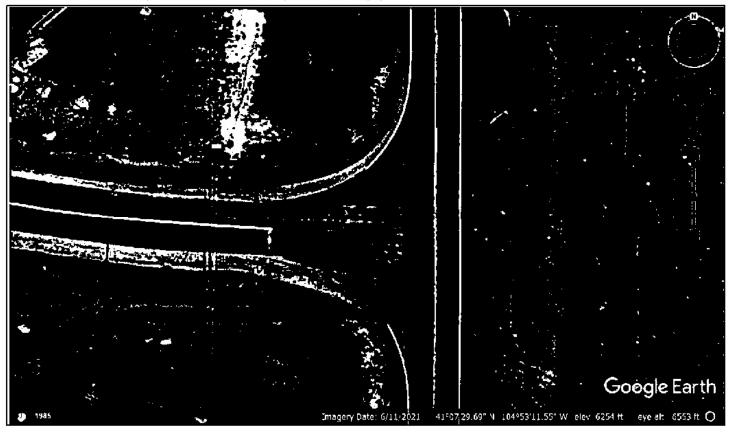
Aerial View of Happy Jack Road (E-W) at Roundtop Road (N-S) (North is at top.)



TEE Intersection of Roundtop Road at Veta Drive:

- The Veta Drive intersection is located 2400 feet south of Happy Jack Road.
- The north and south legs of Roundtop Road consist of two, twelve-foot travel lanes signed at 55 MPH. The roadway connects I-80 to Happy Jack Road and carries a daily volume is about 1700 vehicles with 33% trucks.
- Veta Drive west of Roundtop Road is a local access street planned to serve the *North Range Business Park 3rd Filing* subdivision. Adjacent parcels near Roundtop Road are not yet developed so there is currently little or no traffic volume on that intersection leg.

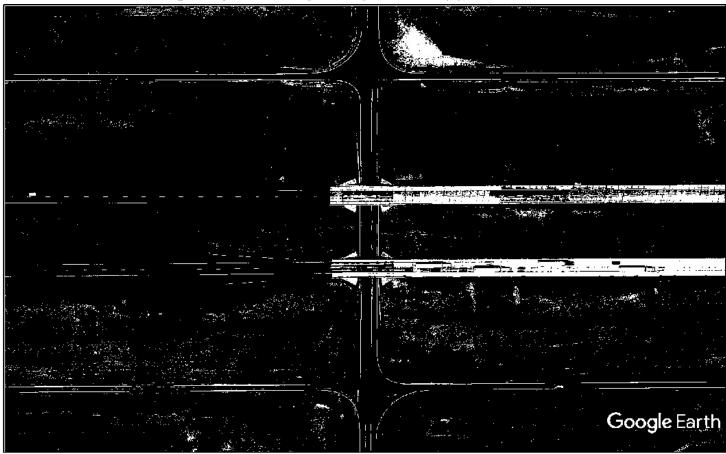
Aerial view of Roundtop Road at Veta Drive. (North is at top.)



I-80 / Roundtop Road (State Highway 222) Diamond Interchange:

- Roundtop Road (SH 222) is a 55 mph, 3-lane roadway with 2-foot shoulders.
- All I-80 ramps have a single, 12-foot lane with 8-foot shoulders
- The westbound on-ramp is gated to prevent freeway entry when closed due to winter weather. When this occurs, semis park at any available space nearby.
- Roundtop Road (SH 222) north of I-80 carries about 3750 vehicles on weekdays, with about 40% commercial trucks. The roadway serves several nearby trucking facilities, including the regional Walmart distribution center on Horizon Drive.
- Roundtop Road (SH 222) south of I-80 carries 586 vehicles on weekdays, with 40% trucks. 85th percentile speeds are 55.1 MPH northbound and 58.6 MPH southbound.

Aerial View of I-80 Interchange Ramps at Roundtop Road. (North is at top.)



I-25 / Happy Jack Road / Missile Drive Interchange:

- The configuration of this interchange was converted from a cloverleaf to a modified diamond in 2009.
- The speed limit on I-25 is reduced from 75 MPH to 65 MPH through this area.

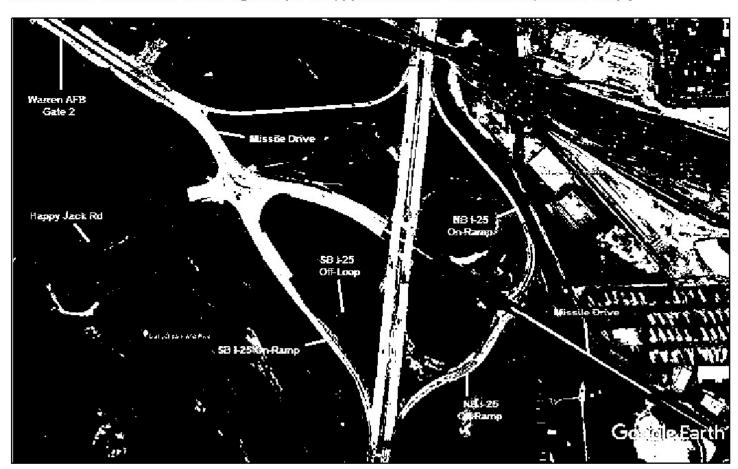
West Ramp Terminal Signalized Cross Intersection

- Happy Jack Road (SH 210) is a 40 MPH, 5-lane asphalt roadway west of the interchange. The eastbound right lane must exit to the I-25 southbound on ramp. This segment carries 3,745 vehicles on weekdays, including 23% trucks.
- The north leg of the I-25 southbound intersection is Missile Drive (F.E. Warren Air Force Base Gate 2). The southbound right turn is channelized.
- The south leg of the I-25 southbound intersection is the southbound I-25 on-ramp and southbound I-25 off-ramp. The northbound right turn is channelized.

East Ramp Terminal Signalized Cross Intersection

- East of I-25, Happy Jack Road becomes Missile Drive. The cross section is 5-lane, and the speed limit is 40 MPH.
 Weekday traffic volume is 7,949 vehicles with 20% trucks. 85th percentile speeds are 44.1 MPH eastbound and 46.2 MPH westbound.
- The northbound off-ramp flares to a left-thru lane and a right turn only lane.
- The northbound on-ramp is a single, 14-foot lane with 8-foot right shoulder and 5-foot left shoulder.

Aerial View of Interstate 25 Interchange Ramps at Happy Jack Road and Missile Drive (North is at top.)



Appendix A: Turn Movement Forecasts

Gold King Mine Drive at CR 210

Crossroad Diagram:

2022 AM Peak Count

Leg 1: Gold King Mine Drive

Leg 4: CR 210

West Leg

WB 2

TOTAL 11 0 LEFT

EB 9 9 THRU

0 RIGHT

Leg 2: CR 210

East Leg

RIGHT 0

THRU 2 2 WB

LEFT 0 11 TOTAL

9 EB

Leg 3: Gold King Mine Drive

South Leg

LEFT THRU RIGHT

0 0 0

0 0

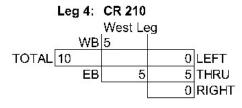
SB 0 NB

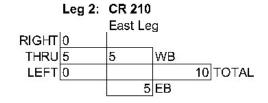
TOTAL

Gold King Mine Drive at CR 210

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: Gold King Mine Drive





Leg 3: Gold King Mine Drive

South Leg

LEFT THRU RIGHT

0 0 0

0 0 0

SB 0 NB

TOTAL

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Gold King Mine Drive

Leg 4: CR 210

West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT

Leg 2: CR 210
East Leg

RIGHT 0 31 WB

LEFT 31 38 TOTAL

7 EB

Leg 3: Gold King Mine Drive

	South Leg							
	LEFT	THRU	RIGHT					
	0	0	7					
31		7	8					
SB	38	NB						
	TOTAL							

Gold King Mine Drive at CR 210

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: Gold King Mine Drive

Leg 4: CR 210

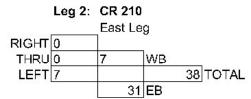
West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT



Leg 3: Gold King Mine Drive

South Leg

LEFT THRU RIGHT

0 0 31

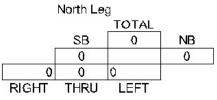
7 31

SB 38 NB

TOTAL

Crossroad Diagram: 2025 AM Peak NO-BUILD

Leg 1: Gold King Mine Drive



Leg 4: CR 210

West Leg

WB 2

TOTAL 12 0 LEFT

EB 9 9 THRU

0 RIGHT

	Leg 2:	CR 210	ı		
		East Le	•g		
RIGHT	0				
THRU	2	2	WB		
LEFT	0			11	TOTAL
		9	EB	3.	•

Leg 3: Gold King Mine Drive

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	0
0		0	
SB	0	NB	_
	TOTAL		

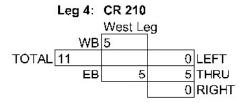
Gold King Mine Drive at CR 210

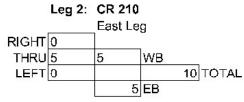
Crossroad Diagram: 2025 PM PEAK NO-BUILD

Leg 1: Gold King Mine Drive

North Leg

		TOTAL	-0
	SB	0	NB
91	0		0
0	0	0	
RIGHT	THRU	LEFT	





Leg 3: Gold King Mine Drive

0

SB

South Leg

LEFT THRU RIGHT

0 0 0

0 0

0 NB

TOTAL

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Gold King Mine Drive

	Leg 2:	CR 2	10			
		East I	Le	g		
RIGHT	0					
THRU	2	33		WB		
LEFT	31			40	49	TOTAL
			16	EB		

Leg 3: Gold King Mine Drive

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	7
31		7	
SB	38	NB	_
	TOTAL		

Gold King Mine Drive at CR 210

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Gold King Mine Drive



Leg 2: CR 210

East Leg

RIGHT 0

THRU 5 12 WB

LEFT 7 48 TOTAL

36 EB

Leg 3: Gold King Mine Drive

	South Leg			
		LEFT	THRU	RIGHT
		0	0	31
	7		31	50
53	ŞB	38	NB	
		TOTAL		

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Gold King Mine Drive

Leg 4: CR 210

West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT

Leg 3: Gold King Mine Drive

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	3
10		3	8
SB	13	NB	
	TOTAL		

Gold King Mine Drive at CR 210

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: Gold King Mine Drive

Leg 4: CR 210

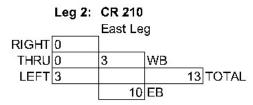
West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT

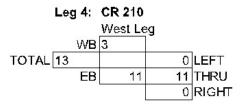


Leg 3: Gold King Mine Drive

	South Leg			
		LEFT	THRU	RIGHT
20		0	0	10
	3		10	8
_	SB	13	NB	
		TOTAL		

Crossroad Diagram: 2035 AM Peak NO-BUILD

Leg 1: Gold King Mine Drive



	Leg 2:	CR 210			
		East Le	g		
RIGHT	0		8		
THRU	2	2	WB		
LEFT	0		0	13	TOTAL
		11	EB	-	

Leg 3: Gold King Mine Drive

	South Leg	1	
	LEFT	THRU	RIGHT
	0	0	0
0		0	8
SB	0	NB	_
	TOTAL		

Gold King Mine Drive at CR 210

Crossroad Diagram: 2035 PM PEAK NO-BUILD

Leg 1: Gold King Mine Drive

Leg 4: CR 210

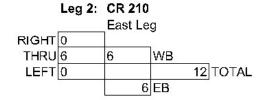
West Leg

WB 6

TOTAL 12 0 LEFT

EB 6 6 THRU

0 RIGHT



Leg 3: Gold King Mine Drive

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Gold King Mine Drive

Leg 4: CR 210

West Leg

WB 2

TOTAL 13 0 LEFT

EB 11 11 THRU

0 RIGHT

Leg 2: CR 210
East Leg

RIGHT 0
THRU 2 12 WB

LEFT 10 26 TOTAL
14 EB

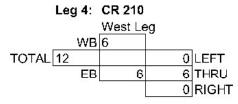
Leg 3: Gold King Mine Drive

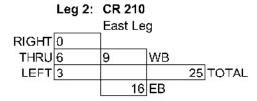
	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	3
10		3	
SB	13	NB	
	TOTAL		

Gold King Mine Drive at CR 210

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Gold King Mine Drive





Leg 3: Gold King Mine Drive

South Leg			
	LEFT	THRU	RIGHT
	0	0	10
3		10	
SB	13	NB	
	TOTAL		

Crossroad Diagram:

2022 AM Peak Count

Leg 1: Happy Jack Road

North Leg

	TOTAL		
	SB	87	NB
© %	56		31
0	56	0	
RIGHT	THRU	LEFT	-

Leg 4: CR 210

West Leg

WB 2

TOTAL 11 1 LEFT

EB 9 0 THRU

8 RIGHT

Leg 3: Happy Jack Road

South Leg

	South Fed				
		LEFT	THRU	RIGHT	
92		2	30	0	
3 20	64		32		
	SB	96	NB	_	
		TOTAL			

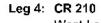
Happy Jack Road at CR 210

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: Happy Jack Road

North Leg

		TOTAL	_
	SB	138	NB
	45		93
0	45	0	
RIGHT	THRU	LEFT	-



			West	Le	eg .		
		WB	5		636		
TOTAL[10			1		1	LEFT
		ΕB		5		0	THRU
						4	RIGHT

Leg 2: CR 210 Fast Leg

		Last Lo	9	
RIGHT	0			
THRU	0	0	WB	500
LEFT	0			0 TOTAL
		0	EB	

Leg 3: Happy Jack Road

South Leg

		,	
	LEFT	THRU	RIGHT
	5	92	0
49	er .	97	
SB	146	NB	
	TOTAL		

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Happy Jack Road

	North Le	g	
		TOTAL	
200	SB	0	NB
	0		0
0	0	0	
RIGHT	THRU	LEFT	(d)

Lea 4: CR 210

	9 7.	011		
		West Le	g	
20	WB	31		
TOTAL 38			0	LEFT
	EB	7	0	THRU
			7	RIGHT
			200	

Leg 2: CR 210

		East Le	g		
RIGHT			20		
THRU	0	0	WB	50	
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Happy Jack Road

	South Leg			
	LEFT	THRU	RIGHT	
	31	0	0	
7		31	8	
SB	38	NB	_	
	TOTAL			

Happy Jack Road at CR 210

Crossroad Diagram:

Construction PM Trip Generation

Happy Jack Road Leg 1:

North Leg TOTAL SB 0 NB 0 0 0

RIGHT THRU LEFT

Leg 4: CR 210

West Leg WB 7 TOTAL 38 0 LEFT ΕВ 0 THRU 31 31 RIGHT

Leg 2: CR 210 East Leg

RIGHT 0 THRU 0 0 WB LEFT 0 0 TOTAL 0 EB

Leg 3: Happy Jack Road

South Leg LEFT THRU RIGHT 0 0

31 7 SB 38 NB TOTAL

Crossroad Diagram: 2025 AM Peak NO BUILD

Leg 1: Happy Jack Road

	Leg 2:	CR 210			
		East Le	g		
RIGHT	0				
THRU	0	0	WB		
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Happy Jack Road

South Leg

LEFT THRU RIGHT

2 31 0

67 33

SB 100 NB

TOTAL

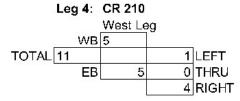
Happy Jack Road at CR 210

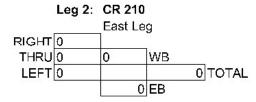
Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: Happy Jack Road

North Leg

	TOTAL				
	SB	144	NB		
	47		97		
0	47	0	5.00		
RIGHT	THRU	LEFT	133		





Leg 3: Happy Jack Road

South Leg

		LEFT	THRU	RIGHT	
		5	96	0	
51	-		101	(e) (e)	
SB		153	NB	-	
		TOTAL			

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Happy Jack Road

	North Le	g	
		TOTAL	
300	SB	90	NB
	58		32
0	58	0	
RIGHT	THRU	LEFT	

Leg 4: CR 210

West Leg

WB 33

TOTAL 49 1 LEFT

EB 16 0 THRU

15 RIGHT

	Leg 2:	CR 210	ı		
		East Le	•g		
RIGHT	0				
THRU	0	0	WB		
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Happy Jack Road

	South Leg	3	
	LEFT	THRU	RIGHT
	33	31	0
73		64	8
SB	137	NB	_
	TOTAL		

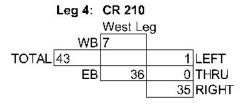
Happy Jack Road at CR 210

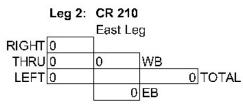
Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Happy Jack Road

North Leg

		TOTAL	
	SB	144	NB
	47		97
0	47	0	
RIGHT	THRU	LEFT	10





Leg 3: Happy Jack Road

South Lea

		Obuin Leg		
		LEFT	THRU	RIGHT
8		7	96	0
	82	31	103	
	SB	185	NB	
		TOTAL		

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Happy Jack Road

	Leg 4:	CR 210)		
		West L	eg		
	WB	10			
TOTAL	13	4	·	0	LEFT
	EB	3	1	0	THRU
				3	RIGHT

	Leg 2:	CR 210			
		East Le	g		
RIGHT	0		8		
THRU	0	0	WB	505	
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Happy Jack Road

	South Leg	3	
	LEFT	THRU	RIGHT
	10	0	0
3		10	(4)
SB	13	NB	
	TOTAL		

Happy Jack Road at CR 210

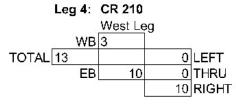
Crossroad Diagram:

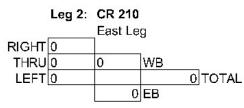
Operations PM Trip Generation

Leg 1: Happy Jack Road

North Leg

	TOTAL			
	SB	0	NB	
	0		0	
0	0	0		
RIGHT	THRU	LEFT	1.0	





Leg 3: Happy Jack Road

South Lea

		Ocour Les		
		LEFT	LEFT THRU	
80		3	0	0
	10		3	
	SB	13	NB	
		TOTAL		

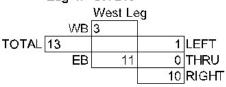
Crossroad Diagram: 2035 AM Peak NO BUILD

Leg 1: Happy Jack Road

North Leg

		TOTAL	
102	SB	105	NB
	68		37
0	68	0	
RIGHT	THRU	LEFT	***

Leg 4: CR 210



Leg 2: CR 210

		East Le	g	
RIGHT	0			
THRU	0	0	WB	
LEFT	0		Ref.	0 TOTAL
		0	EB	

Leg 3: Happy Jack Road

South Leg

		555			
		LEFT	THRU	RIGHT	
		2	36	0	
1	77		39		
	SB	116	NB		
		TOTAL			

Happy Jack Road at CR 210

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: Happy Jack Road

North Leg

		TOTAL	
	SB	167	NB
	54		112
0	54	0	5.0
RIGHT	THRU	LEFT	- 10

Leg 4: CR 210



Leg 2: CR 210

THRU	0	0	WB	247
LEFT	0			0 TOTAL
		0	EB	

Leg 3: Happy Jack Road

South Leg

Oddin Edg				
	LEFT	THRU	RIGHT	
	6	111	0	
59		117	8	
SB	176	NB		
	TOTAL			

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Happy Jack Road

	Leg 2:	CR 210			
		East Le	eg .		
RIGHT	0				
THRU	0	0	WB		
LEFT	0			0	TOTAL
		0	EB	-	

Leg 3: Happy Jack Road

	South Leg				
	LEFT	THRU	RIGHT		
	12	36	0		
81		48	8		
SB	129	NB	_		
	TOTAL				

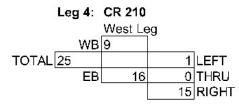
Happy Jack Road at CR 210

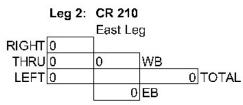
Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Happy Jack Road

North Leg

	TOTAL				
	SB	166	NB		
	54		112		
0	54	0			
RIGHT	THRU	LEFT	100		





Leg 3: Happy Jack Road

South Lea

		Court Log				
		LEFT THRU		RIGHT		
80		9	111	0		
	69		120	88		
	SB	189	NB			
		TOTAL				

McKinney at Happy Jack

Crossroad Diagram: 2022 AM PEAK COUNT

Leg 1: McKinney

North Leg TOTAL SB NB 11 8 3 0 RIGHT THRU LEFT

Leg 4: Happy Jack

		West Le	g	
	WB	105	ia N	
TOTAL	263		0	LEFT
	EB	158	157	THRU
			1	RIGHT

Leg 2: Happy Jack

		East Le	g		
RIGHT	3		-		
THRU	103	107	WB		3
LEFT	1			272	TOTAL
		165	EB		

Leg 3: McKinney

	South Leg	3	
	LEFT	THRU	RIGHT
	1	0	1
2		2	8
SB	4	NB	_
	TOTAL		

McKinney at Happy Jack Road

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: McKinney

North Leg

	TOTAL				
	SB	15	NB		
	6		9		
1	0	5			
RIGHT	THRU	LEFT	10		

Leg 4: Happy Jack Road

West Lea

100	WB	178		
TOTAL	317		1	LEFT
	EB	139	137	THRU
			1	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT	8		96	
THRU	177	186	WB	
LEFT	1			329 TOTAL
		143	EB	

Leg 3: McKinney

South Lea

		Obuin Leg				
		LEFT	RIGHT			
-		0	0	1		
	2		1	es .		
	SB	3	NB			
		TOTAL				

McKinney Drive at Happy Jack Road

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: McKinney Drive

Leg 4: Happy Jack Road

		West Le	eg	
8	WB	7		
TOTAL 7			0	LEFT
	EB	0	0	THRU
			0	RIGHT
				5

Leg 2: Happy Jack Road

		East L	.eç	j		
RIGHT						
THRU	0	175		WB	54	
LEFT	175				188	TOTAL
		1	3	EB		

Leg 3: McKinney Drive

	South Leg			
	LEFT	THRU	RIGHT	
	7	0	13	
175		20	8	
SB	195	NB		
	TOTAL			

McKinney Drive at Happy Jack Road

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: McKinney Drive

Leg 4: Happy Jack Road

		West Le	₽g	
	WB	0		
TOTAL[7		0	LEFT
	EB	7	0	THRU
			7	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 0
THRU 0 13 WB
LEFT 13 188 TOTAL
175 EB

Leg 3: McKinney Drive

	South Leg				
	LEFT	RIGHT			
	0	0	175		
20		175	8		
SB	195	NB			
	TOTAL				

McKinney at Happy Jack

Crossroad Diagram: 2025 AM PEAK NO BUILD

Leg 1: McKinney

North Leg TOTAL SB NB 11 8 3 0 RIGHT THRU LEFT

Leg 4: Happy Jack

	West Le	g	
WB	110	ia N	
TOTAL 275		0	LEFT
EB	165	164	THRU
		1	RIGHT

Leg 2: Happy Jack

East Leg						
RIGHT	3		- 10			
THRU	108	112	WB	50		
LEFT	1			284	TOTAL	
		172	EB			

Leg 3: McKinney

	South Leg	3	
	LEFT	THRU	RIGHT
	1	0	1
2		2	64
SB	4	NB	
	TOTAL		

McKinney at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: McKinney

North Leg

	TOTAL				
	SB	16	NB		
	6		9		
1	0	5	*		
RIGHT	THRU	LEFT	160		

Leg 4: Happy Jack Road

West Leg

	WB	185	8	
TOTAL	330		1	LEFT
	EB	145	143	THRU
			1	RIGHT

Leg 2: Happy Jack Road

____East Leg

RIGHT	8			
THRU	183	192	WB	20
LEFT	1			341 TOTAL
		149	EB	

Leg 3: McKinney

South Lea

		Journ Leg				
		LEFT	THRU	RIGHT		
80		0	0	1		
	2		1			
	SB	3	NB			
		TOTAL				

McKinney Drive at Happy Jack Road

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: McKinney Drive

Leg 4: Happy Jack Road

_	West Le	eg	
WB	117		8
TOTAL 282		0	LEFT
EB	165	164	THRU
		1	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	3		10		
THRU	108	287	WB	5	3
LEFT	176		4.9	472	TOTAL
		185	EB		

Leg 3: McKinney Drive

	South Leg	3	
	LEFT	THRU	RIGHT
	8	0	14
177		22	
SB	199	NB	
	TOTAL		

McKinney Drive at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: McKinney Drive

North Leg

		TOTAL	
	SB	15	NB
	6		9
1	0	5	20
RIGHT	THRU	LEFT	7,00

Leg 4: Happy Jack Road

		West Le	eg	
59	WB	184		6
TOTAL 33	6		1	LEFT
	EB	152	143	THRU
			8	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 8
THRU 183 205 WB
LEFT 14 529 TOTAL
324 EB

Leg 3: McKinney Drive

South Leg

	LEFT	THRU	RIGHT		
	0	0	176		
22		176	88		
SB	198	NB	_		
	TOTAL				

McKinney Drive at Happy Jack Road

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: McKinney Drive

Leg 4: Happy Jack Road

		West Le	eg	
25	WB	10		
TOTAL 1	10		0	LEFT
	EB	0	0	THRU
			0	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	0				
THRU	0	53	WB	50	
LEFT	53			58	TOTAL
		5	EB		

Leg 3: McKinney Drive

	South Leg	3	
	LEFT	THRU	RIGHT
	10	0	5
53		15	8
SB	68	NB	_
	TOTAL		

McKinney Drive at Happy Jack Road

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: McKinney Drive North Leg

THRU

RIGHT

15

SB

TOTAL SB 0 NB 0 0 0 0 0 0

LEFT

Leg 4: Happy Jack Road

West Leg
WB 0

TOTAL 10 0 LEFT
EB 10 0 THRU
10 RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 0
THRU 0 5 WB
LEFT 5 53 EB

Leg 3: McKinney Drive

TOTAL

South Leg

LEFT THRU RIGHT

0 0 53

53

68 NB

McKinney at Happy Jack

Crossroad Diagram: 2035 AM PEAK NO BUILD

Leg 1: McKinney

Leg 4: Happy Jack

		West Le	g	
2	WB	127	6) 8) (4)	
TOTAL	317		0	LEFT
_	EB	190	189	THRU
			1	RIGHT

Leg 2: Happy Jack

		East Le	g		
RIGHT	4		10		
THRU	124	129	WB		
LEFT	1			328	TOTAL
		199	EB		

Leg 3: McKinney

	South Leg	3	
	LEFT	THRU	RIGHT
	1	0	1
2		2	(4)
SB	5	NB	_
	TOTAL		

McKinney at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: McKinney

North Leg

		TOTAL	
	SB	18	NB
	7		11
2	0	5	
RIGHT	THRU	LEFT	10

Leg 4: Happy Jack Road

West Lea

			- 9	
	WB	209	8	5
TOTAL	376		2	LEFT
	EB	167	163	THRU
			2	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT	8		18		
THRU	206	216	WB	2	
LEFT	1			385	TOTAL
		169	EB		

Leg 3: McKinney

South Lea

		Ocarii ref		
		LEFT	THRU	RIGHT
1	10	0	0	1
	3		1	es .
	SB	5	NB	
		TOTAL		

McKinney Drive at Happy Jack Road

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: McKinney Drive

	North Le	g	
		TOTAL	
	SB	13	NB
	9		4
1	0	8	
RIGHT	THRU	LEFT	

Leg 4: Happy Jack Road

		West Le	eg	
V	ΝB	136		
TOTAL 326			0	LEFT
	EΒ	190	189	THRU
			1	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	4				
THRU	124	182	WB		
LEFT	54		4.9	385	TOTAL
		203	EB	3.	

Leg 3: McKinney Drive

		South Leg	g	
		LEFT	THRU	RIGHT
		11	0	6
55	10		17	
SE	}	72	NB	_
		TOTAL		

McKinney Drive at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: McKinney Drive

THRU

RIGHT

LEFT

Leg 4: Happy Jack Road

		West Le	eg .	
	WB	208	FC 50	
TOTAL	385		2	LEFT
	EB	177	163	THRU
			12	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT 8

THRU 206 220 WB

LEFT 6 442 TOTAL

222 EB

Leg 3: McKinney Drive

South Leg

LEFT THRU RIGHT

0 0 54

18 54

SB 72 NB

TOTAL

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2022 AM PEAK COUNT

Leg 1: Roundtop Road

North Leg

		TOTAL	
_	SB	83	NB
	55		28
2	21	32	8
RIGHT	THRU	LEFT	•

Leg 4: Happy Jack Road

West Leg

	WB	107	1375.5	
TOTAL	272		2	LEFT
	EB	165	119	THRU
			44	RIGHT

Leg 2: Happy Jack Road

_____East Leg

RIGHT					
THRU	77	97	WB		
LEFT	11			256	TOTAL
		159	EB		

Leg 3: Roundtop Road

South Leg

	South Fol	9	
	LEFT	THRU	RIGHT
	28	17	8
76		53	(C) (S)
SB	129	NB	
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: Roundtop Road

North Leg

			TOTAL	_
	_	SB	112	NB
100		37		75
	4	16	17	
10	RIGHT	THRU	LEFT	-

Leg 4: Happy Jack Road

West Lea

		West Le	ęy –	
	WB	186	5/25	
TOTAL	329		6	LEFT
	EB	143	101	THRU
			36	RIGHT

Leg 2: Happy Jack Road

East Leg

		Last Lo	9		
RIGHT	46				
THRU	137	193	WB		
LEFT	10	50 0		318	TOTAL
		125	EB		

Leg 3: Roundtop Road

South Leg

	LEFT	THRU	RIGHT
	45	23	7
62	e:	75	
SB	137	NB	5/4
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Roundtop Road

Leg 4: Happy Jack Road

		Wes	t L€	g		
	WB	175			65	
TOTAL	188				0	LEFT
	EB		13		13	THRU
					0	RIGHT

Leg 2: Happy Jack Road

		East	Le	g		
RIGHT						
THRU	175	175		WB	54	
LEFT	0			10	188	TOTAL
			13	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	0
0		0	8
SB	0	NB	_
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: Roundtop Road

Leg 4: Happy Jack Road

		We	st Le	eg .		
	WB	13		7	54	
TOTAL	188				0	LEFT
	EB		175		175	THRU
					0	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 0
THRU 13 13 WB
LEFT 0 188 TOTAL
175 EB

Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

0 0 0

0 0

SB 0 NB

TOTAL

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2025 AM PEAK NO BUILD

Leg 1: Roundtop Road

RIGHT

North Leg **TOTAL** SB 86 NB 57 29 2 23 33 THRU

LEFT

Leg 4: Happy Jack Road

		West Le	eg	
	WB	112		
TOTAL	284		2	LEFT
	EB	172	122	THRU
			48	RIGHT

Leg 2: Happy Jack Road

East Leg RIGHT 9 THRU 79 100 WB LEFT 13 265 TOTAL 164 EB

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	31	18	9
83		58	
SB	141	NB	_
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: Roundtop Road

RIGHT THRU

North Leg TOTAL SB 117 NB 39 78 4 17 17

LEFT

Leg 4: Happy Jack Road West Lea

		West Le	2 g	
59	WB	194	1994	5
TOTAL	344		6	LEFT
	EB	149	104	THRU
			39	RIGHT

Leg 2: Happy Jack Road

East Leg RIGHT 47 THRU 141 200 LEFT 11 329 TOTAL 129 EB

Leg 3: Roundtop Road

South Leg LEFT THRU RIGHT 49 25 68 82 SB 150 NB TOTAL

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Roundtop Road

North Leg

		SB	87	NB		
		58		29		
	2	23	33			
•	RIGHT	THRU	LEFT			

Leg 4: Happy Jack Road

West Leg

			9	
	WB	287		
TOTAL	472		2	LEFT
	EB	185	135	THRU
			48	RIGHT

Leg 2: Happy Jack Road

East Leg

			3		
RIGHT	9				
THRU	254	27 6	WB		
LEFT	13			453	TOTAL
		177	EB		

Leg 3: Roundtop Road

South Leg

	Obder Es	1	
	LEFT	THRU	RIGHT
	31	18	9
84		58	0.00
SB	142	NB	_
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	20
	SB	116	NB
	38		78
4	17	17	100
RIGHT	THRU	LEFT	

Leg 4: Happy Jack Road

West Lea

		1100. =	(9	
	WB	207	1.5	
TOTAL	531		6	LEFT
	EB	324	279	THRU
			39	RIGHT

Leg 2: Happy Jack Road

_____East Leg

RIGHT	47				
THRU	154	212	WB		
LEFT	11			516	TOTAL
		304	EB		

Leg 3: Roundtop Road

	,	j .		
	LEFT	THRU	RIGHT	
	49	25	8	l
67		82		
SB	149	NB	_	
	TOTAL			

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Roundtop Road

Leg 4: Happy Jack Road

		West	L€	g		
20	WB	53		5. 5.		
TOTAL 58	8			e.	0	LEFT
	EB		5		5	THRU
					0	RIGHT
					- 0.0	

Leg 2: Happy Jack Road

		East Le	g		
RIGHT					
THRU	53	53	WB	- 50	
LEFT	0			58	TOTAL
		5	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	0
0		0	8
SB	0	NB	_
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: Roundtop Road

Leg 4: Happy Jack Road

		West Le	g	
<u> </u>	WB	5	1000 17	
TOTAL 58			0	LEFT
	ΕB	53	53	THRU
		,	0	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT 0

THRU 5 5 WB

LEFT 0 53 EB

Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

0 0 0

0 0
SB 0 NB

TOTAL

Crossroad Diagram: 2035 AM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	
	SB	99	NB
	66		33
2	29	35	
RIGHT	THRII	LEFT	50

Leg 4: Happy Jack Road

West Leg

			3	
	WB	128	ia N	
TOTAL	327		2	LEFT
	EB	199	133	THRU
			64	RIGHT

Leg 2: Happy Jack Road

East Led

			3		
RIGHT			20		
THRU	84	112	WB	54	
LEFT	19			295	TOTAL
		183	EB		

Leg 3: Roundtop Road

South Lea

	South Leg			
	LEFT	THRU	RIGHT	
	42	23	15	
113		79		
SB	192	NB		
	TOTAL			

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	_0
	SB	134	NB
	44		90
4	22	18	
RIGHT	THRU	LEFT	700

Leg 4: Happy Jack Road

West Leg

	WB	225	1000	95
TOTAL	397			LEFT
	EB	172	2 114	THRU
		313,000,000	53	RIGHT

Leg 2: Happy Jack Road

	9	nappy odok mode			
	2000	East Le	g		
RIGHT THRU	51		50 20		
THRU	155	224	WB	20	
LEFT	18			369	TOTAL
		145	EB		

Leg 3: Roundtop Road

	LEFT	THRU	RIGHT
	66	33	13
93		112	88
SB	205	NB	_
	TOTAL		

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: Happy Jack Road

	0			77.75
		West Le	g	
25	WB	181	5) 8)	
TOTAL 3	385		2	LEFT
_	EB	204		THRU
			64	RIGHT
		,		-

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	9		20		
THRU	137	165	WB	54	
LEFT	19			353	TOTAL
		188	EB		

Leg 3: Roundtop Road

	South Leg		
	LEFT	THRU	RIGHT
	42	23	15
112		80	
SB	192	NB	_
	TOTAL		

Roundtop Road at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Roundtop Road

	SB	133	NB
	44		89
4	22	18	
RIGHT	THRU	LEFT	-3.0

Leg 4: Happy Jack Road

West Leg
WB 230

TOTAL 455 5 LEFT
EB 225 167 THRU
53 RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT	51			
THRU	160	229	WB	
LEFT	18		(C) (S)	427 TOTAL
		198	EB	

Leg 3: Roundtop Road

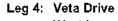
		5				
		LEFT	THRU	RIGHT		
		66	33	13		
	93		112			
Ī	ŞB	205	NB			
		TOTAL				

Crossroad Diagram:

2022 AM PEAK

Leg 1: Roundtop Road

North Leg TOTAL SB 129 NB 76 53 0 76 THRU RIGHT LEFT



West Leg WB 0 0 LEFT TOTAL 0 0 0 THRU EB 0 RIGHT

Leg 2:	Veta	Drive
--------	------	-------

		East Le	g		
RIGHT			20		
THRU	0	0	WB	50	
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Roundtop Road

South Leg LEFT THRU **RIGHT** 53 0 76 53 SB 129 NB TOTAL

Roundtop Road at Veta Drive

RIGHT THRU

Crossroad Diagram:

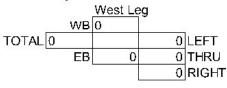
2022 PM PEAK

Leg 1: **Roundtop Road**

North Leg TOTAL SB 137 NB 62 75 0 62

LEFT

Leg 4: Veta Drive



Leg 2: Veta Drive

East Leg RIGHT 0 THRU 0 0 WB LEFT 0 0 TOTAL 0 EB

Roundtop Road Leg 3:

South Leg LEFT THRU **RIGHT** 0 75 62 75 SB 137 NB TOTAL

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Roundtop Road

Leg 4: Veta Drive

		Wes	t Le	g		
	WB	175			20	
TOTAL	188				0	LEFT
	EB		13		0	THRU
					13	RIGHT

Leg 2: Veta Drive

		East Le	g		
RIGHT	0		20		
THRU	0	0	WB	50	
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg			
	LEFT	RIGHT		
	175	0	0	
13		175	8	
SB	188	NB	_	
	TOTAL			

Roundtop Road at Veta Drive

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: Roundtop Road

Leg 4: Veta Drive

	9			
		West Le	eg	
	WB	13	1.00 T	
TOTAL	188		0	LEFT
	EB	175	0	THRU
			175	RIGHT

Leg 2: Veta Drive

East Leg

RIGHT 0

THRU 0 0 WB

LEFT 0 0 TOTAL

0 EB

Leg 3: Roundtop Road

		South Leç		
		LEFT	THRU	RIGHT
		13	0	0
	175		13	8
_	SB	188	NB	-
		TOTAL		

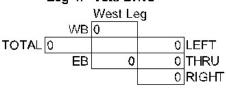
Crossroad Diagram: 2025 AM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

	TOTAL				
	SB	142	NB		
	83		58		
0	83	0			
RIGHT	THRU	LEFT	1.10		

Leg 4: Veta Drive



Leg 2: Veta Drive

		East Le	ġ	
RIGHT	0]		
THRU		0	WB	
LEFT	0		86	0 TOTAL
		0	EB	

Leg 3: Roundtop Road

South Leg

	Count Log			
	LEFT	THRU	RIGHT	
	0	58	0	
83		58		
SB	142	NB		
	TOTAL			

Roundtop Road at Veta Drive

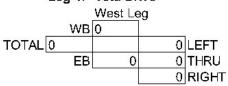
Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	28
	SB	150	NB
	68		82
0	68	0	
RIGHT	THRU	LEFT	

Leg 4: Veta Drive



Leg 2: Veta Drive

East Leg

RIGHT	0			
THRU	0	0	WB	95
LEFT	0		isi.	0 TOTAL
		0	EB	

Leg 3: Roundtop Road

	LEFT	THRU	RIGHT
	0	82	0
68		82	\$6 C
SB	150	NB	-
	TOTAL		

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Roundtop Road

West Leg

		vves	LLE	g :	
	WB	175			9
TOTAL	188			0	LEFT
	EB		13	0	THRU
				13	RIGHT

Leg 2: Veta Drive

		East Le	g	
RIGHT	0		80	
THRU	0	0	WB	
LEFT	0			0 TOTAL
		0	EB	

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	175	58	0
96		233	(A)
SB	329	NB	_
	TOTAL		

Roundtop Road at Veta Drive

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Roundtop Road

North Leg

	SB	150	NB
	68		82
0	68	0	
RIGHT	THRU	LEFT	7.00

Leg 4: Veta Drive

	2000	We	st Le	g		
192	WB	13		1.5	- 59	
TOTAL 1	88				0	LEFT
	EB		175		0	THRU
				17	75	RIGHT

Leg 2: Veta Drive

		East Le	g	
RIGHT	0		E.	
THRU	0	0	WB	
LEFT	0		10	0 TOTAL
		0	EB	

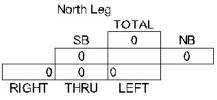
Leg 3: Roundtop Road

	LEFT	THRU	RIGHT	
	13	82	0	
243		95	88	
SB	338	NB	-	
	TOTAL			
		13 243 SB 338	13 82 243 95 SB 338 NB	13 82 0 243 95 SB 338 NB

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Roundtop Road



Leg 4: Veta Drive

				00700	
		West	Leç]	
20	WB	53			<u> </u>
TOTAL 58				(LEFT
	EB		5	(THRU
				5	RIGHT
			100		 -

Leg 2: Veta Drive

		East Le	g		
RIGHT	0		83		
THRU	0	0	WB	50	
LEFT	0			0	TOTAL
		0	EB		

Leg 3: Roundtop Road

		South Leg				
		LEFT	THRU	RIGHT		
		53	0	0		
Į.	5		53	88		
S	В	58	NB	_		
		TOTAL				

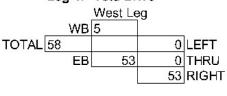
Roundtop Road at Veta Drive

Crossroad Diagram:

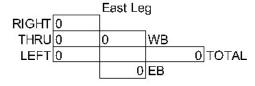
Operations PM Trip Generation

Leg 1: Roundtop Road

Leg 4: Veta Drive



Leg 2: Veta Drive



Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

5 0 0

53 5 5

SB 58 NB

TOTAL

Crossroad Diagram: 2035 AM PEAK NO BUILD

Leg 1: Roundtop Road

Leg 4: Veta Drive

West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT

 Leg 2:
 Veta Drive

 East Leg

 RIGHT 0
 0

 THRU 0
 0
 WB

 LEFT 0
 0
 TOTAL

 0
 EB

Leg 3: Roundtop Road

Roundtop Road at Veta Drive

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	_29
	SB	205	NB
	93		112
0	93	0	5.5
RIGHT	THRU	LEFT	728

Leg 4: Veta Drive

West Leg

WB 0

TOTAL 0 0 LEFT

EB 0 0 THRU

0 RIGHT



Leg 3: Roundtop Road

	LEFT	THRU	RIGHT
	0	112	0
93		112	(A) (B)
SB	205	NB	-
	TOTAL		

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: Veta Drive
West Leg

		West	L€	g		
20	WB	53			60	
TOTAL 58					0	LEFT
	EB		5		0	THRU
					5	RIGHT

Leg 2: Veta Drive

East Leg						
RIGHT	0		83			
THRU	0	0	WB	50		
LEFT	0			0	TOTAL	
		0	EB			

Leg 3: Roundtop Road

	South Leg				
	LEFT	THRU	RIGHT		
	53	79	0		
119		132			
SB	251	NB	_		
	TOTAL				

Roundtop Road at Veta Drive

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	_29
	SB	205	NB
	93		112
0	93	0	5.0
RIGHT	THRU	LEFT	7.0

Leg 4: Veta Drive

			st Le	g	
<u></u>	WB	5		0.B:	5
TOTAL 58				0	LEFT
	EB		53	0	THRU
				53	RIGHT

Leg 2: Veta Drive

East Leg

RIGHT 0

THRU 0 0 WB

LEFT 0 0 TOTAL

0 EB

Leg 3: Roundtop Road

	LEFT	THRU	RIGHT		
	5	112	0		
146		117			
SB	263	NB	_		
	TOTAL				

Crossroad Diagram: 2022 AM PEAK COUNT

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West	Le	g	
	WB	12		0.000	
TOTAL 12				0	LEFT
-	EB		0	0	THRU
			333	0	RIGHT

Leg 2: I-80 Westbound Ramps

		East Le	ġ		
RIGHT					
THRU	1	152	WB		
LEFT	5			152	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg				
	LEFT	THRU	RIGHT		
	0	13	0		
88		13			
SB	101	NB	-		
	TOTAL				

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West	Le	g g	
	WB	11			
TOTAL 11				0	LEFT
	EB		0	0	THRU
				0	RIGHT

Leg 2: I-80 Westbound Ramps

	0	East Le	eg		
RIGHT	95				
THRU	1	101	WB		
LEFT	5			101	TOTAL
		0) EB		

Leg 3: Roundtop Road

	South Leg		
	LEFT	THRU	RIGHT
	1	20	0
155	5	21	3
SB	176	NB	
	TOTAL		

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West Le	g	
20	WB	1		
TOTAL	1		0	LEFT
	EB	0	0	THRU
			0	RIGHT

Leg 2: I-80 Westbound Ramps

		East Le	g		
RIGHT			20		
THRU	0	170	WB	59	
LEFT	0			170	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg		
	LEFT	THRU	RIGHT
	0	5	0
12		5	(4)
SB	17	NB	
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps



Leg 2: I-80 Westbound Ramps

Leg 3: Roundtop Road

	South Leg		
	LEFT	THRU	RIGHT
K0	0	1	0
170		1	8
SB	171	NB	
	TOTAL		

Crossroad Diagram: 2025 AM PEAK NO-BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West Le	eg	
<u> 20</u>	WB	13	i. S	
TOTAL 13			0	LEFT
	EB	0	0	THRU
			0	RIGHT

Leg 2: I-80 Westbound Ramps

		East Le	g		
RIGHT	159		8		
THRU	2	170	WB		
LEFT	9		4.9	170	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg		
	LEFT	THRU	RIGHT
	0	14	0
95		14	8
SB	109	NB	_
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram: 2025 PM PEAK NO-BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	_0
	SB	288	NB
	165		123
9	156	0	
RIGHT	THRU	LEFT	700

Leg 4: I-80 Westbound Ramps

		West	Le	g		
<u> </u>	WB	12		594 8	9	
TOTAL 12				85	0	LEFT
	EB		0		0	THRU
					0	RIGHT

Leg 2: I-80 Westbound Ramps

East Leg

RIGHT 103

THRU 2 113 WB

LEFT 9 113 TOTAL

0 EB

Leg 3: Roundtop Road

	LEFT	THRU	RIGHT	
	2	20	0	
165	41	22	(e) (e)	
SB	187	NB	_	
	TOTAL			

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West Le	g	
20	WB	14		
TOTAL 14			0	LEFT
	EB	0	0	THRU
			0	RIGHT
			17	

Leg 2: I-80 Westbound Ramps

		East Le	∍ g		
RIGHT			_0		
THRU	2	340	WB		
LEFT	9			340	TOTAL
		C	EB		

Leg 3: Roundtop Road

	South Leg	1	
	LEFT	THRU	RIGHT
	0	19	0
107		19	
SB	126	NB	
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Roundtop Road

North Leg

	TOTAL			
	SB	476	NB	
	340		136	
14	326	0		
RIGHT	THRU	LEFT	-38	

Leg 4: I-80 Westbound Ramps

			Wes	st Le	g		
	92	WB	18			-	
TOTAL	18					0	LEFT
		EB		0		0	THRU
						0	RIGHT

Leg 2: I-80 Westbound Ramps

East Leg
RIGHT 115
THRU 2 126 WB
LEFT 9 126 TOTAL
0 EB

Leg 3: Roundtop Road

	,	P		
	LEFT	THRU	RIGHT	
	2	21	0	
335		23	88	
SB	358	NB	_	
	TOTAL			

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

	•			
		West Le	g	
25	WB	0		
TOTAL 0	4		0	LEFT
	EB	0	0	THRU
			0	RIGHT

Leg 2: I-80 Westbound Ramps

		East Le	g		
RIGHT	52		_00		
THRU	0	52	WB	53	
LEFT	0		40	52	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg	g	
	LEFT	THRU	RIGHT
	0	2	0
5		2	(A)
SB	7	NB	
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: Roundtop Road

North Leg

	SB	58	NB
	53		5
2	51	0	20 500
RIGHT	THRU	LEFT	700

Leg 4: I-80 Westbound Ramps

	200	West Le	eg	
200	WB	2		
TOTAL 2			0	LEFT
	EB	0	0	THRU
			0	RIGHT

Leg 2: I-80 Westbound Ramps

East Leg

RIGHT 5

THRU 0 5 WB

LEFT 0 5 TOTAL

0 EB

Leg 3: Roundtop Road

		e e		
	LEFT	THRU	RIGHT	
	0	0	0	
51		0	8.4	
SB	52	NB	_	
	TOTAL			

Crossroad Diagram: 2035 AM PEAK NO-BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West L	eq	W. 100 W.
	WB		7	
TOTAL	19		0	LEFT
_	EB	C	0	THRU
			0	RIGHT
			200	-

Leg 2: I-80 Westbound Ramps

		East Le	g		
RIGHT			20		
THRU	6	248	WB	55	
LEFT	31			248	TOTAL
		0	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	1	16	0
129		16	(A)
SB	145	NB	
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram: 2035 PM PEAK NO-BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	
	SB	340	NB
	188		152
8	180	0	
RIGHT	THRU	LEFT	160

Leg 4: I-80 Westbound Ramps

		West	: Le	eg .	
12	WB	16			8
TOTAL	16			0	LEFT
	EB		0		THRU
				0	RIGHT

Leg 2: I-80 Westbound Ramps

Leg 3: Roundtop Road

		OOG LO		
		LEFT	THRU	RIGHT
3		4	22	0
	210		26	No.
	SB	236	NB	
		TOTAL		

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

	-			
		West Le	eg	
22	WB	20		
TOTAL	20		0	LEFT
_	EB	0	0	THRU
			0	RIGHT

Leg 2: I-80 Westbound Ramps

East Leg
RIGHT 263
THRU 6 300 WB
LEFT 31 300 TOTAL
0 EB

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	1	18	0
134		19	
SB	153	NB	_
	TOTAL		

Roundtop Road at I-80 Westbound Ramps

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Westbound Ramps

		West L	eg		
0	WB	19		65	
TOTAL 19				0	LEFT
	ΕB	0	1	0	THRU
				0	RIGHT

Leg 2: I-80 Westbound Ramps

RIGHT 135
THRU 5 170 WB
LEFT 30 170 TOTAL
0 EB

Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

4 22 0

261 26

SB 287 NB

TOTAL

Crossroad Diagram: 2022 AM PEAK COUNT

Leg 1: Roundtop Road

North Leg

		TOTAL	20
95	SB	118	NB
	106		12
0	16	90	
RIGHT	THRU	LEFT	•

Leg 4: I-80 Eastbound Ramps

		West Le	eg	
22	WB	0		
TOTAL	5		3	LEFT
_	EB	5	0	THRU
			2	RIGHT

Leg 2: I-80 Eastbound Ramps
East Leg

Last Log					
RIGHT			28		
THRU	0	0	WB		
LEFT	0			98 TOTAL	
		98	EB		

Leg 3: Roundtop Road

South Leg

	Ocali Log				
	LEFT	THRU	RIGHT		
	0	9	8		
18		17	10		
SB	35	NB			
	TOTAL				

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: Roundtop Road

North Leg

		TOTAL	
	SB	175	NB
	154	S	21
0	20	134	
RIGHT	THRU	LEFT	-

Leg 4: I-80 Eastbound Ramps

West Lea

		44031		9		
<u> </u>	WB	0			33	
TOTAL 6	81			S	3	LEFT
	EB		6		2	THRU
				Į.	1	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg

RIGHT	0		<u>.</u>	
THRU	0	0	WB	
LEFT	0			167 TOTAL
		167	EB	

Leg 3: Roundtop Road

	LEFT	THRU	RIGHT
	0	18	31
21		49	
SB	70	NB	-
	TOTAL		

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

		West Le	g	
20	WB	0		
TOTAL 5			5	LEFT
	EB	5	0	THRU
			0	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT	0		20		
THRU	0	0	WB	50	
LEFT	0			12	TOTAL
		12	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	0
0		0	8
SB	0	NB	_
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	20000	West Le	eg	
192	WB	0	1000	3
TOTAL 1			1	LEFT
	EB	1	0	THRU
			0	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg

RIGHT 0

THRU 0 0 WB

LEFT 0 170 TOTAL

170 EB

Leg 3: Roundtop Road

		South Leg	g	
		LEFT	THRU	RIGHT
		0	0	0
	0		0	88
_	SB	0	NB	-
		TOTAL		

Crossroad Diagram: 2025 AM PEAK NO-BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	•			
		West Le	eg	
20	WB	0		
TOTAL 5			3	LEFT
	EB	5	0	THRU
			2	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT	0		8		
THRU	0	0	WB	54	
LEFT	0			104	TOTAL
		104	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	9	9
18		18	8
SB	36	NB	_
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	
	SB	181	NB
	160		21
0	20	140	
RIGHT	THRU	LEFT	160

Leg 4: I-80 Eastbound Ramps

		West Le	eg	
20	WB	0		
TOTAL	3		3	LEFT
_	EB	6	2	THRU
			1	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg
RIGHT 0
THRU 0 0 WB
LEFT 0 176 TOTAL
176 EB

Leg 3: Roundtop Road

South Lea

		Codin Log				
		LEFT	THRU	RIGHT		
80		0	18	34		
	21		51			
	SB	72	NB	-		
		TOTAL				

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

		West Le	g	
<u> </u>	WB	0		
TOTAL 10			8	LEFT
	EB	10	0	THRU
			2	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT	0		80		
THRU	0	0	WB	54	
LEFT	0			116	TOTAL
		116	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	9	9
18		18	8
SB	36	NB	_
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

		West L	.eç	j	
199	WB	0			
TOTAL 7				4	LEFT
	EB	1	7	2	THRU
		,		1	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg
RIGHT 0
THRU 0 0 WB
LEFT 0 346 TOTAL
346 EB

Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

0 18 34

21 52

SB 73 NB

TOTAL

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	_	West Le	eg	
<u> </u>	WB	0		
TOTAL 2			2	LEFT
	EB	2	0	THRU
			0	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT			20		
THRU	0	0	WB	50	
LEFT	0			5	TOTAL
		5	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	0	0
0		0	60
SB	0	NB	_
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	•			
	2000 N	West Le	eg	
39	WB	0		5
TOTAL 1			1	LEFT
	EB	1	0	THRU
			0	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg

RIGHT 0

THRU 0 0 WB

LEFT 0 51 TOTAL

51 EB

Leg 3: Roundtop Road

South Leg

LEFT THRU RIGHT

0 0 0

0 0

SB 0 NB

TOTAL

Crossroad Diagram: 2035 AM PEAK NO-BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	_			
		West Le	g	
8	WB	0		
TOTAL 7			3	LEFT
	EB	7	0	THRU
			3	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT					
THRU	0	0	WB	54	
LEFT	0			125	TOTAL
		125	EB		

Leg 3: Roundtop Road

	South Leg	3	
	LEFT	THRU	RIGHT
	0	8	13
17		21	(A)
SB	38	NB	
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: Roundtop Road

North Leg

		TOTAL	
	SB	201	NB
	182		19
0	19	163	
RIGHT	THRU	LEFT	160

Leg 4: I-80 Eastbound Ramps

		West	Le	g		
20	WB	0				
TOTAL 8					3	LEFT
	EB		8		3	THRU
					1	RIGHT

Leg 2: I-80 Eastbound Ramps

East Leg
RIGHT 0
THRU 0 0 WB
LEFT 0 211 TOTAL
211 EB

Leg 3: Roundtop Road

South Lea

oodiii Log					
LEFT	THRU	RIGHT			
0	16	44			
	60				
80	NB	-			
TOTAL					
	LEFT 0 80	LEFT THRU 0 16 60 80 NB			

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	-			
		West Le	g	
-	WB	0		
TOTAL 8			5	LEFT
	EB	8	0	THRU
			3	RIGHT

Leg 2: I-80 Eastbound Ramps

		East Le	g		
RIGHT	0				
THRU	0	0	WB	54	
LEFT	0			129	TOTAL
		129	EB		

Leg 3: Roundtop Road

	South Leg	1	
	LEFT	THRU	RIGHT
	0	8	13
17		21	
SB	38	NB	
	TOTAL		

Roundtop Road at I-80 Eastbound Ramps

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: Roundtop Road

Leg 4: I-80 Eastbound Ramps

	***	West	Le	g		
100	WB	0			- 50	
TOTAL 8				4	4	LEFT
	EB		8	:	3	THRU
					1	RIGHT

Leg 2: I-80 Eastbound Ramps

Leg 3: Roundtop Road

	South Leg	9	
	LEFT	THRU	RIGHT
	0	16	44
20		60	8
SB	80	NB	_
	TOTAL		

Crossroad Diagram: 2022 AM PEAK COUNT

TOTAL 233

Leg 1: I-25 Southbound Ramps

North Leg

		TOTAL	20		
	SB	421	NB		
	83		338		
3	35	45			
RIGHT	THRU	LEFT	5.0		

Leg 4: Happy Jack Road

Leg 2: Happy Jack Road

East Leg

RIGHT	329			
THRU	12	403	WB	89
LEFT	62			769 TOTAL
		366	EB	

Leg 3: I-25 Southbound Ramps

South Leg

	9					
		LEFT	THRU	RIGHT		
		41	0	158		
ſ	102		199	***		
100	SB	301	NB			
		TOTAL				

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: I-25 Southbound Ramps

North Leg

	TOTAL				
0.5	SB	455	NB		
	368		87		
13	128	227			
RIGHT	THRU	LEFT	10		

Leg 4: Happy Jack Road

West Leg

		TIOUL	_	(9	
V	ΙВ	180		110	
TOTAL 358	8			16	LEFT
E	В	17	8'	161	THRU
				1	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT	71		ā		
THRU	82	188	WB	800	
LEFT	35			691	TOTAL
		503	EB		•

Leg 3: I-25 Southbound Ramps

	oouin Log			
	LEFT	THRU	RIGHT	
	85	0	115	
164	5	200		
SB	364	NB		
	TOTAL			

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: I-25 Southbound Ramps

	North Leg				
		200			
	SB	0	NB		
	0		0		
0	0	0			
RIGHT	THRU	LEFT	-24		

Leg 4: Happy Jack Road

		Wes	t L€	g		
	WB	175			65	
TOTAL	188				0	LEFT
	EB		13		7	THRU
					7	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	0				
THRU	88	88	WB	50	
LEFT	0		5.00	94	TOTAL
		7	EB		

Leg 3: I-25 Southbound Ramps

	South Le	South Leg			
	LEFT	LEFT THRU			
	88	0	0		
7		88			
SB	94	NB			
	TOTAL				

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram:

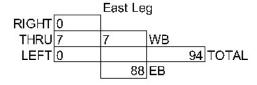
Construction PM Trip Generation

Leg 1: I-25 Southbound Ramps

Leg 4: Happy Jack Road

		West	Le	₽g	
	WB	13		2	
TOTAL	188			0	LEFT
	EB	17	' 5		THRU
				88	RIGHT

Leg 2: Happy Jack Road



Leg 3: I-25 Southbound Ramps

		South Leg				
		LEFT THRU RIGHT				
320		7	0	0		
	88		7	88		
	SB	94	NB			
		TOTAL				

Crossroad Diagram: 2025 AM PEAK NO-BUILD

Leg 1: I-25 Southbound Ramps

North Leg

	•			
		TOTAL		
-	SB	451	NB	
	89		363	
3	41	45		
RIGHT	THRU	LEFT		

Leg 4: Happy Jack Road

West Leg

				•	
	WB	63		ia N	
TOTAL	259			12	LEFT
	EB		197	178	THRU
				6	RIGHT

Leg 2: Happy Jack Road

East Leg

			ت		
RIGHT	351				
THRU	12	428	WB	54	
LEFT	65			820	TOTAL
		392	EB		

Leg 3: I-25 Southbound Ramps

South Leg

	LEFT	THRU	RIGHT		
	48	0	169		
112		217			
SB	329	NB			
	TOTAL				

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK NO BUILD

Leg 1: I-25 Southbound Ramps

North Leg

		TOTAL	_29
	SB	486	NB
	393		93
15	141	237	20
RIGHT	THRU	LEFT	-, 10

Leg 4: Happy Jack Road

West Leg

			3	
	WB	200	1.9% V	5
TOTAL	398		19	LEFT
	EB	198	178	THRU
		2.1902/400, 400	1	RIGHT
			· ·	

Leg 2: Happy Jack Road

East Leg

RIGHT			200	
THRU	89	200	WB	201
LEFT	37			735 TOTAL
\$100.000 p.s.		535	EΒ	

Leg 3: I-25 Southbound Ramps

	LEFT	THRU	RIGHT		
	97	0	121		
179		218	(d)		
SB	397	NB	-		
	TOTAL				

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: I-25 Southbound Ramps

Leg 4: Happy Jack Road

_	West Le	eg	
WB	238		
TOTAL 447		12	LEFT
EB	209	185	THRU
		13	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	351				
THRU	100	516	WB	5	
LEFT	65			914	TOTAL
		399	EB		

Leg 3: I-25 Southbound Ramps

	South Leg			
	LEFT	THRU	RIGHT	
	136	0	169	
119		305		
SB	423	NB	_	
TOTAL				

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: I-25 Southbound Ramps

North Leg

		TOTAL	-00
	SB	486	NB
	393		93
15	141	237	
RIGHT	THRU	LEFT	187

Leg 4: Happy Jack Road

West Leg
WB 214

TOTAL 587 19 LEFT
EB 373 266 THRU
89 RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 74
THRU 96 207 WB
LEFT 37 830 TOTAL
624 EB

Leg 3: I-25 Southbound Ramps

		OOG LO		
		LEFT	THRU	RIGHT
8		104	0	121
	267		225	88
	SB	491	NB	
		TOTAL		

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: I-25 Southbound Ramps

Leg 4: Happy Jack Road

		West Le	g	
8	WB	53		
TOTAL 58			0	LEFT
	EB	5	3	THRU
			3	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	0		20		
THRU	27	27	WB	50	
LEFT	0			29	TOTAL
		3	EB		

Leg 3: I-25 Southbound Ramps

	South Leg				
	LEFT	THRU	RIGHT		
	27	0	0		
3		27			
SB	29	NB			
	TOTAL				

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: I-25 Southbound Ramps

LEFT

RIGHT THRU Leg 4: Happy Jack Road

West Leg

WB 5

TOTAL 58 0 LEFT

EB 53 27 THRU

27 RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 0
THRU 3 3 WB
LEFT 0 29 TOTAL
27 EB

Leg 3: I-25 Southbound Ramps

South Leg

LEFT THRU RIGHT

3 0 0

27 3

SB 29 NB

TOTAL

Crossroad Diagram: 2035 AM PEAK NO-BUILD

Leg 1: I-25 Southbound Ramps

North Leg

		0	
		TOTAL	20
	SB	571	NB
	110		461
4	63	43	
RIGHT	THRU	LEFT	- T.

Leg 4: Happy Jack Road

West Leg

WE	3	92		S.		
TOTAL 370	100				26	LEFT
E	3		279		239	THRU
					13	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT					
THRU	11	522	WB	50	
LEFT	76			1016	TOTAL
		493	EB		

Leg 3: I-25 Southbound Ramps

South Leg

	LEFT	THRU	RIGHT	
	76	0	211	
152		288		
SB	440	NB	_	
	TOTAL			

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK NO BUILD

Leg 1: I-25 Southbound Ramps

North Leg

		TOTAL	_20
	SB	603	NB
	487		116
22	194	270	
RIGHT	THRU	LEFT	-, 10

Leg 4: Happy Jack Road

West Leg

FT
HRU
GHT

Leg 2: Happy Jack Road

East Leg

RIGHT	86		551 694	
THRU	115	244	WB	
LEFT	43			902 TOTAL
		658	EB	

Leg 3: I-25 Southbound Ramps

		,	
	LEFT	THRU	RIGHT
	149	0	140
239		289	(c) (c)
SB	529	NB	_
	TOTAL		

Crossroad Diagram:

2035 AM PEAK BUILD

Leg 1: I-25 Southbound Ramps

4 63 43 RIGHT THRU LEFT

Leg 4: Happy Jack Road

		West Le	g	
	WB	144	6) 8) (4)	
TOTAL	427		26	LEFT
	EB	283	242	THRU
			16	RIGHT

Leg 2: Happy Jack Road

East Leg

		Las. Lo	9		
RIGHT	435				
THRU	38	549	WB	9.	
LEFT	76			1044	TOTAL
		496	EB		

Leg 3: I-25 Southbound Ramps

I-25 Southbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: I-25 Southbound Ramps

North Leg

		TOTAL	
	SB	603	NB
	486		117
22	194	270	100
RIGHT	THRU	LEFT	7,00

Leg 4: Happy Jack Road

	West Le	g	
WB	291	1000 17	
TOTAL 625		31	LEFT
EB	334	275	THRU
		29	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 86
THRU 118 247 WB
LEFT 43 931 TOTAL
685 EB

Leg 3: I-25 Southbound Ramps

	,	o .	
	LEFT	THRU	RIGHT
	152	0	140
266		292	
SB	557	NB	
	TOTAL		

Crossroad Diagram: 2022 AM PEAK COUNT

TOTAL 763

Leg 1: I-25 Northbound Ramps

North Leg

	TOTAL			
	SB	164	NB	
x0	0		164	
0	0	0		
RIGHT	THRU	LEFT		

Leg 4: Happy Jack Road

West Leg
WB 400
8 82 LEFT
EB 363 281 THRU
0 RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT					
THRU	226	306	WB		
LEFT	0			657	TOTAL
		351	EB		

Leg 3: I-25 Northbound Ramps

South Leg

	LEFT	THRU	RIGHT	
	174	2	70	1
0		246		_
SB	246	NB	7.	
	TOTAL			

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2022 PM PEAK COUNT

Leg 1: I-25 Northbound Ramps

North Leg

			TOTAL	_
		SB	387	NB
		0		387
	0	0	0	
2	RIGHT	THRU	LEFT	_

Leg 4: Happy Jack Road

West Leg
WB 208

TOTAL 718 185 LEFT
EB 510 325 THRU

0 RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT				
THRU	160	361	WB	
LEFT	0	200000000000000000000000000000000000000		725 TOTAL
		364	EB	

Leg 3: I-25 Northbound Ramps

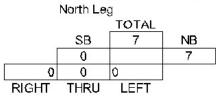
South Lea

	,	,	
	LEFT	THRU	RIGHT
	48	1	39
0		88	
SB	88	NB	
	TOTAL		

Crossroad Diagram:

Construction AM Trip Generation

Leg 1: I-25 Northbound Ramps



Leg 4: Happy Jack Road

			West	t Le	g		
		WB	88		53 5	6	
TOTAL	95					7	LEFT
		EB		7		0	THRU
						0	RIGHT

Leg 2: Happy Jack Road

East Leg						
RIGHT	0					
THRU	0	0	WB	- 85		
LEFT	0			0 TOTAL		
		0	EB			

Leg 3: I-25 Northbound Ramps

	South Leg	3	
	LEFT	THRU	RIGHT
	88	0	0
0		88	
SB	88	NB	
	TOTAL		

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram:

Construction PM Trip Generation

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

		West Le	∍g	
22	WB	7		5
TOTAL 95			88	LEFT
	EB	88	0	THRU
			0	RIGHT

Leg 2: Happy Jack Road

Leg 3: I-25 Northbound Ramps

		LEFT	THRU	RIGHT
8		7	0	0
	0		7	88
	SB	7	NB	
		TOTAL		

Crossroad Diagram: 2025 AM PEAK NO BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

		West Le	eg	
	WB	422		
TOTAL	808		91	LEFT
	EB	385	294	THRU
			0	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	85		8		
THRU	236	321	WB		
LEFT	0			686	TOTAL
		366	EB		

Leg 3: I-25 Northbound Ramps

	South Leg		
	LEFT	THRU	RIGHT
	186	2	72
0		260	8
SB	260	NB	
	TOTAL		

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK NO-BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

		West Le	eg .	
		218		
TOTAL	760		204	LEFT
	EB	542	337	THRU
			0	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 212
THRU 167 378 WB
LEFT 0 756 TOTAL
377 EB

Leg 3: I-25 Northbound Ramps

	South Leg	3	
	LEFT	THRU	RIGHT
	52	1	40
0		93	86
SB	93	NB	
	TOTAL		

Crossroad Diagram: 2025 AM PEAK BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

		West Le	eg	
\	ΝB	510	1.T	
TOTAL 902			98	LEFT
	ΕB	392	294	THRU
			0	RIGHT

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	85		80		
THRU	236	321	WB		3
LEFT	0		40	687	TOTAL
		366	EB		

Leg 3: I-25 Northbound Ramps

	South Leg			
	LEFT	THRU	RIGHT	
	274	2	72	
0		348		
SB	348	NB	_	
	TOTAL			

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2025 PM PEAK BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

		West Le	eg	
	WB	226		
TOTAL	855		292	LEFT
	EB	629	337	THRU
			0	RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 212
THRU 167 379 WB
LEFT 0 756 TOTAL
377 EB

Leg 3: I-25 Northbound Ramps

	South Leg		
	LEFT	THRU	RIGHT
	59	1	40
0		100	
SB	100	NB	_
	TOTAL		

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram:

Operations AM Trip Generation

Leg 1: I-25 Northbound Ramps

North Leg

			TOTAL	
		SB	3	NB
		0		3
	0	0	0	
•	RIGHT	THRU	LEFT	*33

Leg 4: Happy Jack Road

West Leg

	WB	27			
TOTAL 30)			3	LEFT
	EB		3	0	THRU
				0	RIGHT

Leg 2: Happy Jack Road

Leg 3: I-25 Northbound Ramps

South Leg

	J				
	LEFT	THRU	RIGHT		
	27	0	0]	
0		2 7	8	-	
SB	27	NB			
	TOTAL				

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram:

Operations PM Trip Generation

Leg 1: I-25 Northbound Ramps

North Leg

		-88	
	SB	27	NB
	0		27
0	0	0	
RIGHT	THRU	LEFT	100

Leg 4: Happy Jack Road

Nest Lea

		VVEST L	eg	
	WB	3		
TOTAL	30		27	LEFT
	EB	27	0	THRU
			0	RIGHT

Leg 2: Happy Jack Road

East Lea

RIGHT			100	
THRU	0	0	WB	207
LEFT	0			0 TOTAL
		0	EB	

Leg 3: I-25 Northbound Ramps

South Lea

		Obdair Log			
		LEFT	THRU	RIGHT	
1		3	0	0	
	0		3		
	SB	3	NB		
		TOTAL			

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 AM PEAK NO BUILD

Leg 1: I-25 Northbound Ramps

North Leg

	TOTAL				
	SB	232	NB		
	0		232		
0	0	0			
RIGHT	THRU	LEFT	7.00		

Leg 4: Happy Jack Road

West Leg
WB 506

TOTAL 977 128 LEFT
EB 470 343 THRU

0 RIGHT

Leg 2: Happy Jack Road

East Leg
RIGHT 102
THRU 273 374 WB
LEFT 0 794 TOTAL
420 EB

Leg 3: I-25 Northbound Ramps

South Leg

	200209				
	LEFT	THRU	RIGHT		
	233	3	77		
0		313	E .		
SB	313	NB			
	TOTAL				

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK NO-BUILD

Leg 1: I-25 Northbound Ramps

North Leg

		TOTAL			
	(4)	SB	534	NB	
9		0		534	
	0	0	0		
	RIGHT	THRU	LEFT		

Leg 4: Happy Jack Road

West Leg

		11000 -	- 9	
	WB	257		
TOTAL	917		281	LEFT
	EB	661	380	THRU
			0	RIGHT

Leg 2: Happy Jack Road

East Leg

RIGHT	252			
THRU	190	442	WB	
LEFT	0		s,	866 TOTAL
		424	EB	

Leg 3: I-25 Northbound Ramps

South Leg

		_	
	LEFT	THRU	RIGHT
	67	1	44
0		112	
SB	112	NB	_
	TOTAL		

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 AM PEAK BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

	_	West Le	eg	
	WB	533		
TOTAL	1007		131	LEFT
	EB	474	343	THRU
			0	RIGHT
				-

Leg 2: Happy Jack Road

		East Le	g		
RIGHT	102				
THRU	273	375	WB		
LEFT	0			795	TOTAL
		420	EB		

Leg 3: I-25 Northbound Ramps

	South Leg	3	
	LEFT	THRU	RIGHT
	260	3	77
0		340	64
SB	340	NB	
	TOTAL		

I-25 Northbound Ramps at Happy Jack Road

Crossroad Diagram: 2035 PM PEAK BUILD

Leg 1: I-25 Northbound Ramps

Leg 4: Happy Jack Road

	West Le	eg .	
WB	260		
TOTAL 948		308	LEFT
EB	688	380	THRU
		0	RIGHT

Leg 2: Happy Jack Road

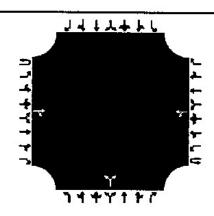
East Leg
RIGHT 252
THRU 190 442 WB
LEFT 0 866 TOTAL
424 EB

Leg 3: I-25 Northbound Ramps

	South Leg	g	
	LEFT	THRU	RIGHT
	70	1	44
0		115	66
SB	115	NB	_
	TOTAL		

Appendix B: Capacity Analysis Plots

General Information		Site Information	Site Information				
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210				
Agency/Co	Y2 Consultants, LLC	Junsdiction					
Date Performed	10/25/2022	East/West Street	CR 210				
Analysis Year	2022	North/South Street	Gold King Mine Road				
Time Analyzed	2022 AM Peak Count	Peak Hour Factor	0.92				
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00				
Project Description	Gold King Mine						



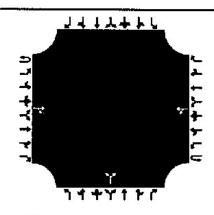
Approach		Eastbound Westbound Northbound Southbo			bound											
Movement	υ	L	Т	R	и	Ĺ	Т	R	U	L	. т	R	u	L	T	R
Priority	111	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	D	0	٥	1	0		0	0	0		0	0	0
Configuration				TR		LT					LR				16	
Volume, V (veh/h)	, , , , , , , , , , , , , , , , , , , ,	200300000000000000000000000000000000000	9	0		a	2			0		0				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked	45															
Percent Grade (%)				•						1200000	0		i			
Right Turn Channelized	No No No					No										
Median Type/Storage				Undi	vided											
Critical and Follow-up	Headwa	ys	-1000 Da													
Base Critical Headway (sec)					\$ 160.00	4.1	2531			71	Γ	62	-			ľ
Critical Headway (sec)					Ì	4.13	<u> </u>			6 43		6 23		t		

Base Critical Headway (sec)	4.1	71	62	
Critical Headway (sec)	4.13	6 43	6 23	1 1 1
Base Follow-Up Headway (sec)	2.2	35	33	
Follow-Up Headway (sec)	2.23	3.53	3 33	
To the state of th	 			

Delay, Queue Length, and Level of Service

**			
Flow Rate, v (veh/h)	0	D	
Capacity, ε (veh/h)	7601	0	
v/c Ratio	0.00		
95% Queue Length, Q ₉₅ (veh)	0.0		
Control Delay (s/veh)	7.2	5.0	
Level of Service, LOS	Α .	A	
Approach Delay (s/veh)	0.0	5.0	
Approach LOS		A	

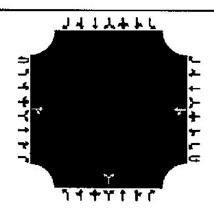
General Information		Site Information	
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	10/25/2022	East/West Street	CR 210
Analysis Year	2022	North/South Street	Gold King Mine Road
Time Analyzed	2022 PM Peak Count	Peak Hour Factor	0.92
Intersection Orientation	East-West	Ana ysis Time Period (hrs)	1.00
Project Description	Gold King Mine		<u></u>



Approach		Eastbound Westbound						North	bound		Southbound					
Movement	U	L	Т	R	Ų	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	В	9		10	11	12
Number of Lanes	a	a	1	0	0	0	1	D	of electric	0	0	0		0	0	0
Configuration				TR		LT			8		LR	. 181 6				
Volume, V (veh/h)			5	0		0	5			G		0				
Percent Heavy Vehicles (%)				_		3				3		3				
Proportion Time Blocked																
Percent Grade (%)			2.51200000	-							0					
Right Turn Channelized		N	lo			V	lo			N	lo		No			
Median Type/Storage			0.000000	Undi	vided											
Critical and Follow-up H Base Critical Headway (sec)						4.1			.3	7,1		6.2			<u> </u>	<u> </u>
Base Critical Headway (sec)			i -	1000		4.1			3	7.1		62	i i	J 1373	<u> </u>	Ī
Critical Headway (sec)	-				_	4.13				6,43		6 23				
Base Follow-Up Headway (sec)						2.2				3.5		33				
Follow-Up Headway (sec)	·					2.23	<u></u>			3.53		3 33				
Delay, Queue Length, an	ıd Leve	of S	ervice	2												
Flow Rate, v (veh/h)						0	2	<u> </u>	2		0					
Capacity, c (veh/h)						1608		150,000	4.0		0					
v/c Ratio		100 mm m m m m m m m m m m m m m m m m m	40			0.00						3		-		
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						7,2					50					
Level of Service, LOS		20				Α	700000				Α					
Approach Delay (s/veh)					W	0	.0			5	.0					
													100000000000000000000000000000000000000	1000000		

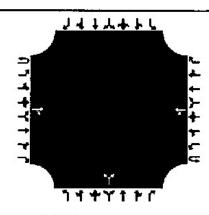
Approach LOS

General Information		Site Information						
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210					
Agency/Co.	YZ Consultants, LLC	Jurisdiction						
Date Performed	10/25/2022	East/West Street	CR 210					
Analysis Year	2025	North/South Street	Gold King Mine Road					
Time Analyzed	2025 AM Peak NO-BUILD	Peak Hour Factor	0.92					
Intersection Orientation	East-West	Analysis Time Period (hrs)	1,00					
Project Description	Gold King Mine		10000					



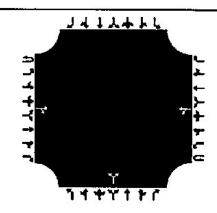
Approach		Eastl	pound			Westbound			Northbound					South	bound	
Movement	U	L	Ţ	R	U	L	Т	R	U	L	Т	R	U	L	т	R
Priority	10	1	2	3	4∪	4	5	6		7	В	9		10	11	12
Number of Lanes	0	0	1	0	C	0	1	0		0	0	0		0	0	0
Configuration				TR		LT					LR	2				
Volume, V (veh/h)			9	0		0	2			0		0				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blacked													_			
Percent Grade (%)						10.00)					
Right Turn Channelized			N	lo	93		N	lo		8	N	lo				
Median Type/Storage			Undi	vided				2				1000				
Critical and Follow-up H	eadwa	ys							10°25	100700						
Base Critical Headway (sec)	5.50		3 6a			4.1		<u> </u>		71		6.2	9.			
Critical Headway (sec)				1		4.13	8.			6.43		6.23			8	
Base Follow-Up Headway (sec)						2.2			e e	35		33				
Follow-Up Headway (sec)						2.23			1/4	3 53		3 33			13	
Delay, Queue Length, an	d Leve	of S	ervice	•	•			·	·	_						
Flow Rate, v (veh/h)			Ī		<u> </u>	0			1		a					
Capacity, c (veh/h)	1					1601			3 3		0					
v/c Ratio						0.00	86									
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)	21 22 22					7.2					5.0					
Level of Service, LOS						Α					Α					
Approach Delay (s/veh)		7			-	0.	.0			5	0		550			
Approach LOS									<u> </u>		1					

#17 to a little of the control of the light **General Information** Site Information Analyst G Grigsby Intersection Gold King Mine Dr @ CR210 Agency/Co. Y2 Consultants, LLC Jurisdiction **Date Performed** 10/25/2022 East/West Street CR 210 Analysis Year 2025 North/South Street Gold King Mine Road Time Analyzed 2025 AM Peak BUILD Peak Hour Factor Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine



Approach		East	bound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	u	L	T	R	u	L	Т	R	U	L	Т	R
Priority	10	١	2	3	4Ų	4	5	6		7	8	9	3 30	10	11	12
Number of Lanes	0	0	1	0	D	۵	1	0		0	0	0		o	0	0
Configuration				TR		LT				_	LR					
Volume, V (veh/h)			9	٥		31	2	32		0		7			522.00	ļ
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked							8									
Percent Grade (%)											0					
Right Turn Channelized			N	ю		No				No						
Median Type/Storage	Undivided													V28130		
Critical and Follow-up H	eadwa	ys	,	,	_								4	Made N		
Base Critical Headway (sec)																
Critical Headway (sec)			20								5-25-25					
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)							No.									
Delay, Queue Length, an	d Leve	l of S	ervice	2								20-20-20				
Flow Rate, v (veh/h)						34		Ĭ			8			Q S		
Capacity, c (veh/h)						1601			100000 100		1068	6				
v/c Ratio						0.02					0.01				· · · · ·	
95% Quaue Length, Q ₅₅ (veh)						0.1					0.0					
Control Delay (s/veh)					3 83	7.3					8,4					
Level of Service, LOS						Α					А					
Approach Delay (s/veh)	1 2 200		0.50		51001545	6.	9			8	.4					
Approach LOS	2	0.7558						-			4					

General Information		Site Information						
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210					
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	1 207 23 15					
Date Performed	10/25/2022	East/West Street	CR 210					
Analysis Year	2025	North/South Street	Gold King Mine Road					
Time Analyzed	2025 PM Peak NO-BUILD	Peak Hour Factor	0.92					
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00					
Project Description	Gold King Mine	•						



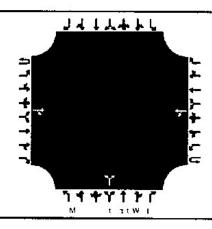
Vehicle Volumes and Adjustme	ents
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			- 12		1				1							
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	Ŋ	L	T	R	U	L	Т	R	u	Ļ	Т	R	U	L	Т	R
Priority	1Ų	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	a	1	0	D	0	1	0		0	О	0		0	0	0
Configuration				TR		LT				•	LR					
Volume, V (veh/h)			5	0		a	5			D		0			 	
Percent Heavy Vehicles (%)		10008		1		3				3		3			9,000	
Proportion Time Blocked												\vdash				_
Percent Grade (%)												٠				
Right Turn Channelized		٨	lo	AFS: S		N	lo			N	lo				io	
Median Type/Storage				Undi	vided			10.000						20.00		
Critical and Follow-up	Headwa	ys													•	******
Base Critical Headway (sec)			<u> </u>			4.1			S 6300	71		6.2				
Critical Headway (sec)						4.13				543		6.23	\vdash		<u> </u>	

Delay, Queue Length, and Level of Serv	ice			
Follow-Up Headway (sec)	2.23	3 53	3 33	
Base Follow-Up Headway (sec)	2.2	35	33	
Critical Headway (sec)	4.13	5 43	6.23	
Base Critical Headway (sec)	4.1	71	6.2	

Flow Rate, v (veh/h)	0	0	
Capacity, c (veh/h)	1608	0	
v/c Ratio	0.00		
95% Queue Length, Q ₉₅ (veh)	0.0		
Control Delay (s/veh)	7.2	5.0	
Level of Service, LOS	A	A	
Approach Delay (s/veh)	0.0	5.0	
Approach LOS		A	

General Information		Site Information	
Analyst	G Grigsby	Intersection	Gold King Mine Or @ CR210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	10/25/2022	East/West Street	CR 210
Analysis Year	2025	North/South Street	Gold King Mine Road
Time Analyzed	2025 PM Peak BUILD	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		20.22.90



Vehicle	Volumes	and Ad	justments

Approach		Eastb	ound		35.79	West	bound		Northbound				Southbound				
Movement	U	L	Т	R	บ	Ł	Т	R	n	L	Т	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	· · · · · ·	0	0	0		0	0	0	
Configuration				TR	9000	LT				7	LR						
Volume, V (veh/h)			5	0		7	5			0		31					
Percent Heavy Vehicles (%)						3			S.	3	e 8	3					
Proportion Time Blocked																	
Percent Grade (%)											0		 				
Right Turn Channelized	No			No				-	N	la		Salida)	N	la			
Median Type/Storage	Undivided																

v/c Ratio

95% Queue Length, Q₉₅ (veh)

Contro! Delay (s/veh)

Level of Service, LOS

Approach Delay (s/veh)

Critical and Follow-up	Headw	ays												
Base Critical Headway (sec)	500.5			\top								T		Ι
Critical Headway (sec)				200				1	 			Ì		
Base Follow-Up Headway (sec)	35 5												 	
Follow-Up Headway (sec)						10 50								
Delay, Queue Length, a	ınd Lev	el of S	ervice											1000
Flow Rate, v (veh/h)					В					34	Τ			
Capacity, c (veh/h)					1608		1			1074	<u> </u>			

0.00

0.0

7.3

A

4.5

Approach LOS	
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0.03

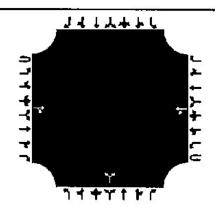
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8.5

8.5

Α

General Information		Site Information	
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	10/25/2022	East/West Street	CR 210
Analysis Year	2035	North/South Street	Gold King Mine Road
Time Analyzed	2035 AM Peak NO BUILD	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Volumes and Adjustments

Approach		Eastb	bnuot	_		West	bound			North	bound			South	bound	
Movement	υ	L	Т	R	U	L	Т	R	บ	L	Ŧ	R	U	L	τ	R
Priority	10	1	2	3	4 U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	D		0	0	0
Configuration		18		TR		LT					LR					
Volume, V (veh/h)	,	69/09/10	11	0		0	2			a	<u> </u>	0				
Percent Heavy Vehicles (%)			. 15		9	3				3		3				
Proportion Time Blacked					.=======											_
Percent Grade (%)						25,000				_	0					
Right Turn Channelized		٨	lo		100	N	lo			١	10		No			
Median Type/Storage				Undi	vided		4000		2 2000	2000	2.200					
Critical and Follow-up H	leadwa	ys			25V W2510	n 2430000000		Social Control of the			50154-10054				5775770	12.00
Base Critical Headway (sec)	15											i in				
Critical Headway (sec)					02222									v 20040000		
Base Follow-Up Headway (sec)									-							200
Follow-Up Headway (sec)			2 200.00									-				
Delay, Queue Length, an	ıd Leve	of S	ervice													
Flow Rate, v (veh/h)				16.0		D					0					
Capacity, c (veh/h)						1598					0					
v/c Ratio						0.00					120072					
95% Queue Length, Q ₃₅ (veh)						0.0					<u> </u>				-	
Control Delay (s/veh)						7.3					50					
Level of Service, LOS			- 8		- 1	Α				T- /	A	200000				

Approach Delay (s/veh)

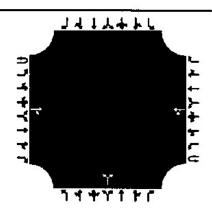
Approach LOS

0.0

5.0

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General Information		Site Information	
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	No. 100
Date Performed	10/25/2022	East/West Street	CR 210
Analysis Year	2035	North/South Street	Gold King Mine Road
Time Analyzed	2035 AM Peak BUILD	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Volumes and Adjustments

Approach		Eastbound U L T R			Westbound			Northbound				Southbound				
Movement	υ	L	Т	R	U	L	Т	R	υ	L	T	R	U	Ļ	Т	R
Priority	ıΠ	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	O	0	1	0		0	0	D	6. 1972/19	0	0	0
Configuration				TR	2008	LT				187	LR					
Volume, V (veh/h)			11	0		10	2	<u> </u>		0		3				
Percent Heavy Vehicles (%)			8 858 5			3				3		3				
Proportion Time Blocked	2 2223											<u> </u>				
Percent Grade (%)										,	0					
Right Turn Channelized		N	ю		8074,00000	1	lo			N	lo			٨	lo	
Median Type/Storage				Undi	vided								1			wie die eele

Critical and Follow-up H	eadwa	ys													
Base Critical Headway (sec)					I										
Critical Headway (sec)															
Base Follow-Up Headway (sec)		2								<u> </u>					
Follow-Up Headway (sec)					i i i		Ì								
Delay, Queue Length, an	d Leve	of 5	ervic	e				•	·		•	•			
Flow Rate, v (veh/h)					11			200000		3	i			Т	T
Capacity, c (veh/h)		Manage VIII		33	1598					1065					
v/c Ratio				T	0.01					0.00					
95% Queue Length, Q ₉₅ (veh)					0.0	·	l			0.0				1	

Control Delay (s/veh)

Level of Service, LQS

Approach LOS

Approach Delay (s/veh)

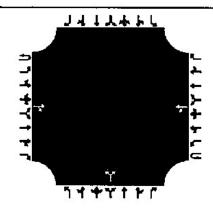
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6.2

8.4

General Information		Site Information	
Analyst	G Grigsby	Intersection	Gold King Mine Dr @ CR210
Agenty/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	10/25/2022	East/West Street	CR 210
Analysis Year	2035	North/South Street	Gold King Mine Road
Time Analyzed	2035 PM Peak NO-BUILD	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine	***	



Approach		Eastb	bnuor			Westi	bound			North	bound		Post Williams	South	bound		
Movement	U	Ļ	Т	R	V	L	T	R	· U	L	T	R	U	ì.	т	R	
Priority	10	1	2	3	4Ú	4	5	6	200	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	D	1	0		0	0	0		D	0	0	
Configuration		83		TR	s.	LT					ŁR						
Volume, V (veh/h)			6	0		0	6			0		0					
Percent Heavy Vehicles (%)						3				3		3					
Proportion Time Blacked			.a - 01.20100						•								
Percent Grade (%)				10000		•					D					100000	
Right Turn Channelized		No				N	lo		No				No				
Median Type/Storage		Undivid													···		
Critical and Follow-up H	eadwa	ys			201720	20,000,000	300										
Base Critical Headway (sec)					Π	4.1			80	71		6.2					
Critical Headway (sec)						4.13				6.43		6 23					
Base Follow-Up Headway (sec)						2.2			200	35	10000	33					
Follow-Up Headway (sec)			·		eses s	2.23				3 53		3 33					
Delay, Queue Length, an	d Leve	l of S	ervice	2			·		•		•						
Flow Rate, v (veh/h)			<u> </u>		<u> </u>	a	1				0				1		
Capacity, c (veh/h)						1605					0					129	
v/c Ratio	3 3 3					0.00								1			
95% Queue Length, Q ₉₅ (veh)					N. X	0.0					(C)						
Control Delay (s/veh)						7.2		ē.			50						

Level of Service, LOS

Approach Delay (s/veh)

Approach LOS

Vehicle Volumes and Adjustments

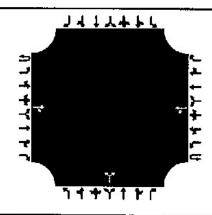
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TO THE STATE OF THE PARTY OF TH **General Information Site Information** Analyst G Grigsby Intersection Gold King Mine Dr @ CR210 Agency/Co. YZ Consultants, LLC Jurisdiction **Date Performed** 10/25/2022 East/West Street CR 210 Analysis Year 2035 North/South Street Gold King Mine Road Time Analyzed 2035 PM Peak BUILD Peak Hour Factor Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine

Lanes



vehicle	Volumes	and	Adjust	ments

Approach		Easth	bound			West	bound		Northbound					Southbaund			
Movement	υ	L	Т	R	U	L	T	R	U	L	Т	R	U	L	т	R	
Priority	10	1	2	3	4U	4	5	6		7	В	9	1/4	10	11	12	
Number of Lanes	a	0	1	0	0	0	1	D		0	0	0		0	0	0	
Configuration				TR	- ASS	LT					LR				3	332.50	
Volume, V (veh/h)	1		-5	0		3	6			0		10					
Percent Heavy Vehicles (%)				80000 0		3	8	20		3		3		_			
Proportion Time Blocked						···											
Percent Grade (%)			2000				-			•	0						
Right Turn Channelized		٨	lo			N	lo			١	ło			N	lo		
Median Type/Storage	1			Undi	vided												

Critical and Follow-up Headway	's				77 :	
Base Critical Headway (sec)				I I I		T
Critical Headway (sec)						
Base Follow-Up Headway (sec)			- 	1 - 	 -	
Follow-Up Headway (sec)					+ +	<u> </u>
Delay, Queue Length, and Level	of Service					
Flow Rate, v (veh/h)		3	T I	11	1	T
Capacity, c (veh/h)		1605		1072		
v/c Ratio		0.00		0.01		
95% Queue Length, Q ₉₅ (veh)		0.0		0.0	_	- -

Control Delay (s/veh)

Level of Service, LOS

Approach LOS

Approach Delay (s/veh)

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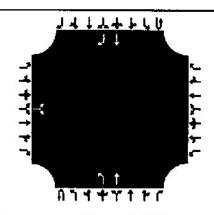
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General Information		Site Information	
Analyst	G Grigsby	Intersection	Happy Jack Rd @ CR 210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2022	North/South Street	Happy Jack Road
Time Analyzed	2022 AM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period :hrs)	1 00
Project Description	Gold King Mine		<u> </u>



Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	υ	L	τ	R	U	L	τ	R	Ш	L	T	R	U	L	Т	R
Priority		10	11	12	0.00	7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	O	0		0	0	a	0	1	1	0	0	0	1	1
Configuration		20	LR							L	T		 		Т	F
Volume, V (veh/h)		1		8						2	30				56	
Percent Heavy Vehicles (%)		3		3						3	200		1			
Proportion Time Blocked							4.6								920	
Percent Grade (%)		,	0												· · · · ·	
Right Turn Channelized		٨	lo	-		١	la			N	0			٨	la	
Median Type/Storage	1	Undivided							9/5/48/	02.00						
Critical and Follow-up Ho	eadwa	adways						<u>,</u>								
Base Critical Headway (sec)			3							8						
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)									1000000			3-402				
Delay, Queue Length, and	d Leve	d of S	ervice	•				80	2010				•		•	
Flow Rate, v (veh/h)			10					E.		2					<u> </u>	V
Capacity, c (veh/h)			9B9			200				1534						_
v/c Ratio			0.01							0.00			2000			
95% Queue Length, Q ₂₅ (veh)			0.0							0.0	10					
Control Delay (s/veh)	3	100111	8.7							7.3						
Level of Service, LOS			Α							Α				5		
Approach Delay (s/veh)		8	.7							0.	4	I				
Approach LOS			Α		ijo.									-	······	

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General Information			••	-			Site	Infor	matio	n	*					55
Analyst	G Gri	gsby		Mades Are as	— »—		Inter	section		•	Нарр	y Jack F	≀d @ CR	210		800 V
Agency/Co.		onsultan	ts, LLC					iction		1000	1—					-
Date Performed	11/8/	2022				L-,	East/	West Str	eet		CR 2	10			- 10	
Analysis Year	2022						Nort	h/South	Street		Нарр	y Jack F	Road			
Time Analyzed	2022	PM Pea	k				Peak	Hour Fa	ctor	·	0.92					
Intersection Orientation	North	n-South					Analy	sis Tıme	Period	(hrs)	100					
Project Description	Gold	King Mi	ne		•				-							
Lanes									_		34 35.5	_	-		-	
	Eastbound				በጉ	<u>ነ ተ</u>	11		⊢ ⊢ ⊢							
Vehicle Volumes and Ac	djustme		ound		Γ	Westl	oound		Г-	North	bound			South		3
Movement	i i		r	R	u	L	Т	R.	U	L	Т	R	 		Т	Γ-
		10	11	12		7	8	9	10	1	2		40	4	5	H
Priority						222		0.00		0.5111		3				
Priority Number of Lanes	 -	0	U	0		0	0	a	0	1	2 200	3				⊢
			U LR	0	<u> </u>	0	0	a	0	1 L	1		0	0	1	
Number of Lanes				0		0	0	a	0		2 200				1 T	
Number of Lanes Configuration		0		2004		0	0	a	0	L 5	1 T				1	
Number of Lanes Configuration Volume, V (veh/h)		0		4		0	0	0	0	L	1 T				1 T	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%)		1 3		4		0	0	a	0	L 5	1 T				1 T	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		1 3	LR	4		0 N		0	0	L 5	1 T			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		1 3	LR	3	vided			0	0	L 5	1 T 92			0	1 T	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	Headwa	0 1 3	LR	3	vided			a	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	Headwa	0 1 3	LR	3	vided			3	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	Headwa	0 1 3	LR	3	vided			0	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	Headwa	0 1 3	LR	3	vided			0	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec)	Headwa	0 1 3	LR	3	vided			a	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		0 1 3 N	LR D	4 3 Undi	vided			O O	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		0 1 3 N	LR D	4 3 Undi	vided			d	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up h Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, al		0 1 3 N	LR	4 3 Undi	vided			a a	0	L 5	1 T 92			0	1 T 45	
Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pollow-Up Headway (sec) Follow-Up Headway (sec)		0 1 3 N	LR D Id ervice	4 3 Undi	vided			O O	0	L 5 3	1 T 92			0	1 T 45	

Control Delay (s/veh)

Level of Service, LOS

Approach LOS

Approach Delay (s/veh)

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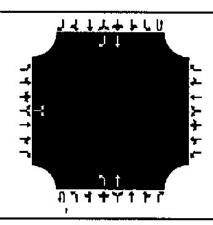
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General Information		Site Information	
Analyst	G Grigsby	Intersection	Happy Jack Rd @ CR 210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2025	North/South Street	Happy Jack Road
Time Analyzed	2025 AM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		5,000,000



Vehicle V	olumes a	and Ad	justn	nents
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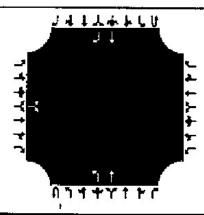
Approach		Eastb	ound	Westbound				North	bound		Southbound					
Movement	υ	L	Т	R	U	L.	Т	R	U	L.	Т	R	U	L	Т	A
Priority		10	. 11	12		7	8	9	1υ	1	2	. 3	4U	4	5	- 6
Number of Lanes	13	0	0	0		0	0	0	0	1	1	0	0	0	1	. 1
Configuration			LR				8.6		-	L	Т				Т	R
Volume, V (veh/h)	383	1	- 26	15			8			33	31				5B	a
Percent Heavy Vehicles (%)		3	ROSSES -	3						3						
Proportion Time Blocked																
Percent Grade (%)	*		0							•	•		50.00000			
Right Turn Channelized		N	lo			N	Jo			N	la			١	وا	
Median Type/Storage	43.00			Undi	vided				8					100000000000000000000000000000000000000		

Dolay Ougus Longth and	Llaw	ما مو د						81 12	•	•	
Follow-Up Headway (sec)						20.25					
Base Follow-Up Headway (sec)								3		}	
Critical Headway (sec)											
Base Critical Headway (sec)	100			9							

Delay, Queue Length, and Level of Service

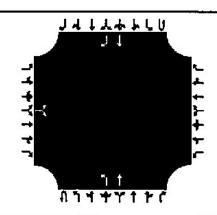
Flow Rate, v (veh/h)	17		36		
Capacity, c (vel/h)	984		1531		
v/c Ratio	0.02		0.02	i	""
95% Queue Length, Q ₃₅ (veh)	D.1	0 809000 84	0.1		
Control Delay (s/veh)	B.7		7.4		10.000
Level of Service, LOS	A		А		
Approach Delay (s/veh)	8.7		3.8	<u>-</u>	<u> </u>
Approach LOS	А		· · · · · · · · · · · · · · · · · · ·		

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General Information		Site Information	- · · · · · · · · · · · · · · · · · · ·
Analyst	G Grigsby	Intersection	Happy Jack Rd @ CR 210
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2025	North/South Street	Happy Jack Road
Time Analyzed	2025 PM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	100
Project Description	Gold King Mine	· · · · · · · · · · · · · · · · · · ·	



Eastbound						bound			140141	bound		Southbound			
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	(D													
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		1007							1547						
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		8,7							7.3				-		
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General Information		Site Information	
Analyst	G Grigsby	Intersection	Happy Jack Rd @ CR 210
Agency/Co.	YZ Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2025	North/South Street	Happy Jack Road
Time Analyzed	2022 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		···

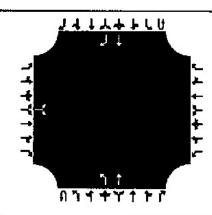


Approach		Eastb	ound		-	West	bound		- 100 - 100	North	bound			South	bound	
Movement	U	L	Т	R	U	L	Ť	R	U	L	т	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes	***************************************	0	a	0		0	a	0	0	1	1	0	0	C	1	1
Configuration			LR							L	1				Т	R
Volume, V (veh/h)		1		8	S					2	31				58	0
Percent Heavy Vehicles (%)	0 10 10	3		3						3						
Proportion Time Blacked																
Percent Grade (%)		(0				•								•	
Right Turn Channelized	y 10750000	N	lo	95.000		١	lo			N	o			N	10	
Median Type/Storage				Undi	vided		(A)	0.00					1			
Critical and Follow-up H	eadwa	ys							•			-		÷		
Base Critical Headway (sec)								<u> </u>				00 JUL 0				
Critical Headway (sec)						1-0 1 66										
Base Follow-Up Headway (sec)											627					
Follow-Up Headway (sec)			100000000													
Delay, Queue Length, an	d Leve	l of S	ervice		ere verte								-			
Flow Rate, v (veh/h)			10		15		<u> </u>			2	2		<u> </u>			
Capacity, c (veh/h)	İ	1000	986						0	1531	-					
v/c Ratio			0.01							0.00						
95% Queue Length, Q ₉₅ (veh)			0.0							0.0						\vdash
Control Delay (s/veh)			8.7						¥.	7.4					<u> </u>	
Level of Service, LOS			Α							Α					2.5	
Approach Delay (s/veh)		8	.7							0.	4					
	+	A A									2.0					

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General Information		•					Site	Infor	matic	n					913 J. W.	-
Analyst	G Gri	gsby			.,,.,		Inter	section			Нар	py Jack I	Rd @ CR	210		-
Agency/Co.	Y2 C	onsultan	its, LLC				Juris	diction			1					_
Date Performed	11/B,	2022					East/	West St	reet		CR 2	10			<u> </u>	
Analysis Year	2025				- manua		Nort	— — h∕South	Street	***	Hap	py Jack I	Road		— —.	
Time Analyzed	2022	PM Pea	k No Bu	ild			Peak	Hour Fa	ctor		0.92					
Intersection Orientation	Norti	South					Anal	ysis Tim	e Period	(hrs)	100			n		
Project Description	Gold	King Mi	ine						10.							
Lanes				-				_		-	-		<u> </u>			- · · · ·
				1477	กา	ካ 1 1 ተ Y	111		4 + / + + - -							
Vehicle Volumes and Ac	ljustme	nts			- · -											
Approach		Eastt	ound	,	. <u> </u>	West	bound		<u> </u>	Norti	bound			South	bound	
Movement	U	L	T _	R	Ц	L	T	R	υ	L	T	R	П	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	D	<u> </u>	0	0	D	a	1	1	O-	0] e	1	1
Configuration			LR		<u> </u>					L	Т				Т	R
Volume, V (veh/h)		1		4			L			5	96	Ι			47	0
Percent Heavy Vehicles (%)	┙	3		3				<u> </u>		3	i !	<u> </u>		, 		
Proportion Time Blocked				<u> </u>											I	Π
Percent Grade (%)			0		<u></u>							14			-	
Right Turn Channelized		N	lo				lo			- 1	Vo O	_ _	T :	-	No	
Median Type/Storage	1			Undi	vided											
Critical and Follow-up H	leadwa	ys									8					
Base Critical Headway (sec)			Γ	Γ -	<u> </u>	Γ –		i -		Γ	T	r— -	T	ī	Τ	Γ
Critical Headway (sec)			on the party	1		Γ-	· · · · ·		†—		Τ-	t —			 	
Base Follow-Up Headway (sec)			 	T -		r— -	·	Γ –	 -~	-	+ —	+ ·	-	+ - -	! 	_
Follow-Up Headway (sec:	-		f	Τ .	Î -	·	† -	_	<u> </u>	<u> </u>	†	┌ .	1	† -՟	†	┪~
Delay, Queue Length, ar	nd Leve	l of S	ervic	 e	£ ·	L	L	L , ,	<u> </u>	<u> </u>	_	L. ~.	A		.	<u>. </u>
Flow Rate, v (veh/h)			5	<u> </u>	T -	Γ^{-}	Γ		Τ	5	Ŧ	ī	_		Т	1
Capacity, r (veh/h)	+		968	† ·-	 -		<u> </u>	-	 	1547		 	1	-	 	
v/c Ratio	I	-	0.01	-	 	-		-	∤ –	0.00	 	} — -	ł –	∔ -	⊢ -	
95% Queue Length, Q ₉₇ (veh)	+ +		0.01	\vdash	 -	<u> </u>	- 12		 	0.00	† –			1	-	-
Control Delay (s/veh)	+ -		87	 	 	ļ - -		<u> </u>	- -	7.3	⊢ -	⊦ —	 	 	- -	
Level of Service, LOS	 		A	 	\vdash \dashv	⊢ -		l -	 			 - -	<u> </u>	⊢ –	├	i
Approach Delay (s/veh)		p	7	L _	 -	l	L	L _	ļ	L^,	Ţ	L	 	L	<u> </u>	
Approach LOS	-		<u>·</u>	— -	<u>. </u>				_ _		1.3	_				

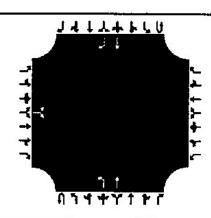
Approach LOS

General Information		Site Information	
Analyst	G Grigsby	Intersection	Happy Jack Rd @ CR 210
Agency/Co.	Y2 Consultants, LLC	Jurisdict.on	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2035	North/South Street	Happy Jack Road
Time Analyzed	2035 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1 00
Project Description	Gold King Mine	-	•



Approach		Eastb	bound		1	West	bound			North	bound		86	South	bound	0.00
Movement	U	L	Т	R	u	L	Т	R	u	L	T	R	u	l.	Т	R
Priority		10	11	12	3 63 65	7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	a	0		0	0	0	D	1	1	0	0	0	1	1
Configuration			LR							L	Т				т	F
Volume, V (veh/h)		1		10						2	36				68	-
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked		93	- K	0.00												
Percent Grade (%)			0							6100						
Right Turn Channelized		٨	lo			N	Jo			N	О			N	٩o	
Median Type/Storage				Undi	vided						100			-		
Critical and Follow-up H	eadwa	ys							057			1000 6000				
Base Critical Headway (sec)	ļ	1000														20000000
Critical Headway (sec)	1	L			<u> </u>											
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)													100000000			[
Delay, Queue Length, an	d Leve	el of S	ervice						1000		55.00					
Flow Rate, v (veh/h)			12						2	2			50.00			
Capacity, c (veh/h)			974	K						1517			Ì	•••••		
v/c Ratio			0.01	e e e e e e e e e e e e e e e e e e e	S.					0 00			-6			
95% Queue Length, Q ₃₅ (veh)			0.0			1900				0.0		ì				
Control Delay (s/veh)			8.7				ë o			7.4	20				0.000.000	
Level of Service, LOS			Α		. 1					А					1	
Approach Delay (s/veh)	8.7									0.	4		·			_
Approach LOS		A														

General Information		Site Information	
Analyst	G Grigsby	Intersection.	Happy Jack Rd @ CR 210
Agency/Co.	YZ Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	CR 210
Analysis Year	2035	North/South Street	Happy Jack Road
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	Narth-South	Analysis Time Perlod (hrs)	100
Project Description	Gold King Mine		

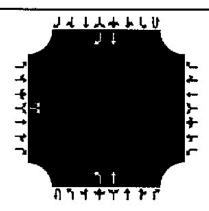


Approach		Eastb	ound		80200	West	bound			Northi	bound			South	bound	
Movement	U	L	Т	R	υ	L	Т	R	U	Ĺ	Ţ	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	- 5	6
Number of Lanes		O	0	0		0	C	O	Ö	1	1	0	0	Ď	1	1
Configuration			LR							L	T			-	Т	R
Volume, V (veh/h)		1		13	İ	in the second				12	36				68	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked							1000								<u> </u>	
Percent Grade (%)		- 1	D	•		52.00				100				2870		
Right Turn Channelized		N	la			N	lo			N	0			٨	lo	
Median Type/Storage			23	Undi	vided				- 12	2000				10,20	1208	
Critical and Follow-up He	eadwa	ys		<u> </u>			\$0. 80 c ccc									
Base Critical Headway (sec)	8									e. 100. 1.00						
Critical Headway (sec)				Sec. 1.					100 2001							
Base Follow Up Headway (sec)							-						0.88374			
Follow-Up Headway (sec)														-		
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			15	2626e5 U					D2 10	13	-					
Capacity, c (veh/h)			973							1517						
v/c Ratio			0 02		3,000,000					0.01						
95% Queue Length, Q ₉₅ (veh)		0 909230	0.0							0.0			N 20	3 3,500		
Control Delay (s/veh)			8.8		700011		100 Tab 100			7.4						
Level of Service, LOS			Α					à		Α						
Approach Delay (s/veh)	88									1.	A .			-	dž6	3
		Α									~					

General Information			200				Site	Infor	matio	ก		_		-		
Analyst	G Gri	asbv —		7.00		-	_	section			Hanr	w larb G	Rd @ CR	210	<u> </u>	-
Agency/Co		onsultan	ts. LLC				— —	diction	_		пар	y Jack r		210		
Date Performed		/2022						West Sti	reet	-	CR 2					
Analysis Year	2035						 -	h/South		·		y Jack P	load	- Part Passace		
Time Analyzed	2035	PM Pea	k No Bu	ild			Peak	Hour Fa	ctor		0.92					
Intersection Orientation	Norti	h-South					-		e Period	(hrs)	1.00					
Project Description	Gold	King Mi	ne		7) 71 7					<u> </u>	<u></u> _	m	ei.	1000	7	
Lanes	-	-						_					-			
·•			. — 12 100	14744	กา	ካ 1 1 ተገ	1 1		}					_ 8.		
Vehicle Volumes and Adj	justme								T		-1		T			
Approach Movement	Eastbound U L T R U						bound T	1 .	 	·	bound	1 =	 	Γ	bound	+
Priority	1	10	11	12	ļ .	7	8	R 9	1U	L 1	T 2	R 3	4U	L 4		
Number of Lanes	 	0	0	1 12		0	0	0	0	1	1	0	0	0	5 1	6
Configuration			LR	<u> </u>	3		-	-	 	Ļ	<u>'</u>	Ľ	<u> </u>		' T	F
Volume, V (veh/h)		1		5	<u> </u>					6	111				54	
		_	<u> </u>	3	 -				├				 	╆	 	┼
Percent Heavy Vehicles (%)		3						i	<u>.</u>	1 3	l					
St. 5000 St. 6000	<u>.</u>	3			3	- . -			 -	3	<u> </u>	 	 	ļ·	<u> </u>	+
Percent Heavy Vehicles (%)				<u> </u>					 -	3			<u> </u>			
Percent Heavy Vehicles (%) Proportion Time Blocked			0						-		10			<u> </u>		<u> </u>
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)					vided		0				10					<u> </u>
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	eadwa	N			vided	^	lo				10				lo	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Heaves	eadwa	N			vided		10	T			50			 	10	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	eadwa	N			vided		0				10				do	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Hease Critical Headway (sec) Critical Headway (sec)	eadwa	N			vided	^					io .					
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tom Channelized Median Type/Storage Critical and Follow-up Heave Critical Headway (sec)	eadwa	N			vided		lo				50				do -	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		ys		Undi	vided		lo				50				10	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		ys		Undi	vided						io					
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an		ys	ervice	Undi	vided						10				10	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Hease Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h)		ys	ervice 6	Undi	vided					7	10				No.	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)		ys	ervice 6 960	Undi	vided	N N				7 1537					10	
Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)		ys	ervice 6 960 001	Undi	vided					7 1537 0.00	10				No.	

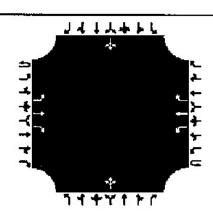
Approach LOS

ELLES ME THE THE STORY STORY BUSINESS **General Information Site Information** Analyst G Grigsby Intersection Happy Jack Rd @ CR 210 Agency/Co. YZ Consultants, LLC Jurisdiction Date Performed 11/8/2022 East/West Street CR 210 Analysis Year 2035 North/South Street Happy Jack Road Time Analyzed 2035 PM Peak Build Peak Hour Factor 0.92 Intersection Orientation North-South Analysis Time Period (hrs) 1.00 Project Description Gold King Mine



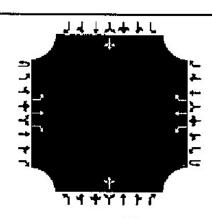
Approach		Eastb	bnuo			West	bound	10.756		North	bound			South	bound	
Movement	U	L	Ť	R	U	L	T	R	U	L	T	R	Ų	L	Т	R
Priority		10	11	12	3	7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		D	0	a	0	1	1	0	0	ō	1	1
Configuration			LR							L	Т				Т	R
Volume, V (veh/h)		1		15			3			9	111				54	O
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked								150 (55.55)							<u> </u>	
Percent Grade (%)			D													
Right Turn Channelized		١	lo			N	la			N	0			N	lo	
Median Type/Storage	\$1.00			Undi	vided				 		2000					
Critical and Follow-up H	leadwa	ys									5550		. 400			
Base Critical Headway (sec)							% (%							4	200	
Critical Headway (sec)																
Base Follow-Up Headway (sec)																V
Follow-Up Headway (sec)					1910/200											
Delay, Queue Length, ап	d Leve	l of S	ervice	<u> </u>								(A) (A)			•	
Flow Rate, v (veh/h)			17				• 51		<u> </u>	10		U N	l		1	
Capacity, c (veh/h)			987	**************************************	59		9			1537						
v/c Ratio			0.02							0.01						
95% Queue Length, Q ₃₅ (veh)			0,1							0.0						
Control Delay (s/veh)			8.7		, ,					7.4			100			
Level of Service, LOS			А							А						
Approach Delay (s/veh)		8.7							<u> </u>	0.	6	·				
Approach LOS			Α			60000000					00					

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General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Адепсу/Со.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2022	North/South Street	McKinney Rd
Time Analyzed	2022 AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



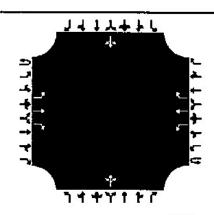
Approach		Easth	ound			Westl	bnuoc			North	bound			South	bound	
Movement	U	L	Ť	Я	U	Ļ	T	R	U	L	7	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		0	1	0		ō	1	0
Configuration		L	Т	R		L	T	R			LTR				LTR	
Valume, V (veh/h)		00	157	1		1	103	3		1	0	1		7	0	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)			**************************************)			•	0	
Right Turn Channelized		N	la			N	lo			N	lo			N	lo	
Median Type/Storage	01			Undi	ivided											
Critical and Follow-up Ho Base Critical Headway (sec)		,,														
Critical Headway (sec)														-		
Base Follow-Up Headway (sec)															\vdash	
Follow-Up Headway (sec)									Н							
Delay, Queue Length, and	d Leve	l of S	ervice							•					1	
Flow Rate, v (veh/h)		0		5		7					2				9	
Capacity, c (veh/h)		1466				1397					752				685	
v/c Ratio		0.00				0.00					0.00				0.01	-
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		7.5				7.6					9.8				10.3	
Level of Service, LOS		Α				Α					А				В	
Approach Delay (s/veh)	0.0					a	.1			9	.8	Jacobs V		10).3	
	0.0															

General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2022	North/South Street	McKinney Rd
Time Analyzed	2022 PM Peak	Peak Hour Factor	092
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		·



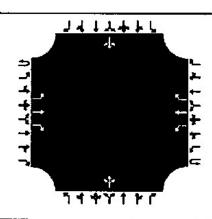
Approach	1 12 11	Easth	cound		<u> </u>	West	oound	2	T	North	bound		17	South	bound	
Movement	U	L	Т	R	υ	L	T	R	u	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5		Ľ	7	8	9	. "	10	11	12
Number of Lanes	0	L'	1	1	0	1	1	1		0	1	0		0	1	3.70
Configuration	+ -		T	R	-	L	<u>,</u>	R	 		LTR			<u> </u>	LTR	C
Volume, V (veh/h)		1	137	1		1	177	8		0	0	1		5	0	1
Percent Heavy Vehicles (%)		3	127			3	,,,,	-		3	3	3	(4)	3	3	3
Proportion Time Blocked					 					,		,	 -		-	-
Percent Grade (%)			3								<u> </u>			<u> </u>		Щ,
Right Turn Channelized		N	lo		 	N	lo				10		0			
Median Type/Storage				Undi	l vided										-	200
Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec)											22 - 2					
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																100000
Delay, Queue Length, an	d Leve	of S	ervice	:												
Flow Rate, v (veh/h)		1		2		1					1				6	
Capacity, c (veh/h)		1364				1423					894				635	
v/c Ratio		0.00				0.00					0.00			-	0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0	-			0.0	
Control Delay (s/veh)		7.6	ŝ			7.5	200				9.0				10.7	
Level of Service, LOS		A				Α	50,0000				Α				В	
Approach Delay (s/veh)		0.1				a	0			9	.0	10.200		10),7	
Approach LOS		U.1									<u> </u>		-		3	

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General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	WOVE IN
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2025	North/South Street	McKinney Rd
Time Analyzed	2025 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		



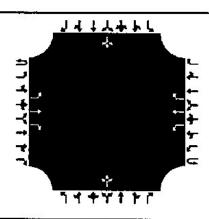
Approach	202009A	Eastb	ound		,	West	oound			North	ponuq	-		South	bound	
Movement	U	L	T	R	U	L	Т	R	Ü	Ļ	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		O	1	0		0	1	0
Configuration		L	Ŧ	R		L	Т	R			LTR	<u>-</u>			LTR	
Volume, V (veh/h)		0	164	1		1	108	3		1	0	1		7	Ð	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked												400000	20 0000			
Percent Grade (%)		A				•					0		0			
Right Turn Channelized		N	lo			N	lo		No No							
Median Type/Storage	i.		27 St.	Undi	vided							7/				
Critical and Follow-up H	eadwa	ys	100													
Base Critical Headway (sec)			3				No. of the last	8 8	3704		- 1				W 187	
Critical Headway (sec)		7300 at 120										988 %				
Base Follow-Up Headway (sec)			8									300				
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	l of S	ervice	•												
Flow Rate, v (veh/h)		0		6		1					2				9	
Capacity, c (veh/h)		1460				1389					742				673	
v/c Ratio		0.00				0.00		10			0.00		233050		0.01	
95% Queue Length, Q ₂₅ (veh)		0.0								00				0.0		
Control Delay (s/veh)		7.5 7.6					************				99				10.4	
Level of Service, LOS	1	A A					A							В		
Approach Delay (s/veh)		0.0 0.1						99				10.4				
Approach LOS	1							A B								

HE. It is he was by it is beginned a wife the **General Information** Site Information Analyst G Grigsby Intersection McKinney Rd @ Happy Jack Agency/Co. Y2 Consultants, LLC Jurisdiction **Date Performed** 11/8/2022 East/West Street Happy Jack Rd Analysis Year 2025 North/South Street McKinney Rd Time Analyzed 2025 AM Peak Build Peak Hour Factor 0.92 Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine



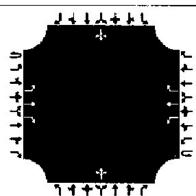
Approach		Eastb	ound			West	pound			North	bound			South	bound		
Movement	υ	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	1	0	1	1	1		a	1	0		0	1	0	
Configuration		L	Т	R		L	T	R			LTR				LTR		
Volume, V (veh/h)		0	164	1		176	10B	3		8	0	14		7	0	1	
Percent Heavy Vehicles (%)		3				3		33	- 00	3	3	3		3	3	3	
Proportion Time Blacked																	
Percent Grade (%)							X120			,)				0		
Right Turn Channelized		N	lo			N	o			N	lo			N	lo		
Median Type/Storage				Undi	vided												
Critical and Follow-up H	leadwa	ys															
Base Critical Headway (sec)																	
Critical Headway (sec)																i.	
Base Follow-Up Headway (sec)																	
Follow-Up Headway (sec)]				10.00				
Delay, Queue Length, an	d Leve	of S	ervice	•	200												
Flow Rate, v (veh/h)		0			2000	191					24				9		
Capacity, c (veh/h)		1460				1389	8			- 57	533				343		
v/c Ratio		0.00				0.14					0.05				0.03		
95% Queue Length, Q ₉₅ (veh)		0.0 0.5									0.1				01		
Control Delay (s/veh)	7.5					B.O			<u> </u>		12.1				15 B		
Level of Service, LOS	A				V = 7.3.2.	A			В						С		
Approach Delay (s/veh)		0	.0			4.	9	200	13	12	!.1		20	15	j.B		
Approach LOS	1							B C									

General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2025	North/South Street	McKinney Rd
Time Analyzed	2025 PM Peak No Build	Peak Hour Factor	092
Intersection Orientation	East-West	Analysis Time Period (hrs.	100
Project Description	Gold King Mine		



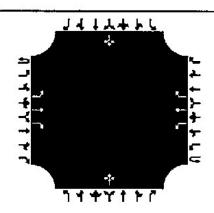
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Mavement	U	L	Ť	R	Ü	L	T	R	U	L	Ť	R	U	L	T	R
Priority	10	1	2	3	411	4	5	6		7	-8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		0	1	0		0	1	0
Configuration		L	Т	R		L	Т	R			LTR				LTR	
Volume, V (veh/h)		. 1	143	1		1	183	6		0	0	1		5	0	1
Percent Heavy Vehicles (%)		3				3			9,20048 1	3	3	3		3	3	3
Proportion Time Blacked								574					 			
Percent Grade (%)					107/285						0		0			
Right Turn Channelized		N	lo			N	lo			N	lo			١	lo .	
Median Type/Storage	2.0			Undi	vided					-						
Critical and Follow-up H	eadwa	ys	37			3				22			81208/00/2			
Base Critical Headway (sec)				100000000												
Critical Headway (sec)	92 COOL															
Base Follow-Up Headway (sec)														· · · · · · · · · · · · · · · · · · ·		
Follow-Up Headway (sec)		16 18								1) Receive	38	
Delay, Queue Length, an	d Leve	l of S	ervice				1200	e es	120							
Flow Rate, v (veh/h)		1				1					1				6	
Capacity, c (veh/h)		1355				1416			30.24%		888				624	
v/c Ratio		000				0.00					0.00				001	
95% Queue Length, Q _{ss} (veh)		00 0.0									0.0				00	
Control Delay (5/veh)			7.5					9.1				108				
Level of Service, LOS		Α				Ā					Α				В	
Approach Delay (s/veh)		0.	.0			D.	.0			9	.1			10).8	
Approach LOS	+								1000	4	- 3			3		

कर्मी १९ ६ विच र एक _{अध्यक्ति} स्व ४ हिन्दू ४४ **General Information** Site Information G Grigsby McKinney Rd @ Happy Jack Analyst Intersection Y2 Consultants, LLC Agency/Co Jurisdiction Date Performed 11/8/2022 East/West Street Happy Jack Rd Analysis Year 2025 North/South Street McKinney Rd Time Analyzed 2025 PM Peak Build Peak Hour Factor 0.92 Intersection Orientation East-West Analysis Time Period (hrs: 1.00 **Project Description Gold King Mine**



Vehicle Volumes and Ad	iustme	ents				•							•-	-		_	
Approach			ound			Westl	oound	_,	<u></u>	North	bound			South	bound		
Movement	U :	L	Ţ	R	U	ι	Т	R	LJ	L	Т	R	Ш	L	Т	R	
Priority	10	1	2	3	4U	4	5	6		7	6	9		10	11	12	
Number of Lanes	0	1	1	1	0	1	1	1		0	1	0		0	;	0	
Configuration		L	т :	R		L	Т	R		2-	LTR				LTR		
Volume, V (veh/h)		1	143	В	†	14	183	8		8	0	176		5	n	1	
Percent Heavy Vehicles (%)		3				3			100	3	3	3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)		S									0	-			0		
Right Turn Channelized	į.	Ŋ	1 0			N	o		8	h	٧a			٨	4o		
Median Type/Storage				Undi	vided		-										
Critical and Follow-up H	leadways												•				
Base Critical Headway (sec)							<u> </u>				Ι -	Γ 🗂					
Critical Headway (sec)		10000															
Base Follow-Up Headway (sec)									<u> </u>								
Follow-Up Headway (sec)								um tote o ac	76		İ						
Delay, Queue Length, an	d Leve	of S	егуісе						<u>. </u>			<u> </u>	_				
Flow Rate, v (veh/h)	``	1			<u> </u>	15			<u> </u>		200			Τ	6		
Capacity, c (veh/h)		1355				1407					865		÷		421	-	
v/c Ratio		0.00				001					0.23				0.01		
95% Queue Length, Q ₉₅ (veh)		00 00								0.9				0.0			
Control Delay (s/veh)	7.7 7.6							· · · ·		10.4				13.7			
Level of Service, LOS	A					Α		9090000			В				В		
Approach Delay (s/veh)		0	1.0	L		0	5			11	0.4		34	13	3 7		
Approach LOS		-m'-n-ry							B 8								

	たなす(また) * (A →)	医乳毒性 医二氯甲烷甲基磺基磺基	
General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2035	North/South Street	McKinney Rd
Time Analyzed	2035 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Volume	es and	Adjust	tments
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Approach		Eastbound Westbound			Northbound				Southbound							
Movement	C	Ļ	Т	R	u	L	Т	R	u	L	Т	R	U	£	Т	R
Priority	10	1	2	3	4U	4	S	6		7	8	9	96	10	11	12
Number of Lanes	0	1	1	1	0	1	1	1	3	0	1	0		0	1	0
Configuration		t	T	R		Ĺ	Т	R			LTR				LTR	
Volume, V (veh/h)		0	189	1		1	124	4		1	0	1		8	0	1
Percent Heavy Vehicles (%)		3			į	3			1 33 No. 10	3	3	3		3	3	3
Proportion Time Blocked									%						8	
Percent Grade (%)			050				9				Ď			,	3	
Right Turn Channelized		١	lo .		% 	ħ	No			٨	ю			N	io	
Median Type/Storage		Undivided					······································				·····	•				

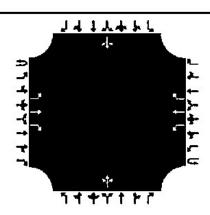
Critical and Follow-up Headways

Base Critical Headway (sec)	L	i				l .			
Critical Headway (sec)		11 11 11							
Base Follow-Up Headway (sec)							2500		
Follow-Up Headway (sec)				18 35					
	115117 108	 	 			 		 	

Delay, Queue Length, and Level of Service

			and the second s	
Flow Rate, v (veh/h)	0	1	2	10
Capacity, c (veh/h)	1437	1358	703	630
v/c Ratio	0.00	0.00	0.00	0.02
95% Queue Length, Q ₅₅ (veh)	0.0	0.0	0.0	0.0
Control Delay (s/veh)	7.5	7.7	101	108
Level of Service, LOS	A	Α	В	В
Approach Delay (s/veh)	0.0	0.1	10 1	108
Approach LOS			9	R

General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2035	North/South Street	McKinney Rd
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Vol	umes and	Adjust	tments
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Approach		Easth	bnuoc	17		West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	υ	L	Т	R	U	L	Ť	R
Priority	יטו	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	D	1	1	1	0	1	1	1		0	1	0		٥	1	0
Configuration		L	ī	R		L	Ť	R			LTR				LTR	
Volume, V (veh/h)		D	189	1		54	124	4		11	0	- 6		8	0	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)					· · ·						0				0	
Right Turn Channelized		١	No.		No					١	No.		No			
Median Type/Storage				Undi	vided								•			

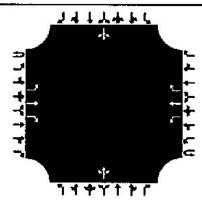
Critical and Follow-up Headways

Base Critical Headway (sec)			1						
Critical Headway (sec)									5395
Base Follow-Up Headway (sec)	33	- 96							
Follow-Up Headway (sec)									

Delay, Queue Length, and Level of Service

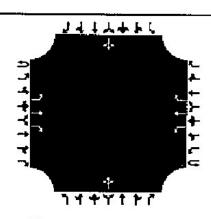
Flow Rate, v (veh/h)	0	59	19	10
**************************************		33	- 1 '2 1 1 1 1 1 1 1 1 1	
Capacity, c (veh/h)	1437	1358	581	511
v/c Ratio	0.00	0.04	0.03	0.02
95% Queue Length, Q ₉₅ (veh)	0.0	0.1	0.1	0.1
Control Delay (s/veh)	7.5	7.8	11,4	12.2
Level of Service, LOS	Α	A	В	В
Approach Delay (s/veh)	0.0	2.3	11.4	12.2
Appmach LOS			R	R

General Information		Site Information								
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack							
Agency/Co.	Y2 Consultants, LLC	Jurisdiction								
Date Performed	11/8/2022	East/West Street	Happy Jack Rd							
Analysis Year	2035	North/South Street	McKinney Rd							
Time Analyzed	2035 PM Peak No Build	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Ana ys s Time Period (hrs)	1.00							
Project Description	Gold King Mine	• "	i de							



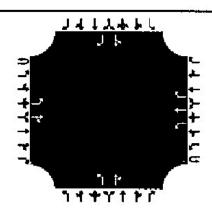
Approach		Eastb	ound			West	pound		•	North	bound			South	bound	
Movement	ŋ	Ł	т	R	U	L	Т	R	U	L	Т	R	U	L	т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	а	1	1	1	0	1	1	1		۵	1	0		0	1	0
Configuration		L	Т	R		L	Т	R			LTR				LTR	
Volume, V (veh/h)		2	163	Z		1	206	8		Ω	0	1		5	0	2
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																14-
Percent Grade (%)											0				0	
Right Turn Channelized		,	lo	3.		٨	lo			Ν	1 0		No			
Median Type/Storage				Undi	vided				1/4				50.00			
Critical and Follow-up H	eadwa	ys	A00-000	30. 30.												
Base Critical Headway (sec)					1			**************************************	10 CONTROL						27 522	
Critical Headway (sec)																
Base Follow-Up Headway (sec)								1700000			0,000,000					
Follow-Up Headway (sec)							1545 (64.15)									_
Delay, Queue Length, an	d Leve	l of S	ervice	,							·				1	
Flow Rate, v (veh/h)		2				7					1		-		7	
Capacity, c (veh/h)		1327				1389					863				606	
v/c Ratio		0.00				0.00					0.00				0.01	
95% Queue Length, Q ₅₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		7.7				7.6					9.2				11.0	
Level of Service, LOS		Α				А					A				В	
Approach Delay (s/veh)	0.1				0.0				9.2				11.0			
Approach LOS	1										Α		Β			

General Information		Site Information	
Analyst	G Grigsby	Intersection	McKinney Rd @ Happy Jack
Адепсу/Со.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2035	North/South Street	McKinney Rd
Time Analyzed	2035 PM Peak Build	Peak Hour Factor	092
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		



Approach		Eastb	ound			Westl	bound		200	North	bound			South	bound	
Movement	Ų	L	1	R	U	L	Т	R	U	L	Т	Ą	u	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		0	1	a		0	1	C
Configuration		L	T	R		L	T	R			LTR		1000		LTR	
Volume, V (veh/h)		2	163	12		6	206	8		11	0	6		8	0	1
Percent Heavy Vehicles (%)		3				3		7		3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)		1.0	NOW W)	÷				
Right Turn Channelized		N	o			N	lo	,		N	la			. N	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys	5W 98	1850			400000				AL COS					
Base Critical Headway (sec)						į.		30							2000000	
Critical Headway (sec)								1008								
Base Follow-Up Headway (sec)						30.00			-							
Follow-Up Headway (sec)	0 (0.000)														-	
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)		2		95		7			el.		19				10	····
Capacity, c (veh/h)		1327				1376					625				552	
v/c Ratio		0.00				0.01					0.03				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0	j.			0.0					0.1				0.1	
Control Delay (s/veh)		7,7				7.6					10.9				11.6	
Level of Service, LOS		А				A					Ħ				В	
Approach Delay (s/veh)	0.1				0.2				10.9				11.5			
Approach LOS								В				В				

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2022	North/South Street	Roundtop Rd
Time Analyzed	2022 AM Peak	Peak Hour Factor	0 92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



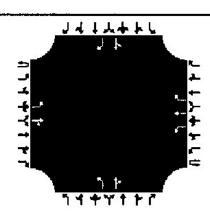
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	n	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	В	. 9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		1	1	0		a	1	1
Configuration		L		ŤŘ		L	Т	R		L		TR		LT		R
Volume, V (veh/h)		2	119	44		11	77	9	8	28	17	В		32	21	2
Percent Heavy Vehicles (%)		3				3			- 24	3	3	3		3	3	3
Proportion Time Blocked		10 10000														
Percent Grade (%)									0.0 100	(}			()	
Right Turn Channelized		N	lo			N	lo			N	0		0	N	lo	
Median Type/Slorage				Undi	vided		2000									
Critical and Follow-up H	eadwa	ys		5076 E4 TA		-										
Base Critical Headway (sec)																
Critical Headway (sec)													0 277			
Base Follow-Up Headway (sec)								Section 10	3.000							
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	of S	ervice	3	12.6											
Flow Rate, v (veh/h)		2				12		1		30		27		58	,	2
Capacity, c (veh/h)		1492				1391		33		646		700		632		972
v/c Ratio		0.00				0.01				0.05		0.04		0.09	· · · · · · ·	0.00
95% Queue Length, Q ₉₅ (veh)		0.0	· · · · · · · · · · · · · · · · · · ·	(S)		0.0				0.1		0.1		0.3	á	0.0
Control Delay (s/veh)		7.4				7.5				10.8		10.4		11.3	9	8.7
Level of Service, LOS		Α		-		A				В		В		B	3	Α
Approach Delay (s/veh)	0.1				0.9				10.6				11.2			
Approach LOS											3		8			

	2	-	. '			•		* •	• .		<u> </u>					
General Information		5 49					Site	Infor	matio	n	20		32			
Analyst	G Gri	gsby			-		Inter	section			Roun	dtop Rd	@ Нарр	y Jack		
Agency/Co	Y2 C c	insult a n	its, LLC	· · · · · · · · · · · · · · · · · · ·	** e Bre		Jurisa	diction			<u> </u>	-				
Date Performed	11/8/	2022		1,000,00			East/	West Str	eet		Нарр	y Jack R	d			
Analysis Year	2022	88					Nort	h/South	Street		Roun	dtop Rd				
Time Analyzed	2022	PM Pea	k				Peak	Hour Fa	ctor		0.92		-	_		
Intersection Orientation	East-	West					Anal	rsis Time	Period	(prz.)	1 00					
Project Description	Gold	King M	ine	25 2500							*************************************					
Lanes		705				- 10			_				INIPPLE LIN	A 14.1	_	
		_		141446	14	1	111									
Vehicle Volumes and Ad	ijustme		bound		ı	West	bound		<u> </u>	North	 bound		г -	South	bound	
Movement	-	1 .	T	R	 	L	T	R		T	Т	R	U	1000	7	R
Priority	10	1	2	3	4U	4	5	6	<u> </u>	7	8	9	- -	10	11	12
Number of Lanes		1	1	0	0	1	1	 -		1	1	0	 		l	1 1
Configuration		L		TR	<u> </u>	╁	7	R	~	+	<u>'</u>	TR		LT	<u> </u>	R
Volume, V (veh/h)		35	101	4 — — — 6	 	10	137	46	┢ -	45	23	7	<u> </u>	17	16	
Percent Heavy Vehicles (%)	-	3		† -	├ ∙ ─	3	1 131	"	 -	 	3	3	† ·- ·- ·	3	3	3
Proportion Time Blocked	-	<u></u>	† —	+	} -		 -	 -	 	† [−]		ļ <u>-</u> -	}	<u> </u>	}´ -	+-
Percent Grade (%)		l, ,		<u> </u>			<u>i — </u>			<u> </u>	 C	<u> </u>	r	L	L	<u></u>
Right Turn Channelized			No			and of the same				··· · · · · · · · · ·	 lo	-			lo	
Median Type/Storage	+ —	- 55	<u> </u>	Undi	.L				 	"		10000				
Critical and Follow-up I	leadwa	_			M	10. T		dordani i	ь —	-					.	
Base Critical Headway (sec)	7	,, <u>, </u>		f -	 	ı—	Т		T	1	r -	 -		г -	i -	Т
Critical Headway (sec)	-	_	-	†—	 		1	 		T T		 	d - 	 	_	
Base Follow-Up Headway (sec)	↓	l —	 − •	+ -	 	†·-			ļ— —	¦	 	}- —			 	 -
Follow-Up Headway (sec)	-		1	╅╴╺	ſ - · - · ·	ł —-		├ ┈─	 	t -	 	1.J	h — —	 	<u></u>	 -
Delay, Queue Length, a	nd Leve	L of S	⊥ ervic	± e	ե .	<u>_</u>	┷ —	1	L	L	L		L	<u></u>	L	1
Flow Rate, v (veh/h)	1	39	Т	Τ -	Ι .	11	т —		F'	49	_	33		35	ſ —	T ' 4
Capacity, c (veh/h)		1366		-		1464	 	 		550		605		538		894
v/c Ratio	 -	0 03	! 	 	-	0.01	† -	 	├ -	0.09	 	0.05	-	0.07		0.00
95% Queue Length, Q ₉₅ (veh)		0.1	† =	1	†	0.0	1			0.3		0.2	-	0.2	-	0.0
Control Delay (s/veh)		7,7	 	† –		7.5	t= —	† T	- -	12.2		11.3	}	12.2		9.0
Level of Service, LOS		A	† —	-	\vdash	A	╼╼╈╼╌╌┦╶┼╌╌┦					B		B		T A
Approach Delay (5/veh)		L	 9).4				11.8 17.8					
A	19								—		po l oi no		11.6			

Approach LOS

В

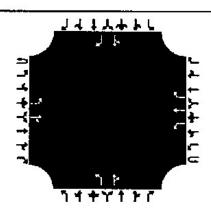
के देखती पार का एक दिन है जाने र जाने र स्ट्रीहरू **General Information** 5ite Information Analyst G Grigsby Intersection Roundtop Rd @ Happy Jack Agency/Co. YZ Consultants, LLC Jurisdiction Date Performed 11/8/2022 East/West Street Happy Jack Rd Analysis Year 2025 Roundtop Rd North/South Street Time Analyzed 2025 AM Peak No Build Peak Hour Factor 092 Intersection Orientation East-West Analysis Time Period (hrs) 100 **Project Description** Gold King M ne



Approach		Eastb	bound			Westl	oound			North	bound			South	bound	
Movement	U	L	т	R	U	L	T	R	U	L	Ţ	R	U	Ł	Т	R
Priority	10	1	2	3	4U	4	5	6	i	7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		1	1	0		0	1	1
Configuration		Ł		TR		L	Т	R		L		TR		LT		R
Volume, V (veh/h)		2	122	48		13	79	9	İ	31	18	9		33	23	2
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked											36 5	0.000.000.000				
Percent Grade (%)										()	•			C C	
Right Turn Channelized		٨	lo			N	lo			N	ю			N	lo	
Median Type/Storage	1		CEDEN VICTOR V	Undi	vided											
Critical and Follow-up H	eadwa	ys	lestron o ne										301358 3			
Base Critical Headway (sec)			5 5.0	50:00 - 964.69									5			
Critical Headway (sec)														57.5		
Base Follow-Up Headway (sec)		2														
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	l of S	ervice	•				1901								
Flow Rate, v (veh/h)		2				14				34		30		61		2
Capacity, c (veh/h)		1490				1382	<u> </u>			632		690		617		969
v/c Ratio		0.00				0.01				0.05		0.04		0 10		0.00
95% Queue Length, Q ₅₅ (veh)		0.0				0.0				0.2		01	(02 900	03		0.0
Control Delay (s/veh)		7,4				7.6				17.0		10.5	8	115		87
Level of Service, LOS		Α		2		Α			-	В		В		В		А
Approach Delay (s/veh)	0.1 1,0								10	8	•		11	1.4		
Approach LOS							 		3				8			

nationally as the course of the experience General Information Site Information **Analyst** G Grigsby Intersect on Roundtop Rd @ Happy Jack Agency/Co. Y2 Consultants, LLC Jurisdiction **Date Performed** 11/8/2022 East/West Street Happy Jack Rd Analysis Year 2025 North/South Street Roundtop Rd Time Analyzed 2025 PM Peak No Build Peak Hour Factor Intersection Orientation East-West Analysis Time Period (hrs) 100 **Project Description** Gold King Mine

Lanes



Vehicle Volumes and Adjustments

Approach		Easu	bound		L	West	bound			North	bound		L	South	ponuq	
Movement	υ	L	Ť	R	ח	L	Т	R	U	L	Т	R	Ü	L	T	R
Priority	īU	1	2	3	4U	4	5	Б		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		1	1	D		0	1	1
Configuration		L		TR		L	Т	R		L		TR		LT		R
Volume, V (veh/h)		6	104	39		11	141	47	(c) (c) (c) (c) (c) (c) (c) (c) (c) (c)	49	25	В	1000	17	17	4
Percent Heavy Vehicles (%)	(A. SOLECC)	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)		- 10000	****								0				0	
Right Turn Channelized		1	No		No		lo .	ide des		N	lo			N	lo	
Median Type/Storage				Undi	divided									202	5	

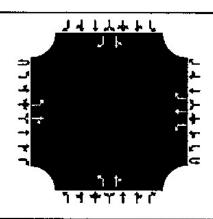
Critical and Follow-up Headways

base Chucai Headway (sec)		İ				 	v-		
Critical Headway (sec)									100000000
Base Follow Up Headway (sec)						 			,
Follow-Up Headway (sec)				83 38 3	(A)			1,000	
- U-0	 _		 	 	 	 		/	

Delay, Queue Length, and Level of Service

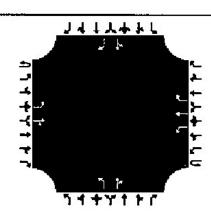
Flow Rate, v (veh/h)	7	12	53	36	36	4
Capacity, c (veh/h)	1360	1417	592	641	572	890
v/c Ratio	0.01	0.01	0.09	0.06	0.06	0.00
95% Queue Length, Q ₉₅ (veh)	0.0	0.0	0.3	D.2	0.2	0.0
Control Delay (s/veh)	7.7	7.6	11.7	110	117	91
Level of Service, LOS	A	Α	В	В	В	А
Approach Delay (s/veh)	0.3	0.4	11.4		11 5	5
Approach LOS			В		В	

	₹ 5.2 (1. %) % (3.4 4	e e medicalismo (12)	ii .
General Information		Site Information	
Analyst	G Grigsby	Intersect on	Roundtop Rd @ Happy Jack
Agenty/Co.	YZ Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gald King Mine	· • • • • • • • • • • • • • • • • • • •	



Approach		East	oound			West	pound			North	bound			South	bound	
Movement	U	L	Т	R	u	L	, т	R	u	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9	53	10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		1	1	0		0	1	1
Configuration		L		TR		Ļ	Т	R		L		TR		LT		R
Volume, V (veh/h)		2	133	64		19	84	9		42	23	15		35	29	2
Percent Heavy Vehicles (%)		3		6		3				3	3	3		3	3	3
Proportion Time Blocked	1				1											
Percent Grade (%)				Ō.		· 	•			· · · · · · · · · · · · · · · · · · ·					,	
Right Turn Channelized		٨	10			N	io			N	o			N	lo	
Median Type/Storage				Undi	vided				1							10.50
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)										100000						
Critical Headway (sec)]											
Base Follow-Up Headway (sec)										0.253						
Follow-Up Headway (sec)						10	157									
Delay, Queue Length, an	d Leve	of S	ervice	•						•						•
Flow Rate, v (veh/h)		2				21				46		41		70		2
Capacity, c (veh/h)		1483				134B				582		670		569		963
v/c Ratio		0 00				0.02				0.08		0 06		0 12		0.00
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				03	····	0.2		0.4		00
Control Delay (s/veh)		7.4	<u> </u>			7.7	R			117		10.7		12.2		87
Level of Service, LOS		A				Α				В		В		В		А
Approach Delay (s/veh)		٥	.1			1	.3			11	3		12 1			
Approach LOS	0.1 1.3										3				3	

	e ^{to} ggi ^H ⊃ _e o	er nig silver	1
General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Happy Jack
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Happy Jack Rd
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 PM Peak No Build	Peak Hour Factor	0 92
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		



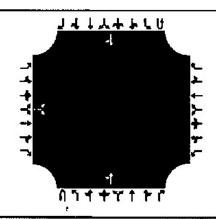
Approach		Eastb	pound			West	oound			North	bnuad		, , , , , , , , , , , , , , , , , , ,	South	bound		
Movement	υ	L	Т	R	U	L	T	R	U	L	Т	R	U	L	τ	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	1		1	1	0		0	1	1	
Configuration		L		TR		L	Т	R		L		TR		LT		R	
Volume, V (veh/h)		5	114	53		18	155	51		66	33	13		18	22	4	
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3	
Proportion Time Blacked																	
Percent Grade (%)			•				•			()	5,000)		
Right Turn Channelized		N	lo			N	lo			N	מ			N	la		
Median Type/Storage	1			Undi	vided		-1										
Critical and Follow-up H	leadwa	ys							aro evento e								
Base Critical Headway (sec)								93	- 12						000-00 F 080-000		
Critical Headway (sec)													38	10000000			
Base Follow-Up Headway (sec)	13								-	100000000							
Follow-Up Headway (sec)																	
Delay, Queue Length, an	d Leve	l of S	ervice	}			-				7.0						
Flow Rate, v (veh/h)		5				20				72		50		44		4	
Capacity, c (veh/h)		1338				1386				541		613		523		873	
v/c Ratio		0.00	100			0.01				0.13		80.0		0.08	·	0,00	
95% Queue Length, Q ₉₅ (veh)		0.0				O.D				0.5	98 :	0.3		0.3		0.0	
Control Delay (s/veh)		7.7				7.6				12.7		11.4		12.5		91	
Level of Service, LOS		Α		2		Α		1000		В	3 (N 3)	B		В		A	
Approach Delay (s/veh)	<u> </u>	0	.2		1	0	.6		12.1				12.2				
Approach LOS											3				B		

to the track of the Council Region : General Information Site Information Analyst G Grigsby Intersection Roundtop Rd @ Veta Drive Y2 Consultants, LLC Agency/Co. Jurisdiction Date Performed 11/8/2022 East/West Street Veta Rd 2022 Analysis Year North/South Street Roundtop Rd 2022 AM Peak Time Analyzed Peak Hour Factor 0.92 Intersection Orientation North-South Analysis Time Period (hrs) 100 **Project Description** Gold King Mine Lanes 1414476 Vehicle Volumes and Adjustments Approach Eastbound Westbound Northbound Southbound Movement U R Ų Priority 10 12 7 11 8 9 10 1 2 3 40 Б Number of Lanes 0 0 0 0 ٥ 0 0 1 0 D G 1 0 Configuration LR LT TR Volume, V (veh/h) ō. D a 53 76 0 Percent Heavy Vehicles (%) 3 3 3 Proportion Time Blocked Percent Grade (%) 0 Right Turn Channelized No No Nο No Median Type/Storage Undivided Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Level of Service Flow Rate, v (veh/h) 0 0 Capacity, c (veh/h) 0 1506 v/c Ratio 0.00 95% Queue Length, Q₃, (veh) 0.0 Control Delay (s/veh) 50 74 Level of Service, LOS A A Approach Delay (s/veh) 5.0 0.0

A

Approach LOS

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2022	North/South Street	Roundtop Rd
Time Analyzed	2022 PM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Volume	s and Adjustments
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Eastbound West				uouna			MOLLU	bound		Southbound					
U	L	Т	R	U	L	Т	R	υ	L	Ť	R	U	L	Т	R
8	10	11	12		7	8	9	10	1	2	3	4U	4	5	6
	0	0	0		0	0	0	0	0	1	0	0	0	1	0
		LR							LT						TR
	0 0								0	75				62	0
	3	SSSS E	3						3						
0															
	N	la	60 (Carlotter) V	No					N	lo			١	lo	
		Undivided					·								
		0 3	10 11 0 0 LR 0 3	10 11 12 0 0 0 LR 0 3 3 3	10 11 12 0 0 0 LR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 11 12 7 0 0 0 0 0 LR 0 0 0 0 3 3 3	10 11 12 7 8 0 0 0 0 0 0 LR 0 0 0 0 0 0 0 3 3 3 3 0 0 0 No No	10 11 12 7 8 9 0 0 0 0 0 0 0 LR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 11 12 7 8 9 1U 0 0 0 0 0 0 0 0 0 LR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 11 12 7 8 9 1U 1 0 0 0 0 0 0 0 0 0 0 LR	10 11 12 7 8 9 1U 1 2 0 0 0 0 0 0 0 0 0 0 1 LR	10 11 12 7 8 9 1U 1 2 3 0 0 0 0 0 0 0 0 0 1 0 LR	10 11 12 7 8 9 1U 1 2 3 4U 0 0 0 0 0 0 0 0 0 1 0 0 LR	10 11 12 7 8 9 1U 1 2 3 4U 4 0 0 0 0 0 0 0 0 0 0 1 0 0 0 LR	10 11 12 7 8 9 1U 1 2 3 4U 4 5 0 0 0 0 0 0 0 0 0 1 0 0 0 1 LR

Critical and Follow-up Headways

ı	Base Critical Headway (sec)				l		400	 			ı
	Critical Headway (sec)										
	Base Follow-Up Headway (sec)									CCC 1	
	Follow-Up Headway (sec)		93550				5.	3			Г
									 		_

Delay, Queue Length, and Level of Service

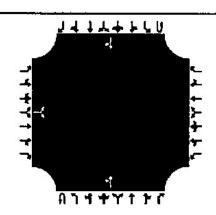
Delay, Queue Length, and Li	see of service				
Flow Rate, v (veh/h)	0	25 25223	0	 	
Capacity, c (veh/h)	D		1526		
v/c Ratio		33	0.00		
95% Queue Length, Q ₉₅ (veh)		725450 G	0.0		
Control Delay (s/veh)	5.0		7.4		
Level of Service, LOS	A		A		
Approach Delay (s/veh)	5.0		0.0	 	
Approach LOS	A				

रहाकि है। तेर के प्रकृतकार के र**ृ**ष्ट्रभूतक केन किन्द्र र General Information Site Information Analyst **G** Grigsby Intersection Roundtop Rd @ Veta Drive Agency/Co Y2 Consultants, LLC Jurisdiction **Date Performed** 11/8/2022 East/West Street Veta Rd Analysis Year 2025 North/South Street Roundtop Rd 2025 AM Peak No Build Time Analyzed Peak Hour Factor 0.92 Intersection Orientation North South Analysis Time Period (hrsi 1.00 **Project Description** Gold King Mine Lanes Vehicle Volumes and Adjustments Approach Eastbound Westbound Northbound Southbound Movement ш R Ų Priority 10 7 11 12 8 9 10 1 3 4U 6 Number of Lanes a 0 0 0 0 D 0 0 1 0 0 O ٦ a Configuration LR LT TR Volume, V (veh/h) a 0 0 58 83 \mathbf{q} Percent Heavy Vehicles (%) 3 3 3 Proportion Time Blocked Percent Grade (%) 0 Right Turn Channelized No No No No Median Type/Storage Undivided Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Level of Service Flow Rate, v (veh/h) Q D Capacity, c (veh/h) 0 1497 v/c Ratio 0.00 95% Queue Length, Q₃₅ (veh) 00 Control Delay (s/veh) 5.0 7.4 Level of Service, LOS Α A Approach Delay (s/veh) 50 0.0

A

Approach LOS

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 PM Peak No Build	Peak Hour Factor	0 92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1 00
Project Description	Gald King Mine		



Vehicle	Volumes	and	Adjı	ustments
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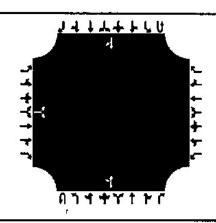
Approach		Eastbound Westbound Northbound						South	Southbound								
Movement	υ	L	Т	R	u	L	Т	R	U	L	т	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR		LT LT						TR						
Volume, V (veh/h)		0		٥	0 82				68	0							
Percent Heavy Vehicles (%)		3		3		3											
Proportion Time Blocked																	
Percent Grade (%)			O O					•		<u> </u>							
Right Turn Channelized		1	lo			ſ	Vo.			١	VO.			ı	Vo		
Median Type/Storage				Undi	ivided							10		100			
Critical and Follow-up H	leadwa	ıys				• •				-							
Base Critical Headway (sec)		710 ESCAPE (2007)	0														
Critical Headway (sec)																	
Base Follow-Up Headway (sec)					1				1						\vdash		

Delay, Queue Length, and Level of Service

Follow-Up Headway (sec)

		-		 	<u> </u>		 	
Flow Rate, v (veh/h)	0				0			
Capacity, c (veh/h)	0				1517			
v/c Ratio					0.00			
95% Queue Length, Q ₃₅ (veh)					0.0			
Control Delay (s/veh)	5.0				7,4			
Level of Service, LOS	A				Α			
Approach Delay (s/veh)	5.0	-			0.0		 	
Approach LOS	А			90	38			

Roundtop Rd @ Veta Drive
V 10.00
Veta Rd
Roundtop Rd
0 92
1 00



venicie v	olumes a	and Ad	justments
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Approach		East	bound			West	bound Northbound				Southbound				Southbound			
Movement	Ų	L	Т	R	Ш	L	T	R	U	L	Т	R	R U L T R					
Priority		10	11	12	10 10 10 10 10 10 10 10 10 10 10 10 10 1	7	8	9	9 1U 1 2 3 4U 4 5					6				
Number of Lanes		0	0	0		0	0	0	0	0	0 1 0 0 0 1					0		
Configuration			LR	2000000000				989		LT								
Valume, V (veh/h)		0		٥						σ	79		114					
Percent Heavy Vehicles (%)		3		3						3								
Proportion Time Blocked													2 10 10					
Percent Grade (%)			0					·		•				 				
Right Turn Channelized		N	lo			١	lo			٨	40		20	No				
Median Type/Storage				Undi	vided					<u> </u>								

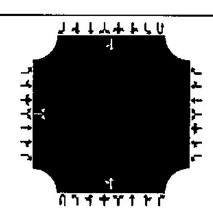
Critical and Follow-up Headways

<u></u>	 İ					1		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			0	
Capacity, c (veh/h)	- O		1455	
v/c Ratio	 ` 		0.00	
95% Queue Length, Q ₉₅ (veh)			0.0	
Control Delay (s/veh)	5.0		7.5	
Level of Service, LOS	A		A	
Approach Delay (s/veh)	5.0		0.0	···
Approach LOS	A			

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdict on	
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 PM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		

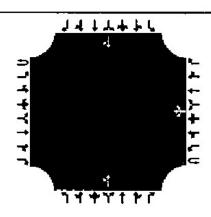


Approach		Easth	ound			West	bound		1500000	North	bound			South	bound	
Movement	U	L	Ť	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12	200	7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	D	a	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		0		0						a	112				93	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)			0							, and the second					1	
Right Turn Channelized	·	1	lo	•		٨	lo			N	lo	·		40		
Median Type/Storage			× 0.	Undi	vided					93.03						
Critical and Follow-up H	eadwa	ys												35000000		
Base Critical Headway (sec)		183									89711			. (13%		
Critical Headway (sec)											200					
Base Follow-Up Headway (sec)			- 84	33					O	l "	<i>"</i>			e secon		
Follow-Up Headway (sec)																
Delay, Queue Length, an	d Leve	l of S	ervice		5.000 5								•			
Flow Rate, v (veh/h)			0				2.00.00			0			i			
Capacity, c (veh/h)			0				1888			1483	V					
v/c Ratio										0.00					1	
95% Queue Length, Q ₉₅ (veh)							30.0		100	0.0					i ""	
Control Delay (s/veh)	Ĭ		5.0							7.4						
Level of Service, LOS			Α	8						А						
Approach Delay (s/veh)		5	.0		\Box				is	0	.a				<u></u>	
		150	19679								CONT.					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

							'	Olego and a			2012/03/2013	X-80,500500		100	1000	
General Information							Site	Infor	matio	n						
Analyst	G Grig	gsby		4	52 ES 3030		Inters	section	oksi.	576	Roun	dtop Rd	@ I-80	West R		
Agency/Co.	Y2 Co	nsultan	ts, LLC				Juriso	ction								
Date Ferformed	11/8/	2022				<u>.</u>	East/	West Str	eet		1-80	Vestbou	ınd Ram	ps		'
Analysis Year	2022						North	√South	Street		Roun	dtop Rd				
Time Analyzed	2022	AM Pea	k				Peak	Hour Fa	ctor		0.92					
Intersection Orientation	East \	West			b (2) (1) (1)		Analy	/sis Time	Period	(hrs)	100			-		
Project Description	Gold	King Mi	ne 								·= = ·=					
Lanes																
				ያግተትፕተ <u>ት</u> ር	ጉዣ	1 +Y	ነትና		+ 							
	justme T — —								т Т				- γ——			
Approach	I	Easth	oound	17 6		_	oound		<u> </u>		bound	_ 			bound	
Approach Movement	U	Easth L	Т	R	U	L	Т	R	U	L	Т	R	Ш	L	Т	-
Approach Movement Priority	υ 10	Easth L 1	T 2	3	4U	4 4	T 5	6	U	ا 7	В	9	Ц	L 10	T 11	12
Approach Movement Priority Number of Lanes	U	Easth L	Т	25628	9050	L	T 5	3638	U	ι 7 0	Т	1000	Ш	L	Т	12
Approach Movement Priority Number of Lanes Configuration	υ 10	Easth L 1	T 2	3	4U	L 4 D	T 5 1 LTR	6	U	L 7 0 LT	Т В	9	Ш	L 10	11 1	12 0
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h)	υ 10	Easth L 1	T 2	3	4U	L 4 0	T 5	6	U	L 7 0 LT 0	T B 1	9	Ц	L 10	11 1	12 0 TP
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%)	υ 10	Easth L 1	T 2	3	4U	L 4 D	T 5 1 LTR	6	U	L 7 0 LT	Т В	9	Ц	L 10	11 1	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h)	υ 10	Easth L 1	T 2	3	4U	L 4 0	T 5 1 LTR	6	U	1 7 0 LT 0 3	T B 1	9	L L	10 0	11 1 1 83 3	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)	υ 10	Easth L 1 0	T 2	3	4U	L 4 0	T 5 1 LTR	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9	Ц	L 10 0	T 11 1 1 83 3	R 122 0 TF 111 3
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked	υ 10	Easth L 1 0	T 2 0	3	4U	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	13 3	9	L L	L 10 0	11 1 1 83 3	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	U 1U 0	Easth L 1 0	T 2 0	3	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9	<u></u>	L 10 0	T 11 1 1 83 3	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H	U 1U 0	Easth L 1 0	T 2 0	3	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9	<u></u>	L 10 0	T 11 1 1 83 3	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	U 1U 0	Easth L 1 0	T 2 0	3	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9	-	L 10 0	T 11 1 1 83 3	12 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	U 1U 0	Easth L 1 0	T 2 0	3	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	1; 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)	U 1U 0	Easth L 1 0	T 2 0	3	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	1; 0 TF
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	L 4 0 5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	1; 0 TI
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6	U	0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	12 0 0 TF 11 3 3
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, ar Flow Rate, v (veh/h)	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6	U	L 7 0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	12 0 0 11 11 3
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6	U	0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	100 E11
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6		0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	100 TFF 11 3 3 3 10 10 10 10 10 10 10 10 10 10 10 10 10
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pollay, Queue Length, and Flow Rate, v (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6		0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	100 TFF 111 3 3 3 100 E 11 0 .1 0
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Pollay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio	υ 10 0	Easth L 1 0	T 2 0	3 Q Undi	4U 0	5 3	5 1 LTR 1	6		0 LT 0 3	1 T B 1 1 3 3 3	9		L 10 0	T 11 1 1 83 3	100 TEFF

Approach LOS

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General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ West Ramps
Agency/Co.	Y2 Consultants, LLC	Jurisd ction	
Date Performed	11/8/2022	East/West Street	I-80 Westbound Ramps
Analysis Year	2022	North/South Street	Roundtop Rd
Time Analyzed	2022 PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Approach		Easth	bnuox			West	bound			North	bound			South	bnuod	
Movement	U	L	T	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		1D	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	. 0		0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						5	1	95		1	20	975-58			150	9
Percent Heavy Vehicles (%)					× .	3				3	3				3	3
Proportion Time Blocked																
Percent Grade (%)				500000		A30,000.00				(•	2		0	
Right Turn Channelized		١	10			N	lo	576		N	lo		V 2	N	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up H	leadwa	ys	100000000000000000000000000000000000000		0.000											
Base Critical Headway (sec)				<u> </u>) S	tt.										
Critical Headway (sec)									52557							
Base Follow-Up Headway (sec)				9230-1123					-							
Follow-Up Headway (sec)									•		2	-				
Delay, Queue Length, an	d Leve	of S	ervice	2	•							•	•			•
Flow Rate, v (veh/h)				(2)07		5				23				39		173
Capacity, c (veh/h)						0										835
v/c Ratio																0.21
95% Queue Length, Q ₉₅ (veh)			,													0.8
Control Delay (s/veh)																10 4
Level of Service, LOS																В
Approach Delay (s/veh)				•	i	18.00			1					10	1.4	

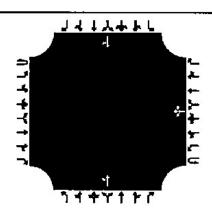
Approach LOS

			0.500.0	83, 55, 550		93.			22					7.5	•	
General Information					<u></u>		Site	Infor	natio	n	.					
Analyst	G Grie						Inter	section			Roun	dtop Rd	@ I-8D	West R		
Agency/Co		nsultan	ts, LLC				209207	diction .		_		NC 578-00				
Date Performed	11/8/	2022						West Str				Westbou	nd Ram	ps		
Analysis Year	2025						\$2000000	n/South			-	dtop Rd	Der S an San San San San San San San San San S			
Time Analyzed		AM Pea	k					Hour Fa		<u> </u>	0.92					
Intersection Orientation	East-\		_			-	Analy	/sis Time	Period	(hrs)	100					
Project Description	Gold	King Mi	ne 									a name was	- -			_
Lanes																
				141446	14	1 + Y	ነተሰ		- - - - -							
Vahicle Volumes and Ad	luctmo	mte				_							-	-		
	justme				T	Macth	and a			* an			- r –	- 5		
Vehicle Volumes and Ad Approach		Eastb	oound				oaund T			North	bound		- 		bound	— —
Approach Movement	U	Eastb	т	R	U	L	Т	R	U	L	T	R	- U	1	T	R
Approach Movement Priority	u 10	Eastb	T 2	R 3	4U	L 4	T 5	6	U	L 7	8	9	- U	10	T 11	12
Approach Movement Priority Number of Lanes	U	Eastb L 1	т	3		L	5 1		U	7 0	T		- U	1	T	12
Approach Movement Priority Number of Lanes Configuration	u 10	Eastb L 1	T 2	3	4U	L 4	T 5 1 LTR	6	U	7 0 LT	8 1	9	U	10	T 11 1	1;
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h)	u 10	Eastb L 1	T 2	3	4U	4 D	5 1	6	U	7 0	8	9	U	10	T 11 1 1 A6	1;
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%)	u 10	Eastb L 1	T 2	3	4U	L 4 D	T 5 1 LTR	6	U	L 7 0 LT 0	T 8 1	9	- U	10	T 11 1	1;
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked	u 10	Eastb L 1	T 2	3	4U	L 4 D	T 5 1 LTR	6	U	L 7 0 LT 0 3	T 8 1	9	U	10	T 11 1 a6 3	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)	u 10	Eastb	7 2 0	3	4U	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1	9	U	10	T 11 1 1 A6	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized	u 10	Eastb	T 2	3 0	4U	L 4 D 9 3	T 5 1 LTR	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9	U	10	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tum Channelized Median Type/Storage	U 1U 0	Eastb	7 2 0	3 0	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9	U	10	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H	U 1U 0	Eastb	7 2 0	3 0	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9	U	10	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tum Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	U 1U 0	Eastb	7 2 0	3 0	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9		10	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec)	U 1U 0	Eastb	7 2 0	3 0	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9	U	10 0	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tum Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec)	U 1U 0	Eastb	7 2 0	3 0	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	1) T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	L 4 D 9 3	T 5 1 LTR 2	6	U	0 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	1. TI
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3	T 5 1 LTR 2	6	U	L 7 0 1 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	117
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tum Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pollow-Up Headway (sec) Follow-Up Headway (sec)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3 N	T 5 1 LTR 2	6		0 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	11.
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3	T 5 1 LTR 2	6		L 7 0 1 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	1: [T T T T T T T T T T
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Tum Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3 N	T 5 1 LTR 2	6		L 7 0 1 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	11. TI
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Critical Headway (sec) Pellow-Up Headway (sec) Follow-Up Headway (sec) Pellow-Up Headway (sec) Follow-Up Headway (sec) Pellow-Up Headway (sec)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3 N	T 5 1 LTR 2	6		L 7 0 1 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	10 79 0.1
Approach Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critica' Headway :sec: Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec)	u 1U 0	Eastb L 1 0	7 2 0	Undi	4U 0	9 3 N	T 5 1 LTR 2	6		L 7 0 1 LT 0 3	T 8 1 1 14 3 0 0	9		10 0	T 11 1 36 3 3 0 0	11. TI

Approach LOS

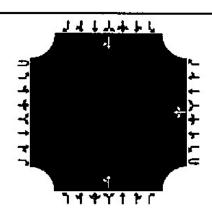
В

General Information		Site Information	Wigner (1982) - March (1982)
Analyst	G Grigsby	Intersection	Roundtap Rd @ 1-80 West R
Agency/Co.	YZ Consultants, LLC	Jurisdiction	2 8 6
Date Performed	11/8/2022	East/West Street	I-80 Westbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	υ	L	Т	R	U	L	T	R	U	L	т	R
Priority	10	1	2	3	4U	4	5	6		7	6	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	1	0
Configuration			1 2	886			LTR			LT						7R
Volume, V (veh/h)					3-202 300	9	2	103		2	20			 ''	156	g
Percent Heavy Vehicles (%)					- Indicators	3				3	3				3	3
Proportion Time Blocked						<u> </u>										
Percent Grade (%)			500								0				0	
Right Turn Channelized		ľ	lo			١	ło	M923800 2		N	lo	•	d	1	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys		5 90600 R												
Base Critical Headway (sec)								23 - 5								
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)										-						
Delay, Queue Length, an	d Leve	l of 5	ervice	<u>-</u>			•									
Flow Rate, v (veh/h)		000000000000000000000000000000000000000			Ϊ	10			Ι	24		1		T	<u> </u>	180
Capacity, c (veh/h)						O										B19
v/c Ratio		8														022
95% Queue Length, Q ₅₅ (veh)								1.00						1		0.8
Control Delay (s/veh)											8. :					10 6
Level of Service, LOS		3.55		- 38 - 1757413			25 55000									В
Approach Delay (s/veh)	5/63							· · · · · · · · · · · · · · · · · · ·						1()6	100
Approach LOS	1			- 3	1										B	

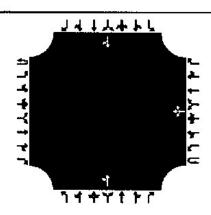
अस्ट के उन्हें करन के हुं **बाराग**्र हैं के लेखन कर ह **General Information 5ite Information** G Grigsby Analyst Intersection Roundtop Rd @ I-80 West R Y2 Consultants, LLC Agency/Co. Jurisdiction Date Performed 11/8/2022 East/West Street I-80 Westbound Ramps Analysis Year 2035 North/South Street Roundtop Rd Time Analyzed 2035 PM Peak Peak Hour Factor 0.92 Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** God King Mine



Approach		Eastb	oound			West	pound			North	bound		l	South	bound	
Mavement	U	L	τ	R	U	L	Т	R	U	L	Т	Ř	U	ι	т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9	·	10	11	12
Number of Lanes	0	O	0	٥	D	0	1	0		0	1	0		D	1	0
Configuration							LTR			LT					· · · · · ·	TR
Volume, V (veh/h)		1000				30	5	13D		4	22				180	8
Percent Heavy Vehicles (%)						3	N			. 3	3				3	3
Proportion Time Blocked												V			63	
Percent Grade (%)											0	·			D	
Right Turn Channelized		١	10			N	lo			N	lo			٨	Vo.	
Median Type/Storage				Undi	ivided					188	Ç.			*		
Critical and Follow-up H Base Critical Headway (sec)	eadwa	ys	i	1								Γ		ı		_
Critical Headway (sec)																
Base Follow-Up Headway (sec)															†	
Follow-Up Headway (sec)											3143		Ì		<u> </u>	
Delay, Queue Length, an	d Leve	l of S	ervic	}						_			1			
Flow Rate, v (veh/h)		T-12.	65.00			33				28			<u> </u>			205
Capacity, c (veh/h)						D										755
v/c Ratio									8.992						i –	0 27
95% Queue Length, Q ₉₅ (veh)												-				11
Control Delay (s/veh)																115
Level of Service, LOS				Ī												B
Approach Delay (s/veh)	T '		0.000			D. 101.0 101.1								11	1.5	
Approach LOS							32.00								В	

कार्यपुर्^{कारी स}ाल्या केट **क्रा**क्षण **प्रश**िक्षण का किल्लाक **General Information** Site Information Analyst G Grigsby Intersection Roundtop Rd @ I-80 West R Agency/Co. YZ Consultants, LLC Junsdiction Date Performed 11/8/2022 East/West Street 1-80 Westbound Ramps Analysis Year 2035 North/South Street Roundtop Rd Time Analyzed 2035 AM Peak No Build Peak Hour Factor Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine

Lanes



Approach		Eastt	bnuoc			West	bound			North	bound			South	bound	
Movement	U	Ļ	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority	าบ	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	a	0	a	0	1	0		0	1	0		0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						31	5	211		1	16				98	13
Percent Heavy Vehicles (%)						3				3	3				3	3
Proportion Time Blocked																
Percent Grade (%)			-)				<u>, </u>	
Right Turn Channelized		N	10	33		١	lo			N	lo		i i	١	la	
Median Type/Storage	1	,		Undi	vided					<u> </u>						
Critical and Follow-up H	leadwa	ys							1923							
Base Critical Headway (sec)										-						
Critical Headway (sec)																
Base Follow-Up Headway (sec)											2000			2000		
Follow-Up Headway (sec)									99							
Delay, Queue Length, ar	id Leve	l of S	ervice	•												<u>L</u> ie
Flow Rate, v (veh/h)						34				18					Γ	121
Capacity, c (vel/h)	2					0										72
v/c Ratio																0.1
95% Queue Length, Q ₉₅ (veh)						20										0.6
Control Delay (s/veh)						-						100				11 (

Level of Service, LOS

Approach LOS

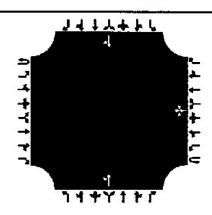
Approach Delay (s/veh)

Vehicle Volumes and Adjustments

11.0

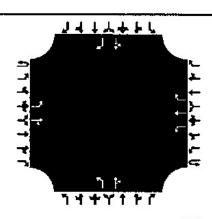
В

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ I-80 West R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	I-80 Westbound Ramps
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 PM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	



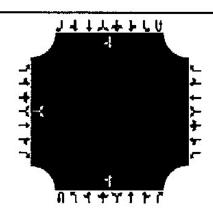
Approach		Easth	bound			Westl	bound			North	bound			South	bound	
Movement	U	Ł	Т	R	u	L	Т	R	U	l.	T	R	Ų	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	٥	0	0	0	1	0		0	1	0	10.0 10.0	0	1	0
Configuration							LTR		0	LT						TR
Volume, V (veh/h)						30	5	130		4	22			55990500966	180	В
Percent Heavy Vehicles (%)						3			- 1	3	3				3	3
Proportion Time Blocked													W			
Percent Grade (%)	570		V0.000				200)				a	
Right Turn Channelized		ı	ło			N	lo	-	W.	N	lo			N	10	
Median Type/Storage		9955	,	Undi	ivided										*	
Critical and Follow-up H	eadwa	ys	,				,						,			
Base Critical Headway (sec)																1
Critical Headway (sec)																
Base Follow-Up Headway (sec)			<u> </u>													Г
Follow-Up Headway (sec)				L											879-5	
Delay, Queue Length, an	d Leve	of S	ervice	=										•	•	
Flow Rate, v (veh/h)						33				26						20!
Capacity, c (veh/h)	2000	100				0										755
v/c Ratio																0.2
95% Queue Length, Q ₉₅ (veh)						C331 1 2 3								3		1.1
Control Delay (s/veh)		•														11
Level of Service, LOS								5000				**************************************	·			В
Approach Delay (s/veh)														1	1.5	
Approach LOS	1			~~	1			-							В	

विकास । १०३ मा स्टार सुर प्रवेशकार विकास एक जीत्रु स्वर General Information Site Information Analyst **G** Grigsby Intersection Roundtop Rd @ Happy Jack Agency/Co. Y2 Consultants, LLC Jurisdiction Date Performed 11/8/2022 East/West Street Happy Jack Rd Analysis Year 2035 Roundtop Rd North/South Street 2035 AM Peak Build Time Analyzed Peak Hour Factor 0.84 Intersection Orientation East-West Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine



Approach		Eastb	ound			West	pound			North	bound	35 18	200	South	bound	15/9/2009
Movement	U	L	Т	R	U	L.	Т	R	υ	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	71	12
Number of Lanes	0	1	1	0	0	1	1	1		1	1	Q		0	1	1
Configuration		L		TR		L	Т	R		L		TR		LT		R
Volume, V (veh/h)		2	138	64		19	137	9		42	23	15		35	29	2
Percent Heavy Vehicles (%)		3				3				3	3	3	-	3	3	3
Proportion Time Blocked													250000			
Percent Grade (%)										(3			()	
Right Turn Channelized		N	ю			N	lo			N	0		**	lo		
Median Type/Storage		3.32.52.53	12	Undi	vided			\$-/a								
Critical and Follow-up H	eadwa	ys		529X96A9					78/7/2009	5/5/20 Pag			V 1000 1000 1000 1000 1000 1000 1000 10	2222		
Base Critical Headway (sec)												:			b 8	
Critical Headway (sec)				3		2011 COLUM		50.00								
Base Follow-Up Headway (sec)		Ö											0	600		10/20
Follow-Up Headway (sec)					37 18	***									•	
Delay, Queue Length, an	d Leve	l of S	ervice									•				
Flow Rate, v (veh/h)		Z				23				50		45		77		2
Capacity, c (veh/h)		1395				1319				493		609		490		878
v/c Ratio		0.00				0.02				0 10		0 07		0 16		0.00
95% Queue Length, Q ₉₅ (veh)	1	0.0				0.1				0.3		0.2		0.6	5	0.0
Control Delay (s/veh)		7.6				7.8		108		13 ī		11.4		13.7		9.1
Level of Service, LOS		Α				А				Э		В		В		Α
Approach Delay (s/veh)		0	.1			0	.9			12	2.3			13	.6	
	_		1000	100			over 17				3				3	

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	200 10
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 AM Peak Build	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Vehicle Volu	mes and A	Adjust	tments
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Approach		Eastb	ound			West	bound		Sec.	North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	Ų	L	Т	R	U	L	Ŧ	R
Priority		10	11	12		7	В	9	10	1	2	3	4U	4	5	5
Number of Lanes		0	0	0		0	0	0	0	0	1	a	0	0	1	٥
Configuration			LR							LT				8		TR
Volume, V (veh/h)		0		13					59 2750	175	58				83	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blacked			3 H5				1					00000000				
Percent Grade (%)			D			•				•						
Right Turn Channelized		ħ	lo	·		١	۷o		<u> </u>	N	la			1	lo al	
Median Type/Storage				Undi	vided	i de de la constante de la con									*******	

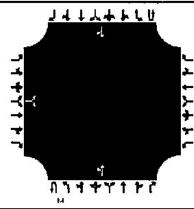
Critical and Follow-up Headways

Base Critical Meaoway (sec)		<u> </u>		1			L		l
Critical Headway (sec)									
Base Follow-Up Headway (sec)								- 60	
Follow-Up Headway (sec)									
								-	

Delay, Queue Length, and Level of Service

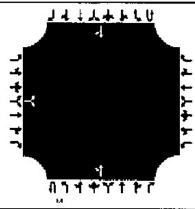
Flow Rate, v (veh/h)	15	550 0000	208				
Capacity, c (veh/h)	953		1486				
v/c Ratio	0.02		014				Ì
95% Queue Length, Q ₉₅ (veh)	0.0		0.5	000000			
Control Delay (s/veh)	8.8		7.8			<u> </u>	<u> </u>
Level of Service, LOS	A		A				
Approach Delay (s/veh)	8.8		62		•	•	
Approach LOS	Α	2 2.50 24 1 2.50 24 1 2.50					

Regard of the second of the Same Same to be the second **General Information** Site Information Analyst G Grigsby Intersection Roundtop Rd @ Veta Drive Agency/Co. Y2 Consultants, LLC Jurisdiction Date Performed 11/8/2022 East/West Street Veta Rd Analysis Year 2025 Roundtop Rd North/South Street Time Analyzed 2025 PM Peak Build 0.84 Peak Hour Factor Intersection Orientation North-South Analysis Time Period (hrs) 1.00 **Project Description** Gold King Mine



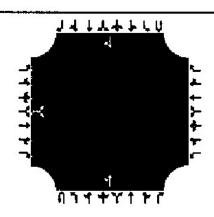
					#1 3 °	1 1	TF									
Vehicle Volumes and Ad	justme	ents	100 KG KG	9 85	50.500									V.		
Approach		Easti	opund		ĺ	West	bound			North	bound			South	bound	
Movement	U	L	Т	R	u	L	Т	R	U	L	Т	R	Ü	Ĺ	Ť	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes	***	0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration		1	LR							LT						TR
Volume, V (veh/h)		0		175					72	13	82				68	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked	20 200 2000	200 100		gerengere												
Percent Grade (%)			0			•				•				20000000	33055 KI-97	2000 700
Right Turn Channelized		١	4o			١	lo			N	lo			ı	Vo.	
Median Type/Storage				Undi	vided									500		
Critical and Follow-up H	leadwa	ays														500
Base Critical Headway (sec)	S								-86		- C		-			
Critical Headway (sec)															İ	
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)													-			
Delay, Queue Length, ar	ıd Leve	el of S	ervice	•			35.0		276.5				· · · · · ·			
Flow Rate, v (veh/h)			208				-			15						
Capacity, c (veh/h)			975							1508						
v/c Ratio			021				\vdash			0.01		•				
95% Queue Length, Q ₉₅ (veh)			0.8					31		00			- 66			
Control Delay (s/veh)			97			1				74						
Level of Service, LOS			Α							Α		<u> </u>				
Approach Delay (s/veh)			9.7							1	1					
Approach LOS			A		İ		· · · · · · ·		İ							

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		



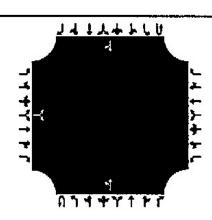
Vehicle Volumes and Adj	justme	nts														
Approach		Eastt	oound			West	panuq	X33.000.000	T	Northi	bound			South	bound	
Movement	U	L	T	R	υ	L	Т	R	U	L	T	R	U	Ĺ	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	a	0	0	1	a
Configuration			LR							ĻŢ						TR
Volume, V (veh/h)		0		5			10000 NO 100 N			53	79				114	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked					8								1			
Percent Grade (%)			0					•						0.000		15.
Right Turn Channelized		4	10		<u> </u>	٨	ło		Ì	N	o			١	√o	
Median Type/Storage	<u>"i</u>			Undi	vided			200								
Critical and Follow-up H	eadwa	ys		88			18.									
Base Critical Headway (sec)	3							* ** - ** · ·							1	
Critical Headway (sec)											5.7 5.0					
Base Follow-Up Headway (sec)											500,100,00					-
Follow-Up Headway (sec)																8
Delay, Queue Length, an	d Leve	l of S	ervice	?	572.5	A A										
Flow Rate, v (veh/h)			6							63						,
Capacity, c (veh/h)			909		á.					1440						
v/c Ratio			0.01		İ					0.04						
95% Queue Length, Q ₉₅ (veh)			0.0							0.1						
Control Delay (s/veh)			9.0							7.6						
Level of Service, ŁOS			Α				<u> </u>			Α						
Approach Delay (s/veh)	¥.	9	9.0							3.	3				A	
Approach LOS		· ·	A		1											

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ Veta Drive
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	Veta Rd
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0 84
Intersection Orientation	North-South	Analysis Time Period (hrs)	1 DO
Project Description	Gold King Mine		



Approach		Easti	bnuot			Westl	bound			North	bound			South	bound	
Movement	U	L	Ŧ	R	u	L	Ŧ	R	υ	L.	Т	R	U	L	Т	R
Priority		10	- 11	12		7	8	9	10	1	2	3	40	4	5	6
Number of Lanes		0	0	0		0	0	0	a	٥	1	0	0	C	1	0
Configuration			LR							LT ·	8		100.00			TR
Volume, V (veh/h)		0		5		50				53	79		<u> </u>	100	134	0
Percent Heavy Vehicles (%)		3		3						3	i i					i de la companya de l
Proportion Time Blocked	20 0000 0000															
Percent Grade (%)			0			52.812				20 20	50				ol .	
Right Turn Channelized		1	10			N	ło	de desce		N	0				40	
Median Type/Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys	eş.													
Base Critical Headway (sec)							F 20 e8									
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)			3			1										A1131 W
Delay, Queue Length, an	ıd Leve	l of S	ervice	.	126 2										•	
Flow Rate, v (veh/h)			5		y (000)					63						
Capacity, c (veh/h)			909							1440						
v/c Ratio		100	0.01							0.04		T				
95% Queue Length, Q _{es} (veh)		· · · · · ·	0.0						1.00	0.1						
Control Delay (s/veh)			9.0							7.6				·		
Level of Service, LOS		17.000 000	Α					20		Α						
Approach Delay (s/veh)		9	1.0							3	.3					
Approach LOS			Α						·							

र 🗽 औं 🧺 🖺 ब्राह्मका कर पुरस्य र द्वापाल नर्का स्टानका स General Information Site Information Analyst G Grigsby Intersection Roundtop Rd @ Veta Drive Agency/Co. Y2 Consultants, LLC Jurisdiction **Date Performed** 11/8/2022 East/West Street Veta Rd Analysis Year 2035 North/South Street Roundtop Rd Time Analyzed 2035 PM Peak Build 0.86 Peak Hour Factor Intersection Orientation North-South Analysis Time Period (hrs) 1.00 Project Description Gold King Mine



Approach		Easth	ound			West	ound			North	bound			South	bound	
Movement	U	L	τ	R	U	L	Т	R	u	L	Т	R	U	L	т	R
Priority		10	11	12		7	8	9	10	1	2	3	4Ų	4	5	6
Number of Lanes	T	0	0	0		0	0	0	0	0	1	0	D	Ď	1	0
Configuration			LŔ							LT						TR
Volume, V (veh/h)		0		53		III 1000.00 -0000 000				5	112				93	0
Percent Heavy Vehicles (%)		3		3				2 3		3			y s			
Proportion Time Blocked				203												
Percent Grade (%)			0							10000	0.07.20.00 0.00				1000	
Right Turn Channelized		N	lo			١	lo			N	lo	8 XS	Ų.	٨	lo	
Median Type/Storage	1			Undi	vided											
Critical and Follow-up H	leadwa	ys				•										
Base Critical Headway (sec)																
Critical Headway (sec)		3												80 10		
Base Follow-Up Headway (sec)					0.000			N.C. 000 (100 A 100 A 40 A 100 A								
Follow-Up Headway (sec)					9		<u>-</u>		i i							
Delay, Queue Length, ar	d Leve	l of S	ervice	è	35											
Flow Rate, v (veh/h)			62			100				6		200				
Capacity, c (veh/h)			942			200 30 0			ē 0	1475					1 12	
v/c Ratio			0.07			207				0.00						
95% Queue Length, Q ₉₅ (veh)			0.2							0.0						
Control Delay (s/veh)			9.1			•				7.5		<u> </u>				
Level of Service, LOS		33.	Α							Α						
Approach Delay (s/veh)		9	.1							0	.4	a a	Ų			
Approach LOS	1		A							•						

General Information							Site	Infor	natio	n	, MCNOX					
Analyst	G Grig	jsby					Inter	section			Roun	dtop Rd	@ Нар	py Jack	· - -	
Agency/Co.		nsultani	ts, LLC		·		Junso	liction				•				
Date Performed	11/8/2	2022					East/	West Str	eet		Нарр	y Jack R		186		
Analysis Year	2035		-				Norti	1/South	Street			dtop Ad				
Time Analyzed	2035	PM Peak	c Build				Peak	Hour Fa	ctor		0.84					
Intersection Orientation	East-V	Vest					Analy	rsis Time	Period	(hrs)	1.00					
Project Description	Gold 1	King Mir	ne		,					-						
Lanes			· -	_	90 8	e de					(8) JB					
				1414	ጎዣ	ስ ሱ ተዣ '	ተቀሾ	·	⊦ - -							
Vehicle Volumes and Ad	ljustme	nts										- 0 0 - 0			· - -	
	-								г				F -53			
Approach	<u> </u>	Eastb	ound	··		Westl	-	. ·		r —	bound	— —			bound	
Movement	U	Eastb L	Т		ú	L	T	R	U	L	Т	R	U	L	Т	-
Movement Priority	10	Eastb L 1	T 2	3	4U	L 4	T S	6	U	L 7	T 8	9	U	10	T 11	12
Movement Priority Number of Lanes		Eastb L 1	Т	3		L 4	5 1	6	U	7 1	Т	9	u	1D 0	Т	12
Movement Priority Number of Lanes Configuration	10	Eastb L 1	T 2	3 O TR	4U	L 4 1	T 5 1 T	6 1 R	U	7 1 L	T 8 1	9 0 T R	U	10 0 LT	11 1	R 12
Movement Priority Number of Lanes Configuration Volume, V (veh/h)	10	Eastb L 1 1 2	T 2	3	4U	L 4 1 L	5 1	6	U	1 1 1 42	T 8 1	9 0 TR 15	U	10 0 LT 35	11 1 1 29	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%)	10	Eastb L 1	T 2	3 O TR	4U	L 4 1	T 5 1 T	6 1 R	U	7 1 L	T 8 1	9 0 T R	U	10 0 LT	11 1	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked	10	Eastb L 1 1 2	T 2	3 O TR	4U	L 4 1 L	T 5 1 T	6 1 R	U	1 1 1 42 3	7 8 1 23 3	9 0 TR 15	U	10 0 LT 35	11 11 29	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)	10	Eastb L 1 1 L 2	T 2 1	3 O TR	4U	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR 15	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized	10	Eastb L 1 1 L 2	T 2	3 0 TR 64	4U 0	1 1 1 19 3	T 5 1 T	6 1 R	U	1 1 1 42 3	7 8 1 23 3	9 0 TR 15	U	10 0 LT 35	11 11 29	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	10	Eastb L 1 1 L 2 3	T 2 1	3 0 TR 64	4U	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up I-	10	Eastb L 1 1 L 2 3	T 2 1	3 0 TR 64	4U 0	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec)	10	Eastb L 1 1 L 2 3	T 2 1	3 0 TR 64	4U 0	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U -	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up I-	10	Eastb L 1 1 L 2 3	T 2 1	3 0 TR 64	4U 0	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)	10	Eastb L 1 1 L 2 3	T 2 1	3 0 TR 64	4U 0	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up F Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)	1U 0	Eastb L 1 1 L 2 3	T 2 1	TR 64	4U 0	1 1 1 19 3	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR	U	10 0 LT 35	T 11 1 1 29 3	12 1 R
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, as	1U 0	Eastb L 1 1 L 2 3	T 2 1	TR 64	4U 0	L 4 1 1 19 3 N	T 5 1 T 137	6 1 R	U	1 1 42 3 N	7 8 1 23 3 3 0 0	9 0 TR 15 3	U	10 0 LT 35	T 11 1 1 29 3	1.3 1 1 R 2 2 3 3
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec)	1U 0	Eastb L 1 2 3	T 2 1	TR 64	4U 0	L 4 1 1 L 19 3 N	T 5 1 T 137	6 1 R	U	1 1 1 42 3	7 8 1 23 3 3 0 0	9 0 TR		10 0 LT 35	T 11 1 1 29 3	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an	1U 0	Eastb L 1 1 L 2 3 N ys	T 2 1	TR 64	4U 0	L 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	T 5 1 T 137	6 1 R	U	L 7 1 L 42 3 N N N N N N N N N N N N N N N N N N	7 8 1 23 3 3 0 0	9 0 TR 15 3	U	10 0 LT 35 3 N	T 11 1 1 29 3	12 1 1 R 2 2 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)	1U 0	Eastb L 1 1 L 2 3 N ys L 1 1 1 2 1 1 1 1 1 1 1 1 1	T 2 1	TR 64	4U 0	L 4 1 1 L 19 3 N	T 5 1 T 137	6 1 R	U	1 1 42 3 N	7 8 1 23 3 3 0 0	9 0 TR 15 3		10 0 LT 35 3	T 11 1 1 29 3	12 1 1 R 2 3 3
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up Hase Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Critical Headway (sec)	1U 0	Eastb L 1 1 L 2 3 N ys 1 395 0.000	T 2 1	TR 64	4U 0	L 4 1 1 L 19 3 N N 23 1319 0.02	T 5 1 T 137	6 1 R	U	L 7 1 L 42 3	7 8 1 23 3 3 0 0	9 0 TR 15 3		10 0 LT 35 3 N	T 11 1 1 29 3	1.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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Approach Delay (s/veh)

Approach LOS

09

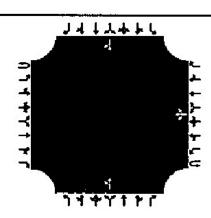
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В

12.3

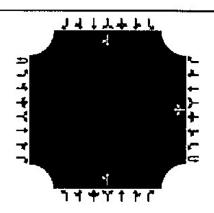
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General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ 1-80 West R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	1 80 Westbound Ramps
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0 84
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine	· · · · · · · · · · · · · · · · · · ·	



Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	5		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		a	1	0		C	1	0
Configuration							LTR			LT	ž.					TR
Volume, V (veh/h)						31	6	263		1	18				103	13
Percent Heavy Vehicles (%)						3				3	3		-X		3	3
Proportion Time Blocked			0.00													
Percent Grade (%)		Ø.	•				50.0		00000	. ()		(d) (d)		0	
Right Turn Channelized		N	lo			١	lo		-00000A	N	la			١	lo	
Median Type/Storage				Undi	vided	40.000000000000000000000000000000000000										****
Critical and Follow-up H	leadwa	ys									*****	200000				
Base Critical Headway (sec)				3	5				3				ľ			
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)															SCN	100
Delay, Queue Length, an	ıd Leve	l of S	ervice	e	2000										•	
Flow Rate, v (veh/h)			Jan Alexandria		i de la companya de l	37				22					Γ .	138
Capacity, c (veh/h)				10000		0							i i			679
v/c Ratio																0.20
95% Queue Length, Q ₉₅ (veh)			···						3							0.8
Control Delay (s/veh)																117
Level of Service, LOS			ne postovenove	10.		 			2							В
Approach Delay (s/veh)											•			1	1,7	
Approach LOS							X86								1,7 B	_

	20 10 100000000000000000000000000000000		
General Information		Site Information	
Analyst	G Grigsby	Intersect on	Roundtop Rd @ I-80 West R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	1-80 Westbound Ramps
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 PM Peak Build	Peak Hour Factor	0.80
Intersection Orientation	East-West	Ana ys s Time Period (hrs)	1.00
Project Description	Gold King Mine		



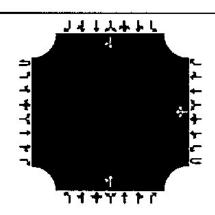
Approach		Easth	ound		T	West	bound			North	bound		Ĭ	South	bound	
Movement	U	L	Т	R	и	Ľ	Ť	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	-5		7	8	9		10	11	12
Number of Lanes	D	0	С	0	0	0	1	0		0	1	0		0	1	0
Configuration							LTR		-	LT			· · · ·			TR
Volume, V (veh/h)						30	5	135		4	22				231	10
Percent Heavy Vehides (%)					30	3		44		3	3				3	3
Propartion Time Blocked		20.2000			<u> </u>											
Percent Grade (%)			*)				D	<u> </u>
Right Turn Channelized		٨	lo			٨	lo			N	la			N	ło	
Median Type/Storage	Uni			Undi	vided									7		
Critical and Follow-up H	leadwa	ys														
Base Critical Headway (sec)	· ·														Ĭ	<u> </u>
Critical Headway (sec)																
Base Follow-Up Headway (sec)												1455-0-X-1045-1				
Follow-Up Headway (sec)											20,000			3 33 5		
Delay, Queue Length, ar	ıd Leve	l of S	ervice	2				•				•			·	
Flow Rate, v (veh/h)				23.757(4)47		38				33						301
Capacity, c (veh/h)	8			····		0										732
v/c Ratio																0.4
95% Queue Length, Q ₉₅ (veh)																2.1
Control Delay (s/veh)																13.
Level of Service, LOS								95045			<u> </u>	В				
Approach Delay (s/veh)						Residence (Section)	Orde A			1000				13	3 3	
Approach LOS							7								В	

Residence Resi				5565 33			100							×1000			-
Agency/Co. V2 Consultans, LLC	General Information				A3101 100			Site	Infor	matio	n						
Date Performed 11/8/2022 Eau/West Street 1-80 Westbound Ramps Analysis View 2025 NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street Nountdip Pt NorthSouth Street N	Analyst	G Grig	sby			~ ~ .		Inter	ection			Rou	ndtop Ro	ଉ । ଉ	West R		
Analysis Near 2025 Mark Bould Peak Bould Peak Hour Factor O.94	Agency/Co.	Y2 Co	nsultan	its, LLC				Juriso	liction								
Time Analysed	Date Performed	11/8/	2022					East/	West Str	eet		1.80	Westbo	ınd Ram	ıps		
		2025						Norti	1/South	Street	5000 50	Rou	idtop Ro				
Project Description Gold King Mine	Time Analyzed	2025	PM Pea	k Build				Peak	Hour Fa	ctor		0.84					
Vehicle Volumes and Adjustments	Intersection Orientation							Analy	⁄sis ∓∙me	Period	(hrs)	1.00		C			
Vehicle Volumes and Adjustments	Project Description	Gold I	King Mi	ne													
Northbound Northbound Northbound Southbound Northbound Southbound Northbound																	
Approach						ጎተ		1 ነ ሰ		.							
Movement		ijustme	·			 Т	West	bound			Norti				South		
Priority 1U 1 2 3 4U 4 5 6 7 8 9 110 11 1 Number of Lanes 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 1 0		╃╼┌╾			R	 	1	T	В	11	T -		7	<u></u>	T		Т.
Number of Lanes 0 0 0 0 0 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0				 ~	·		4		20.00	<u> </u>	1-7	-	<u> </u>	- -	10	 -	+-
LTR		0	0	D	0						1		 			<u> </u>	1 0
Volume, V (veh/h) 9 2 115 2 21 326 1 Percent Heavy Vehicles (%) 3	Configuration	 					T	LTR			+	+		 —		 	TI
Percent Heavy Vehicles (%) 3 3 3 3 3 3 3 3 3		 		<u> </u>	-	 	9		115	}	∤ —	1	╅━	denomination and	 	326	1,
Proportion Time Blocked 0 0 Percent Grade (%) 0 0 Right Turn Channelized No No No Median Type/Storage Undivided Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) 27 4(Delay, Queue Length, and Level of Service 5(6(Flow Rate, v (veh/h) 0 8(v/c Ratio 0 0 95% Queue Length, Q ₉₅ (veh) 3 Control Delay (s/veh) 14 Level of Service, LOS 1	Percent Heavy Vehicles (%)	• /	2000	<u> </u>		†	3	 		<u> </u>		-	ه. حداد	 	† -	 	-3
Right Turn Channelized No No No No No No No No No No Median Type/Storage Undivided Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Flow Rate, v (veh/h) 11 27 46 Capacity, c (veh/h) v/c Ratio 95% Queue Length, Qas (veh) Control Delay (s/veh) 12 Control Delay (s/veh)	Proportion Time Blocked				· ——			 		<u> </u>	1	 	† —	3	†	<u> </u>	⇈
Median Type/Storage Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Level of Service Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service, LOS	Percent Grade (%)	7	··.—_	!	L					-	,	0	⊥ -		<u> </u>	⊥ O	⊥
Critical and Follow-up Headways Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Level of Service Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service, LOS	Right Turn Channelized	+ -				İΤ			55		 1			 			
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Flow Rate, v (veh/h) 11 27 40 Capacity, c (veh/h) 0 80 v/c Ratio 0 0 95% Queue Length, Q ₉₅ (veh) 3 Control Delay (s/veh) 14 Level of Service, LOS 15	The second secon	لے یا nd Leve	l of S	ervice	L •	⊥ -	Ц, ,	L	i	L	L .	ш_	I.	l	<u>. </u>	L	1
Capacity, c (veh/h) 0 80 v/c Ratio 0 0 95% Queue Length, Qss (veh) 3 3 Control Delay (s/veh) 14 14 Level of Service, LOS 15 16		-r - ··	7	т -:	-	т -	T 11	I	, -	* *	يس ريسان 27		. -	, .		т	I Ar
v/c Ratio 0. 95% Queue Length, Q ₉₅ (veh) 3 Control Delay (s/veh) 14 Level of Service, LOS 6		- - 	_	1	h ~	 		 	}	 	- -	1	+ -		† -		•
95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service, LOS		+ -		 -	-	-	}		<u> </u>	ļ —	. <u>ļ. — </u>	⊢ –	ļ <u>-</u>	1	ــ ا		_
Control Delay (s/veh) Level of Service, LOS		++1		† -	i	 	 	 	<u> </u>	f -	 	 -	- -	<u> </u>	<u> </u>	├ —	3
Level of Service, LOS				 -	ļ <u> </u>	 	 	 		- -	 	↓	4	}	<u> </u>		14
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Approach LOS

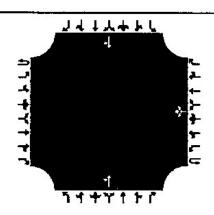
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General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ 1 80 West R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/6/2022	East/West Street	I-80 Westbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 AM Peak Build	Peak Hour Factor	080
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Approach		Easti	bnuo			West	bound			North	bound		35.530	South	bound	
Movement	Ü	L	Т	Ř	U	L	Т	R	U	Ĺ	Т	R	U	L	Ţ	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	Ð	D	D	O.	1	0		a	1	0	***	0	1	0
Configuration							LTR			ĻŤ						TR
Valume, V (veh/h)					12 100,000	9	2	115		2	21				326	14
Percent Heavy Vehicles (%)						3				3	3				3	3
Proportion Time Blocked								a 0	20 8/0/20							
Percent Grade (%))				0	
Right Turn Channelized		N	lo			N	lo			N	lo	1		١	ło	
Median Type/Storage				Undi	vided	· · · · · · · · · · · · · · · · · · ·						22 20000000000000				
Critical and Follow-up H Base Critical Headway (sec)	eadwa	ys	<u> </u>			F 4	l			·	•••		100			5
Critical Headway (sec)	+ -		 						7.							
Base Follow-Up Headway (sec)			(3) (4)		- 2											
Follow-Up Headway (sec)	+														<u> </u>	
			<u> </u>													
Delay, Queue Length, an	id Leve	l of S	ervic													
Flow Rate, v (veh/h)						11	- 100 E-1			28	TO 800 (000-					426
Capacity, c (veh/h)						0							900 5000			798
v/c Ratio											12					0.5
95% Queue Length, Q ₉₅ (veh)													-020-00-0-00-0	3		3.4
Control Delay (s/veh)																14 (
Level of Service, LOS											Dest Garage				<u> </u>	В
Approach Delay (s/veh)				··			_					*		1-	1.6	
Approach LOS				-											8	

General Information		Site Information	
Analyst	G Gngsby	Intersect on	Roundtop Rd @ I-80 West R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	I-80 Westbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 AM Peak Build	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



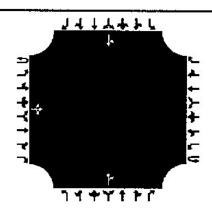
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	П	L	T	R	υ	L	Т	R	U	L	T	R	υ	L	T	R	
Priority	10	1	2	3	40	4	S	6		7	8	9		10	11	12	
Number of Lanes	a	0	0	0	0	0	1	D		0	1	0		0	1	٥	
Configuration							LTR			LT						TR	
Volume, V (veh/h)			ľ	2		9	2	32 9		0	19			_	98	12	
Percent Heavy Vehicles (%)						3				3	3				3	3	
Proportion Time Blocked		12/25/20															
Percent Grade (%)										()			,	0		
Right Turn Channelized		N	lo			٨	lo			N	ю			٨	la		
Median Type/Storage				Undi	vided			20.000									
Critical and Follow-up H	eadwa	ys								5950			0.000.000.000.000				
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Critical Headway (sec)						-											
Base Follow-Up Headway (sec)			100													-	
Follow-Up Headway (sec)																	
Delay, Queue Length, an	d Leve	l of S	ervice	<u> </u>				500 NOSO	50								
Flow Rate, v (veh/h)						11				23						131	
Capacity, c (veh/h)						0										691	
v/c Ratio																0 19	
95% Queue Length, Q ₉₅ (veh)								2							·	07	
Control Delay (s/veh)					2000											11.4	
Level of Service, LOS	10000							8								В	
	11.4						. 27										
Approach Delay (s/veh)					1								l	- 1	11.4 B		

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General Information							Site	Infor	matic	n						
Analyst	G Gri	gsby					Inter	section			Rour	dtop Rd	@ 1-80	East R		
Agency/Co.	Y2 Co	nsultar	its, LLC		8		Jurisa	diction	152				3.02			00000
Date Performed	11/8/	2022					East/	West Str	eet		1.80	Eastbour	nd Ramp	os -		
Analysis Year	2022	2.12			ă		Norti	h/South	Street		Roun	dtop Rd	 —			
Time Analyzed	2022	AM Pea	ık				Peak	Hour Fa	ctor		0.92					
Intersection Orientation	East-	West					Analy	ysis Time	Period	(hrs)	1 00					
Project Description	Gold	King M	ine	88 88			96930						2 90.00 0000	***		
Lanes																
Vehicle Volumes and Ad	justme	ents		144446	ግ ተ	† † Y	1 P [F	··- -				<u>.</u> .	-	_
Approach	T-~~-	Enert	baund		Γ		0.00		1153						0.000	
***	86	Caşu	DORNO		l	West	bound		Ţ	North	bound		Ī	South	bound	
Movement	Ü	<u> </u>	,	R	υ	West	bound T	R	U	North	bound T	R	<u> </u>	South	bound T	R
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Movement	100000	<u>-</u>	Ť			L	T		U	L	т		<u></u>	Ę	Ŧ	<u> </u>
Movement Priority	10	1	2	3	4U	L 4	T 5	6	U	L 7	T 8	9	U	10	T 11	12
Movement Priority Number of Lanes	10	1	2	3	4U	L 4	T 5	6	U	L 7	T 8	9 a	U	10 0	T 11	12
Movement Priority Number of Lanes Configuration	10	1 0	2 1 LTR	0	4U	L 4	T 5	6	U	L 7	T 8	9 d TR	U	10 0 LT	11 1	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h)	10	1 0	2 1 LTR	0	4U	L 4	T 5	6	U	L 7	T 8 1	9 0 TR	U	10 0 LT 90	11 1 1	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%)	10	1 0	2 1 LTR	0	4U	L 4	T 5	6	U	L 7	T 8 1	9 0 TR	U	10 0 LT 90 3	11 1 1	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked	10	1 0 3 3	2 1 LTR	0	4U	0	T 5	6	U	7 0	T 8 1 1 9 3	9 0 TR	U	10 0 LT 90 3	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)	10	1 0 3 3	7 2 1 LTR 0	3 0	4U	0	T 5	6	U	7 0	7 8 1 1 9 3 3 0 0	9 0 TR	U	10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage	10	1 0 3 3	7 2 1 LTR 0	3 0	4U 0	0	T 5	6	U	7 0	7 8 1 1 9 3 3 0 0	9 0 TR	U	10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H	10	1 0 3 3	7 2 1 LTR 0	3 0	4U 0	0	T 5	6	U	7 0	7 8 1 1 9 3 3 0 0	9 0 TR	U	10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	10	1 0 3 3	7 2 1 LTR 0	3 0	4U 0	0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9 0 TR		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec)	10	1 0 3 3	7 2 1 LTR 0	3 0	4U 0	0	T 5	6	U	7 0	7 8 1 1 9 3 3 0 0	9 0 TR		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec)	10	1 0 3 3	7 2 1 LTR 0	3 0	4U 0	0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9 0 TR		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec)	1U 0	1 0 3 3	2 1 LTR 0	3 0 2 Undi	4U 0	0	T 5	6	U	7 0	7 8 1 1 9 3 3 0 0	9 0 TR		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an	1U 0	1 0 3 3	2 1 LTR 0	3 0 2 Undi	4U 0	0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9 0 TR 9 3		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an	1U 0	1 0 3 3 ys	2 1 LTR 0	3 0 2 Undi	4U 0	0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9 0 TR 8 3		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h)	1U 0	1 0 3 3	2 1 LTR 0	3 0 2 Undi	4U 0	0 0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9 0 TR 8 3		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) V/c Ratio	1U 0	1 0 3 3 ys	2 1 LTR 0	3 0 2 Undi	4U 0	0 0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, an Flow Rate, v (veh/h) V/c Ratio 95% Queue Length, Qas (veh)	1U 0	1 0 3 3 ys	2 1 LTR 0	3 0 2 Undi	4U 0	0 0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9		10 0 LT 90 3	11 1 16 3 3 D	12
Movement Priority Number of Lanes Configuration Volume, V (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type/Storage Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) V/c Ratio	1U 0	1 0 3 3 ys	2 1 LTR 0	3 0 2 Undi	4U 0	0 0	T 5	6		7 0	7 8 1 1 9 3 3 0 0	9		10 0 LT 90 3	11 1 16 3 3 D	12

Approach LOS

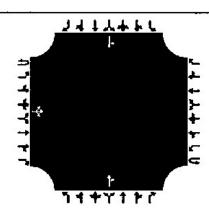
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THE REPORT OF THE PERSON AND ASSOCIATED PROPERTY. General Information Site Information Analyst **G** Grigsby Intersection Roundtop Rd @ I 80 East R Y2 Consultants, LLC Agency/Co. Jurisdiction **Date Performed** 11/8/2022 East/West Street I 80 Eastbound Ramps Analysis Year 2022 North/South Street Roundtop Rd Time Analyzed 2022 PM Peak Peak Hour Factor 0.92 Intersection Orientation East-West Analysis Time Period (hrs) **Project Description** Gold King Mine



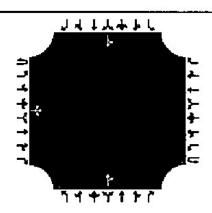
Approach		Eastl	bound			West	bound		ě.	North	bound	100		South	bound	
Movement	U	L	T	R	Ü	Ļ	Т	R	V	L	Т	R	U	L	Υ	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		D	1	۵		0	1	0
Configuration			LTR						5			TR		ĻŢ		
Volume, V (veh/h)		3	2	1			9				18	31		134	20	
Percent Heavy Vehicles (%)		3		82A - 63		-					3	3		3	3	
Proportion Time Blocked			a a													
Percent Grade (%)			201202				•				0			()	
Right Turn Channelized		١	la			٨	lo			И	io.			N	lo	
Median Type/Storage	1			Undi	vided	-	0.000									
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)							<u> </u>									
Critical Headway (sec)																
Base Follow-Up Headway (sec)		- 100 ACCES - 100				-				<u> </u>				-		
Follow-Up Headway (sec)	1000000					5-1							2 9443			
Delay, Queue Length, an	d Leve	of 5	ervice							·			V es es			
Flow Rate, v (veh/h)		3]	<u> </u>	}	<u> </u>	54	-	16B		- St.
Capacity, c (veh/h)		0				-					-	997				
v/c Ratio						i i	-					0.05			9	
95% Queue Length, Q ₉₅ (veh)				21								0.2				
Control Delay (s/veh)				Rode A			i					8.8	, i			
Level of Service, LOS												Α			%	
Approach Delay (s/veh)				55		-					.B	14000				
Approach LOS				0 00	1					5	Α		ed .	-2000		

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ I-80 East R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	I-80 Eastbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 AM Peak No Build	Peak Hour Factor	0 92
Intersection Orientation	East-West	Analysis Time Period (hrs)	100
Project Description	Gold King Mine		



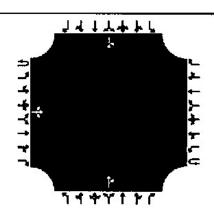
Approach	Eastbound				Westbound					North	bound		Southbound				
Movement	Ų	L	Т	R	υ	L	Т	R	υ	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	6	9	exec.	10	11	12	
Number of Lanes	G	0	1	0	0	0	0	D		0	1	0		0	1	0	
Configuration			LTR		· <u></u>							TR		LT			
Volume, V (veh/h)		3	0	2							9	9		95	16	· · · · · · ·	
Percent Heavy Vehicles (%)		3									3	3	5. V20-474.	3	3		
Proportion Time Blocked		- S													1/2		
Percent Grade (%)			1200 12								0	•	0				
Right Turn Channelized		1	lo		No					١	10	··-··	No				
Median Type/Storage	Undivided																
Critical and Follow-up H	leadwa	ys		100000000000000000000000000000000000000				20									
Base Critical Headway (sec)									55				· · ·				
Critical Headway (sec)																	
Base Follow-Up Headway (sec)														0,200,00		8 30	
Follow-Up Headway (sec)		8		(35.75) (3									8				
Delay, Queue Length, ar	d Leve	of S	ervice														
Flow Rate, v (veh/h)		3										20		120			
Capacity, c (veh/h)		0								100	3	973					
v/c Ratio												0.02		3343	ia siika i		
95% Queue Length, Q ₉₅ (veh)												0.1					
Control Delay (s/veh)												8.8	S 8X		W		
Level of Service, LOS						(a)						Α					
Approach Delay (s/veh)			-						e d	8	1.6					1100	
Approach LOS	_										Α						

The State of the S **General Information** Site Information Analyst **G** Grigsby Intersection Roundtop Rd @ I-80 East R Agency/Co Y2 Consultants, LLC Jurisdiction **Date Performed** 11/8/2022 East/West Street I-80 Eastbound Ramps Analysis Year 2025 North/South Street Roundtop Rd Time Analyzed 2025 AM Peak Build Peak Hour Factor 0.89 Intersection Orientation East-West Analysis Time Period (hrs) 100 **Project Description** Gold King Mine



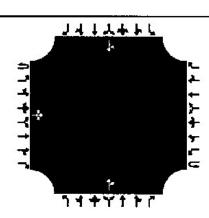
Approach	Eastbound				2002 63 34	West	bound		1	North	bound	8	Southbound				
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	Ų	, L	T	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	D	0	1	0	0	0	D	0		٥	1	0		0	1	0	
Configuration			LTR		8							TR		LT			
Volume, V (veh/h)		8	0	2							9	9		107	16		
Percent Heavy Vehicles (%)		3							1		3	3		3	3		
Proportion Time Blacked																	
Percent Grade (%)											0	•		Ţ)		
Right Turn Channelized		١	No.		No					١	lo		Na				
Median Type/Storage	Undivided																
Critical and Follow-up H	leadwa	ys			(PER 12) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								-200				
Base Critical Headway (sec)			V 102 1											33	0		
Critical Headway (sec)		1000								0.000							
Base Follow-Up Headway (sec)																	
Follow-Up Headway (sec)																	
Delay, Queue Length, an	d Leve	l of S	ervice	•					300		300		žes :				
Flow Rate, v (veh/h)		9					<u> </u>	<u> </u>				20		138		200	
Capacity, c (veh/h)		0										965					
v/c Ratio				-								0.02				\Box	
95% Queue Length, Q ₉₅ (veh)			1									0.1					
Control Delay (s/veh)			599733 5000					<u> </u>	<u> </u>			8.8					
Level of Service, LOS												Α					
Approach Delay (s/veh)		•	-	-					i i		3.8			10			
										100			I		100		

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ 1-80 East R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Date Performed	11/8/2022	East/West Street	I-80 Eastbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 PM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		*



Approach		Eastl	ound			Westl	bound	soesi a		North	bound		Southbound				
Movement	U	L	T	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	10	1	2	3	4U	4	5	6		7	В	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR	86	LT	10.2		
Volume, V (veh/h)		3	2	1							18	34	1065	20	140		
Percent Heavy Vehicles (%)		3									3	3	94 S 32 S	3	3		
Proportion Time Blocked			2 2000	2000													
Percent Grade (%)						*					0		5.6)		
Right Tum Channelized		ſ	No.		Nο					١	la .		No				
Median Type/Storage	Undivided																
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)	N																
Critical Headway (sec)																	
Base Follow-Up Headway (sec)																	
Follow-Up Headway (sec)																	
Delay, Queue Length, an	d Leve	of S	ervice	•	1020 W						•			•			
Flow Rate, v (veh/h)		3										57		174			
Capacity, c (veh/h)		0				33		33				1001					
v/c Ratio											1	0.06					
95% Queue Length, Q ₉₅ (veh)						38						0.2				\Box	
Control Delay (s/veh)												8.8					
Level of Service, LOS		1000		1.19-1.1							50 SERVE	А			150		
Approach Delay (s/veh)							100		-09	8	i.B	`					
Approach LOS											A					****	

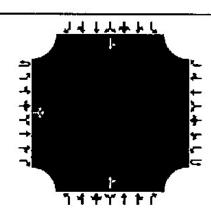
General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ 1-80 East R
Agency/Co.	Y2 Consultants, LLC	Junsdiction	
Date Performed	11/8/2022	East/West Street	I-80 Eastbound Ramps
Analysis Year	2025	North/South Street	Roundtop Rd
Time Analyzed	2025 PM Peak Build	Peak Hour Factor	0.89
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		



Approach		Eastl	bound	20 00 10	Westbound				N 69	North	bound		Southbound				
Movement	U	L	Т	R	U	L	τ	R	u	L	Т	R	U	L	T	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	D	1	0	D	0	0	0	3	0	1	0		a	1	0	
Configuration	100		LTR				44					TR		LT			
Volume, V (veh/h)		4	2	1		2000 C	96 3				18	34		310	20		
Percent Heavy Vehicles (%)		3									3	3	227	3	3		
Proportion Time Blocked				8											140000 0		
Percent Grade (%)										,	0		15 100.00)		
Right Turn Channelized		1	Vo.			N	lo		3 333	٨	ło		No				
Median Type/Storage				Undi	vided	-					- /						
Critical and Follow-up H	leadwa	ys															
Base Critical Headway (sec)																	
Critical Headway (sec)																I	
Base Follow-Up Headway (sec)							100 000 000 000 000 000 000 000 000 000									A	
Follow-Up Headway (sec)						65		G0 00 0									
Delay, Queue Length, an	ıd Leve	i of S	ervice	}													
Flow Rate, v (veh/h)		4			<u> </u>							58		370			
Capacity, c (veh/h)		0	63 									1002					
v/c Ratio												0.06					
95% Queue Length, Q _{as} (veh)		2										0.2					
Control Delay (s/veh)												8.8					
Level of Service, LOS				3000								Α				<u> </u>	
Approach Delay (s/veh)										8	.8			4			
Approach LOS	1										A			·W· ····			

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ 80 East R
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	89-20.000
Date Performed	11/8/2022	East/West Street	1-80 Eastbound Ramps
Analysis Year	2035	North/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Gold King Mine		

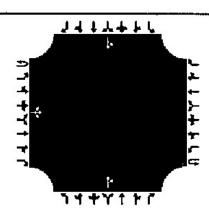
Lanes



Approach		Easth	oound			West	oound			North	bound			South	bound	
Movement	И	L	T	R	U	L	τ	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	В	9		1D	11	12
Number of Lanes	0	0	1	0	0	0	0	D		ď	1	0		a	1	0
Configuration			LTR		81.3			8.				TR		LT		
Volume, V (veh/h)		3	0	3				194 81			8	13		111	14	
Percent Heavy Vehicles (%)		3									3	3		3	3	
Proportion Time Blocked																- 55,200
Percent Grade (%)		· · · · · · · · · · · · · · · ·								(0				0	
Right Turn Channelized	8	No No					(A)	N	lo			N	lo			
Median Type/Storage		Undivided														
Critical and Follow-up H	leadwa	ys	,									<u>,</u>				
Base Critical Headway (sec)																
Critical Headway (sec)	20															
Base Follow-Up Headway (sec)																П
Follow-Up Headway (sec)								303000	- (%)							
Delay, Queue Length, ar	nd Leve	of S	ervice	<u> </u>								•		•	•	
Flow Rate, v (veh/h)		3									<u> </u>	23		136		
Capacity, c (veh/h)		0										993				
v/c Ratio												0.02				
95% Queue Length, Q ₉₅ (veh)	30 3											0.1	30 ··· - 20			
Control Delay (s/veh)												8.7				1000
Level of Service, LOS												A				
Approach Delay (s/veh)			0/31820						<u> </u>	8	.7					
Approach LOS	1										A					8000

General Information		Site Information	
Analyst	G Grigsby	Intersection	Roundtop Rd @ I-80 East F
Agency/Co.	Y2 Consultants, LLC	Jurisdiction	
Dat= Performed	11/8/2022	East/West Street	I-80 Eastbound Ramps
Analysis Year	2035	Narth/South Street	Roundtop Rd
Time Analyzed	2035 AM Peak Build	Peak Hour Factor	0.89
Intersection Orientation	Fast - West	Analysis Time Period (hrs)	1,00
Project Description	Gold King Mine	·	

Lanes



Approach		Easth	ound			West	bnuoc			North	bound			South	bound	
Movement	υ	L	T	R	ט	L	Ť	R	u	L	T	R	U	ι	Т	R
Priority	īψ	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	a	0	0	a		0	1	0		D	1	0
Configuration			LTR									TR		LТ		
Volume, V (veh/h)		5	0	3		-					8	13		116	14	
Percent Heavy Vehicles (%)		3									3	3		3	3	
Proportion Time Blacked							8									
Percent Grade (%)	50 %	0								1)					
Right Turn Channelized		No No No								N	o					
Median Type/Storage	Undivided															
Critical and Follow-up H	eadwa	ys							^							
Base Critical Headway (sec)										<u> </u>	<u> </u>					
Critical Headway (sec)							3 2			T						
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)							3						80.80			
Delay, Queue Length, an	d Leve	l of S	ervice)					<u> </u>		•					
Flow Rate, v (veh/h)		5	. p. 3						90		<u> </u>	24		146		
Capacity, c (veh/h)		D										993				
v/c Ratio												0.02			***********	<u> </u>
95% Queue Length, Q ₉₅ (veh)	50		- S			3						0,1				
Control Delay (s/veh)												B.7				
Level of Service, LOS	5								2000			A				
Approach Delay (s/veh)						Å.			į.	8	.7					
		8.7														

Source Information													4			
General Information	NATION STOCK						Site	Infor	matio	n						
Analyst	G Gri	gsby					Inters	ection			Roun	dtop Ra	@1.80	East R	2753 AMERICA	
Agency/Co.	Y2 Çc	onsultan	ts, LLC				Juriso	iction					1000	THE RESERVE		
Date Performed	11/8/	2022			20079581 03	20050000	East/	Nest Str	eet		1-80 E	astbou	nd Ramp	 55		
Analysis Year	2035						North	/South	Street		Roun	dtop Rd				_
Time Analyzed	2035	PM Pea	k No Bui	ld			Peak	Hour Fa	ctor		0.92					
Intersection Orientation	East-1	West				38.3	Analy	sis Time	Period (hrs)	1.00					
Project Description	Gold	King Mi	ne				<u> </u>			PRESE		-		~		
Lanes			-	7.00	• • • • • • • • • • • • • • • • • • • •											
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Vehicle Volumes and A	djustme	nts		-									_	— <u>—</u>	-	
Approach		Eastb	ound			West	ound			North	bound		Г 	South	bound	
Movement	Ų	L	Т	R	U .	L	Т	R	υ	L	Т	R	Ų	l	Т	R
Priority	1U	1	2	3	4U	4	5	6	<u> </u>	7	8	9		10	11	12
Number of Lanes	G	0	1	0	O	0	a	0		0	1	0		0	1	D
Configuration			LTR		<u> </u>			77.5				TR		LT		92
Volume, V (veh/h)		3	3	1					L		16	44	L -	163	19	
Percent Heavy Vehicles (%)		3	<u> </u>		<u> </u>						, , 3] 3_	<u> </u>	3	3	
Proportion Time Blocked					<u> </u>						40. NO.					
Percent Grade (%)	- +				<u> </u>	_			·	(· _		Ĺ			
Right Turn Channelized			lo		<u> </u>	N	lo			_ N	lo		L	N	0	6
	1			Undi	vided				L						· — · ·	
Median Type/Storage				_												
	⊥ Headwa	ys –		-												
	⊥ Headwa	ys 	y—	- 	<u> </u>		ī –	M.A. SARLA		-	-	Γ -	 -	r - 1		
Critical and Follow-up l	Headwa	ys	r- -	- - - -				Mar Subsection	<u> </u>	-		[<u>-</u>	positive	<u>[</u>	T.	
Critical and Follow-up I Base Critical Headway (sec)	Headwa	ys	,- } - 	- - -		·		<u></u>	-	Marine 1007	- -		<u> </u>]	T	3
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec)	Headwa	ys	r— 	- - - - -							 		<u> </u>] 		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)	1		ervice	- - - -									Γ΄. Γ]] 		_
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)	1		ervice								-	65	Para de la companya d	198		-
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a	1	l of S	ervice	- - - - - - - - - - -						,		65		198		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a Flow Rate, v (veh/h)	1	of S	ervice											198		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a Flow Rate, v (veh/h) Capacity, c (veh/h)	1	of S	ervice	- - - - - - - - - - - - - - - - - - -						,	-	1017		198		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio	1	of S	ervice					**************************************				1017 0.06		198		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)	1	of S	ervice									1017 0.06 0.2		198		
Critical and Follow-up I Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow Up Headway (sec) Delay, Queue Length, a Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	1	of S	ervice							8	8	1017 0.06 0.2 88		198		

8	<u> </u>	-5 E	9.		6 1				1. 1	7 l*					
General Information						1818 50	Site	Infor	natio	n	38-58			25	9.85
Analyst	G Grid	sby		- Maria Alba		. 1 · <u> </u>	Inters	ection			Rouni	dtop Rd	@ 1-80	East R	FE
Agency/Co.		nsultan	ts, LLC			-	Jurisc	liction				. <u></u>	· - -		.
Date Performed	11/8/	2022					East/	 West Str	eet		I-80 E	astbour	nd Ramp	u	
Analysis Year	2035		"				North	/South	Street			dtop Rd			
Time Analyzed	2035	PM Pea	k Build			22.5	Peak	Hour Fa	ctor	da o	0.82				
Intersection Orientation	East-\	West					Analy	sis Time	Period	(hrs)	3.00	<u> </u>			
Project Description	Gold	King Mi	ne ne										-		
Lanes	L									A STATE				200	
				144446	ካቀ	† †Y	ነተሶ		- - - - - -						
Vehicle Volumes and Ad	justme	nts			······································				·						
Approach	<u> </u>	Eastb	ound			West	oound		20 1000	North	bound			South	bound
Movement	u	L	Т	R	U	L	T	R	υ	L	[_T]	R	U	L	Т
Priority	10	1	2	. 3	4U	4	5	6	L	7_	B	9		10	11
Number of Lanes	0	0	1	0	a	0	0	0		0	1	O	<u> </u>	0	1
Configuration			LTR							<u></u>		TR	<u> </u>	LT	×
Volume, V (veh/h)	ļ J	4_	3	1			Ļ <u> </u>		<u>-</u> -		16	44	L	214	19
Percent Heavy Vehicles (%)	<u>_</u>	3	ļ	<u> </u>						ļ	3	3		3	3
Proportion Time Blocked	_ . .]				<u> </u>	<u></u> ,,,			_	l]		
Percent Grade (%)	<u> </u>		<u> </u>			<u> </u>					0		<u> </u>		<u> </u>
Right Turn Channelized	1	_ ^	10 -		<u></u>		lo	0.00	<u> </u>	N	<u>lo</u> .		<u>L</u>	_ N	0
Median Type/Storage		<u> </u>		Undi	vided						_		`		_
Critical and Follow-up H	eadwa	ys													
Base Critical Headway (sec)	Ţ ~ 1		·· 1	r]	- -	<u> </u>	7 -	r	T ~	}~~ :				
Critical Headway (sec)								l - '		Γ.	<u> </u>		i	†	i †-
Chuca Headway (Sec)				·	ן דו			† 	_	1	фи		•		
Base Follow-Up Headway (sec)	1	L	ľ.					• •		♦ ^` +	4		Y	†	
	†	Į	-	Γ.	- i	-						7	l		
Base Follow Up Headway (sec)	id Leve	l of S	ervice		_ i			l .		<u>.</u>			L.,		LL
Base Follow-Up Headway (sec) Follow-Up Headway (sec)	d Leve	l of S	ervice	•	[[[r] .	<u> </u>	74	L f	284	
Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an	id Leve		ervice	· -			[] - -		74 1014	L ₹ — -	284	
Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)	d Leve		ervice				· .	- -					L F — T —	284	
Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)	id Leve		ervice				[- - -] 		1014		284	
Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio	id Leve		ervice	• • • • • • • • • • • • • • • • • • •								1014 D 07	L	284	-
Base Follow Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₃₃ (veh)	id Leve		ervice	• • • • • • • • • • • • • • • • • • •						-		1014 D 07 0.2		284	
Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q35 (veh) Control Delay (s/veh)	id Leve		ervice					 		a		1014 D 07 0.2 8.8		284	

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2022 AM Peak	Time I Analys	Period sis Year			С ,А ,Р ,А	Ouration, Area Typ PHF Analysis	e	0.25 Other 0.92 1> 7:0		147417	111	
Demand Information Approach Movement Demand (v), veh/h	L 9	EB T 163	R 5	: L 62	WB T	R . 329	: L 41	NB T	R . 158	L 45	SB T 35	; R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red	36.2	3.1 3.0 1.0	8.7 3.0 1.0	Ö.Ö Ö.Ö	0.0 <u>0.0</u> 0.0	0.0 0.0 0.0	٠.	; <u> </u>	4	.[. .]	ሖ ዋ
Timer Results	. EBI	_	EBT	WBI		WBT	NBL	•	NBT	SBL		SBT
Assigned Phase			2			6			8			4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s			40.2			40.2			12.7			7.1
Change Period, (Y+R c), s		•	4.0			4.0			4.0			4.0
Max Allow Headway (MAH), s			0.0			0.0			4.3			4.1
Queue Clearance Time (g +), s		38			D.*.D				8.1			3.6
Green Extension Time (g a), s			0.0			0.0			0.8			0.2
Phase Call Probability									0.97			0.78
Max Out Probability								1	0.00			0.00
Movement Group Results		ЕB			WB			NB			SB	
Approach Movement	L	Т	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	10	177	5	67	13	358	45	0	172	49	38	3
Adjusted Saturation Flow Rate (s), veh/h/ln	1423	1900	1610	1226	1809	1610	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	0.2	2.4	0.1	1.5	0.1	6.8	1.3	0.0	6.1	1.6	1.2	D.1
Cycle Queue Clearance Time (ge), s	0.3	2.4	0.1	4.0	0.1	6.8	1.3	0.0	6.1	1.6	1.2	D.1
Green Ratio (g/C)	0.60	0.60	0.60	0.60	0.60	0.60	0.14	0.14	0.14	0.05	0.05	0.05
Capacity (c), veh/h	977	1147	972	B10	2184	972	261	274	232	94	99	84
Volume-to-Capacity Ratio (X)	0.010	0 154	0.006	0.083	0.006	0.368	0.171	0.000	0.739	0.521	0.386	0.039
Back of Queue (Q), ft/in (50 th percentile)	1	19.3	0.5	8.6	0.6	47.2	13.3	0	60.9	18.8	14	1.1
Back of Queue (Q), veh/ln (50 th percentile)	0.0	0.8	0.0	0.3	0.0	1.9	0.5	0.0	2.4	8.0	0.6	0.0
Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d s), s/veh	0.00 4.8	0.00 5.2	0.00 4.7	0.00	0.00 4.7	0.00 6.1	0.00 22.5	0.00	0.00	0.00	0.00	0.00
Incremental Delay (d 2), s/veh	0.0	0.3	0.0	5.1 0.2	0.0	1.1	0.3	0.0 0.0	24.6 4.6	27.7 4.4	27.5 2.5	27.0 0.2
Initial Queue Delay (d a), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	4.8	5.5	4.7	6.3	4.7	7.1	22.8	0.0	29.2	32.1	30.0	27.2
Level of Service (LOS)	4.0 A	Α.	Α.	Α.	A	A	C C	5.5	25.2 C	Ç	C	Ç.2
Approach Delay, s/veh / LOS	5.4		Α̈́	6.9	-1	Α	27.9	ı	c	31.1	~	c
Intersection Delay, s/veh / LOS				3.8		•				В		150
Multimodal Results		EB			WB			NB			SB	
Pedestrian LOS Score / LOS	2.4 0.8		В	2.4		В	2.6		В	2.8		С
Bicycle LOS Scare / LOS			Α	0.8		Α	0.8		Α	0.6		Α

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2022 PM Peak	Time F Analys	Period sis Year			С Д Р	Duralion Area Typ PHF Analysis	e	0.25 Other 0.92 1> 7:6	00	1414141	JIL	74.441.61	
Demand Information Approach Movement Demand (v), veh/h	L 16	EB T 161	R 1	L 35	WB T 82	R . 71	L 85	NB T	R 115	L 227	SB T 128	R . 13	
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red		10.6 3.0 1.0	6.9 3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	<u>ب</u>	-	Q		<u>ተ</u>	
Timer Results Assigned Phase	EBL	-	EBT 2	WBI	_	WBT 6	NBL		NBT 8	SBL	٠	SBT 4	
Case Number Phase Duration, s Change Period, (Y+Ro), s Max Allow Headway (MAH), s Queue Clearance Time (gs), s Green Extension Time (ge), s Phase Call Probability		*1	5.0 34.4 4.0 0.0			5.0 34.4 4.0 0.0			9.0 10.9 4.0 4.3 6.5 0.7			9.0 14.6 4.0 4.1 9.8 0.9 1.00	
Max Out Probability								-	0.00			0.23	
Movement Group Results	10	EB	_		WB	_	_	NB	_		SB	:	
Approach Movement Assigned Movement	L 5	T 2	R . 12	L	T	R	L	T	R	L	T	R	
Adjusted Flow Rate (v), veh/h	17	175	. 12	1 38	6 89	16 77	3 92	8 0	18 125	7 247	4	14	
Adjusted Saturation Flow Rate (s), veh/h/ln	1328	1900	1610	1229	1809	1610	1810	1900	1610	1810	139 1900	14 1610	
Queue Service Time (g s), s	0.4	3.0	0.0	1.0	0.7	1.5	2.9	0.0	4.5	7.8	3.9	0.4	
Cycle Queue Clearance Time (g_c), s	1.2	3.0	0.0	4.0	0.7	1.5	2.9	0.0	4.5	7.8	3.9	0.4	
Green Ratio (g/C)	0.51	0.51	0.51	0.51	0.51	0.51	0.12	0.12	0.12	0.18	0.18	0.18	
Capacity (c), veh/h	777	963	816	6B1	1834	816	210	220	187	321	337	285	
Volume-to-Capacity Ratio (X)	0.022	0.182	0.001	0.056	0.049	0.095	0.441	0.000	0.670	0.769	0.413	0.049	
Back of Queue (Q), fl/In (50 th percentile)	2.6	27.3	0.2	6.6	6.1	11.6	30.4	0	44.8	84.4	41.7	3.9	
Back of Queue (Q), veh/in (50 th percentile)	0.1	1.1	0.0	0.3	0.2	0.5	1.2	0.0	1.8	3.4	1.7	0.2	
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d 1), s/veh	7.8	80	7.3	9.1	7.5	7.7	24.7	0.0	25.4	23.5	21.9	20.5	
Incremental Delay (d 2), s/veh	0.1	0.4	0.0	0.2	0,1	0.2	1.5	0.0	4.1	3.9	8.0	0.1	
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	D.O	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	7.8	8.5	7.3	9.3	7.5	7.9	26.2	0.0	29.5	27.4	22.7	20.6	
11													
Level of Service (LOS)	Α	Α	Α .	A	Α	A	C 20.4		С	C	C	C	
Approach Delay, s/veh / LOS	A 8.4	Α	A	8.0	^	A	28.1		С	25.5		c	
		Α	A		^				С				
Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS			A	8.0					С	25.5			
Approach Delay, s/veh / LOS		A EB	A	8.0	WB			NB	С	25.5			

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2025 AM Peak - No Build	Time F	is Year	2025	021 outh - H	D A P A	luration, rea Typ HF nalysis	e Period	0.25 Other 10.95 1> 7:0	00	141477	1110 110 110	
Demand Information Approach Movement	L	EB T 178	R 6	L 6 5	WB T	R	L	NB T	R	L	SB T	R
Demand (v), veh/h	12	176	i . •	60	12	. 351	48	0	169	45	41	3
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red		3,2 3,0 1.0	9.0 3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0		, -	€ .		<u>ት</u>
Timer Results	EBI		EBT	WBL	,	WBT	NBL		NBT	SBL	;	SBT
Assigned Phase		•	2	*****		6	1,00	-	8	552		4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s		ţ	9.9			39.9			13.0			7.2
Change Period, (Y+R e), s			4.0			4.0		53	4.0			4.0
Max Allow Fleadway (MAH), s			0.0			0.0			4.3			4.1
Queue Clearance Time (g s), s									83			3.5
Green Extension Time (g e), s			0.0			0.0			0.8			0.2
Phase Call Probability									0.98			0.79
Max Out Probability									0.00			a.ad
(vide oder roodsing)												
		ЕВ			WB			NB			SB	
Movement Group Results	L	EB T	R	L	WB T	R	L	NB T	R	L	SB T	R
	L 5		R 12	L 1		R 16	L 3		R 18	L 7		R 14
Movement Group Results Approach Movement		T			T			T			T	
Movement Group Results Approach Movement Assigned Movement	5	T 2	12	1	T 6	16	3	T B	18	7	T 4	14
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h	5 13	T 2 187	12 6	1 68	T 6 13	16 369	3 51	T B O	18 178	7 47	T 4 43	14 3
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln	5 13 1424	T 2 187 1900	12 6 1610	1 68 1215	T 6 13 1809	16 369 1610	3 51 1810	T B O 1900	18 178 1610	7 47 1810	T 4 43 1900	14 3 1610
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s	5 13 1424 0.2 0.3 0.60	T 2 187 1900 2.6	12 6 1610 0 1	1 68 1215 1.6	T 6 13 1809 0.1	16 369 1610 7.2	3 51 1810 1.5 1.5 0.15	T 8 0 1900 0.0 0.0 0.15	18 178 1610 6.3	7 47 1810 1.5	T 4 43 1900 1.3	14 3 1610 0.1
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (s), veh/h	5 13 1424 0.2 0.3 0.60 969	T 2 187 1900 2.6 2.6 0.60 1136	12 6 1610 0 1 0.1 0.60 963	1 68 1215 1.6 4.2 0.60 793	T 6 13 1809 0.1 0.1 0.60 2164	16 369 1610 7.2 7.2 0.60 963	3 51 1810 1.5 1.5 0.15 270	T 8 0 1900 0.0 0.0 0.15 283	18 178 1610 6.3 6.3 0.15 240	7 47 1810 1.5 1.5 0.05 95	T 4 43 1900 1.3 1.3 0.05	14 3 1610 0.1 0.1 0.05 85
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/In Queue Service Time (g s), s Cycle Queue Clearance Time (g o), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X)	5 13 1424 0.2 0.3 0.60 969 0.013	T 2 187 1900 2.6 2.6 0.60 1136 0.165	12 6 1610 0.1 0.60 963 0.007	1 68 1215 1.6 4.2 0.60 793 0.086	T 6 13 1809 0.1 0.1 0.60 2164 0.006	16 369 1610 7.2 7.2 0.60 963 0.384	3 51 1810 1.5 1.5 0.15 270 0.187	T 8 0 1900 0.0 0.0 0.15 283 0.000	18 178 1610 6.3 6.3 0.15 240 0.740	7 47 1810 1.5 1.5 0.05 95 0.497	T 4 43 1900 1.3 1.3 0.05 100 0.431	14 3 1610 0.1 0.1 0.05 85 0.037
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/In Queue Service Time (gs), s Cycle Queue Clearance Time (go), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/In (50 th percentile)	5 13 1424 0.2 0.3 0.60 969 0.013 1.3	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2	12 6 1610 0 1 0.1 0.60 963 0.007 0.7	1 68 1215 1.6 4.2 0.60 793 0.086 9	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6	16 369 1610 7.2 7.2 0.60 963 0.384 50 9	3 51 1810 1.5 1.5 0.15 270 0.187 15	T 8 0 1900 0.0 0.0 0.15 283 0.000	18 178 1610 6.3 6.3 0.15 240 0.740 62.8	7 47 1810 1.5 1.5 0.05 95 0.497 18	T 4 43 1900 1.3 1.3 0.05 100 0.431 16	14 3 1610 0.1 0.1 0.05 85 0.037
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/In Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/in (50 th percentile) Back of Queue (Q), veh/in (50 th percentile)	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8	12 6 1610 0 1 0.1 0.60 963 0.007 0.7	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4	T 6 13 1809 0.1 0.60 2164 0.006 0.6	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6	T 8 0 1900 0.0 0.0 0.15 283 0.000 0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6	14 3 1610 0.1 0.05 85 0.037 1.1
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile)	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00	12 6 1610 0.1 0.60 963 0.007 0.7 0.0 0.00	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00	T 6 13 1809 0.1 0.60 2164 0.006 0.6 0.0 0.00	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00	T 8 0 1900 0.0 0.15 283 0.000 0 0.0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4	12 6 1610 0 1 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3	T 8 0 1900 0.0 0.15 283 0.000 0 0.0 0.00	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v) , veh/h Adjusted Saturation Flow Rate (s) , veh/h/In Queue Service Time (gs) , s Cycle Queue Clearance Time (gs) , s Green Ratio (g/C) Capacity (c) , veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q) , ft/In $(50 \text{ th percentile})$ Back of Queue (Q) , veh/In $(50 \text{ th percentile})$ Queue Storage Ratio (RQ) $(50 \text{ th percentile})$ Uniform Delay (ds) , s/veh Incremental Delay (ds) , s/veh	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3	12 6 1610 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2	T 6 13 1809 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	18 178 1610 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g o), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0	12 6 1610 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 0.0	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0	T 6 13 1809 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0 0.0	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh Initial Queue Delay (d3), s/veh Control Delay (d3), s/veh	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7	12 6 1610 0 1 0.60 963 0.007 0.7 0.00 4.9 0.0 4.9	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0 4.9	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g o), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS)	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0 A	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7 A	12 6 1610 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 0.0	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5 A	T 6 13 1809 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0 0.0	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4 A	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7 C	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0	18 178 1610 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9 C	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh Initial Queue Delay (d3), s/veh Control Delay (d3), s/veh	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7 A	12 6 1610 0 1 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 4.9 A	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0 4.9	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9 C	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0 A	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7 A	12 6 1610 0 1 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 4.9 A	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5 A	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.0 4.9 0.0 4.9 A	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4 A	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7 C	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9 C	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g o), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS Multimodal Results	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0 A 5.6	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7 A	12 6 1610 0 1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 4.9 A	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5 A 7.2	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.00 4.9 0.0 4.9	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4 A	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7 C	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9 C	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C 30.9	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 13 1424 0.2 0.3 0.60 969 0.013 1.3 0.1 0.00 4.9 0.0 5.0 A	T 2 187 1900 2.6 2.6 0.60 1136 0.165 21.2 0.8 0.00 5.4 0.3 0.0 5.7 A	12 6 1610 0 1 0.1 0.60 963 0.007 0.7 0.0 0.00 4.9 0.0 4.9 A	1 68 1215 1.6 4.2 0.60 793 0.086 9 0.4 0.00 6.3 0.2 0.0 6.5 A	T 6 13 1809 0.1 0.1 0.60 2164 0.006 0.6 0.0 0.0 4.9 0.0 4.9 A	16 369 1610 7.2 7.2 0.60 963 0.384 50 9 2.0 0.00 6.3 1.2 0.0 7.4 A	3 51 1810 1.5 1.5 0.15 270 0.187 15 0.6 0.00 22.3 0.3 0.0 22.7 C	T 8 0 1900 0.0 0.0 0.15 283 0.000 0 0.0 0.0 0.0 0.0	18 178 1610 6.3 6.3 0.15 240 0.740 62.8 2.5 0.00 24.4 4.4 0.0 28.9 C	7 47 1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C	T 4 43 1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	14 3 1610 0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2025 AM Peak - Build	Time F Analys	Period sis Year			С Д Р Д	oration, rea T <u>yp</u> HF nalysis	e	0.25 Other 0.95 1> 7:0	00	141476	7 † [7 † [7 †] 7	
. Demand Information		EB			WB			NB		1	SB	
Approach Movement	L	Ţ	R	L	Т	R	Ł	Т	R	L	T	R
. Demand (v), veh/h	12	185	13	65	100	351	136	. 0	, 169	45	41	3
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult, Gap E/W On Force Mode Fixed Simult, Gap N/S On	Green Yellow Red	35.4	3.2 3.0 1.0	9.4 3.0 1.0	0.0 0.0 0.0	0.0 0 <u>.0</u> 0.0	0.0 0.0 0.0	~		♦		<u>ት</u> ሦ
Timer Results	EBI	_	EBT	WBI		WBT	NBL		NBT	SBL	_	SBT
Assigned Phase			2			6			8			4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s			39.4			39,4			13.4			7.2
Change Period, (Y+Rc), s			4.0			4.0			4.0			4.0
Max Allow Headway (MAH), s			0.0			0.0			4.3			4.1
Queue Clearance Time (g_s), s Green Extension Time (g_s), s			0.0			0.0			8.3			3.5
Phase Call Probability			0.0			0.0			1.2 1.00			0.2 0.79
Max Out Probability									0.00			0.00
•												0.00
Movement Group Results		EB			WB			NB			SB	
Approach Movement	L	T	R	L	Т	R	L	Т	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
				68	105	369	143	0	178	47	43	3
Adjusted Flow Rate (v), veh/h	13	195	14		4000	4040	4846	4000	4040			
Adjusted Saturation Flow Rate (s), veh/h/ln	1309	1900	1610	1207	1809	1610	1810	1900	1610	1810	1900	. 1610
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s	1309 0.2	1900 2.8	1610 0.2	1207 1.6	0.7	7.3	4.3	0.0	6.3	1810 [*] 1.5	1900 1.3	0.1
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s	1309 0.2 1.0	1900 2.8 2.8	1610 0.2 0.2	1207 1.6 4.5	0.7 0.7	7.3 7.3	4.3 4.3	0.0 0.0	6.3 6.3	1810 [*] 1.5 1.5	1900 1.3 1.3	0.1 0.1
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C)	1309 0.2 1.0 0.59	1900 2.8 2.8 0.59	1610 0.2 0.2 0.59	1207 1.6 4.5 0.59	0.7 0.7 0.59	7.3 7.3 0.59	4.3 4.3 0.16	0.0 0.0 0.16	6.3 6.3 0.16	1810 ² 1.5 1.5 0.05	1900 1.3 1.3 0.05	0.1 0.1 0.05
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h	1309 0.2 1.0 0.59 877	1900 2.8 2.8 0.59 1122	1610 0.2 0.2 0.59 951	1207 1.6 4.5 0.59 778	0.7 0.7 0.59 2137	7.3 7.3 0.59 951	4.3 4.3 0.16 283	0.0 0.0 0.16 298	6.3 6.3 0.16 252	1810 ² 1.5 1.5 0.05 95	1900 1.3 1.3 0.05 100	0.1 0.1 0.05 85
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C)	1309 0.2 1.0 0.59	1900 2.8 2.8 0.59	1610 0.2 0.2 0.59	1207 1.6 4.5 0.59	0.7 0.7 0.59	7.3 7.3 0.59	4.3 4.3 0.16	0.0 0.0 0.16	6.3 6.3 0.16	1810 ² 1.5 1.5 0.05	1900 1.3 1.3 0.05	0.1 0.1 0.05
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X)	1309 0.2 1.0 0.59 877 0.014	1900 2.8 2.8 0.59 1122 0.174	1610 0.2 0.2 0.59 951 0.014	1207 1.6 4.5 0.59 776 0.088	0.7 0.7 0.59 2137 0.049	7.3 7.3 0.59 951 0.388	4.3 4.3 0.16 283 0.505	0.0 0.0 0.16 298 0.000	6.3 6.3 0.16 252 0.705	1810 ³ 1.5 1.5 0.05 95 0.497	1900 1.3 1.3 0.05 100 0.431	0.1 0.1 0.05 85 0.037
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile)	1309 0.2 1.0 0.59 877 0.014 1.4	1900 2.8 2.8 0.59 1122 0.174 22.8	1610 0.2 0.2 0.59 951 0.014 1.5	1207 1.6 4.5 0.59 776 0.088 9.3	0.7 0.7 0.59 2137 0.049 5.4	7.3 7.3 0.59 951 0.388 52 3	4.3 4.3 0.16 283 0.505 45.3	0.0 0.0 0.16 298 0.000 0	6.3 6.3 0.16 252 0.705 61.1	1810 ³ 1.5 1.5 0.05 95 0.497 18	1900 1.3 1.3 0.05 100 0.431 16	0.1 0.1 0.05 85 0.037 1.1
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (ds), s/veh	1309 0.2 1.0 0.59 877 0.014 1.4 0.1	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9	1610 0.2 0.2 0.59 951 0.014 1.5	1207 1.6 4.5 0.59 776 0.088 9.3 0.4	0.7 0.7 0.59 2137 0.049 5.4 0.2	7.3 7.3 0.59 951 0.388 52.3 2.1	4.3 4.3 0.16 283 0.505 45.3 1.8	0.0 0.0 0.16 298 0.000 0	6.3 6.3 0.16 252 0.705 61.1 2.4	1810 ³ 1.5 1.5 0.05 95 0.497 18 0.7	1900 1.3 1.3 0.05 100 0.431 16 0.6	0.1 0.1 0.05 85 0.037 1.1 0.0
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (s), veh/h Volume-to-Capacity Ratio (s) Back of Queue (s), ft/ln (50 th percentile) Back of Queue (s), veh/ln (50 th percentile) Queue Storage Ratio (s) (50 th percentile) Uniform Delay (s), s/veh Incremental Delay (s), s/veh	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6	1810 ³ 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d_s), s/veh Incremental Delay (d_s), s/veh Initial Queue Delay (d_s), s/veh	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0	1610 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 0.0	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0	1810 ° 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d_s), s/veh Incremental Delay (d_s), s/veh Control Delay (d_s), s/veh	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 0.0	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0 5.2	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.6 1.2 0.0 7.7	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6	1810 ° 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30 5	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh Control Delay (d), s/veh Level of Service (LOS)	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4 A	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9 A	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 5.1 A	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8 A	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2 0.0 7.7 A	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6 C	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6 C	1810 3 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (ds), s/veh Incremental Delay (ds), s/veh Control Delay (ds), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9 A	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 5.1 A	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8 A 7.1	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0 5.2	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.6 1.2 0.0 7.7	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6 C	1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C 30.9	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh Control Delay (d), s/veh Level of Service (LOS)	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4 A	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9 A	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 5.1 A	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8 A	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0 5.2	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2 0.0 7.7 A	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6 C	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6 C	1810 3 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (ds), s/veh Incremental Delay (ds), s/veh Control Delay (ds), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4 A	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9 A	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 5.1 A	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8 A 7.1	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0 5.2	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2 0.0 7.7 A	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6 C	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6 C	1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C 30.9	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C
Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gs), s Green Ratio (g/C) Capacity (s), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh Initial Queue Delay (d3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	1309 0.2 1.0 0.59 877 0.014 1.4 0.1 0.00 5.4 0.0 0.0 5.4 A	1900 2.8 2.8 0.59 1122 0.174 22.8 0.9 0.00 5.6 0.3 0.0 5.9 A	1610 0.2 0.2 0.59 951 0.014 1.5 0.1 0.00 5.1 0.0 5.1 A	1207 1.6 4.5 0.59 776 0.088 9.3 0.4 0.00 6.6 0.2 0.0 6.8 A 7.1	0.7 0.7 0.59 2137 0.049 5.4 0.2 0.00 5.2 0.0 0.0 5.2 A	7.3 7.3 0.59 951 0.388 52.3 2.1 0.00 6.5 1.2 0.0 7.7 A	4.3 4.3 0.16 283 0.505 45.3 1.8 0.00 23.2 1.4 0.0 24.6 C	0.0 0.0 0.16 298 0.000 0 0.0 0.0 0.0 0.0 0.0	6.3 6.3 0.16 252 0.705 61.1 2.4 0.00 24.0 3.6 0.0 27.6 C	1810 1.5 1.5 0.05 95 0.497 18 0.7 0.00 27.6 4.0 0.0 31.6 C 30.9	1900 1.3 1.3 0.05 100 0.431 16 0.6 0.00 27.5 2.9 0.0 30.5 C	0.1 0.05 85 0.037 1.1 0.0 0.00 27.0 0.2 0.0 27.2 C

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2025 PM Peak - No Build	Time i	Period sis Year ame			C A A Jappy J	Ouration Area Typ PHF Analysis	e	0.25 Other 0.86 1> 7:1	00	142+141	110	1414
Demand Information Approach Movement		EB T	_		WB	_		NB	-		\$B	-
Demand (v), veh/h	L 19	178	R · 1	1 37	T 89	R . 74	L 97	T 0	R 121	L 237	. T	R
Demaila (v), verm	12	176		37		, 14	91	v	121	237	: 141	15
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult Gap E/W On Force Mode Fixed Simult Gap N/S On	1							0 E	 	♦	 - -	<u>ት</u>
Timer Results	EBI	L	EBT	WB	L i	WBT	NBL	<u>.</u>	NBT	SBL	Ÿ	SBT
Assigned Phase			2			6			8			4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s			32.7			32.7			11.7			15.6
Change Period, (Y+R c), s			4.0			4,0			4.0		8	4.D
Max Allow Headway (MAH), s			0.0			0.0			0.0			0.0
Queue Clearance Time (g s), s			0.0			0.0			0.0		•	0.0
Green Extension Time (g +), s			0.0			0.0			0.0			0.0
Phase Call Probability			0.00			0.00			0.00			0.00
Max Out Probability			0.00			0.00			0.00			0.00
Movement Group Results		EB			WB			NB	85		SB	
Approach Movement	Ł	Т	R	L	Т	R	L	Т	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	· 18	7	4	14
Adjusted Flow Rate (v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Saturation Flow Rate (s), veh/h/ln	0	0	0	0	0	0	0	0	0	0	0	a
Queue Service Time (gs), s	0.0	0.0	0.0	0.0	0,0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Queue Clearance Time (g c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C) Capacity (c), veh/h	0.48 727	0.48 909	0.48	0.48	0.48	0.48	0.13	0.13	0.13	0.19	0.19	0.19
Volume-to-Capacity Ratio (X)	0.030	0.228	770 0.002	615 0.070	1731 0.060	770 0.112	232 0.487	243 0.000	206 0.683	350 0.787	368 0.446	312 0.056
Back of Queue (Q), ft/in (50 th percentile)	3.7	36	0.2	8.3	7.8	14.2	36.9	0.000	49.7	95.9	48.5	4.7
Back of Queue (Q), veh/ln (50 th percentile)	0.1	1,4	0.0	0.3	0.3	0.6	1.5	0.0	2.0	3.8	1.9	0.2
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00	0.00	0.00	0,00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d +), s/veh	8.8	9.2	8.2	10.7	8.4	8.6	24.3	0.0	25.0	23.0	21.4	19.7
Incremental Delay (d 2), s/veh	0.1	0.6	0.0	0.2	0.1	0.3	1.6	0.0	4.0	5.0	0.8	0.1
Initial Queue Delay (d z), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.9	9.7	8.2	10.9	8.5	8.9	25.9	0.0	29,0	28.0	222	198
Level of Service (LOS)	Α	Α	Α	В	Α	Α	С		С	С	C	В
Approach Delay, s/veh / LOS	9.6		Α	9.1		Α	27.6	i	С	25.6		С
Intersection Delay, s/veh / LOS			19	9.6						В		
Multimodal Results		EB			WB			NB			SB	
Pedestrian LOS Score / LOS	2.4		В	2.4		В	2.6		В	2.8		С
Bicycle LOS Score / LOS	0.9		A	0.7		A	0.9		Ā	1.2		A
•									57.87	28.07 6		6777

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description 2025 PM Peak - Build	Time I	Period sis Year	9/15/2 2025 I-25 5	2021 South - H	E A F	ntersec Duration Area Typ PHF Analysis lack Rd	, h æ Period	0.25 Other 0.95 1> 7:0	00	14141Ft	114. JIL 4	14.4+1+1+1C
Demand Information Approach Movement Demand (v), veh/h	L 19	EB T 266	R 89	L 37	WB T : 96	R 74	L 104	NB T	R 121	L 237	SB T 141	R 15
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red		10.8 3.0 1.0	7.1 3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	, <u>.</u>	ļ	Q		4
[†] Timer Results	EBI	L	EBT	WBI	<u> </u>	WBT	NBL		NBT	SBL		SBT
Assigned Phase			2			6		•	8			4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s			34.1			34,1			11.1			14.8
Change Period, (Y+R r), s			4. D			4.0			4.0		•	4.0
Max Allow Headway (MAH), s			0.0			0.0			4.3			4.1
Queue Clearance Time (g s), s		8.				-			6.5			9.9
Green Extension Time (g a), s			0.0			0.0			0.7			0.9
Phase Call Probability									0.98			1.00
Max Out Probability									0.00			0.25
Movement Group Results		EB			WB			NB			SB	
Approach Movement	L	T	R	L	Т	R	L	Т	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	20	280	94	39	101	78	109	0	127	249	148	16
Adjusted Saturation Flow Rate (s), veh/h/ln	1314	1900	1610	1117	1809	1610	1810	1900	1610	1810	1900	1610
Queue Service Time (g s), s	0.5	5.2	1.8	1.3	0.9	1.5	3.4	0.0	4.5	7.9	4.2	0.5
Cycle Queue Clearance Time (g o), s	1.3	5.2	1.8	64	0.9	1.5	3.4	0.0	4.5	7.9	4.2	0.5
Green Ratio (g/C)	0.50	0.50	0.50	0.50	0.50	0 50	0.12	0.12	0.12	0.18	0.18	0.18
Capacity (c), veh/h	761	953	808	584	1815	808	215	226	192	324	340	289
Volume-to-Capacity Ratio (X)	0.026	0.294		0.067		0.096	0.508	0.000	0.665	0.769	0.436	
Back of Queue (Q), ft/in (50 th percentile) Back of Queue (Q), veh/in (50 th percentile)	3.1 0.1	47.8 1,9	14.5 0.6	7.6 0.3	7.1 0.3	11.9	36.4 4.5	0	45.2	85.1	44.6	4.4
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00	0.00	0.00	0.00	0.5 0.00	1.5 0.00	0.0 0.00	1.8	3.4	1.8	0.2
Uniform Delay (d+), s/veh	8.0	8.7	7.9	10.6	7.7	7.8	24.8	0.0	0.00 25.3	0.00 23.4	0.00 21.9	0 00 20.4
Incremental Delay (d 2), s/veh	0.1	0.8	0.3	0.2	0.1	0.2	1.9	0.0	3.9	3.9	0.9	0.1
Initial Queue Delay (d a), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.1	9.5	8.2	10.8	7.7	8.1	26.6	0.0	29.2	27.3	22.8	20.5
Level of Service (LOS)	Α	A	A	В	Α	A	C	25552603	C	C	C	C
Approach Delay, s/veh / LOS	9.1		A	8.4	1000 (1000)	A	28.0	i	c	25.4		c
Intersection Delay, s/veh / LOS			1	7.9						В		
Muldinardal Dage W-		~~						r i e				
Multimodal Results Pedestrian LOS Score / LOS	2.4	EB		0.4	WB		0.0	NB	В		SB	_
Bicycle LOS Score / LOS	2.4 1.1		B A	2.4 0.7		B A	2.6 0.9		B A	2.8 1,2		C A
,	1, 1			5.7			4.3			1,2		_

Ager Anal Juris Urba Inter	5. 1 .	Western R&D, Ltd. G Grigsby I-25 South @ Happy ;2035 AM Peak - No I		Time I	Period sis Year			E A A	Ouration trea Typ PHF unalysis		0.25 Other 0.95 1> 7:0	0 0	147414	1117	1411
Аррі	nand Information roach Movement nand (v), veh/h			L 26	EB T , 239	R . 13	L 76	WB T 11	R 435	, L 76	NB T	R 211	L 43	SB T ' 63	R 4
Cycl Offse Unce		Reference Phase Reference Point Simult. Gap E/W Simult. Gap N/S	2 End On On	Green Yellow Red	33.5 3.0 1.0	3.7 3.0 1.0	10.9 3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0			♣ .	- 	<u></u> ቀ
Assi Casi Phas Chai Max	er Results gned Phase e Number se Duration, s nge Period, (Y+R Allow Headway (MAH), s		EBI		EBT 2 5.0 37.5 4.0 0.0	WB		WBT 6 5.0 37.5 4.0 0.0	NBL		NBT 8 9.0 14.9 4.0 4.3 9.9	SBL		SBT 4 9.0 7.7 4.0 4.1 4.0
Gree Pha	en Extension Time se Call Probability Out Probability					0.0		a.s	0.0			1.1 0.99 0.00			0.2 0.85 0.00
	rement Group Res	sul ts		ı	EB T	R	L	WB T	R	L	NB T	R		SB T	R
2000	gned Movement			5	. 2	12	1	6	16	3	8	18	L 7	4	14
	isted Flow Rate ()	/) ueh/h		27	252	14	80	12	458	80	0	222	45	66	4
		ow Rate (s), veh/h/ln		1425	1900	1610	1146	1809	1810	1810	1900	1610	1810	1900	1610
	ue Service Time (0.5	4.1	0.2	2.3	0.1	10.5	2.3	0.0	7.9	1.4	2.0	0.1
	le Queue Clearanc	·-		0.6	4.1	0.2	6.4	0.1	10.5	2.3	0.0	7.9	1.4	2.0	0.1
	en Ratio (g/C)	(2011)		0.56	0.56	0.56	0.56	0.56	0.56	0.18	0.18	0.18	0.06	0.06	0.06
	acity (c), veh/h			913	1060	898	682	2018	898	328	345	292	110	116	98
	me-to-Capacity Ra	atio (X)		0.030	0.237	0.015	0.117	0.006		0 244	0.000	0.761	0.410	0.573	0.043
Back	k of Queue (Q), fl	VIn (50 th percentile)		3.4	34.8	1.7	13.2	0.7	81.3	22.9	0	76.1	16.4	25.1	1.4
Back	k of Queue (Q), v	eh/ln (50 th percentile	9)	0.1	1.4	0.1	0.5	0.0	3.3	0.9	0.0	3.0	0.7	1.0	0.1
Que	ue Storage Ratio ((RQ) (50 th percentil	e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unif	orm Delay (d ı), s	s/veh		6.0	6.8	5.9	8.4	5.9	8.2	21.0	0.0	23.3	27.1	27.4	26.5
	emental Delay (d :			D.1	0.5	0.0	0.4	0.0	21	0.4	0.0	4.1	2.4	4.4	0.2
	al Queue Delay <u>⟨</u> d			0.0	0.0	0.0	0.0	0.0	D.O	0.0	0.0	0.0	0.0	0.0	0.0
	trol Delay (d), s/v			6.1	7.3	59	8.7	5.9	10.3	21.4	0.0	27.4	29.6	31 8	26.7
	el of Service (LOS)			Α	Α	. A	Α	Α .	. В	С		С	С	С	C
	roach Delay, s/veh			7.1		Α 4	10.0	J	Α	25.8		С	30.7		С
inter	rsection Delay, s/vi	en / LOS				16	5.0						В		
Mult	timodal Results				ЕВ			WB			NB			SB	
	estrian LOS Score	/LOS		2.4		В	2.4		В	2,6		В	2.8	35	Ç
	rcle LOS Score / Lo			1.0		A	0.9		Ā	1.0		A	0.7		A
1.73	8			_			_			-		1000	500000		19100

General Information					li	ntersec	tion Infe	ormatic	эп	<u>.</u>	74.44 t	b L
Agency Western R&D, Ltd.						Duration		0.25		-	2 4 %	.
Analyst G Grigsby	-		9/15/2	021		\rea Typ	je	Other	•	≐		<u> </u>
Jurisdiction		Period	100.000.000.000			PHF		0.95		‡	P.	
Urban Street	<u>-</u>		2035	2000		Anal <u>y</u> sis		1> 7:1		*		—
Intersection I-25 South @ Happy Jac	File N	ame	1-25 S	outh - H	Iappy J	ack Rd	- 2035 A	M Pea	k Buil		ጎተሰ	
Project Description 2035 AM Peak - Build										•	- 14 144	* f*
Demand Information		EB			WB			NB			SB	
Approach Movement	L	T	R	L	T	R	L	Т	R	L	T	R
Demand (v), veh/h	26	242	. 16	76	38	435	103	0	211	43	63	4
Signal Information									20	ľ		
Cycle, s 60.0 Reference Phase 2		⊨ 3 8	=							a l	,	4
Offset, s 0 Reference Point End	<u></u>		۰	44.5				-		∑ ↓		•
Uncoordinated No Simult, Gap E/W On	Yellow	33.3 3.0	3.7 3.0	11.0 3.0	0.0 0.0	0.0 0.0	0.0 0.0			⊹		-+-
Force Mode Fixed : Simult. Gap N/S On	Red	1.0	1.0	3.0 1.0	0.0	Ö.Ö	0.0		7		1	Y,
									100	-	•	-4-1
Timer Results	EBI	- 33 (EBT	WBI	L	WBT	. NBL	_	NBT	SBL	_	SBT
Assigned Phase			2			6			8			4
Case Number		2	5.0			5.0			9.0			9.0
Phase Duration, s			37.3			37.3			15.0			7.7
Change Period, (Y+Rc), s			4.0			4.0			4.0			4.0
Max Allow Headway (MAH), s			0.0			0.0			4.3			4.1
Queue Clearance Time (g s), s					•	212			9.8			4.0
Green Extension Time (g s), s			0.0			0.0			1.2			0.2
Phase Call Probability									1.00			0.85
Phase Call Probability Max Out Probability									1.00 0.00			0.85 0.00
		EB			WB							
Max Out Probability	L	EB T	R	L	WB T	R	L			L		
Max Out Probability Movement Group Results Approach Movement Assigned Movement	L 5	T 2	R 12	L 1		R 16	L 3	NB	0.00	L 7	SB	0.00
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h		T 2 255	12 17	1 80	Т	16 458		NB T	0.00 R		SB T	0.00 R
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln	5 27 1389	T 2 255 1900	12 17 1610	1 80 1143	T 6 40 1809	16 458 1610	3 108 1810	NB T 8	0.00 R 18	7	SB T 4	0.00 R 14
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s	5 27 1389 0.5	T 2 255 1900 4.1	12 17 1610 0.3	1 80 1143 2.3	T 6 40 1809 0.3	16 458 1610 10.6	3 108 1810 3.1	NB T 8 0 1900	0.00 R 18 222 1610 7.8	7 45 1810 1.4	SB T 4 66 1900 2.0	0.00 R 14 4 1610 0.1
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s	5 27 1389 0.5 0.8	T 2 255 1900 4.1 4.1	12 17 1610 0.3 0.3	1 80 1143 2.3 6.5	T 6 40 1809 0.3 0.3	16 458 1610 10.6 10.6	3 108 1810 3.1 3.1	NB T 8 0 1900 0.0	0.00 R 18 222 1610 7.8 7.8	7 45 1810 1.4 1.4	SB T 4 66 1900 2.0 2.0	0.00 R 14 4 1610 0.1 0.1
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C)	5 27 1389 0.5 0.8 0.56	T 2 255 1900 4.1 4.1 0.56	12 17 1610 0.3 0.3 0.56	1 80 1143 2.3 6.5 0.56	T 6 40 1809 0.3 0.3 0.56	16 458 1610 10.6 10.6 0.56	3 108 1810 3.1 3.1 0.18	NB T 8 0 1900 0.0 0.0 0.18	0.00 R 18 222 1610 7.8 7.8 0.18	7 45 1810 1.4 1.4 0.06	SB T 4 66 1900 2.0 2.0 0.06	0.00 R 14 4 1610 0.1 0.1 0.06
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h	5 27 1389 0.5 0.8 0.56 885	T 2 255 1900 4.1 4.1 0.56 1056	12 17 1610 0.3 0.3 0.56 895	1 80 1143 2.3 6.5 0.56 676	T 6 40 1809 0.3 0.3 0.56 2011	16 458 1610 10.6 10.6 0.56 895	3 108 1810 3.1 3.1 0.18 332	NB T 8 0 1900 0.0 0.0 0.18 348	0.00 R 18 222 1610 7.8 7.8 0.18 295	7 45 1810 1.4 1.4 0.06 110	SB T 4 66 1900 2.0 2.0 0.06 116	0.00 R 14 4 1610 0.1 0.1 0.06 98
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X)	5 27 1389 0.5 0.8 0.56 885 0.031	T 2 255 1900 4.1 4.1 0.56 1056 0.241	12 17 1610 0.3 0.3 0.56 895 0.019	1 80 1143 2.3 6.5 0.56 676 0.118	T 6 40 1809 0.3 0.56 2011 0.020	16 458 1610 10.6 10.6 0.56 895 0.512	3 108 1810 3.1 3.1 0.18 332 0.327	NB T 8 0 1900 0.0 0.0 0.18 348 0.000	0.00 R 18 222 1610 7.8 7.8 0.18 295 0.753	7 45 1810 1.4 1.4 0.06 110 0.410	SB T 4 66 1900 2.0 2.0 0.06 116 0.573	0.00 R 14 4 1610 0.1 0.1 0.06 98 0.043
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile)	5 27 1389 0.5 0.8 0.56 885 0.031 3.5	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6	12 17 1610 0.3 0.56 895 0.019 2.1	1 80 1143 2.3 6.5 0.56 676 0.118 13.3	T 6 40 1809 0.3 0.56 2011 0.020 2.3	16 458 1610 10.6 10.6 0.56 895 0.512 81.7	3 108 1810 3.1 3.1 0.18 332 0.327 31.7	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0	0.00 R 18 222 1610 7.8 7.8 0.18 295 0.753 75.7	7 45 1810 1.4 1.4 0.06 110 0.410 16.4	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/in (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile)	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4	12 17 1610 0.3 0.3 0.56 895 0.019 2.1 0.1	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3	NB T 8 0 1900 0.0 0.18 348 0.000 0	0.00 R 18 222 1610 7.8 7.8 0.18 295 0.753 75.7 3.0	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7	SB T 4 66 1900 2.0 0.06 116 0.573 25.1 1.0	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile)	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00	12 17 1610 0.3 0.56 895 0.019 2.1 0.00	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0	0.00 R 18 222 1610 7.8 7.8 0.18 295 0.753 75.7 3.0 0.00	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8	12 17 1610 0.3 0.56 895 0.019 2.1 0.1 0.00 6.0	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5
Max Out Probability Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d 2), s/veh	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5	12 17 1610 0.3 0.56 895 0.019 2.1 0.1 0.00 6.0 0.0	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.00	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d t), s/veh Intitial Queue Delay (d t), s/veh	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.00 0.0	0.00 R 18 222 1610 7.8 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Control Delay (d), s/veh	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 0.0 6.0	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0 6.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.00	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS)	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2 A	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4 A	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 6.0 A	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8 A	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4 B	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9 C	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1 C	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6 C	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8 C	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2 0.0 26.7 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Control Delay (d), s/veh	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4 A	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 A	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0 6.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1 C	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8 C	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d r), s/veh Incremental Delay (d z), s/veh Initial Queue Delay (d z), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2 A	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4 A	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 A	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8 A 9.8	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0 6.0 A	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4 B	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9 C	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1 C	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6 C	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8 C	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2 0.0 26.7 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d r), s/veh Incremental Delay (d z), s/veh Initial Queue Detay (d z), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2 A 7.2	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4 A	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 A A	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8 A 9.8	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0 6.0	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4 B	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9 C	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1 C	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6 C	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8 C	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2 0.0 26.7 C
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d r), s/veh Incremental Delay (d z), s/veh Initial Queue Delay (d z), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 27 1389 0.5 0.8 0.56 885 0.031 3.5 0.1 0.00 6.2 0.1 0.0 6.2 A	T 2 255 1900 4.1 4.1 0.56 1056 0.241 35.6 1.4 0.00 6.8 0.5 0.0 7.4 A	12 17 1610 0.3 0.56 895 0.019 2.1 0.0 6.0 0.0 6.0 A	1 80 1143 2.3 6.5 0.56 676 0.118 13.3 0.5 0.00 8.5 0.4 0.0 8.8 A 9.8	T 6 40 1809 0.3 0.56 2011 0.020 2.3 0.1 0.00 6.0 0.0 6.0 A	16 458 1610 10.6 10.6 0.56 895 0.512 81.7 3.3 0.00 8.3 2.1 0.0 10.4 B	3 108 1810 3.1 3.1 0.18 332 0.327 31.7 1.3 0.00 21.3 0.6 0.0 21.9 C	NB T 8 0 1900 0.0 0.0 0.18 348 0.000 0 0.0 0.0 0.0 0.0	0.00 R 18 222 1610 7.8 0.18 295 0.753 75.7 3.0 0.00 23.2 3.9 0.0 27.1 C	7 45 1810 1.4 1.4 0.06 110 0.410 16.4 0.7 0.00 27.1 2.4 0.0 29.6 C	SB T 4 66 1900 2.0 2.0 0.06 116 0.573 25.1 1.0 0.00 27.4 4.4 0.0 31.8 C	0.00 R 14 4 1610 0.1 0.06 98 0.043 1.4 0.1 0.00 26.5 0.2 0.0 26.7 C

General Information						Ji	ntersec	tion Infe	ormatic	חכ	<u>.</u>	44+1	<u> </u>
Agency We	estern R&D, Ltd.						Ouration		0.25		200	111	8
-	Grigsby	Analys	is Date	9/15/2	021		rea Typ		Other		4		,
Jurisdiction	* 1	Time F					PHF		0.95		=E		
Urban Street				2035			\nalysis	Period	1> 7:0	00	-{		7
Intersection I-25	5 South @ Happy Jac	_			outh - H		ack Rd					5.40	-
	35 PM Peak - No Build										י	4144	P (*
Demand Information			EB		1	WB		i	NB		ı	SB	
Approach Movement		L	T	R	L	T	R	L	Т	R	L	T	R
, Demand (v), veh/h		31	248	2	43	115	86	149	' 0	140	270	194	. 22
Signal Information			_								Ī	í	.
·	eference Phase 2		<u>_</u> 2	#							A	ļ	ሳ -
· -	eference Point End		-3 -							1	▼ 2		Ť (
	mult. Gap E/W On	Green		12.0	8.1	0.0	0.0	0.0			A		
·	mult. Gap N/S On	Yellow Red	3.0 1.0	3.0 1.0	3.0 1.0	0.0 0.0	0.0 0.0	0.0			¥ .		Ψ.
TOTO MODE TINCE OF	man. Cap rec		1.0	1.0	1.0	0.0	0.0	0.0	-		,T	-	'i .1
' Timer Results		EBL		EBT	WBI		WBT	NBL	_	NBT	SBL		SBT
Assigned Phase				2			6			8			4
Case Number				5.0			5.0			9.0		1	9.0
Phase Duration, s				31.9			31.9			12.1			16.0
Change Period, (Y+Rc), s	S			4.0			4.0			4.0			4.0
Max Allow Headway (MAH	f), s			0.0			0.0			4.2			4.1
Queue Clearance Time (g	s), S					28				7.2			10.9
Green Extension Time ($oldsymbol{g}$ =	e), s			0.0			0.0			0.9			1.0
Phase Call Probability	• (4,500									0.99			1.00
Max Out Probability										0.00			0.47
Housement Croup Bouilte	_		r.D			14.00			м			-	
Movement Group Results Approach Movement	5		EB T			WB	_		NB	-		SB	_
Assigned Movement		L 5	2	R 12	L	T	R 16	L	T	R	L	T	R
Adjusted Flow Rate (v), ve	ah/h	33	261	2	1 45	6 121	91	3 157	8	18	7	4	14
Adjusted Saturation Flow R		1291	1900	1610	1136	1809	1610		0	147	284	204	23
Queue Service Time (g_s),		0.9	5.1	0.0	1.5	1.1	1.9	1810 4.9	1900	1610	1810	1900	1610
Cycle Queue Clearance Tir		2.0	5.1	0.0	6.7	1.1	1.9	4.9	0.0	5.2 5.2	8.9 8.9	5.8 5.8	0.7
Green Ratio (g/C)	ine į g c), a	0.46	0.46	0.46	0.46	0.46	0.46	0.14	0.14	0.14	0.20		0.7
Capacity (c), veh/h		696	883	749	551	1682	749	245	257	218	361	0 20	0.20
Volume-to-Capacity Ratio ((Y)	0.047	0.295	0.003	0.082	0.072	0.121		0.000	0.676	0.787	379	321
Back of Queue (Q), ft/in (**************************************	5.7	49.3	0.3	9.6	9.6	15.7	53.2	0.000	51.3	99,4	0.538 61.7	0.072 6.2
Back of Queue (Q), veh/ir		0.2	2.0	0.0	0.4	0.4	0.6	2.1	0.0	2.1	4.0	2.5	0.2
Queue Storage Ratio (RQ		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d 1), s/veh	(i) (ii) (ii) (iii) (iii) (iii)	9.4	10.0	8.6	12.0	8.9	9.1	24.6	0.0	24.7	22.8	21.5	19.5
Incremental Delay (d z), se		0.1	0.9	0.0	0.3	0.1	0.3	2.8	0.0	3.6	5.3	1.2	0.1
Initial Queue Delay (d 3), s		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	J, 7 Z I .	9.6	10.8	8.6	12.3	9.0	9.4	27.3	0.0	28.3	28.0	22.7	
Level of Service (LOS)		3.G A	В	Α.	В	Α.	Э. 4 А	Ç	0.0	20.3 C	26.U C	C	19.6 B
Approach Delay, s/veh / LC	os	10.7		В	9.7		A	27.8		c	25.5		c
Intersection Delay, s/veh / I		10.7			.9		G.	27.0			29. 9 B		J
,	tests (1917-191			•	5 5 8					31	_		
Multimodal Results			EB			WB			NB			5B	
Pedestrian LOS Score / LO	DS .	2.4		В	2.4		В	2.6		В	2.8		С
		1.0		Α	0.7		Α	1.0		Α	1.3		Α

General Information Agency 'Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 South @ Happy Jac Project Description '2035 PM Peak - Build	Time I	Period sis Year		2021 South - H	С Д Р	Ouration Area Typ PHF Analysis	Period	0.25 Other 0.95 1> 7:0	00	1414417	4 1 4 Y	1414111
Demand Information		EB			WB			NB		•3	SB	
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	. 31	275	. 29	43	118	86	152	. 0	140	270	194	. 22
Signal Information		_	.							ï		ī ī
Cycle, s 60.0 Reference Phase 2		<u>_</u>	≓ '							д	,	本
Offset, s 0 Reference Point End		귝.	đ					+		ል ∄	•	٠.
Uncoordinated No Simult. Gap E/W On	Green		12.0	8.1	0.0	0.0	0.0			4	:	_
Force Mode Fixed Simult. Gap N/S On	Yellow Red	3.0 1.0	3.0 1.0	3.0 1.0	0.0 0.0	0.0 0.0	0.0 0.0				.1	Y
	1100		11111		5.5		0.0			1		L _
Timer Results	EBI	L	EBT	WBL		WBT	NBI	<u>.</u>	NBT	SBL		SBT
Assigned Phase			2			6			8			4
Case Number			5.0			5.0			9.0			9.0
Phase Duration, s			31.9			31.9			12.1			16.0
Change Period, (Y+Rc), s			4.0			4.0			4.0			4.0
Max Allow Headway (MAH), s			0.0			0.0			4.2			4.1
Queue Clearance Time (g s), s									7.2			10.9
Green Extension Time (g a), s			0.0			0.0			1.0			1.0
Phase Call Probability Max Out Probability		-3							0.99			1.00
Max Out Flobability									0.00			0.47
Movement Group Results		EB			WB			NB			SB	
Approach Movement	L	Т	R	L	Т	R	L	T	R	L	Т	R
Assigned Movement	5	2	12	1 -	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	33	289	31	45	124	91	160	0	147	284	204	23
Adjusted Saturation Flow Rate (s), veh/h/in	1287	1900	1610	1107	1809	1610	1810	1900	1610	1810	1900	1610
Queue Service Time (g :), s	0.9	5.8	0,6	1.6	1.1	1.9	5.0	0.0	5.2	8.9	5.8	0.7
Cycle Queue Clearance Time (ge), s	2.0	5.8	0.6	7.4	1.1	1.9	5.0	0.0	5.2	8.9	5.8	0.7
Green Ratio (g/C)	0.46	0.46	0.46	0.46	0.46	0.46	0.14	0.14	0.14	0.20	0.20	0.20
Capacity (c), veh/h	694	883	748	528	1681	748	245	258	218	361	379	321
Volume-to-Capacity Ratio (X)	0.047	0.328	0.041		0.074	0.121	0.652	0.000	0.675	0.787	0.538	0,072
Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile)	5.7 0.2	55.7 2.2	5.1 0.2	9,9 D,4	9.9	15.7	54.5 2.2	0	51.3	99.4	61.7	6.2
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00	0.00	0.00	0.4 0.00	0.6 0.00	0.00	0.0	2.1 0.00	4.0	2.5	0.2
Uniform Delay (d +), s/veh	9.5	10.1	8.8	12.5	8.9	9.1	24.6	0.0	24.7	0.00 22.8	0.00 21,5	0.00 19.5
Incremental Delay (d 2), s/veh	0.1	1.0	0.1	0.3	0.1	0.3	2.9	0.0	3.6	5.3	1.2	0.1
Initial Queue Delay (d z), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.6	11.1	8.9	12.8	9.0	9.4	27.5	0.0	28.3	28.0	22.7	19.6
Level of Service (LOS)	A	В	A	B	Α.	Α Α	C	3.9	20.3 C	20.0 C	C	В
Approach Delay, s/veh / LOS	10.8		В	9.8	••	A	27.9)	c	25.5		c
Intersection Delay, s/veh / LOS				9.6		2525		55		В		·-
- November - November												
Multimodal Results		EB			WB			NB			SB	
Pedestrian LOS Score / LOS	2.4		В	2.4		В	2.6		В	2.8		Ç
Bicycle LOS Score / LOS	1.1		Α	0.7		Α	1.0		Α	1.3		Α

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description 2022 AM Peak	Time I	sis Year	2022		E A F	ntersect Ouration, Area Typ PHF Analysis ack Rd -	h e Period	0.25 Other 0.92 1> 7:	r 00	1 4 7 4 7 4 7	1141 1144	7 4 4 4 F C
Demand Information Approach Movement Demand (v), veh/h	L 82	EB T 281	R	L	WB T 226	R	: L 174	NB T 2	R 70	L	SB T	R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red		8.6 3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	î.	, <u> </u>	4	 	Ý
Timer Results Assigned Phase Case Number Phase Duration, s Change Period, (Y+R c), s Max Allow Headway (MAH), s Queue Clearance Time (g s), s Green Extension Time (g o), s Phase Call Probability	EBI		EBT 2 6.0 47.4 4.0 0.0 0.0	WB		WBT 6 8.0 47.4 4.0 0.0	NBL		NBT 8 11.0 12.6 4.0 4.2 8.1 0.6 0.99	SBL	•	SBT
Max Out Probability									0.06			
Movement Group Results		EB	R	i.	WB T	В		NB T	_		ŞB T	
N. -	- 1			1000	ı.	R 16			R	L	1	R
Approach Movement	L 5	T 2	n.		6		3	м.	18			
Approach Movement Assigned Movement	5	2	r.		6 171		3	8 191	18 76			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h	5 89	2 305	n		171	162	3	191	76			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln	5 89 1064	2 305 1809	n		171 1900	162 1732	3	191 1811	76 1 6 10			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s	5 89	2 305 1809 1.5	n		171 1900 2.5	162 1732 1.7	3	191 1811 6.1	76 1610 2.5			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln	5 89 1064 1.7	2 305 1809	n		171 1900	162 1732	3	191 1811	76 1610 2.5 2.5			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s	5 89 1064 1.7 4.2	2 305 1809 1.5 1.5	n		171 1900 2.5 2.5	162 1732 1.7 1.7	3	191 1811 6.1 6.1	76 1610 2.5			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X)	5 89 1064 1.7 4.2 0.72	2 305 1809 1.5 1.5 0.72 2617	ĸ		171 1900 2.5 2.5 0.72 1375	162 1732 1.7 1.7 0.72		191 1811 6.1 6.1 0.14	76 1610 2.5 2.5 0.14 231			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), it/ln (50 th percentile)	5 89 1064 1.7 4.2 0.72 846 0.105 6.8	2 305 1809 1.5 1.5 0.72 2617 0.117	ĸ		171 1900 2.5 2.5 0.72 1375	162 1732 1.7 1.7 0.72 1253		191 1811 6.1 6.1 0.14 259	76 1610 2.5 2.5 0.14 231			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), it/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile)	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3	2 305 1809 1.5 1.5 0.72 2617 0.117 7 0.3	r		171 1900 2.5 2.5 0.72 1375 0.124	162 1732 1.7 1.7 0.72 1253 0.129		191 1811 6.1 6.1 0.14 259 0.738	76 1610 2.5 2.5 0.14 231 0.330			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile)	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00	r		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d_s), s/veh	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5	ĸ		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (gs), s Cycle Queue Clearance Time (gc), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), it/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d1), s/veh Incremental Delay (d2), s/veh	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1	r		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Initial Queue Delay (d J), s/veh	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.3	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0			171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Initial Queue Delay (d j), s/veh Control Delay (d), s/veh	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.0 3.6	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0 2.6	r		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2 0.0 2.7	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2 0.0 2.7		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0 28.7	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8 0.0 23.9			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), it/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Control Delay (d), s/veh Level of Service (LOS)	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.0 3.6 A	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0		2.7	171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2 0.0 2.7 A		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8 0.0 23.9 C			
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d z), s/veh Initial Queue Delay (d j), s/veh Control Delay (d), s/veh	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.0 3.6	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0 2.6	Α	2.7 9.4	171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2 0.0 2.7	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2 0.0 2.7		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0 28.7	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8 0.0 23.9 C	0.0 A		
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d t), s/veh Incremental Delay (d t), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.0 3.6 A	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0 2.6	Α		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2 0.0 2.7	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2 0.0 2.7 A		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0 28.7	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8 0.0 23.9 C		SB	
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	5 89 1064 1.7 4.2 0.72 846 0.105 6.8 0.3 0.00 3.3 0.0 3.6 A	2 305 1809 1.5 0.72 2617 0.117 7 0.3 0.00 2.5 0.1 0.0 2.6 A	Α		171 1900 2.5 2.5 0.72 1375 0.124 8.8 0.4 0.00 2.5 0.2 0.0 2.7 A	162 1732 1.7 1.7 0.72 1253 0.129 8.5 0.3 0.00 2.5 0.2 0.0 2.7 A		191 1811 6.1 6.1 0.14 259 0.738 67.1 2.7 0.00 24.6 4.1 0.0 28.7 C	76 1610 2.5 2.5 0.14 231 0.330 23.6 0.9 0.00 23.1 0.8 0.0 23.9 C		SB	C

General Information Agency	Western R&D, Ltd.							ntersecti Duration,		ormati :0.25	on		ير يه آل	414	<u>i</u>
	G Grigsby	Analys	sis Date	9/15	5/202	1		Area Type		Other	г	<u>ب</u>			
Jurisdiction	.E. (1)	Time F	Period					PHF		0.92		3			
Urban Street		Analys	sis Year	202	2		A	Analysis F	Period	1> 7.	00	-			*
Intersection	I-25 North @ Happy Jac	File Na	ame	1-25	Nort	h - H		ack Rd - :		M Pea	k.xus	`	٠,	11	
Project Description	2022 PM Peak						:54E-50						_	ተዣኮ	ľ
Demand Information			EΒ	10			WB		r.	NB			,	SB	
Approach Movement		Ł	T	F	,	L	Т	R	L	T	R	L		Т	R
Demand (v), veh/h		185	325				, 160	201	48	1	39		e	:	
Signal Information												200		*	
Cycle, s 60.0	Reference Phase 2										, !—	4			
Offset, s 0	Reference Point End	1								-		R 1	•	÷	-
Uncoordinated No	Simult. Gap E/W On											-			小
Force Mode Fixed	Simult. Gap N/S On									U	5	<u> </u>		.]	1
Timer Results		EBI	_	EBT		WBI	-v 346	WBT	NBL		NBT	SI	3L	5	BT.
Assigned Phase				2				6			8				
Case Number				6.0				8.0			11.0				
Phase Duration, s				47.4				47.4			12.6				
Change Period, (Y+R			ċ	4.0				4.0			4 .D				
Max Allow Headway (A				0.0				0.0			0.0				
Queue Clearance Time			•	0.0				0.0			00				
Green Extension Time	(g ₀), s			0.0				0.0			0.0				
Phase Call Probability				0.00				0.00			0.00				
Max Out Probability				0.00				0.00			0.00				
Movement Group Res	ults		EB				WB			NB			5	SB	
Approach Movement		L	T	R		L	Т	R	L	Т	R	L	-	Т	R
Assigned Movement		5	2				6	16	3	8	18				
Adjusted Flow Rate (v	30	0	0				0	0		0	0				
Adjusted Saturation Flo		0	0				0	0		Ď	0				
Queue Service Time (g		0.0	0.0				0.0	0.0		0.0	0.0				
Cycle Queue Clearance	e lime (gc), s	0.0	0.0				00	0.0		0.0	0.0				
Green Ratio (g/C)		0.72	0.72				0.72	0.72		0.14	0.14				
Capacity (c), veh/h Volume-to-Capacity Ra	tio (V)	846	2617				1375	1253		259	231				
Back of Queue (Q), ft/		0.105 6.8	7				8.8	0.129 8 5		0.738 67.1					
Back of Queue (Q), ve		0.3	0.3				0.4	0.3		2.7	23.6 0.9				
Queue Storage Ratio (-	0.00	0.00				0.00	0.00		0.00	0.00				
Uniform Delay (d 1), s/		3.3	2.5				2.5	2.5		24.6	23.1				
Incremental Delay (d 2		0.3	0.1				02	0.2		4,1	0.8				
Initial Queue Delay (d :		0.0	0.0				0.0	0.0		0.0	0.0				
Control Delay (d), s/ve		3.6	2.6				2.7	2.7		28.7	23.9				
Level of Service (LOS)		Α	Α				A	A		С	С				
Approach Delay, s/veh	/ LOS	2.8		Α		2.7		A	27.4		c	0.	0		
Intersection Delay, s/ve					9.4	2000000		9000			60.000	A	23.5		
Multimodal Results			EB				WB			NB			ç	SB	
Pedestrian LOS Score	/LOS	1.6		Α		1.8	. 10	Α	2.7	.40	В	2.			С
Bicycle LOS Score / LO		0.8		A		0.8		A	0.9		A		-		-
-						_		85	2/00/07		6940				

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description 2025 AM Peak - No Build	Time Period Analysis Ye	ar ;2025		Intersection Ind Duration, h Area Type PHF Analysis Period Jack Rd - 2025 A	0.25 Other 0.90 1> 7:00	14741	4 1 4 4 5 6
Demand Information Approach Movement Demand (v), veh/h	EI L T 91 : 29	R	W L T ! 23	RL	NB T R 2 · 72	L	SB T R
Signal Information Cycle, s 60.0 Reference Phase 2 Offsel, s 0 Reference Point End Uncoordinated No Simult Gap E/W On Force Mode Fixed Simult Gap N/S On	Green 42.1 Yellow 3.0 Red 1.0		0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0		4,	Y .
Timer Results Assigned Phase Case Number Phase Duration, s Change Period, (Y+R c), s Max Allow Headway (MAH), s Queue Clearance Time (g s), s Green Extension Time (g v), s Phase Call Probability Max Out Probability	EBL	EBT 2 6.0 46.8 4.0 0.0	WBL	WBT NB 6 8.0 46.8 4.0 0.0	NBT 8 11.0 13.2 4.0 4.2 8.6 0.7 0.99 0.10	SBL	SBT
Movement Group Results	EB		WB		NB		SB
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d r), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	L T 5 2 101 327 1041 1800 2.1 1.7 4.8 1.7 0.71 0.7 816 2580 0.124 0.12 8.5 8.5 0.3 0.3 0.00 0.00 3.6 2.7 0.3 0.1 0.0 0.0 4.0 2.8 A A 3.1	9 1 0 . 7) A 9.5	L T 6 183 1900 2.7 2.7 0.71 1358 0.138 10.5 0.4 0.00 2.7 0.2 0.0 2.9 A 3.0	1.9 1.9 0.71 5 1234 5 0.140 10.1 0.4		L	T R
Pedestrian LOS Score / LOS Bicycle LOS Score / LOS	1,6 0.8	A A	1.8 0.8	A 2.7 A 1.0	В	2.8	C

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description 2025 AM Peak - Build	Time I Analys	Period sis Yea	e '9/15/. r :2035 l-25 N) 1 1	ntersect Duration, Area Type PHF Analysis F ack Rd -	h e Period	0.25 Other 0.89 1> 7:	r 00	14741	414	1
Demand Information Approach Movement Demand (v), veh/h	L 98	EB T 294	R	Ļ	WB T 236	R	L 274	NB T	R + 72	, L	SB T	R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green Yellow Red		12.5 3.0 1.0	0.0 0.0 0.0	0.0 <u>0.0</u> 0.0	0. <u>0</u> 0. <u>0</u> 0.0	0.0 0.0 0.0		,	4		ヤ
Timer Results Assigned Phase Case Number Phase Duration, s Change Period, (Y+R c), s Max Allow Headway (MAH), s Queue Clearance Time (g s), s Green Extension Time (g e), s	ЕВІ	- 3	EBT 2 6.0 43.5 4.0 0.0	WBI	17	WBT 6 8.0 43.5 4.0 0.0	NBL		NBT 8 11.0 16.5 4.0 4.2 11.8 0.7	SBL	3	SBT
Phase Call Probability Max Out Probability					i.				1.00 0.63		Ĭ	
Movement Group Results		EB			WB			NB			SB	
- Approach Movement	L	T	R	L	T	R	L	Т	R	L	Т	R
Assigned Movement	5	2			6	16	3 .	В	18	;		19
Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln	110	330			186	175		310	81			
Queue Service Time (g s), s	1037 2.8	1809 2.1			1900	1730		1810	1610			ii.
Cycle Queue Clearance Time (g c), s	5.5	2.1			2.7 2.7	2.3 2.3		9.8 9.8	2.5 2.5			
Green Ratio (g/C)	0.66	0.66			0.66	0.66		0.21	0.21			
Capacity (c), veh/h	756	2381			1251	1139		377	336			
Volume-to-Capacity Ratio (X)	0.146	0.139			0.148			0.822	0.241			
Back of Queue (Q), ft/In (50 th percentile)	12.5	12.8				. 14.9		114,4	22.3			
Back of Queue (Q), veh/ln (50 th percentile)	0.5	0.5			0.6	0.6		4.6	0.9			
Queue Storage Ralio (RQ) (50 th percentile)	0.00	0.00			0.00	0.00		0.00	0.00			
Uniform Delay (d +), s/veh	5.0	3.9			3.9	3.9		22.7	19.8			
Incremental Delay (d z), s/veh	0.4	0.1			0.3	0.3		7.7	0.4			
lnitial Queue Delay (d ɔ), s/veh	0.0	0.0			0.0	0.0		0.0	0.0			
Control Delay (d), s/veh	5,4	4.0			4.1	4.2		30.3	20.2			
Level of Service (LOS)	Α	Α			Α	Α		С	Ç			
Approach Delay, s/veh / LOS	4.3		A	4.2		A	28.2		С	0.0		
Intersection Delay, s/veh / LOS			1:	2.1						В		
Multimodal Results		EB			wв			NB			SB	
Pedestrian LOS Score / LOS	1.6		Α	1.8		Α	2.7	.10	В	2.8		С
Bicycle LOS Score / LOS	0.9		A	0.8		A	1.1		A			10.T

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description 2025 PM Peak • No Bulld	Analysis Date 9/15/2021 Time Period Analysis Year 2025 File Name 'I-25 North - Ha	Area Type PHF	0.25 Other 1 0.92 4 1> 7:00	1414464 44 2414187
Demand Information Approach Movement Demand (v), veh/h	EB L T R L 204 337	WB T R L 167 212 52	NB , T R 1 40	SB L T R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Green 48.7 3.3 0.0 Yellow 3.0 3.0 0.0 Red 1.0 1.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	-4 	· · · · · · · · · · · · · · · · · · ·
Assigned Phase Case Number Phase Duration, s Change Period, (Y+Rc), s Max Allow Headway (MAH), s Queue Clearance Time (gs), s Green Extension Time (gs), s Phase Call Probability Max Out Probability	EBL EBT WBL 2 6.0 52.7 4.0 0.0	WBT NBL 6 8.0 52.7 4.0 0.0	NBT 8 11.0 7.3 4.0 4.2 3.9 0.2 0.81 0.00	SBL SBT
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/n Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/in (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	4.0 1.3 6.7 1.3 0.81 0.81 879 2935 0.252 0.125 9.8 1.1 0.4 0.0	2.6 1.9 2.6 1.9 0.81 0.81 1541 1306 0.118 0.176 1.9 3 0.1 0.1 0.00 0.00 1.2 1.2 0.2 0.3 0.0 0.0	NB T R I 8 18 58 43 1811 1610 1.9 1.6 1.9 1.6 0.06 0.06 100 89 0.574 0.488 22.3 166 0.9 0.7 0.00 0.00 27.6 27.5 5.1 4.1 0.0 0.0 32.7 31.6 C C A	SB TR
Multimodal Results Pedestrian LOS Score / LOS Bicycle LOS Score / LOS	EB 1.6 A 1.8 1.0 A 0.8	WB A 2.7 A 0.7	NB B A	SB 2.8 C

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description I2025 PM Peak - Build		2035	Area Type PHF	0.25 Other 4 0.89 4 1> 7:00	# # # # # # # # # # # # # # # # # # #
Demand Information Approach Movement Demand (v), veh/h	EB L T 292 337 1	R L 1	RL	NB : T R L 1 40	SB T R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Yellow 3.0	3.7 0.0 0.0 3.0 0.0 0.0 1.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0		Y .
Assigned Phase Case Number Phase Duration, s Change Period, (Y+R:), s Max Allow Headway (MAH), s Queue Clearance Time (g:), s Green Extension Time (g:), s Phase Call Probability Max Out Probability	6. 52	2.3 .0 .0	WBT NBL 6 8.0 52.3 4.0 0.0	NBT 5 8 11 0 7.7 4.0 4.2 4.2 0.2 0.85 0.00	BL SBT
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/In Queue Service Time (g s), s Cycle Queue Clearance Time (g c), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d v), s/veh Incremental Delay (d v), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	EB L T 5 2 328 379 977 1809 7.3 1.4 10.1 : 1.4 0.80 0.80 861 2910 0.381 0.130 18.8 1.7 0.8 0.1 0.00 0.00 2.6 1.3 1.3 0.1 0.0 0.0 3.9 1.4 A A	4.8	R L 16 3 238 0 1610 2.0 2.0 2 0 0 0.80 6 1295 3 0.184 0.2 0 0.00 1.3 0.3 0.0 1.7 A A 31.5	А	SB T R
Multimodal Results Pedestrian LOS Score / LOS Bicycle LOS Score / LOS	EB 1.6 A 1.1 A	WB A 1.8 A 0.8	A 2.7 A 07	NB B 2 A	.8 C

General information						ı	ntersecti	on Info	rmati	on	<u> 5</u> .	(i.k.)	<u>i</u> į
Agency West	em R&D, Ltd.					0	Duration, I	h	0.25				
Analyst G Gri	gsby	Analys	sis Date	e 9/15/20	021	A	vea Type		Othe	r	÷		*
Jurisdiction	- -	Time F	Period			F	PHF T		0.90		3		÷
Urban Street		Analys	is Yea	r 2035		Ā	nalysis P	eriod	1>7:	:00	4		-
Intersection I-25 N	North @ Happy Jac	File Na	ame	1-25 No	orth - Ha		ack Rd - 2		И Реа	k No B		4.7	
Project Description 2035	AM Peak - No Build											1 † + Y	ተና
Demand Information			EВ			WB			NB		ī	SB	
Approach Movement		Ĺ	Т	R	L	Т	R	L	Т	R	1.	T	R
Demand (v), veh/h		128	343		. 	273		233		. 77	- 1	•	:
Signal Information						•	3 3.4				į		
	rence Phase 2			Ħ							я 📗		
**************************************	rence Point End			<u>.</u> l y=	12		-		ı	4	-	85.8	• [
	ilt. Gap E/W On	Green Yellow		11.0	0.0	0.0	0.0	0.0			45.		
Force Mode Fixed Simu		Red	. <u>3.0</u> 1.0	3.0 1.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0		₽.	5	,	Y.
, , , , , , , , , , , , , , , , , , ,	524100			1.0	0.0	<u>u</u> .u	0.0	0.0			1	I.	. 47
Timer Results		EBL	•	EBT	WBL		WBT	NBL	Ĺ	NBT	SBL		SBT
Assigned Phase				2			6		_	8			
Case Number				6.0		•	8.0		•	11.0			
Phase Duration, s				45.0		1	45.0			15.0			
Change Period, (Y+Rc), s				4.0			4.0			4.0		•	
: Max Allow Headway (MAH).				0.0			0.0			4.2			
Queue Clearance Time (g ,)									÷	10.3			
Green Extension Time ($\underline{g} \in$),	, S			0.0			0.0			0.7			
Phase Call Probability										1.00		Ç	
Max Out Probability										0.29			
Movement Group Results			EB			WB			NB			SB	
Approach Movement		L	Т	R	L	Т	R	L	T	R	L	Т	R
Assigned Movement		5	2			6	16	3	8	18			
Adjusted Flow Rate (v), veh		142	381			215	201		262	86			
Adjusted Saturation Flow Rai		985	1809		ā	1900	1725		1811				
Queue Service Time (g s), s		3.7	2.2			3.2	2.5		8.3	2.8			
Cycle Queue Clearance Time	e(g ∈), s												
Green Ratio (g/C)		6.9	2.2	•		32	25		8.3	28			
Connected to 1	T. T.	0.68	0.68	•		0.68	0.68		0.18	0.18			
Capacity (c), veh/h		0.68 741	0.68 2473			0.68 1299	0.68 1179		0.1B 332	0.18			
Volume-to-Capacity Ratio (X	7)	0.68 741 0.192	0.68 2473 0.154		,	0.68 1299 0.166	0.68 1179 0.171		0.18 332 0.791	0.18 295 0.290			
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50	() th percentile)	0.68 741 0.192 15.6	0.68 2473 0.154 12.7			0.68 1299 0.166 15.5	0.68 1179 0.171 14.9		0.18 332 0.791 91 2	0.18 295 0.290 24.9			1
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (7) Ith percentile) 50 th percentile)	0.68 741 0.192 15.6 0.6	0.68 2473 0.154 12.7 0.5			0.68 1299 0.166 15.5 0.6	0.68 1179 0.171 14.9 0.6		0.18 332 0.791 91 2 3.6	0.18 295 0.290 24.9 1.0			
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (7) Ith percentile) 50 th percentile)	0.68 741 0.192 15.6 0.6 0.00	0.68 2473 0.154 12.7 0.5 0.00			0.68 1299 0.166 15.5 0.6 0.00	0.68 1179 0.171 14.9 0.6 0.00		0.18 332 0.791 91 2 3.6 0 00	0.18 295 0.290 24.9 1.0 0.00			
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d)), s/veh) th percentile) 50 th percentile) (50 th percentile)	0.68 741 0.192 15.6 0.6 0.00 4.8	0.68 2473 0.154 12.7 0.5 0.00 3.4			0.68 1299 0.166 15.5 0.6 0.00 3.4	0.68 1179 0.171 14.9 0.6 0.00		0.18 332 0.791 91 2 3.6 0 00 23.4	0.18 295 0.290 24.9 1.0 0.00 21.1	ū		
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh	(50 th percentile) 50 th percentile)	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1			0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3		0.18 332 0.791 91 2 3.6 0 00 23.4 4.6	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5	:		
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh	(50 th percentile) 50 th percentile)	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0			0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0		0.18 332 0.791 91 2 3.6 0 00 23.4 4.6 0.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0	:		-
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 3), s/veh Control Delay (d), s/veh	(50 th percentile) 50 th percentile)	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0 3.5		,	0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0 3.7	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7		0.18 332 0.791 91 2 3.6 0.00 23.4 4.6 0.0 28.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7	÷		
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS)	() th percentile) 50 th percentile) (50 th percentile) eh	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4 A	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0		37	0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7 A		0.18 332 0.791 91 2 3.6 0 00 23.4 4.6 0.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7 C			
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS	()) th percentile) 50 th percentile) (50 th percentile) eh	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0 3.5		3.7	0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0 3.7	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7		0.18 332 0.791 91 2 3.6 0.00 23.4 4.6 0.0 28.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7 C	D.O A		-
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	()) th percentile) 50 th percentile) (50 th percentile) eh	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4 A	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0 3.5 A			0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0 3.7	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7 A		0.18 332 0.791 91 2 3.6 0.00 23.4 4.6 0.0 28.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7 C	0.0 A		
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	th percentile) 50 th percentile) (50 th percentile) ch reh	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4 A	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0 3.5			0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0 3.7	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7 A		0.18 332 0.791 91 2 3.6 0.00 23.4 4.6 0.0 28.0	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7 C		SB	-
Volume-to-Capacity Ratio (X Back of Queue (Q), ft/in (50 Back of Queue (Q), veh/in (Queue Storage Ratio (RQ) (Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Initial Queue Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	th percentile) 50 th percentile) (50 th percentile) ch reh	0.68 741 0.192 15.6 0.6 0.00 4.8 0.6 0.0 5.4 A	0.68 2473 0.154 12.7 0.5 0.00 3.4 0.1 0.0 3.5 A			0.68 1299 0.166 15.5 0.6 0.00 3.4 0.3 0.0 3.7 A	0.68 1179 0.171 14.9 0.6 0.00 3.4 0.3 0.0 3.7 A		0.18 332 0.791 91 2 3.6 0.00 23.4 4.6 0.0 28.0 C	0.18 295 0.290 24.9 1.0 0.00 21.1 0.5 0.0 21.7 C		SB	c

General Information Agency Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description \$2035 AM Peak - Build	Time F Analys	sis Year	r 203	85		С Д Р	ntersecti Duration, Area Type PHF Analysis F ack Rd - 2	h : Period	0.25 Othe 0.89 1> 7:	r 00	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		i (
Demand Information		ЕВ				WB		!	NB				SB	
Approach Movement	L	T	F	2	L	Т	R	L	Т	R	160	L	Т	R
Demand (v), veh/h	131	343	:			273	. 102	260	, 3	. 77				1
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point ; End Uncoordinated No Simult Gap E/W On Force Mode Fixed , Simult Gap N/S ! On	Green Yellow Red	39.9	12. 3.0 1.0	N 1 (j.o 5.o 5.o	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0		, I=	4	2	·:	Y
† Timer Results	EBL		EBT		WBD		WBT	NBL		NBT		SBL	Ĺ	SBT
Assigned Phase			2				6			8				
Case Number			6.0				8.0			11.0			:	
Phase Duration, s			43.9				43. 9			16.1				
Change Period, (Y+R c), s		:	4,0				4.0			4.0				
Max Allow Headway (MAH), s			0.0				0.0			4.2				
Queue Clearance Time (g s), s										11.4				
Green Extension Time (g_{ϕ}), s			0.0				0.0			0.7				
Phase Call Probability		i				0.			88	1 00				
Max Out Probability										0.50				
Movement Group Results		EB				WB			NB				SB	
, Approach Movement	L	Т	R		L	Т	R	L	Т	R		Ļ	Т	R
Assigned Movement	5	2				6	16	3	8	18				
Adjusted Flow Rate (v), veh/h	147	385				218	204		296	87				
Adjusted Saturation Flow Rate (s), veh/h/ln	981	1809				1900	1725		1811	1610)	•		
Queue Service Time (g s), s	4.1	2.4				3.2	2.7		9.4	2.7				
Cycle Queue Clearance Time (g_{c}) , s	7.3	2.4				3.2	2.7		9.4	2.7				
Green Ratio (g/C)	0.67	0.67				0.67	0.67		0.20	0.20	ı			
¹ Capacity (c), veh/h	720	2408				1265	1149		364	324				
Volume-to-Capacity Ratio (X)		0.160				0.172	0.177		0.812	0.267	7			
Back of Queue (Q), fl/ln (50 th percentile)	17.7	14.4				17.7	16.8		106 9	24.3				
Back of Queue (Q), veh/ln (50 th percentile)	0.7	0.6				0.7	0.7		4.3	1.0				
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00				0.00	0.00		0.00	0.00				
Uniform Delay (d +), s/veh	5,3	3.8				3.8	3.8		22.9	20.2				
Incremental Delay (d 2), s/veh	0.6	0.1				0.3	0.3		6.7	04				
Initial Queue Delay (d a), s/veh	0.0	0.0				0.0	0.0		0.0	0.0				
Control Delay (d), s/veh	6.0	3.9				4.1	4.1		29.6	20.7				•
Level of Service (LOS)	Α	A				Α	A		¢	C		092		
Approach Delay, s/veh / LOS	4.5		А	11 A	4.1		Α	27.5		С	_	0.0		
Intersection Delay, s/veh / LOS				11.0							В			
Multimodal Results		ЕВ				WB			NB				SB	
Pedestrian LOS Score / LOS	1.6		Α		1.8		Α	2.7		В		2.8		C
							^	4.7				2.0		-

General Information Agency 'Western R&D, Ltd. Analyst G Grigsby Jurisdiction Urban Street Intersection I-25 North @ Happy Jac Project Description 2035 PM Peak - No Build	Analysis Time Per Analysis File Nam	Year ,203	5	Duration, Area Typ PHF Analysis	e Other 0.90	00 P	1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4
Demand Information Approach Movement Demand (v), veh/h	L 281	EB T R 380	L	WB T R 190 252	NB L T	R L	SB T R
Signal Information Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Uncoordinated No Simult. Gap E/W On Force Mode Fixed Simult. Gap N/S On	Yellow 3	7.9 4.1 3.0 3.0 3.0 1.0	0,0 <u>0.0</u> 0.0	0.0 <u>0.0</u> 0.0 <u>0.0</u> 0.0 0.0	0.0 0.0 0.0		*
Timer Results Assigned Phase Case Number Phase Duration, s Change Period, (Y+Rv), s Max Allow Headway (MAH), s Queue Clearance Time (gs), s Green Extension Time (ge), s Phase Call Probability Max Out Probability	EBL	EBT 2 6.0 51.9 4.0 0.0	WBL	WBT 6 8.0 51.9 4.0 0.0		NBT SB 8 11 0 8.1 4.0 4.2 4.4 0.3 0.87	L SBT
Movement Group Results Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g s), s Cycle Queue Clearance Time (g s), s Green Ratio (g/C) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (50 th percentile) Back of Queue (Q), veh/ln (50 th percentile) Queue Storage Ratio (RQ) (50 th percentile) Uniform Delay (d 1), s/veh Incremental Delay (d 2), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	L 5 312 4 920 11 7.8 11.0 1.80 0 806 21 0.387 0.21.3 2 0.9 1.4 0.0 0 0 4.3 11	EB T R 2 1222 8009 1.6 1.6 1.6 1.6 1.00 1.4 1.00 1.5 A A	L 17 5.0	WB T R 6 16 211 280 1900 1610 3.1 2.6 3.1 26 0.80 0.80 1516 1285 0.139 0.218 3.6 5.8 0.1 0.2 0.00 0.00 1.4 1.5 0.2 0.4 0.0 0.0 1.6 1.9 A A A	NB L T 3 8 76 1811 2.4 2.4 0.07 124 0.608 28.5 1.1 0.00 27.2 4.7 0.0 31.9 C	0.442	SB TR
Multimodal Results Pedestrian LOS Score / LOS Bicycle LOS Score / LOS	1.6 1.1	EB A A	1.8 0.9	WB A A	NB 2.7 0.7	B 2.8 A	SB C

General Information						li.	ntersecti	on info	rmati	on		14	1417	Ü
Agency Western R&D, Ltd.							uration, l	h	0.25		.,			
Analyst G Grigsby	Analys		e 9/15	5/202	1		геа Туре	Di .	Othe	ſ				<u>.</u>
Jurisdiction	Time F						HF		0.92		* * * * * * * * * * * * * * * * * * *		-:	±
Urban Street	Analys						nalysis P		1> 7:		_			7
Intersection I-25 North @ Happy Jac	File N	ame	1-25	Norti	h - Ha	ippy Ja	ack Rd - 2	2035 PI	M Pea	ık Build			11	
Project Description 2035 PM Peak - Build												14	1441	• •
Demand Information		EB		5		WB		i .	NB				SB	
Approach Movement	L	T	R		L	Т	R	L	T	R	L		T	R
Demand (v), veh/h	308	380	7.			190	252	70	, 1	44				
Signal Information			Ħ							1	ĺ		1	,
Cycle, s 60.0 Reference Phase 2		= `								: -	4			j
Offset, s 0 Reference Point End	Green	47.8	4.2	11	Ö.O	άn	0.0	٥٥	÷	j.			+	ำ
Uncoordinated No Simult. Gap E/W On	Yellow		3.0		0.0	0.0 0.0 0.0	0.0	0.0 0.0		•	4		4	xt>
Force Mode Fixed Simult. Gap N/S : On	Red	3.0 1.0	1.0	Õ	0.0	0.0	0.0	0.0	-	٤.	, s	<u>.</u> .	-]	Y :
Timer Results	EBI	<u>6</u>	EBT		WBL	:	WBT	NBL	r	NBT	s	BL		SBT
Assigned Phase			2				В		10	В	Ĭ			,
Case Number		,	6.0				B.O			11.D				
Phase Duration, s			51.8			•	51.8			B.2			• 7	
Change Period, (Y+R c), s			4.0				4.0			4.0				
Max Allow Headway (MAH), s			0.0				0.0		i.	4.2				
Queue Clearance Time (g s), s						:				4.5				
Green Extension Time (g .), s			0.0				0.0			0.3				
Phase Call Probability										0.88				
Max Out Probability										0.00			¥1	
Movement Group Results		ЕВ				WB			NB				SB	
Approach Movement	Ļ	T	R		L	Т	R	L	Т	R	L		T	R
Assigned Movement	5	2				6	16	3	8	18	\$ \$		80	53
Adjusted Flow Rate (v), veh/h	335	413				207	274		77	48				
Adjusted Saturation Flow Rate (s), veh/h/ln	929	1809				1900	1610		1811	1810				
Queue Service Time (g s), s	8.6	1.6				3.0	2.5		2.5	1.7				
Cycle Queue Clearance Time (g c), s	11.6	1.6				3.0	2.5		2.5	- 1.7				
Green Ratio (g/C)	0.80	0.80				08.0	0.80		0.07	0.07				
Capacity (c), veh/h	813	2884				1515	1284		126	112				
Volume-to-Capacity Ratio (X)	0.412	0.143				0.136	0.213		D.613	0.427	•			
Back of Queue (Q), ft/in (50 th percentile)	23.6	2.6				3.6	5.7		29.1	17.3				
Back of Queue (Q), veh/ln (50 th percentile)	0.9	0.1				0.1	0.2		1.2	0.7				
Queue Storage Ratio (RQ) (50 th percentile)	0.00	0.00				0.00	0.00		0.00	0.00				
Uniform Delay (d +), s/veh	3.0	1.4				1.4	1.5		27.1	268				
Incremental Delay (d 2), s/veh	1.5	0.1			÷	0.2	0.4		4.8	2.6				
Initial Queue Delay (d a), s/veh	0.0	0.0				0.0	0.0		0.0	0.0				
Control Delay (d), s/veh	4.6	1.5				1.6	1.9		31.9	29.3				
Level of Service (LOS)	Α	Α				Α	Α		С	С				
Approach Delay, s/veh / LOS	2.9		Α		1.7		Α	30.9		С		.0		
Intersection Delay, s/veh / LOS				5.1							Α			
Multimodal Results		EB				WB			NB				SB	
Pedestrian LOS Score / LOS	1.6		Α		1.8		Α	2.7	_	В	2.	.8		С
Bicycle LOS Score / LOS	1.1		Α		0.9		Α	0.7		Α				

Appendix C: Signal Timing Plans

WYDOT Administration

MaxTime Timing Sheet 3365 WYDOT Default

_Cross Black_White.jpg

Unit Information

Controller ID 60 Main St. Happy Jack Side St Gate 2/1-25 NB

Adapter	IP Address	Subnet Mask	Default Gateway	ARP	Mode
_ i _					

Enable 60 0.0 Disable

Serial Ports:

<u> Striai</u>	FUILS.									
Port	Description	Function	Address	Baud	Bits	Stop	Parity	Flow	CTS	RTS
1	Port 2/C21S	None	1	9600	8	1	None	None	0	0
2	Aux_P3/C22S	None	1	9600	8	1	None	None	0	0
3	SDLC Port 1	None	1	9600	8	1	None	None	0	0
4	Com A/C50S	None	1	9600	8	1	None	Nоле	0	0
5_	FIO	None	1	9600	8	1	None	None	Ð	0
6	DISPLAY/C60M	None	1	9600	8	1	None	None	0	0
7	SP7	None	1	9600	8	1	None	Мопе	0	0
8	SP8/Com B	None	1	9600	8	1	None	None	0	0

Unit Parameters

Startup Flash	0	Auto Ped (
All Red Exit	0	Gm Flash F
MCE Seq.	1	Start Yelk
Master By TOD	Disable	Flash CV

Red Revert	40
Yel Flash Freq	60
Start Red	0.0
All Red Flash	Dışable
Auto Ped Clear	Enable

Backup Time	600
MCE Enable	Enable
Starl Clear Hold	0
3 Phs Dia Seq	
4 Phs Dia Seq	

Ext Mode	Disable
Free Sen	1

Phase P	aramet	ers
---------	--------	-----

Phasas	1	2	3	4	5	6	7	Ð	9	10	11	12	13	14	15	16	17	18	19	20
Walk Time	٥	0	0	0	0	0	0	0	0	0	0	0	0	٥	0	0	0	0	0	0
Clear Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	Ü	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	5	15	5	4	5	15	5	4	-	1	1	1	1	1	1	1	1	1	1	1
Min Green 2	0	0	0	0	0	0	0	0	0	O	0	٥	0	0	0	0	0	0	0	0
Passage	1.0	1.0	1.0	1.0	1.0	1.0	10	1.0	0.0	0.0	0.0	0.0	0.0	00	00	00	00	0	00	00
Max-1	0	30	O	30	0	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0
Mex-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conditional Max	0	0	0	Ð	0	0	0	0	0	0	Ū	0	0	0	0	0	0	0	0	0
Yel Change	3.0	41	3.0	3.9	30	41	30	3.9	3.0	30	3.0	3.0	30	30	30	30	30	30	30	30
Red Clear	1.0	1,0	1,0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	00	0.0	00	00
Add Red Clear	0	0	0	٥	0	0	0	0	0	0	0	0	0	0	0	0	0	0	٥	0
Red Revert	0.0	0.0	0.0	0.0	00	00	00	00	00	0.0	0.0	0.0	00	00	00	00	00	00	00	00
Added Initia	0.0	0.0	0.0	00	00	0.0	0.0	00	00	0.0	0,0	0.0	00	00	0.0	00	00	00	00	00
Max Initia	0.0	0.0	0.0	00	00	0.0	0.0	00	00	0.0	0.0	0.0	00	00	00	00	00	00	00	0.0
Time B4 Reduce	0	0	0	D	Ð	0	Ð	0	0	0	0	0	0	0	0	0	Ð	0	D	0
Cars 84 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	D .	0	0	Ð	0	0	0
Time To Reduce	0	0	а	0	0	0	0	0	0	0	0	0	0	0	Ð	0	0	0	D	0
Reduce By	0.0	00	0.0	00	0.0	00	0.0	0.0	0,0	0.0	0.0	00	0.0	0.0	00	0.0	0.0	00	00	00
Min Gap	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	00	00	00	00	0.0	00	00	00	00
Dyn Max Limit	0	0	ů	0	0	0	0	0	0	0	0	0	0	0	D	0	0	0	0	0
Dyn Max Slep	0.0	0.0	0.0	00	0.0	00	0.0	0.0	0.0	00	0.0	00	00	00	00	00	00	00	00	00
Advance Walk	0	0	٥	0	0	0	0	0	0	Ð	0	0	0	0	Ω	0	D	0	0	D
Delay Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	O	0	0	0	0	0	0
Alt Walk	_	0	0	0	0	0	0	0	0	Ð	0	0	0	0	0	0	0	0	0	0
Alt Ped Cir	0	0	Q	0	0	0	0	0	0	Đ	0	0	0	0	0	0	0	0	0	0

CINAL		po.		
3		3	3	_ 3 _
4		4	4	4
5		5	5	5
6		8	6	6
7		7	7	7
8	35.25 300	8	8	8

equence 1	Sequence 2	Sequence 3	Sequence 4
9	9	9	. 9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
18	16	16	16

Phase Configuration

Ph.	Startup	Ring	Concurrent	Startup Min	Description
1	Phase Not On	0		0	Particular
2	Green No Walk	1	6	0	EB
3	Phase Not On	0		a	
4	Phase Not On	1	8	0	SB
5	Phase Not On	0		0	
6	Green No Walk	2	2	0	WB
7	Phase Not On	D		0	3.1.1.2.E.
8	Phase Not On	2	4	0	NB
9	Мопе	0		0	
10	None	0		0	<u></u>
11	None	0	200 200	0	
12	None	0		ů .	
13	None	0		0	
14	None	. 0		0	
15	None	0		0	
16	None	0		Q.	
17	None	0		0	
18	None	0		0	
19	None	Q		0	
20	None	0	·	0	20-00-20-00

Sequence Configuration

Sequenc	Sequence 2	
Ring	Phases	Ring
1	2,a,4,b	1
2	6,a,8,b	2
3 _		3
4	-	4
5		5
6		6
7		7
8		8
9		9
10		10
11		11
12		12
13		13
14		14
15		15

Sequence	2	Sequence	3
Ring	Phases	Ring	Phases
1		1	
2		. 2	<u> </u>
3		3	
4		4	
5		5	
6		6	475 - 4
7		7	
8		8	
9		9	
10		10	
11		11	
12	·	12	
13		13	
14	·	14	
15		15	· · · · ·

Ring	Phases
1	100
2	4000
3	
4	
5	
6	
7	
В	
9	98400000
10	10000100 00
11	
12	
13	
14	
15	

			9. 90					
14	L	14		14		14	1	1
15		15		15	j.	18	5	
16	-	16		16		16	3	

Sequence	Seq	
Ring	Phases	RI
1	3.02(16) 22	J L
2		
3		نا اــا
4		
5		
6		
7		
n		

Sequence	18
Ring	Phases
1	71 0
2	
3	2
4	
5	
6	
7	
8	- 10 10 15 15 15 15 15 15 15 15 15 15 15 15 15

Sequent	ce 19
Ring	Phases
1	
2	
3	
4	
5	30 9005 100
6	10 10 10 10
7	
8	

Seguence 20		
Ring	Phases	
1		
2		
3		
4	- 6510 - 70	
5		
6		
7		
8		

9		18
10		
11		
12		16
13		
14	80	Ų.
15		
18		

Sequent	e 18
9	
10	
11	8. 02-
12	
13	
14	90
15	
16	
16	

18 0.70m
2000

9	
10	
11	
12	
13	
14	
15	
16	

9	Slobal Phas	e	Re	Ca	lls	}				- 10	1	1	1	1	1	1	1	1	1	1	2
Ĺ	Phase	1	2	3	4	5	6	7	<u>B</u>	9	0	1	2	3	4	5	6	7	8	9	٥
Į	Min					,	- 5			963					8		9		> -	- 2	-30
Į	Max			_					L					L							
L	Ped	<u>L</u>					- 55		L	- 5			- 3	L					L		
	Act Walk Rest									- 8			- 5					88		.0	

Global	Veh	Det	D	lagı	nost	ics
--------	-----	-----	---	------	------	-----

Global No Activity	0
Global Max Presence	0
Global Erractic Count	1
Globel Failed Recall	None
Detector Reset Enable	Enabled

Global Ped Det Diagnostics Global Pri/Pre Det Diag

Global No Activity	0
Global Max Presence	0
Global Erractic Count	0

Global No Activity	0
Global Max Presence	0
Global Erractic Count	Ð

Vehicle Detection Parameters

ACIII	Call of the Add Call of														2	
	Call	Call	Cat	Add Call	Sw			Queve	Ext	No	Max	Erratic	Failed	Failed	Feit	5555
Det.	Phs	Ped	Ovi	Phases	Phs	Delay	Extend	Limit	Hold	Activity	Pres	Counts	Time	Recall	Link	Description
1	2	0	0		0	0.0	0.0	O	0.0	0	10	255	20	None	0	EB Truck
2	2	٥	0		0	0.0	0.0	0	0.0	0	10	255	20	None	0	EB Dilemma
3	2	0	0		0	0.0	0.0	0	0.0	0	10	255	20	None	0	EB C/Ext-Q
4	0	0	0		0	0.0	0.0	0	0.0	0	0	0	0	None	0	000000 60
5	4	0	0		0	0.0	0.0	0	0.0	. 0	20	255	0	None	Q	SB Ext
6	4	D	0		Đ	0.0	0.0	0	0.0	0	20	255	10	None	0	SB C/Ext
7	0	0	٥		0	00	0.0	0	0.0	0	0	0	0	None	0	
8	0	0	0	6	0	0.0	0.0	0	00	0	0	0	0	None	0	
9	5	0	0	1	0	0.0	0.0	0	00	0	10	255	20	None	0	WB Truck
10	6	0	0	2.6	0	0.0	00	0	00	0	10	255	20	None	0	WB Dilemma
11	6	0	0		0	0.0	0.0	0	00	0	10	255	20	None	0	WB C/Ext-Q
12	6	0	0		0	0.0	0.0	0	0.0	0	20	255	20	None	0	WBLT C/Ext
13	8	Q	0		0	0.0	Q.D	0	0.0	0	20	255	0	None	0	NB Ext
14	8	0	0		D	0.0	O.D	0	0.0	_0	20	255	15	None	0	NB C/Ext
15	0	0	٥		0	0.0	0.0	0	0.0	0	٥	0	0	None	0	
16	0	0	0		0	0.0	0.0	0	0.0	0	0	0	0	None	0	1

						10		77					0.0			
71	0	0	0	0	0.0	0.0	0	0.0	0	0	0	0	None	0	L1	
72	0	D	0	0	0.0	0.0	0	0.0	0	0	0	0	None			

Detector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Volume Detector	Х	х	х		х	х			х	х	х	х	Х	х		G.,				
Оссиралсу	Х	х	х		х	х			х	X	х	X	х	х			1 1/2			
Yellow Lock Call											5 5						1 3			
Red Lock call					8	- 1				93										
Extend	х	x	х	. 0	х	х			X	х	x	x	х	х						
Added Initial						-200 6555														
Queue														33	- 2		- 0			
Call			х			х					х	х		х			3			
Terminate										100		1000			24					
Min Green 2								3 -		(2) S		<u> </u>				S				
Protected Perm																	- 2		- 10	
Disable Dly Lead						33					8	i			38					2 120
Disable TS2 Diag	*****			Š		33		<u> </u>							- 1					ऻ

Detector	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Volume Detector														х	100	44 A	х	х		x
Оссиралсу								99		2000					100				- 20 V -	
Yellow Lock Call					ı		П	2002							33	-	A			
Red Lock call															- 10		1000	52 S		П
Extend				4 8	- N	100			0								V.C.			
Added Initial				,	12							c 0.00								
Queue									18. 3					20 1	35					
Call						- 8				84										
Terminate																		is turis		
Min Green 2																	10000		14.0	
Protected Perm														-						
Disable Dly Lead																				
Disable TS2 Diag	_												\Box							Г

Detector	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	5B	59	60
Volume Detector	х	Х	Х	X	x	х		х									123			
Occupancy									, S						100 - 50					
Yellow Lock Call					69									.00403.0				3		
Red Lock call														×						
Extend																				151325055
Added Initial	9																			_
Queue		. Su Su													1020000					
Call																				
Terminate																				
Min Green 2																				
Protected Perm												53 508								
Disable Dly Lead																				_
Disable TS2 Diag	8																			

Detector	61	82	63	84	65	66	67	68	69	70	71	72
Volume Detector												
Occupancy	iii											
Yellow Lock Call			П	ĺ								
Red Lock call	8											
Extend												
Added Initial												
Queue												
Call								i				

Data Collection Period	60
Number of Periods	15

							9	
4	Disabled	Off	31	<u> </u>	l			1
5	Disabled	Off						
6	Disabled	Off						-
7	Disabled	Off						-
8	Disabled	Off		202.00				
9	Disabled	Off					000 000	
10	Disabled	Off					3.5-	19152
11	Disabled	Off				100		
12	Disabled	Off			5,000		-33-33	0.00000
13	Disabled	Off			5000 V 3000 50		(3.00)	
14	Disabled	Off		37343 296 638				
15	Disabled	Off						
16	Disabled	Off	A 5000000				20000	

OLP	TrG Omit Phs	Negative Peds	Neg Ped Ovlps	Gm Sup Phs	N Ped Phs Calls	Description
1				200		
2			2,000	<u> </u>		Secretaria
3	30		10.00			
4						
5					162	
8						

OLP	TrG Omit Phs	Negative Peds	Neg Ped Ovips	Gm Sup Phs	N Ped Phs Calls	Description
7						5
8						10
9		10010	- Bo			
10						
11						
12					2 (22) (25)	
13			100			
14			000			
15	N 300 000					3
18	20.20.20					

	_				_	_	_		100						
	Trail	Trail	Trail	Walk	Ped	Walk	Ped			Min	Mx Gm	Red	Flash	Flash	Welk
OLP	GRN	YEL	RED	1	Çir 1	2	Cir 2	Delay	Flash	Green	Ext	Revert	Inactive	Alt	Rest
1	0	0.0	0.0	0	Q	0	0	0.0	Off	0	Ð	0.0	Off	Off	Off
2	0	0,0	Q.D	٥	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
3	D	0.0	O.D	0	.0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
4	0	0.0	0.0	٥	0	0	0	0.0	Qfī	0	0	0.0	Off	Off	Off
5_	0	0.0	0.0	O.	0	0	0	0.0	Qff	0	0	0.0	Off	Off	Off
6	0	0.0	O.D	0	0	0	0	0.0	Off	٥	0	0.0	Off	Off	Off
7	0	0.0	0.0	0	o	0	0	0.0	Off	0	0	0.0	Off	Off	Off
8	D	0.0	0.0	٥	0	٥	0	0.0	Off	0	0	0.0	Off	Off	Off
9	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	_Off
10	0	0.0	0.0	0	0	0	٥	0.0	Off	0	0	0.0	Oli	Off	Off
11	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
12	0	0.0	0.0	0	0	0	0	0.0	Qf	0	0	0.0	Off	Off	Off
13	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Oli	Off	Q#
14	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
15	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
16	0	0.0	0.0	٥	0	٥	0	0.0	Off	0	0	0.0	Off	Off	Off

1	Overlap Options			_					5.7		1	1	1	1	1	1	1	
	Overlap	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	
	Startup Call													П				
	Recall													П				
1	No Veh Reserv			Γ		Γ	Γ							П		П	П	

			150		v		02.			1	1	1	1	1	1	1	l
Overlap	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	
Call for Service		355	Г														
Trail Gm Bridge									Г						П	П	
FYA Prot. Red CI		Г	Г	Г	П	Г	Г	Г	Г	Г						П	l

CIN									
8	0	0	0		Fix	Нопв	0	0	Float
9	0	0	0		Fix	None	0	0	Float
10	0	0	0		Fix	None	0	0	Float
11	0	0	0		Fix	None	0	0	Float
12	0	0	0		Fix	Мопв	0	0	Float
13	0	0	0		Fix	None	0	0	Float
14	0	0	0		Fix	None	0	0	Float
15	0	0	0	8	Fix	None .	0	0	Float
16	Q	0	0		Fix	enoM	0	0	Float

Split 2	<u> </u>			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Made	Mode	Min	Max	F. Off
1	_ 0_	O	0				Fix	None	0	0	Float
2	a	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	٥	0	0	8			Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float
9	0	0	0	22			Fix	None	0	0	Float
10	0	0	0	-			Flx	None	0	0	Float
11	a	0	0				Fix	None	0	0	Float
12	O	0	0	52			Fix	None	0	0	Float
13	0	0	0				Fix	None	0	0	Float
14	O	0	0	2000			Fix	None	0	0	Float
15	ů	0	0	70			Fix	enoM	0	0	Float
16	O	0	0	76			Fix	None	0	0	Float

Split 3	3			Coord	Ref	Cover	Force Off		Pri	Prl	Pri
PH.	Time	Min	Max	PH	PH	Ped	Made	Mode	Min	Max	F. Off
1	0	0	0			3	Fix	None	0	0	Float
2	0	0	0	8.			Fix	None	Ð	0	Float
3	o	0	0	6		3	Fix	None	0	٥	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0	ee 18		100000	Fix	None	Ð	0	Float
7	_ 0	0	0			S.	Fix	None	Ð	0	Float
8	O	0	0			S.	Fix	None	D	0	Float
9	0	0	0			8 0	Fix	None	0	0	Float
10	0	0	0			3 0	Fix	None	D	0	Float
11	0	0	0				Fix	None	0	0	Float
12	0	0	0	8			Fix	None	0	0	Float
13	0	0	0	8.3		3 0	Fix	None	0	0	Float
14	0	0	0	8. (8)			Fix	None	0	0	Float
15	0	0	0			94 0	Fix	None	D	0	Float
16	0	0	0				Fix	None	0	0	Float

Split 4	1			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Mex	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0	100		-75 -05	Fix	None	0	0	Float
2	0	0	0	00		3	Fix	None	0	0	Float
3	0	0	0	87		% 3	Fix	None	0	_0	Float
4	. 0	0	0			3	Fix	None	D	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0			3	Fix	None	0	0	Float
7	O	0	٥			4	Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float

, (IV)									
6	0	0	0	1 1	Fix	None	0	0	Float
7	0	0	0		Fix	None	0	0	Float
8	0	0	0		Fix	None	0	0_	Float
9	Q	0	0		Flx	None	0	0	Float
10	0	0	0		Fix	None	0	0	Float
11	0	0	0		Fix	None	0	0	Float
12	0	0	0		Fix	None	0	0	Float
13	0	0	0		Fix	None	0	o	Float
14	0	0	0	3000	Fix	None	0	0	Float
15	0	0	0		Fix	None	0	0	Float
16	0	0	0		Fix	None	0	0	Float

Split 8	3		31	Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Mex	PH	PH	Ped	Mode	Mode	Міп	Max	F. Off
1	0	0	0		30,00		Fix	None	0	0	Float
2	0	0	0				Flx	None	0	0	Float
3	0	0	Đ				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	Мопв	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	0	0	Ð				Fix	None	0	0	Float
8	0	Ð	Ð				Fix	None	0	0	Float
9	0	0	D				Fix	None	0	0	Float
10	0	D	D	3			Fix	None	0	0	Float
11	0	D	0	8			Fix	None	Đ	0	Float
12	0	0	Q	2 99			Fix	None	Ð	0	Float
13	0	0	0	2 20			Fix	None	Ð	0	Float
14	0	0	0	2 20			Fix	None	٥	0	Float
15	0	D	0				Fix	None	٥	0	Float
16	0	0	0	S	2	8 0	Fix	None	0	0	Float

Split 9	3		86	Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	emiT	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0			- 10 - 12	Fix	None	0	0	Float
2	0	0	0			60 U	Fix	None	0	0	Float
3	0	0	0		2 32 2 32	98 0	Fix	None	0	0	Float
4	0	0	O.			% 0 % 0	Fix	None	0	0	Float

Split 9	9			Coord	Ref	Caver	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
5	D	o	Q			1600 100	Fix	None	0	0	Float
6	0	0	0		. 600000		Fix	Nane	œ	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0		-		Flx	Nane	0	0	Float
9	0	0	0		31		Flx	None	c	ū	Float
10	0	0	0				Fix	None	٥	Ð	Float
11	٥	0	0	istor korocza	107 10		Fix	None	0	0	Float
12	0	0	0		10000-000-		Fix	None	0	0	Float
13	0	0	0				Fix	None	0	0	Float
14	0	0	0				Fix	None	0	0	Float
15	0	0	0				Fix	None	0	0	Float
16	0	0	0				Fix	None	0	0	Float

Split :	10			Coord	Ref	Cover	Force Off		Pri	Pri	₽ri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0			02040 NOON	Fix	None	0	0	Float
2	0	0	0	. xoros arc			Flx	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float

8	a	0	لسا	LE		D	0	1	8	0	0	8	0	0	
9	0	0		5		0	. 0		9	0	Q.	9	0	0	
10	0	0		11	0	0	. 0		10	D	a	10	0	0	

Day P	lan	17	
Even	Hour	Min.	Act
. 1	0	0	
2	0	0	
3	0	0	
4	0	0	
5	0	0	
6	0	0	
7	D	0	
8	0	0	
9	0	0	
10	D	0	

Day Pi	en	18	16.
Event	Hour	Min.	Act
1	Ð	0	
2	0	0	
3	Ð	0	
4	0	0	
5	0	0	
6	0	0	
7	ð	0	
8	0	0	L
9	0	0	
10	0	0	

Day F	'lan	19		Di
Even	Ноиг	Min.	Act	E
1	_ 0	0		. 6
2	O	a		
3	Đ	0		
4	0	Q	$oxed{oxed}$	
5	0	0		
6	0	0		
7	٥	0		Ĭ
8	0	0		
9	. 0	0		3
10	0	0		Ŀ

į	Day F	tan	20	y
	Even!	Hour	Min	 Act
	1	0	0	
	2	0	0	
	3	0	D	
	4	0	0	
	5	0	0	
	6	0	0	
	7	0	0	
	8	0	D	
	9	0	٥	
	10	0	0	

Acti	ons		Aux.			Special Functions						
Act	Pattern	1	2	3	1	2	3		5		7	
1	Pattern 1							40.00	33			
2	Pattern 2							- 100			1000	Γ
3	Pettern 3		1									Γ
4	Pattem 4	L								Ĺ		
5	Pattern 5											
6	Pattern 6											Г
7	Pattern 7	Ľ										
8	Pattern 8											
9	Pattern 9											L
10	Pattern 10											L
11	None								L			
12	None	L	L					L				L
13	None											
14	None	L				1						L
15	Free	L										L
16	None	L	L								L	L
17	None	L	L									L
18	None	L				2		L				L
19	None	L				1/2					_ ==	
20	Flash	L	_									L
21	None	L				7/2			8		9	L
22	None	L				1/2					9	L
23	None					3/2						L
24	None	L	L			<i>%</i>	L	L	L	L	L	L
25	None	L	L	L		L	L			L		L
26	None	L	L								L	L
27	None		L	L			Ĺ	Ĺ	Ĺ		Ĺ	Ĺ
28	None	L							(3)			L
29	None	Ĺ	Ĺ	Ĺ						Ĺ		Ĺ
30	None											Ĺ
31	None											
32	None											Ĺ

Acti	ons	7	۱ux		Special Functions							3
Act	Pattern	1	2	3		2		4				8
33	None	Ĺ										
34	None					38					_	
35	None											
36	None											
37	None											
38	None											
39	None				48							
40	None											
41	None											
42	None											
43	None											
44	None				100							
45	None											
46	None											
47	None									i		
48	None										L	
49	None		12	8 89					9			
50	None			0.80	45.							
51	None		82.5									
52	None											
53	None	$oxed{\Box}$. 97	AV ²							
54	None	Γ										
55	None											
56	None			2892								
57	None											
58	None											
59	None											
60	None											
61	None											
62	None											
63	None											
64	None											

Action Commands Action 1

Cmd	Command	Indexes
1	None	
2	None	
3	None	

Action 2

Crnd	Command	Indexes
1	None	·
2	None	
3	None	3

Preemption Configuration

Preempt	1	2	3	4	5	6	7	8
Enabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Туре	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh
Description								
Track Phases	w.					ili.		
Track 2 Phases	40707000000		22 W 20 0		Program y			
Track Overlaps						24	203	
Track 2 Overlaps							_	
Dwell Phase						4	3.	
Dwell Ped						25 23516336		
Dwell Overtaps	221		MC000000000000000000000000000000000000					
Cycling Phases	<u>-</u>							
Cycling Peds					57075 (8)	8		
Cycling Overlaps			372		4000	16		
Exit Phases			ill.			16		
Exit Overlaps						% %	V	
Exit Veh Calls				\$ / A	32	86		
Exit Ped Calls					\$ 100 to 100			
Recovery Omit Phs) 		
Max Pres Action	0	0	0	D	0	Ð	0	0
Exit Type	Exit Phases	Exit Phases	Exit Phases	Exit Pheses	Exit Phases	Exit Phases	Exit Phases	Exit Phases
Exit Max Mode	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled

Cabinet Config

Run ITS on NEMA port 1	No	Enable TS2/ATC Stop Time
Run ITS on 2070-1C C13S	No	Disable TS2 Startup Call

Disable TS2 Fault Flash	
Disable TS2 Cab. Alarms	х

IO Modules

	nnel Configura	tion
Chan	Cirl Type	Sou

IO Mod	TYPE	Chan	Cirl Type	Source	MMU Channel
1	Caltrans 332	1	Phs Veh	1	1
2	TS2 MMU	2	Phs Veh	2	2
3	TS2 DR1 BIU	3	Phs Veh	3	3
4	TS2 DR3 BIU	4	Phs Veh	4	4
5	None	5	Phs Veh	5	5
6	None	6	Phs Veh	6	6
7	None	7	Phs Veh	7	7
8	None	8	Phs Veh	8	8
9	None	9	Olp	9	9
10	None	10	Olp	10	10

Chan	Ctrl Type	Source	MMU Channel
11	Olp	11	11
12	Olp	12	12
13	Phs Ped	2	13
14	Phs Ped	4	†4
15	Phs Ped	6	15
16	Phs Ped	В	16
17	None	0	17
18	None	0	18
19	None	0	19
20	None	O	20

Channel Options

Channel Opt	ions															
Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Yellow		х				х		- 3								9
Flash Red				х				х								
Alt Flash			5 20	х				х		9.90						
Channel	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Flash Yellow	12					5										96
Flash Red	80	. 60			27879											
Alt Flash	25 00000	1000	2 88				8									

Phase Intervals

Interval	Description	Red	Yel	Grn	Туре
1	Not Act	On	Off	Off	Red
2	Dly Gm	Оп	Off	Off	Red

Interval	Description	Red	Yel	Gm	Турв
7	Pre Cir	IIO II	Off	On	Green
8	Yel Change	Off	On	Off	Yellow

Peer Configuration

4				IP	Http	Serial	Serial	Master	P2P	
Ctrl	Peer ID	Device Type	IP address	Port	Port	Port	Addr	Sect.	TO	Description
1	0	Peer MaxTime		161	80	0	Q	0	15	
2	0	Peer MaxTime		161	80	0	0	0	15	
3	0	Peer MaxTime		161	80	0	0	0	15	33.35
4	0	Peer MaxTime		161	80	0	0	0	15	
.5	0	Peer MaxTime		161	80	0	Ó	٥	15	MESS
6	0	Peer MaxTime		161	80	0	0	O	15	
7	0	Peer MaxTime		161	80	0	0	0	15	
8	0	Peer MaxTime		161	80	0	0	0	15	
9	0	Peer MaxTime	86	161	80	0	0	0	15	
10	0	Peer MaxTime		161	80	٥	O	0	15	

Master Section Configuration

master	naster Section Configuration										
Section	Control	Poll	Req#	Fail Time	Algorithm Period	Description					
1	None	60	1	300	240	1					
2	None	60	1	300	240	di.					
3	None	60	1	300	240	2002					
4	None	60	1	300	240	\$10					
5	None	60	1	300	240	<u> </u>					
_ 6	None	60	1	300	240						
7	None	60	1	300	240						
В	None	60	1	300	240						
9	None	60	1	300	240	25					
10	None	60	_11	300	240	<u> </u>					
11	None	60	1	300	240	20202					
12	None	60	1	300	240						
13	None	60	1	300	240	5					
14	None	60	1	300	240						
15	None	60	1	300	240						
16	None	60	1	300	240						

User Program Info

Pgm	Description
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Pgrm	Description
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	

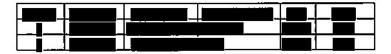
WYDOT Administration

MaxTime Timing Sheet

3365 WYDOT Default :Cross Black_White.jpg

55 <u>-</u>	Unit Information
Controller ID	12

	Out anomation
Controller ID	12
Main St.	Missle
Side St.	1-25 NB



Serial Ports:

Port	Description	Function	Address	Baud	Bits	Stop	Parity	Flow	CTS	RTS
1	Port 2/C215	None	1	9600	8	1	None	None	0	0
2	Aux_P3/C22S	None	1	9600	8	1	None	None	0	0
3	SDLC Port 1	None	1	9600	8	1	Nane	None	0	0
4	Com A/C50S	None	1	9600	8	1	None	None	0	0
5	FIO	None	1	9600	8	1	None	None	0	0
6	DISPLAY/C60M	None	1	9600	8	1	None	None	0	D
7	SP7	None	1	9600	8	1	None	None	0	٥
8	SP8/Com B	None	1	9600	8	1	None	None	0	0

Unit Parameters

Startup Flash	0
All Red Exit	0
MCE Seq	1
Master By TOD	Disable

Auto Ped Cir	Enable
Gm Flash Fre	. 60
Start Yellow	0.0
Flash CVM	Disable

Red Revert	4.0
Yel Flash Freq	60
Start Red	0.0
All Red Flash	Disable
Auto Ped Clear	Enable

2 52	50 KS
Backup Time	600
MCE Enable	Enable
Start Clear Hold	0
3 Phs Dia Seq	
4 Phs Dia Seq	

Ext Mode	Enable
Free Sea	1

Phase Parameters

HOSE I BIBLINGIO	•																			
Phases	1	2	3	4	5	6	7	8	9	1D	11	12	13	14	15	16	17	18	19	20
Walk Time	0	O	٥	0	0	0	0	Ð	O	O.	0	0	0	٥	0	0	٥	0	٥	٥
Clear Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	D	0	0	0	o	0	0	0	Q	0	q	0	0
Min Green	5	15	5	5	4	15	5	4	1	1	1	1	1	1	1	1	1	1	1	1
Min Green 2	0	0	0	0	0	0	٥	0	0	0	0	0	0	0	0	0	0	0	0	0
Passage	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max-1	0	35	0	0	10	30	0	25	O	0	0	0	0	0	0	0	0	0	0	0
Max-2	0	35	0	0	10	30	0	35	Đ	0	o	٥	0	0	0	0	0	0	0	0
Max-3	0	0	0	0	0	0	0	0	0	O	0	٥	0	Ð	0	0	0	0	0	0
Conditional Max	0	0	0	0	0	0	0	0	0	٥	0	0	0	٥	0	0	0	0	0	0
Yel Change	3.0	4.1	3.0	3.0	4.1	4.1	3.0	3.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	30
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Add Red Clean	0	0	0	٥	0	0	0	0	0	0	0	0	0	0	0	0	D	0	0	O
Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	0.0	0.0	0.0	0,0	0,0	0,0	0,0	0,0	0,0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0	0,0	0,0	0.0
Max Initiat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time 84 Reduce	0	o	0	0	0	0	0	0	٥	0	0	0	0	Q	٥	0	٥	0	0	0
Çars 84 Reduce	0	0	0	0	0	0	0	.0	0	٥	0	0	0	0	٥	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	D	0	0	0	0	0	0	0	0	0	0
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	0,0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 0
Dyn Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Đ	0	0
Dyn Max Step	0.0	0.0	0.0	0.0	0,0	0,0	0,0	0.0	0.0	0,0	0.0	0,0	0,0	0,0	0,0	0.0	0,0	0,0	0,0	0.0
Advance Walk	٥	0	٥	0	Ð	0	0	0	0	0	0	0	0	0	0	0	0	D	0	0
Delay Ped	۵	0	O.	0	0	0	0	0	0	0	0	٥	0	0	0	0	0	D	0	0
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Ped Cir	0	Ð	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

I WIN			
3	3	3 1] [3]
4	4	4	4
5	5	5	5
6	G	6	G
7	7	7	7
8	8	8	8

lequence 1	Sequence 2	Sequence 3	Sequence 4
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16

Phase Configuration

Ph.	Startup	Ring	Concurrent	Startup Min	Description
1	Phase Not On	D		0	
2	Green No Walk	1	6,5	a	EB
3	Phase Not On	0		a	
4	Phase Not On	0		0	
5	Phase Not On	2	2	0	EBLT
6	Green No Walk	2	2	Q	WB
7	Phase Not On	0		0	
8	Phase Not On	2		0	NB
ø	None	0		0	
10	None	O		0	
11	None	0		0	
12	None	0		0	
13	None	0		0	
14	Nane	0		0	
15	None	0		0	
16	None	0		0	
17	Nane	0	·	0	
18	None	0		0	
19	None	0		0	
20	None	0		0	

Sequence Configuration

lequence 1		nce 1 Sequence 2				Sequence	Sequence 4					
Ring	Phases	Ring	Phases	Ring	Phases	Ring	Phases					
1	2,a,b	1		1	***************************************	1						
2	6,5,a,8,b	2		2		2						
3		3		3		3						
4	100	4		4		4						
5		5		5		5						
6		6		6		6						
7		7		7		7						
8		8		8		8						
9		9		9		9						
10		10		10		10						
11		11		11		11						
12		12		12		12						
13		13		13		13						
14		14		14		14						
15	•	15		15		15						

	14	14	1 1 14 1	14
į	15	15	15	15
1	16	16	16	16

Ring	Phases
1	
2	
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4	
5	
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7	
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Sequence	18
Ring	Phases
1	
2	
3	
4	
5	
6	
7	
8	

Sequen	ce 19
Ring	Phases
1	200 100-100
2	
3	
4	
5	
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Seguence 20										
Ring	Phases									
11										
2										
3										
4										
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6	10.00									
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Sequen	ce 17
9	-2.3
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9		
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Sequen	ce 19
9	
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16	

Seque	ence 20
9	
10	
11	
12	
13	×
14	
15	4
16	2

Global Phas	8 (Re	ca	lis	•					1	1	1	1	1	1	1	1	1	1	2
Phase	1	2	3	4	5	6	7	В	я	0	1	2	3	4	5	6	7	8	9	٥
Min								2.55												
Max																				
Ped														8						
Act Walk Rest							l "	-	_	Γ	Γ			300				100		

Global Veh Det Diagnostics

Alabai tali bar bidililaariaa								
Global No Activity	0							
Global Max Presence	0							
Global Erractic Count	1							
Global Failed Recall	None							
Detector Resel Enable	Enabled							

Global Ped Det Diagnostics

Global No Activity	0
Global Max Presence	0
Globel Erractic Count	0

Global	Pri/Pro	Dat	nein
GIUDAI	FIVEIG	LOL	viau

Global No Activity	a
Global Max Presence	a
Global Erractic Count	a

Vehicle Detection Parameters

ven	icie i	Dete	CUO	n Parame	iers											
9/101	Call	Call	Call	Add Call	Sw			Queue	Ext	No	Max	Erratic	Failed	Failed	Fail	<u></u>
Det.	Phs	Ped	Ovi	Phases	Phs	Delay	Extend	Limit	Hold	Activity	Pres	Counts	Time	Recall	Link	Description
1	2	0	0		0	0.0	0.0	0	0.0	0	10	255	25	None	0	EB Truck
2	2	0	0		0	0.0	0.0	0	0.0	٥	10	255	25	None	0	EB Dilemma
3	2	0	0		0	0.0	0.0	0	0.0	0	10	255	25	None	0	EB C/Ext-Q
4	5	0	0	6	0	5.0	0.0	D	0.0	0	20	255	0	Min Rec	alD	EBLT C/Ext
5	0	0	0		0	0.0	0.0	0	0.0	٥	0	0	0	None	0	
6	0	0	0		0	0.0	0.0	0	0.0	0	0	0	0	None	0	400,000
7	Q	0	Q.		0	0.0	0.0	0	0.0	D	0	0	0	None	0	A CONTRACTOR OF THE PARTY OF TH
8	0	0	0		0	0.0	0.0	0	0.0	D	0	0	0	None	D	
9	6	0	0		0	0.0	0.0	0	0.0	Đ	10	255	25	None	Ð	WB Truck
10	6	٥	0		0	0.0	0.0	0	0.0	0	10	255	25	None	0	WB Dilemma
11	6	0	0		0	0.0	0.0	0	0.0	0	10	255	25	None	D	WB C/Ext-Q
12	0	0	0		0	0.0	0.0	0	0.0	D	0	0	0	None	0	30
13	8	0	0		0	0.0	0.0	0	0.0	0	10	255	Q	None	0	NB Ext
14	8	0	0		0	0.0	0.0	0	0.0	0	20	255	10	None	0	NB C/Ext
15	8	0	0		0	15,0	0.0	0	0.0	0	20	255	0	Min Red	a110	NB C/Ext-delay
16	0	0	a		0	0.D	0.0	a	0.0	0	0	0	0	None	0	

Added Initial Queue Cell

71	0	0	0	1	0	0.0	0.0	0	0.0	0	٥١	0	l 0	None	<u>_o</u> _	
72	0	0	0		0	0.0	0.0	0	0.0	0	0	0	0	None	0	50,000 00

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Vo	lume	Delec	tor	х	х	х	х					х	X	X		х	х	х					
	٥c	cupar	cv	х	х	х	Х					X	Х	X		X	Х	х			-	_	
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4	Disabled	Off			1		<u></u>
5	Enabled	FYA - 4 Sec	6	5			
6	Disabled	Off				<u></u>	
7	Disabled	FYA - 4 Sec	8	7			
8	Disabled	Off					
9	Disabled	Off					
10	Disabled	Off				Agra-20	
11	Disabled	Off				200000	
12	Disabled	Off					
13	Disabled	Off					
14	Disabled	Off					
15	Disabled	Off				·	
16	Disabled	Off					

OLP	TrG Omit Phs	Negative Peda	Neg Ped Ovips	Grn Sup Phs	N Ped Phs Calls	Description
1		45				
2						
3		,				
4						
5						EB FYLTA
6						3

OLP	TrĢ Omit Phs	Negative Peds	Neg Ped Ovips	Gm Sup Phs	N Ped Phs Calls	Description
7		P. 1036	300001 70000000			
8						
9			127			•
10	1819x0 Cr (1 ACOCC + C					
11						
12			//- //			
13			0.000			
14	Ü	3.3.0				
15						
16	Decree of the second					

	Trail	Treil	Trail	Walk	Ped	Walk	Ped		33	Min	Mx Gm	Red	Flash	Flash	Walk
OLP	GRN	YEL	RED	1	Cir 1	2	Cir 2	Delay	Flash	Green	Ext	Revert	Inactive	Alt	Rest
1	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
2	0	0.0	0.0	0	D	0	0	0.0	Off	0	0	0.0	Off	Off	Off
3	٥	0,0	0.0	0	٥	0	0	0.0	Off	Q	٥	0.0	Off	Off	Off
4	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
5	0	0.0	0.0	0	D	0	0	0.0	Off	0	0	0.0	Off	Off	Off
6	0	0.0	0.0	0	0	0	0	0.0	Off	Ó	0	0.0	Off	Off	Off
7	0	0.0	0.0	0	Q	0	٥	0.0	Off	0	0	0.0	Off	Off	Off
8	0	0.0	0.0	0	0	0	0	0,0	Off	0	0	0.0	Off	Off	Off
9	0	0.0	0.0	0	0	0	0	_ Q,D	Off	0	0	0.0	Off	Off	Off
10	0	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
11	0	0.0	0.0	0	0	0	0	0.0	Qff	0	0	0,0	Off	Off	Olf
12	0	0.0	O.D	0	0	0	0	0.0	Off	0	0	0,0	Off	Off	Off
13	٥	0.0	0.0	0	0	0	0	0.0	Off	0	0	0.0	Off	Off	Off
14	D	0.0	0.0	0	0	0	0	0.0	Off	a	0	0.0	Off	Off	Off
15	0	0.0	0.0	٥	0	0	0	0.0	Off	a	0	0.0	Off	Off	Off
16	٥	0.0	0.0	0	0	٥	0	0.0	Off	0	0	0.0	Off	Off	Off

Overlap Options		· ·								1	1	1	1	1	1	1
Overlap	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
Startup Call	% (%			8	35			8 8	98				20	0	- 10	2 8
Recal	8				- 33		1							90	100	8
No Veh Reserv			Г	Г	Г	Г		Г			Г	ं	Г	_	_	

ė.									30	1	1	1	1	1	1	1	ı
Overlap	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	ĺ
Call for Service	300		100		8		2 0		5200 500	0 0			1222		**	2000	ı
Trail Gm Bridge	300		100		88		2 0		- 20 - 30	3 8			0000		25	- 1	l
FYA Prot. Red Cl	9				х			Γ	- 53	8		Γ	Γ				

II MIN				i i				
8	σ	0	0	Fix	None	0	0	Float
9	a	0	0	Fix	None	D	0	Float
10	a	0	0	Fix	None	0	0	Float
11	0	0	0	Fix	None	0	0	Float
12	0	0	0	Fix	None	0	0	Float
13	0	0	0	Fix	None	0	0	Float
14	٥	0	0	Fix	None	0	0	Float
15	Q	0	0	Fix	None	0	0	Float
16	0	0	0	Fix	None	0	0	Float

Split 2	2		3	Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	₽H	Ped	Mode	Made	Min	Мах	F. Off
1	П	0	O				Fix	None	0	0	Float
2	0	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0	101			Fix	None	0	0	Float
6	Q	0	0				Fix	None	0	0	Float
7	0	0	0	3/2			Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float
8	0	0	0	100			Fix	None	D	0	Float
10	0	0	0				Fix	None	D	0	Float
11	0	0	0				Fix	None	Q	0	Float
12	0	0	0			8	Fix	None	0	0	Float
13	0	0	0				Fix	None	0	0	Float
14	0	0	0	10.00			Fix	None	٥	0	Float
15	0	0	0				Fix	None	٥	0	Float
16	O	0	0				Fix	None	0	0	Float

Split 3	3			Coord	Ref	Соувг	Force Off		Pri	Рп	Pri
PH.	Time	Min	Мах	₽H	PH	Ped	Mode	Mode	Min	Mex	F. Off
1	0	0	0	2			Fix	None	0	0	Float
2	0_	0	0				Fix I	None	0	0	Float
3	0	0	0		N		Fix	None	0	0	Float
4	0	Ð	0		1000	Ď.	Fix	None	٥	0	Float
5	0	0	0	9		8	Fix	None	0	0	Float
6	0	0	0		8 0		Fix	None	D	0	Float
7	0	0	0			V	Flx	None	0	0	Float
В	0	D	0				Fix	None	a	Ð	Float
9	0	0	Ð		6 89		Fix	None	٥	0	Float
10	0	0	0				Fix	None	0	ū	Float
11	0	0	Ð				Fix	None	0	0	Float
12	0	D	0				Fix	None	٥	Ō	Float
13	0	0	0	0	8 %		Fix	None	٥	0	Float
14	0	0	0				Fix	None	0	0	Float
15	0	0	Ö				Flx	None	0	0	Float
16	0	0	0				Flx	Nane	ů	0	Float

Split 4				Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Мах	F. Off
1	0	O	0	2	U 60		Fix	None	G	0	Float
2	0	0	0	38			Fix	Nane	0	0	Float
3	0	0	0	3	30		Fix	None	0	0	Float
4	0	0	0	z.			Fix	Nane	0	0	Float
5	0	O	0	8			Fix	Nane	0	0	Float
6	0	0	0	2			Fix	None	0	0	Float
7	0	0		71			Fix	None	0	0	Float
8	0	0	0	3		8	Fix	Nane	0		Float

1 AM											
8	0	0	0		1		Fix	None	10	0	Float
7	0	0	0				Fix	None	0	0	Float
В	0	0	0				Fix	None	0	0	Float
9	0	0	0		$oxed{oxed}$		Flx	None	0	0	Float
10	0	0	0				Fix	None	0	0	Float
11	0	0	0				Flx	None	0	0	Float
12	0	0	0				Fix	None	0	0	Float
13	0	0	0				Fix	None	0	0	Float
14	0	0	0				Fix	None	0	0	Float
15	0	0	0				Flx	None	0	0	Float
15	0	0	0				Fix	None	0	0	Float
Split I	3			Coord	Ref	Cover	Force Off	<u>.</u>	Pri	Pri	Pri
PH.	Тітне	Min	Max	PH	PH	Ped	Mode	Mode	Min	Мех	F. Off
	_	1 ~					Fig. (M	T ~	_	F11

Split 8	3			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Тітне	Min	Max	PH	PH	Ped	Mode	Mode	Min	Мех	F. Off
1	0	0	0				Fix	None	٥	0	Float
2	0	0	0	2.5			Fix	None	٥	.0	Float
3	0	0	0				Fix	None	٥	0	Float
4	0	0	0				Fix	None	0	0	Float
5	Q	0	0				Fix	None	٥	0	Float
6	Q	0	0				Fix	None	٥	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0			3	Flx	None	0	0	Float
9	0	0	0	_			Flx	None	٥	0	Float
10	0	0	Ō	0000			Fix	None	0	0	Float
11	0	0	O				Fix	None	0	0	Float
12	0	0	0				Flx	None	0	0	Float
13	0	0	0				Fix	None	0	0	Float
14	0	0	0			7 777	Fix	None	٥	0	Float
15	0	0	0				Fix	None	٥	0	Float
16	0	0	0		2	3	Fix	None	0	0	Float

Split 9	3			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
₽H.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Flx	None	O	0	Float
2	0	0	0				Flx	None	0	0	Float
3	0	0	0		0.19		Fix	None	0	0	Flost
4	0	0	٥		A 80	92 0	Flx	None	0	0	Float

Split I	9			Coord	Ref	Caver	Force Off	DO NOVE	Pri	Pri	Pri
PH.	Time	Min	Мах	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
5	0	D	0		0 95	92	Fix	None	0	0	Float
6	0	0	0		0 30 6 30		Fix	None	0	0	Float
7	0	0	0	9	0 99 6 99		Fix	None	a	0	Float
В	0	D	0	2202	0 30 0 30	92	Fix	None	0	0	Float
9	0	D	٥	3	90		Fix	None	0	0	Float
10	0	0	0	% 	9 99	3 3	Fix	None	0	0	Float
11	0	D	0			3550 s	Fix	None	0	0	Float
12	0	D	0			5046 1	Fix	None	0	0	Float
13	0	0	٥		- 28	32534	Fix	None	0	0	Float
14	0	0	0		33		Fix	None	0	0	Float
15	0	0	0	<u> </u>		3	Fix	None	Q	Ð	Float
15	0	0	0				Flx	Nane	0	0	Float

Split 1	0		100 - 40	Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	eboM	Mode	Min	Мах	F. Off
1	0	0	0				_ Fix	None	0	٥	Float
2	0	0	0				Fix	None	٥	0	Float
3	0	0	0	as a			Fix	None	0	Ð	Float

						100									
8	1 0	0	 L	8	0	_0_		8	0	0	2 1 2	8	a	0	
9	0	0		9	0	0		9	0	0		9	_ 0	0	
10	0_	0	ΙE	10	0	Q		10	0	0		10	a	0	

Day P	lan	17		9
Even	Hour	Min.	Act	j
1	0	0		1
2	0	0		
3	0	0		
4	0	0		
5	Đ_	0		-
6	0	0		-
7	Ð	0		
8	0	0		
9	Đ	0		
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Action Commands

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1	None	
2	None	22 22
3	None	

Action 2

Cmd	Command	Indexes
1	None	
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3	None	

Preemption Configuration

reempt	t	2	3	4	5	6	7	8
Enab le d	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
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Max Pres Action	0	0	0	0	0	0	0	0
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Exit Max Mode	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled

Cabinet Config

Run ITS on NEMA port 1	No	Enable TS2/ATC Stop Time
Run ITS on 2070-1C C13S	No	Disable TS2 Startup Cail

I	Disable TS2 Fault Flash	
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IO Modules

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3	TŠ2 DR1 BIU				
4	TS2 DR3 BIU				
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2	Phs Veh	2	2
3	Оlр	3	3
4	Phs Veh	4	4
5	Olp	5	5
6	Phs Veh	. 6	6
7	Olp	7	. 7
8	Phs Veh	8	8
9	Olp	9	9
10	Olp	10	10

Chan	Ctrl Type	Source	MMU Channel		
11	Оlp	11	11		
12	Olp	12	12		
13	Phs Ped	2	13		
14	Phs Ped	4	14		
15	Phs Ped	6	15		
16	Phs Ped	8	16		
17	None	a	17		
18	None	a	18		
19	None	0	19		
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Channel Options

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Phase Intervals

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Interval	Description	Red	Yel	Gm	Тура
7	71000				Green
8	Yel Change	Off	On	Off	Yellow

Peer Configuration

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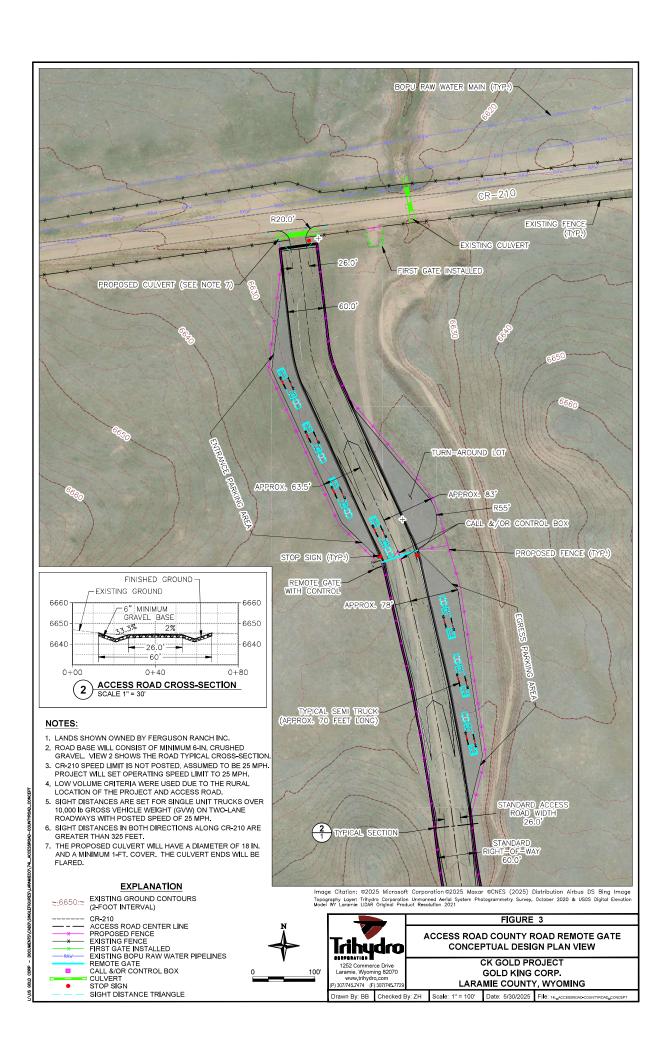
Master Section Configuration

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User Program Info

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Mark Gordon, Governor

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Todd Parfitt, Director

April 29, 2024

Mr. Patrick Crank Gold King Corp. 1815 Evans Ave. Cheyenne, WY 82001

RE: Gold King Corp., Application for a Surface Gold Mine Permit TFN 7 2/142

Dear Mr. Crank:

I have received and reviewed the recommendation provided by the Land Quality Division (LQD) Administrator regarding the Gold King Corp. (GK) application for a Surface Gold Mine Permit TFN (Temporary Filing Number) 7 2/142. The applicant has applied for a gold surface mining operation located in Sections 25 & 36, Township 14 North, Range 70 West and Section 31, Township 14 North, Range 69 West in Laramic County, Wyoming. The proposed permit area will cover 1,628.8 acres and GK intends to affect approximately 1,057 acres within the permit boundary. I accept the recommendation of the LQD Administrator and as the Wyoming Department of Environmental Quality Director approve the issuance of this permit in accordance with Wyoming Statute §35-11-406(q)(ii). I also accept the recommendations of the LQD Administrator for the following conditions to be placed on the Form 1 of the permit approval:

Condition 1: No construction or mining activities shall be allowed to commence until the reclamation performance bond, in the amount of \$5,010,000 as set forth in the Director's Bond Letter dated February 20, 2024, is approved.

Condition 2: The application states multiple discharge points that require WYPDES permits. The operator has applied for these permits and is awaiting final approval. As a non-significant revision (NSR) to the approved permit, the operator shall provide an updated map of approved discharge locations and a list of WYPDES permit numbers when they are made available to them. The operator is not authorized to conduct discharge activities until the permits are approved and placed into the permit.

Condition 3: No construction or mining activities shall be allowed to commence until the applicant obtains required WDEQ-Air Quality Division (AQD) permits. As an NSR to the approved permit, a copy of the approved AQD permit(s) shall be inserted into the approved mining plan when they are made available.

A copy of this letter and the Administrators report, and recommendations will be mailed to the objector of record. The applicant or objector who filed an objection on or before March 29, 2024, may appeal this decision to the Environmental Quality Council within 30 days after this notification of agency action.

Todd Parfitt Director

cc: Nolan Rapp, Natural Resources Policy Staff Kyle Wendtland, Land Quality Division Administrator Greg Weisz, Senior Assistant Attorney General Nancy Vehr, Air Quality Administrator Jennifer Zygmunt, Water Quality Administrator Robin Jones, LQD District 1 Supervisor

Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Mark Gordon, Governor

Todd Parfitt, Director

MEMORANDUM

TO:

Todd Parfitt, Director

FROM:

Kyle Wendtland, Administrator LOD

DATE:

April 29, 2024

SUBJECT:

Public Notice Comments, Actions, & Recommendations, Gold King Corp., Regular

Mine Permit Application, Temporary Filing Number (TFN) 7 2/142.

Section 1, General Project Overview

The application package for this Regular Mine permit was received by the Land Quality Division (LQD) on September 13, 2022. The application was declared complete on November 16, 2022 and the application notice was published in the Wyoming Tribune Eagle and the Laramie Boomerang on November 21 & 28, 2022. Declaration of application completeness indicates that all the necessary components of the application are present and prompts the review of the application for technical adequacy.

Once declared complete, the application was reviewed by the LQD District 1 (D1) staff for technical deficiencies as required by the Wyoming Environmental Quality Act. Application reviews were provided by the following D1 staff: Chad Haley, Natural Resource Program Principal; Brian Goodnough, Surface Water Hydrologist; Blaise Hansen, Geologist; Christine Henkel (former staff) Wildlife Biologist; and Robin Jones D1 Supervisor, Vegetation Ecologist. Additionally, a hydrogeological contractor [Geosyntec Consulting, Inc. (GS)] was employed by the Department to provide independent review of geological, hydrogeological, and geochemical aspects of the application.

The first round of technical comments was submitted to Gold King Corp. (GK) on April 13, 2023. Responses to these technical comments were received by LQD on October 9, 2023 and the second-round technical comments were sent to GK November 8, 2023. Response to the second-round was received by LQD on January 2, 2024. Review of these responses was concluded with the application package being deemed technically complete on February 1, 2024. At this time GK was instructed by LQD to proceed with the provisions of Wyoming Statute (W. S.) §35-11-406(j) and the first date of public notice of a technically adequate application in the Wyoming Tribune was February 7, 2024. The technically adequate notice also published February 14, 21 and 28, 2024. The statutorily required 30-day comment period opened February 29, 2024 and concluded March 29, 2024.

Section 2, Comments and Actions:

The Land Quality Division received fifteen (15) total comments in relation to this Regular Mine application. Fourteen (14) of these comments expressed support for the mine application. LQD reviewed these comments and has included them in the record for the project.

The one (1) remaining comment was not expressed as a formal objection to the application but rather a concern from a landowner with property located in the general vicinity of the proposed project. This concern

was centered around the water well on the objector's property in relation to various development aspects of this project. Specifically, the concern centered on water production from the objector's well and how it may be affected by project water use from the proposed Lone Tree Creek Well Field and the effect of inflow of local groundwater to the proposed mine pit. In order to address these concerns LQD tasked GS with providing an independent third-party review of the citizen's concerns. This independent review of the citizen's concerns was provided to LQD by email on 4/17/2024.

Section 3, Administrators Review and Recommendations:

Wyoming Statute W. S. §35-11-406(q)(ii) directs the LQD Administrator to review all objections, and forward a report and recommendations on the objections to the director. The following address the one citizen concern that LQD received during the thirty (30) day public comment period for this application. Additionally, the following includes a recommendation for three (3) conditions to be placed on the Form 1 of the application to address the various timing of permitting actions and project bonding requirements.

Citizen's Concern

Prompted by the citizen's concern (Attachment A) noted above the LQD tasked GS to conduct an independent review of available materials to address this concern. The review by GS analyzed permit application documents, the Wyoming State Engineer's Office permit summary for the property well in question, and several studies performed by the Wyoming Water Development Office related to the development of the Lone Tree Creek Well Field (LTC). One aspect of the project development that concerned the citizen included a question of probable impact to the property well in relation to the development of LTC well filed. Through the analysis (Attachment B), GS determined that the property well is placed in Precambrian aged Sherman Granite. Additionally, the LTC well field is proposed to be installed in the Permian-Pennsylvanian aged Casper Formation approximately 7.9 miles to the southeast of the property well. The GS analysis reported that the property well and the LTC are in separate, distinct geologic formations and that there is "little to no hydraulic conductivity between the two locations." Further, the GS analysis indicated that groundwater drawdown effects from the proposed pumping at the LTC are projected to be limited to the Casper Formation and other shallow aquifers in the immediate area of the LTC well field.

Another aspect of the project development that concerned the citizen included the potential of the mining pit development leading to dewatering of the property well. The GS analysis indicated that the long-term groundwater drawdown effects related to development of the mining pit are projected to be limited to the CK Gold Mine Property only, i. e., limited to the proposed permit boundary, which is approximately 3.5 miles southeast of the property well.

The information provided by GS confirms that there will likely be no impact to the property well from either the mining activities or the pumping of groundwater at the LTC well field.

Form 1 Recommended Permit Conditions:

The following three (3) conditions are recommended for inclusion on the Form 1 of the approved application. The necessity to include these conditions on the Form 1 are to ensure, despite the unknown timing associated with these various objectives, that these will be in place prior to the initiation of any project development activity under the LQD permit. Including these conditions on the Form 1 of the permit application in no way constitutes reasons for permit denial as outlined in W. S. §35-11-406(m).

Reclamation Performance Bond

Condition 1: No construction or mining activities shall be allowed to commence until the reclamation performance bond, in the amount of \$5,010,000 as set forth in the Director's Bond Letter dated February 20, 2024, is approved.

WYPDES

Condition 2: The application states multiple discharge points that require WYPDES permits. The operator has applied for these permits and is awaiting final approval. As a non-significant revision (NSR) to the approved permit, the operator shall provide an updated map of approved discharge locations and a list of WYPDES permit numbers when they are made available to them. The operator is not authorized to conduct discharge activities until the permits are approved and placed in the permit.

Air Quality Permits

Condition 3: No construction or mining activities shall be allowed to commence until the applicant obtains required WDEQ-Air Quality permits. As an NSR to the approved permit, a copy of the approved AQD permit(s) shall be inserted into the approved mining plan when they are made available.

Recommendation

This permit application has met all the requirements outlined in W.S. §35-11-406 and the LQD Noncoal Rules and Regulations. Statutory deadline requirements were met by the LQD staff.

I, as the Administrator of the WDEQ-LQD, <u>recommend approval</u> of the proposed mine permit (TFN 7 2/142) with the above three (3) permit conditions.

Memorandum

Date:

April 17, 2024

To:

Chad Haley, Muthu Kuchanur, and Robin Jones, Wyoming Department

of Environmental Quality Land Quality Division

Copies to:

David Folkes, P.E. (CO), Martina Litasi, P.G. (WY),

Sarah Walker, P.G. (NC), Luke Varner, G.I.T.(FL)

From:

Geosyntec Consultants, Inc.

Subject:

Gold King Corporation, CK Gold Mine Permit Application, Review of

Public Comments

Geosyntec Consultants (Geosyntec) has completed its review of Mr. Bert McCauley's public comments regarding Gold King Corporation's CK Gold Mine Regular Mine Operating Permit Application (Temporary Filing Number 7 2/142). This review is focused on Mr. McCauley's concerns regarding the CK Gold Mine's pumping requirements from the proposed Lone Tree Well Field and how potential drawdown may impact aquifers in the region of the CK Gold Mine and specifically the well located at his home (P180840). The remainder of this document outlines observations made during review of the regional hydrogeology near the CK Gold Mine Pit (Pit), the Lone Tree Creek (LTC) Well Field as they apply to Mr. McCauley's comments. The Pit, the LTC Well Field, and P180840 are depicted on Figures 1 and 2.

Mr. McCauley's Well (water right P180840)

P180840 is located approximately 3.6 miles northwest of the Pit and approximately 7.9 miles northwest of the LTC Well Field (farther than the 6 miles noted in Mr. McCauley's comment). Publicly available literature discussing hydrogeology in the area of P180840 includes Wyoming State Geological Survey's *Geology of Curt Gowdy State Park*, which suggests P180840 and other wells in the surrounding area likely extract groundwater from localized unconsolidated aquifers forming in the Laramie Mountain drainage features and fractured bedrock zones of the Sherman Granite. These zones receive groundwater recharge from Laramie Mountains precipitation infiltrating through shallow surface sediments (if present) into the fractured bedrock. However, no literature was found to provide hydraulic characteristics of these water bearing zones within the Sherman Granite.

The Wyoming State Engineer's Office (SEO) permit summary lists P180840 installation to a depth of 500 feet (ft) below land surface (bls) and is claimed by Mr. McCauley to average an estimated depth to water of 460 ft bls. This suggests approximately 40 ft of water column within the well. Mr. McCauley indicates P180840 exhibits anomalous water levels in comparison to other wells in the vicinity stating other wells in the area typically exhibit water levels up to several hundred feet above the well depths and therefore suspects his well to be in a perched aquifer zone. However, no well specific measurements (depth to water [DTW]) are provided for Mr. McCauley's or other

Geosyntec Consultants CK Gold Mine Permit Application Review of Public Comments Page 2

neighboring wells. Groundwater level variability in fractured bedrock areas with limited hydraulic connectivity to surrounding aquifers is common and typically results in isolated water bearing zones. Additionally, the Wyoming SEO permit summary lists the P180840 water bearing zone from 380 ft bls to 500 ft bls and details the pump placement within the well at 465 ft bls. The placement of the pump within P180840 may conflict with the claim that DTW in the well averages 460 ft bls. Pumps are typically placed significantly below the groundwater surface to account for seasonal variation and drawdown due to pumping. It is unclear if Mr. McCauley's statement that average DTW at P180840 is for static or steady state pumping conditions.

Lone Tree Creek Well Field

The test well (LTC-1) utilized to evaluate the feasibility of the proposed LTC Well Field is located approximately 7.9 southeast of P180840 and is depicted on **Figures 1** and **2**. LTC-1 was installed to a depth of 1,348 ft bls into the Casper Formation. Multiple studies¹ funded by the Wyoming Water Development Commission (WWDC) have been conducted to evaluate the location and feasibility of the LTC Well Field. An aquifer performance test (APT) completed during these studies suggest the Casper Formation in area of the LTC Well Field exhibit a transmissivity of 43,900 gallons per day (gpd)/ft and a hydraulic conductivity of 45.6 gpd/ft² (Lidstone, 2008). 48-hour and 30-day APTs at a 600 gallon per minute (gpm) pumping rate resulted in approximately 17 ft and 71 ft of drawdown, respectively at LTC-1. The LTC-1 APT drawdown test results are depicted in **Attachment A**. Within the LTC Well Field, the Sherman Granite is the underlying bedrock to the Casper Formation and is thought to be a minor aquifer only producing water in zones where fracturing is present.

CK Gold Mine Pit

The planned excavation area for the Pit is depicted on Figures 1 and 2. The primary ore material that will be extracted from the Pit during mining operations are composed of surficial soils from the White River Formation and granodiorite within the Sherman Granite. The Pit excavation is anticipated to result in a hydraulic low point affecting groundwater elevations in the area of the Pit. However, these drawdown effects are projected to be limited to within the boundary of the CK Gold Mine which is depicted on the figure included as **Attachment B**.

Granite Springs and Crystal Lake Reservoirs

As depicted on Figure 1, P180840 is located just south of Granite Springs Reservoir and northwest of Crystal Lake Reservoir. A search for publicly available information on the hydraulic connectivity of these reservoirs to groundwater aquifers in the area provided no results. However, basic principles of groundwater system boundaries (hydraulic and physical) suggest the Crystal

¹ Three studies were performed: States West 2006 Belvoir Ranch Paleozoic Groundwater Exploration Project, Lidstone and Associates 2008 Belvoir Ranch Lone Tree Well Test Report, and Lidstone and Associates 2012 Cheyenne Belvoir ranch Groundwater Level II Study.

Geosyntec Consultants CK Gold Mine Permit Application Review of Public Comments Page 3

Springs Reservoir is an aquifer input source in the area of the P180840 stabilizing impacts of groundwater withdrawal to groundwater levels this area.

Regional Groundwater Levels and Flow Direction

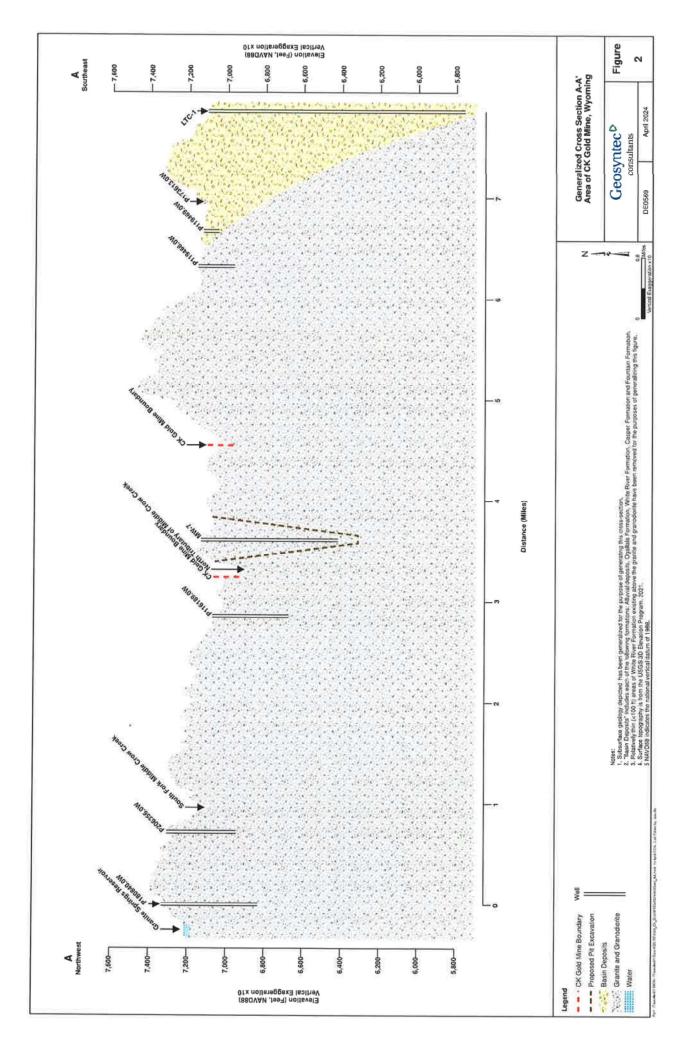
A map depicting regional groundwater levels and flow directions for bedrock and basin fill deposits in the area of P180840, the CK Gold Mine, and the LTC Well Field is included as **Attachment C**. Groundwater flow in the region is generally southeast to east for both aquifer types suggesting P180840 is hydraulically upgradient from both the Pit and the LTC Well Field.

Summary and Conclusions

Evaluation of documents included as part of the CK Gold Mine Permit Application and other publicly available reports suggest P180840 is likely placed within water bearing fractured bedrock zones within the Sherman Granite. P180840 likely receives groundwater recharge through infiltration of precipitation from the Laramie Mountains and may exhibit varied water levels in comparison to other wells in the area due to the nature of the fractured bedrock aquifers. The LTC Creek Well Field is proposed to extract water from the Casper Formation which directly overlies Sherman Granite in the proposed LTC Well Field area. Considering the proposed LTC Well Field is approximately 7.9 miles southeast of P180840 and is screened within a different aquifer unit, there likely is limited to no hydraulic connection between the two well locations. Drawdown effects from pumping at the LTC Well Field are projected to be limited to the Casper Formation and other more shallow aquifers in the area. Additionally, the long-term groundwater drawdown effects of the Pit are projected to be limited to the CK Gold Mine Property.

Our assessment that the Casper Formation is likely not hydraulically connected to the Sherman Granite in the vicinity of Mr. McCauley's well addresses his concerns that the LTC Well Field could impact the water bearing zones of the Sherman Granite and therefore static water levels in his well (concerns from SEO report #1 and #3). Mr. Cauley's concern #2 regarding seasonal vs. continuous pumping appears to be in reference to a quote from the Lidstone & Associates (2012) study and does not reflect the anticipated water demand of the CK Gold Project. Geosyntec was not able to review this report to corroborate this information (website link was not functional). Based on their review of the existing studies including Lidstone & Associates (2012), it is SEO's opinion that the Casper Aquifer would be able to meet the needs of the CK Gold Project of 907 acre-feet per year.





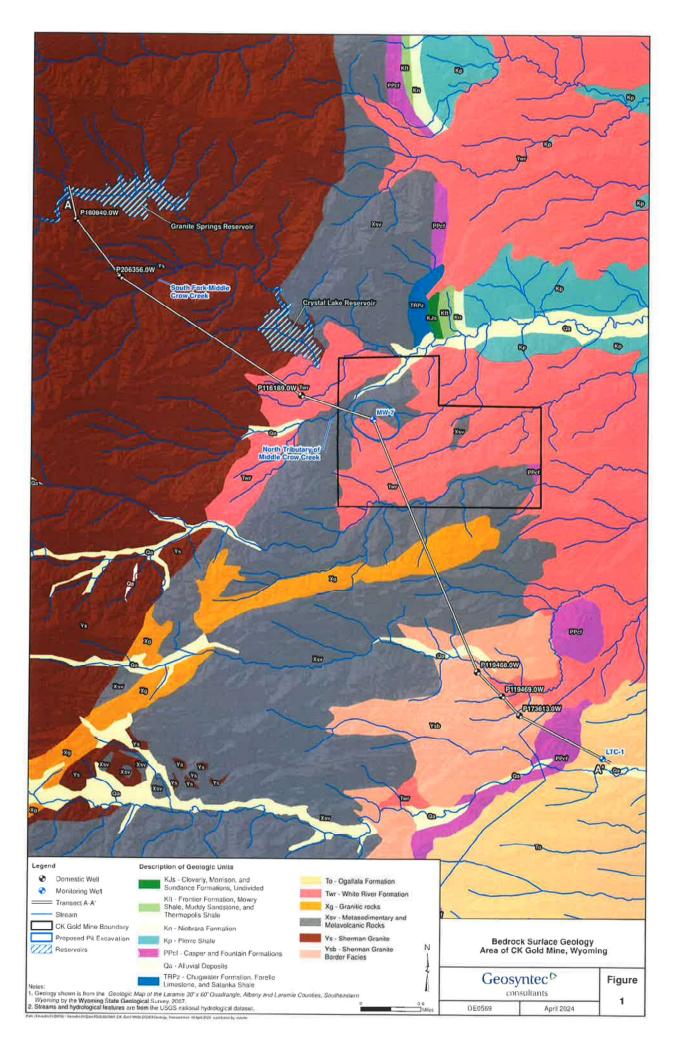
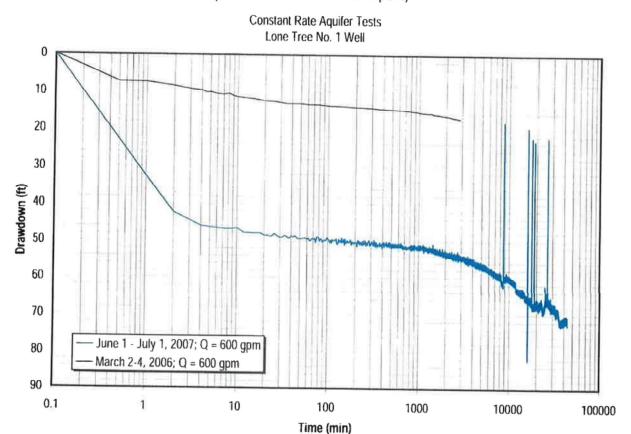




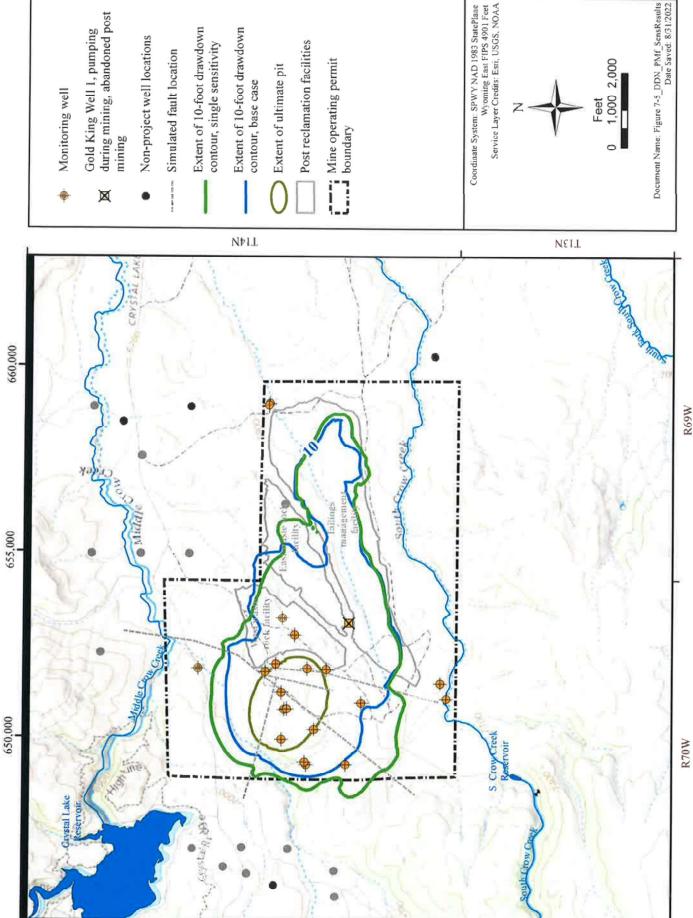
Figure 11 – Graph of LTC-1 48-hour and 30-day Pump Tests (From the 2008 WWDC Report)



The 2012 Lidstone report (page 6-1) indicate that geologic structures near the LTC-1 well "have resulted in an enhanced zone of permeability due to fracturing and dissolution tube development that would produce sufficient water to warrant a well field." The 2012 report indicates that the hydrogeological parameters of the LTC-1 well are more typical of a karst limestone or perhaps fracture flow.

Figure 12 below (from Western Water Consultants, 1982) is a schematic cross section that illustrates the development of enhanced permeability in the Casper Formation associated with geologic structures.

ATTACHMENT B



235,000

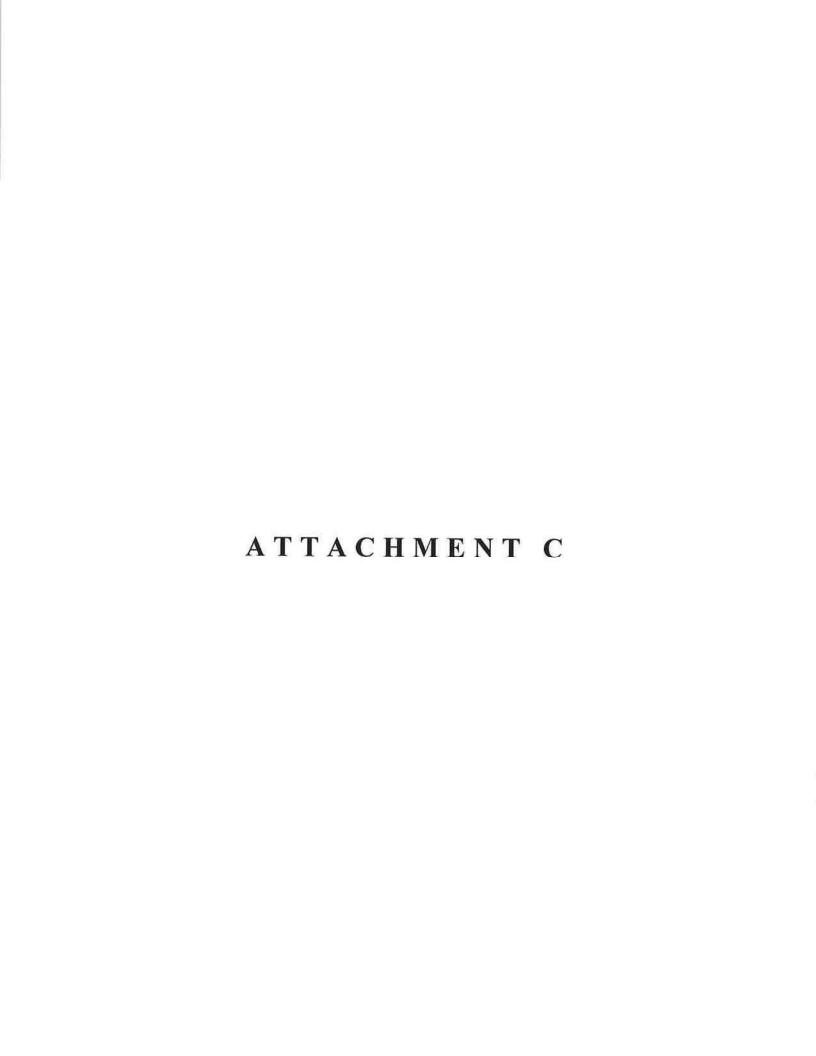
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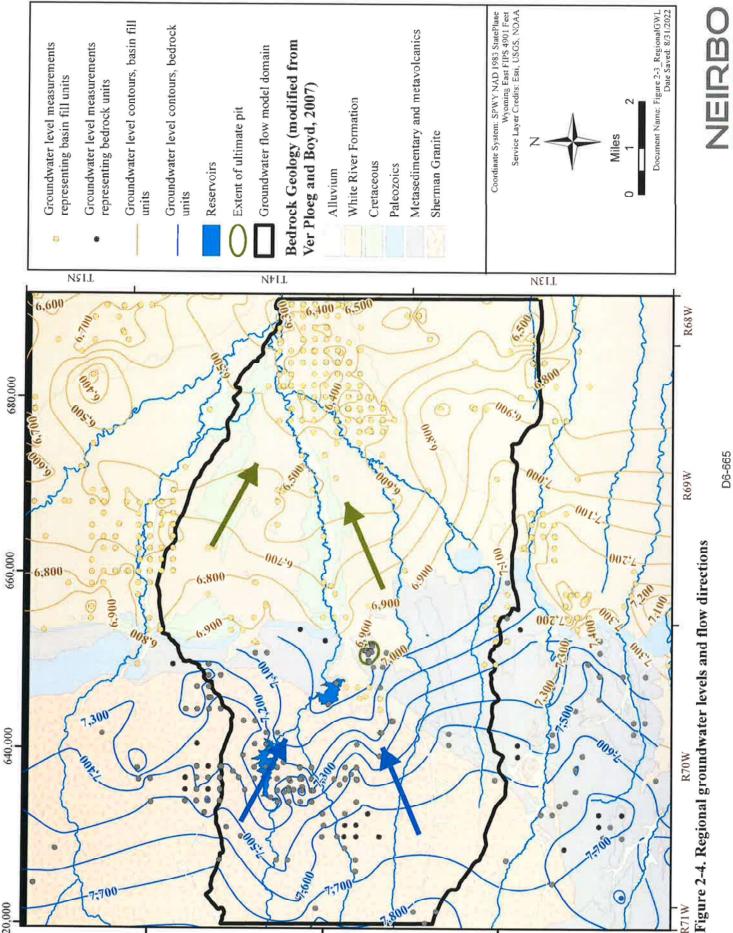
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Figure 7-5. Predicted groundwater drawdown extent 150-years after the end of mining for base-case model and assuming a 20-percent decrease in gestagrge

225,000







240,000

220,000

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HYDRO GEOLOGY

Attachment A Complaint

Bert McCauley

I live in Mountain Meadows subdivision, which is not submitting comments as an organization on this proposal, to my knowledge. I am taking this action unilaterally because I believe my specific well could be in more jeopardy from the anticipated 14-year project drawdowns because our well depth is 500 ft., with a static water depth only 40 ft. higher, at 460 ft.; and, to get even that, we had to frack the rock strata we are in at 3 locations below 350 ft. Most of the other wells around our lot, and in most of the subdivision for that matter, are in the 300 ft. to 600 ft. depth range, but their static water levels are typically hundreds of feet above well depths, not 40 feet like ours. I believe our very low static water depth may indicate we are located in a "perched" branch of the main aquifer that could sustain some serious impacts from the anticipated volume of water extracted from the Casper Aquifer formation at the LTC Well Field on a continuous basis for this project for 14 years.

Please see the attached PDF white paper I have assembled directly from the SEO's final report on this project, which more or less summarizes the situation and my concerns, highlighted at the bottom of the first page. I would like each of these concerns noted and/or addressed by the SEO and/or WYDEQ. Please note also from Exhibit 2 therein that there are historic drawdown static losses in Laramie County from industrial or agricultural wells in SE Wyoming, I believe in the Ogalla Aquifer formation. Also of note is that the City of Cheyenne and Laramie County in the 1980s-90s both agreed to a moratorium on 2.5 AC residential lots in the north and east areas of Cheyenne, stipulating 5 AC lots as the minimum for subdivisions, specifically because of concerns of impacts on static aquifer depths in that aquifer. Both of these examples are to highlight that my concern is not without precedent in this regard.

Bert J. McCauley, P.E.(Ret.)

The Gold King CK Project water needs over 14-year project life¹:

Gold King Corp estimated that the new facility will use 907 acre-feet (296 million gallons) per year, which is equivalent to continuous pumping at 562 gallons per minute ("gpm"). The majority is process water demand which is not expected to vary seasonally. Some seasonal variation in water use for dust control is expected, resulting in expected demand during the summer months being slightly larger on average than during the winter months, with average July-September demand being 584 gpm. The maximum instantaneous use, or peak water demand, was not specified. The projected life of the mine is ten years, with a total project duration of about 14 years, including construction and reclamation. During construction, water demand is expected to be about 100 acre-feet per year. During reclamation, the expected water demand is 55 acre-feet per year. Assuming that construction and reclamation are each completed in two years, the total water use over the life of the facility is 9,380 acre-feet (3,056 million gallons).

The development of the well field under the Purchase Agreement consists of construction of up to three new wells into the Casper Formation and associated infrastructure. The wells have not yet been drilled or permitted by the SEO, and the number of wells drilled may depend on future events and future consultation and agreement between the parties (i.e., SEO, BOPU, and the Project). The SEO received six applications, three for municipal use and three enlargement applications for time-limited industrial use, all listing BOPU as the applicant. *These applications are currently under review.*

According to calculations of aquifer drawdown and sustainable yield performed by Lidstone & Associates (2012, page 6-9), "...the Casper Aquifer may be able to support development of 2,000 gpm from the Lone Tree Creek Well Field (1,060 acre-feet per year), ...on a seasonal basis, or 120 day annual summer pumping season." This yield would be sufficient to supply the needs of the CK Gold Project (907 acre-feet per year). At this pumping rate, Lidstone & Associates (2012) estimated that static water levels in the LTC well field would be lowered approximately 9 feet after 20 years of production. However, a significant amount of development and infrastructure work is needed to bring this water resource to the point where it can be utilized at the mine site. This process may be expensive and has the potential to delay the CK Gold Project.

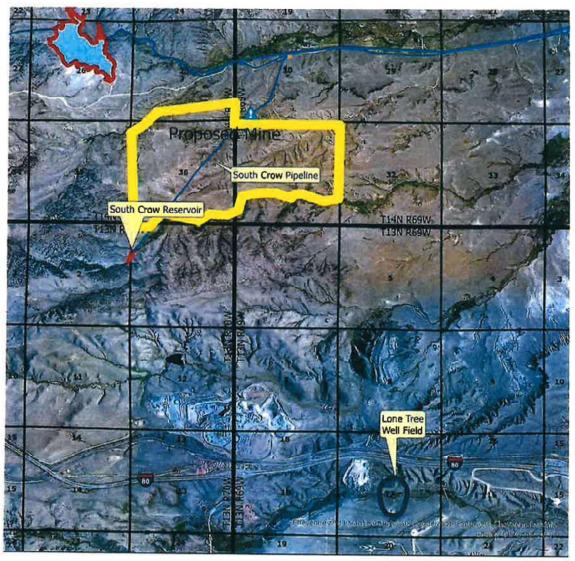
Concerns from SEO report:

- 1) "may be able to support". Indications are it will not support this volume (see below) and ~600 gpm of continuous pumping may affect our aquifer level negatively.
- 2) "120 day...summer pumping season". Project process water supply is "not expected to vary seasonally", i.e., 900 Ac-Ft is a year-round requirement, indicating that the LTC Well Field WILL NOT be able to provide needed water, thus potentially affecting my upper part of the aquifer negatively.
- 3) "lowered...9 feet after 20 years". How will continuous pumping of 600 gpm at the LTC Well Field for 14 years affect my well's static water level ~6 miles away?

¹Excerpted from: "Final Opinion of Water Supply and Water Yield Analysis for CK Gold Project, Laramie County, Wyoming", Wyoming State Engineers Office, April 2023

Exhibit 1

Proximity of 6 new industrial wells relative to Mountain Meadows (Crystal Lake shown SE of Granite Lake and Mountain Meadows subdivision by ~1.5 mi.).



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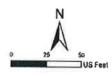


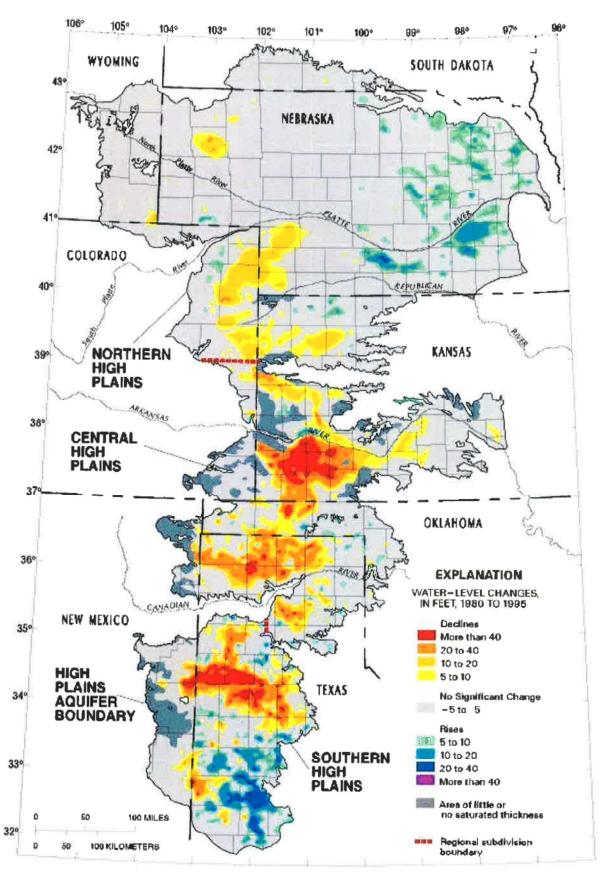
EXHIBIT 1



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Exhibit 2
High Plains Aquifer static water drops and rises over the years (note SE Wyoming).



Attachment B

Geosyntec Consultants, Inc.

Analysis of the proposed Lone Tree Creek Well Field pumping impacts to domestic well P180840

AND 36, TOWNSHIP 14 NORTH, RANGE 70	GOLD PROJECT SITE PLAN LOCATED ON PORTIONS OF SECTION 25 WEST, AND PORTIONS OF SECTION 28, 29, AND 32, AND ALL OF RANGE 69 WEST, 6^{TH} P.M., LARAMIE COUNTY, WYOMING.
	to 18-5-107; §§18-5-201 to 18-5-208; §§18-5-301 to 18-5-315 blic health, safety, morals and general welfare of the county, to corporated Laramie County; and
WHEREAS, the Laramie County Board of Comm (LCLUR); and	issioners have adopted the Laramie County Land Use Regulations
WHEREAS, this application meets the criteria for Land Use Regulations; and	or a Site Plan pursuant to Section 2-2-133 of the Laramie County
WHEREAS , this application is in conformance w District.	ith Section 4-2-114 of the LCLUR governing the LU – Land Use Zone
NOW THEREFORE BE IT RESOLVED BY THE GOV	ERNING BODY OF LARAMIE COUNTY, WYOMING, as follows:
The Laramie County Board of Commissioners fin	nds that:
a. This application is in conformance	with Section 2-2-133 governing Site Plans; and,
This application is in conformance v	with Section 4-2-114 governing the LU = Land Use Zone District.
THEREFORE, the Board places the following co	nditions on the CK Gold Project Site Plan:
 All agency comments must be add Certificate of Review. 	ressed and corrections made to the Site Plan prior to issuance of
PRESENTED, READ, AND PASSED, this	day of
	LARAMIE COUNTY BOARD OF COMMISSIONERS
ATTEST:	Gunnar Malm, Chairman
Debra K. Lee, Laramie County Clerk	
Reviewed and approved as to form: Laramie County Attorney	

RESOLUTION #

