



CITY OF STAR

LAND USE STAFF MEMO

TO: Mayor & Council

FROM: City of Star Planning & Zoning Department *Shen T. Mink*

MEETING DATE: **January 16, 2024 – PUBLIC HEARING (tabled from 12-5-2023)**

FILE(S) #: AZ-22-11 - Annexation and Zoning
RZ-23-03 – Rezone
DA-22-12 – Development Agreement
PP-22-17 – Preliminary Plat for Talega Village Subdivision
CUP-22-05 – Talega Village Multi-Family

OWNER/APPLICANT/REPRESENTATIVE

Representative:

Chad Garner
Focus Engineering & Surveying
6949 S. High Tech Dr., Ste. 200
Midvale, UT 84047

Owner/Applicant:

Derk Pardoe
3454 Stone Mountain Lane
Sandy, UT 84092

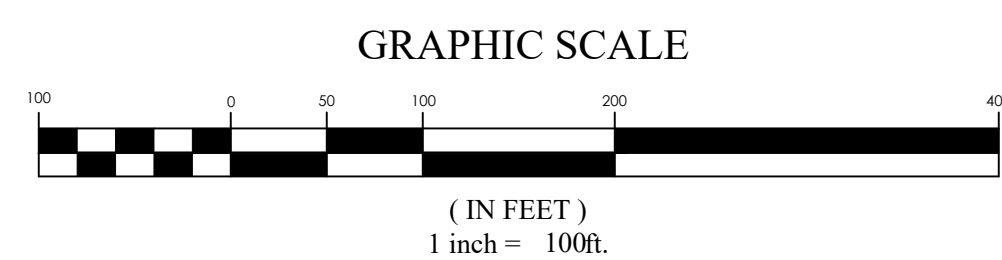
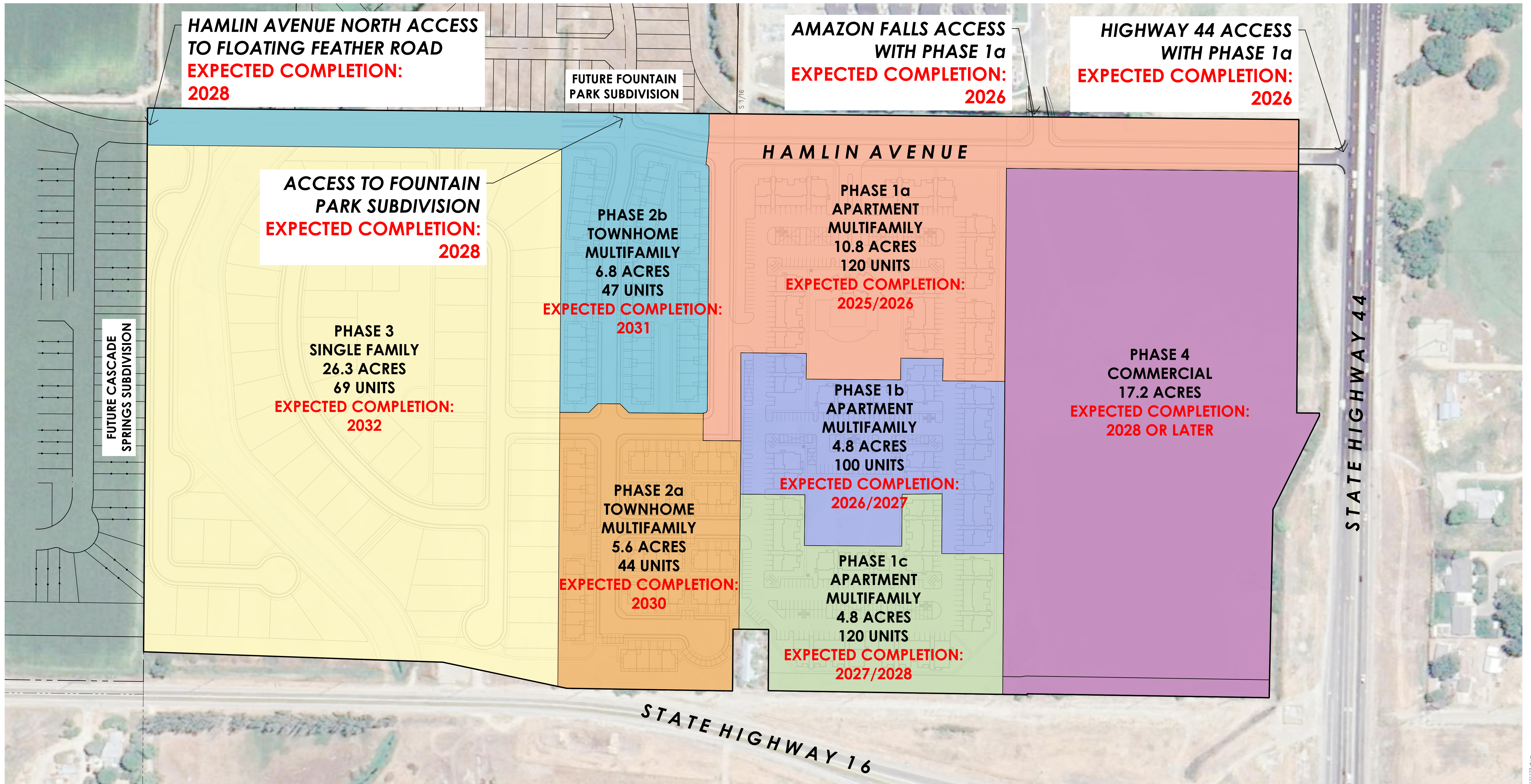
REQUEST

Request: The Applicant is requesting approval of an Annexation and Zoning (Residential R-10-DA), a Rezone (from R-1 & C-2 to Residential R-10-DA), a Development Agreement, a Preliminary Plat for proposed residential and commercial uses consisting of 162 buildable lots (1 commercial lot, 1 multi-family lot, 65 single-family residential lots, 95 townhome lots and multiple common lots), and a Conditional Use Permit for a proposed multifamily residential use (340 units), A residential density of 10 du/acre is proposed. The property is located at 58 N. Truman Place and 8370 W. Shults Court in Star, Idaho. The entire property consists of 74.61 acres.

SUMMARY

The application was tabled from December 5, 2023. Council directed the applicant to bring back revised plans addressing staff comments, project phasing information and updated transportation agency comments.

**UPDATED EXHIBITS FROM
APPLICANT FOR JANUARY 16,
2024 COUNCIL MEETING**

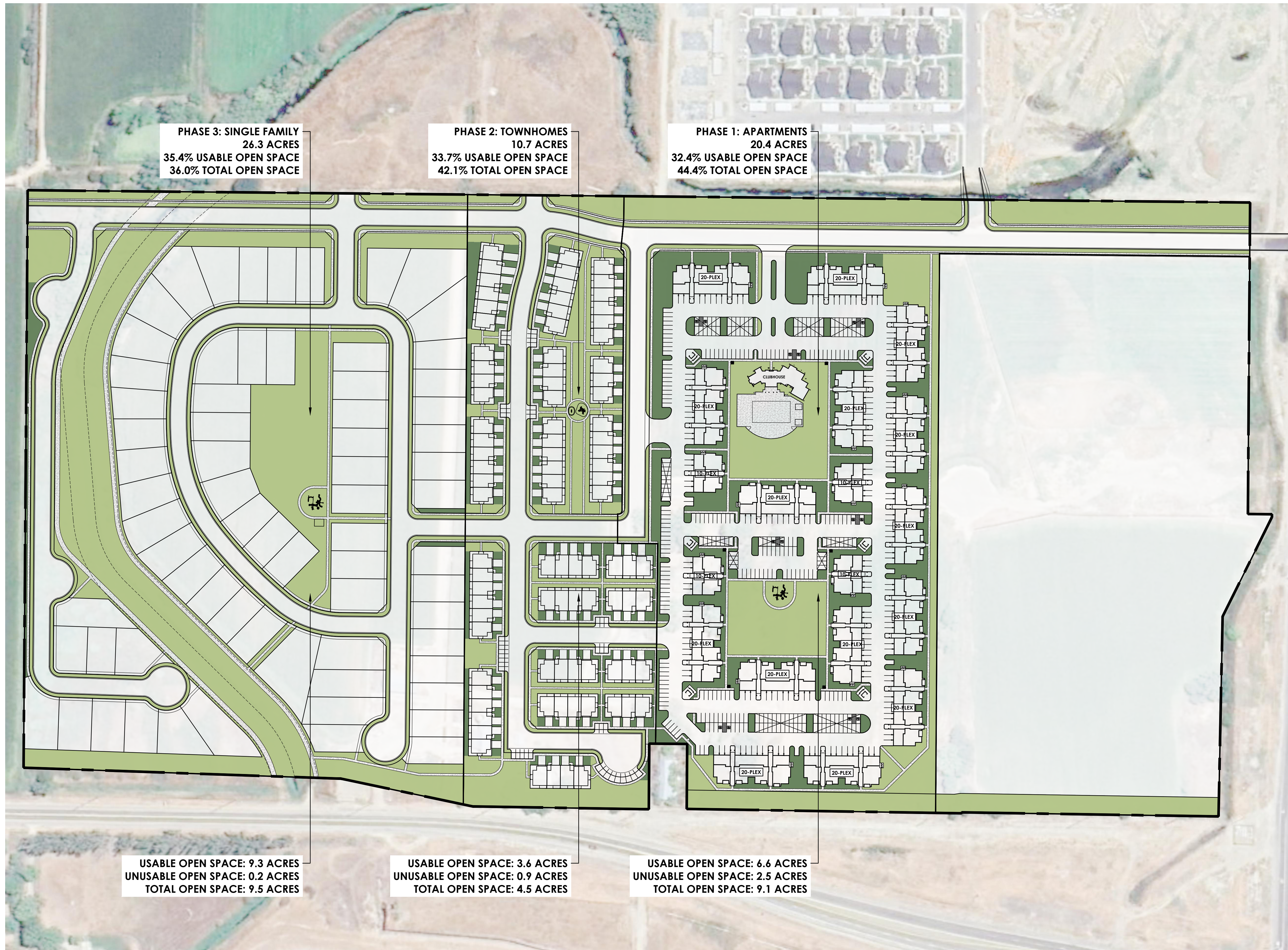


TALEGA VILLAGE overall phasing exhibit

STAR CITY, ADA COUNTY, IDAHO

1/2/2024

21-0488



PHASE 3: SINGLE FAMILY
 26.3 ACRES
 35.4% USABLE OPEN SPACE
 36.0% TOTAL OPEN SPACE

PHASE 2: TOWNHOMES
 10.7 ACRES
 33.7% USABLE OPEN SPACE
 42.1% TOTAL OPEN SPACE

PHASE 1: APARTMENTS
 20.4 ACRES
 32.4% USABLE OPEN SPACE
 44.4% TOTAL OPEN SPACE

USABLE OPEN SPACE: 9.3 ACRES
 UNUSABLE OPEN SPACE: 0.2 ACRES
 TOTAL OPEN SPACE: 9.5 ACRES

USABLE OPEN SPACE: 3.6 ACRES
 UNUSABLE OPEN SPACE: 0.9 ACRES
 TOTAL OPEN SPACE: 4.5 ACRES

USABLE OPEN SPACE: 6.6 ACRES
 UNUSABLE OPEN SPACE: 2.5 ACRES
 TOTAL OPEN SPACE: 9.1 ACRES

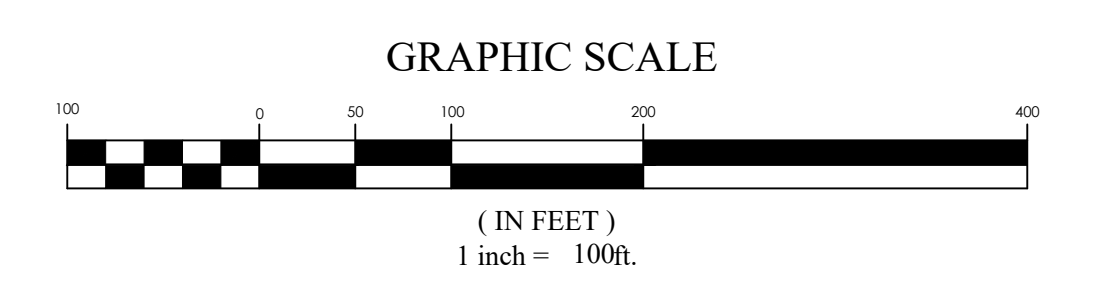
OPEN SPACE

	USABLE OS	UNUSABLE OS	TOTAL OS
APARTMENTS	6.6 ACRES	2.5 ACRES	9.1 ACRES
AREA: 20.4 ACRES	32.4%		44.4%
TOWNHOMES	3.6 ACRES	0.9 ACRES	4.5 ACRES
AREA: 10.7 ACRES	33.7%		42.1%
SINGLE FAMILY	9.3 ACRES	0.2 ACRES	9.5 ACRES
AREA: 26.3 ACRES	35.4%		36.0%

TOTAL OS	19.5 ACRES	3.6 ACRES	23.1 ACRES
AREA: 57.4 ACRES	34.0%		40.2%

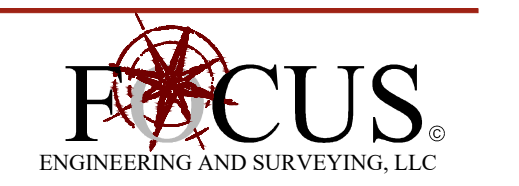
LEGEND

- USABLE OPEN SPACE
- UNUSABLE OPEN SPACE

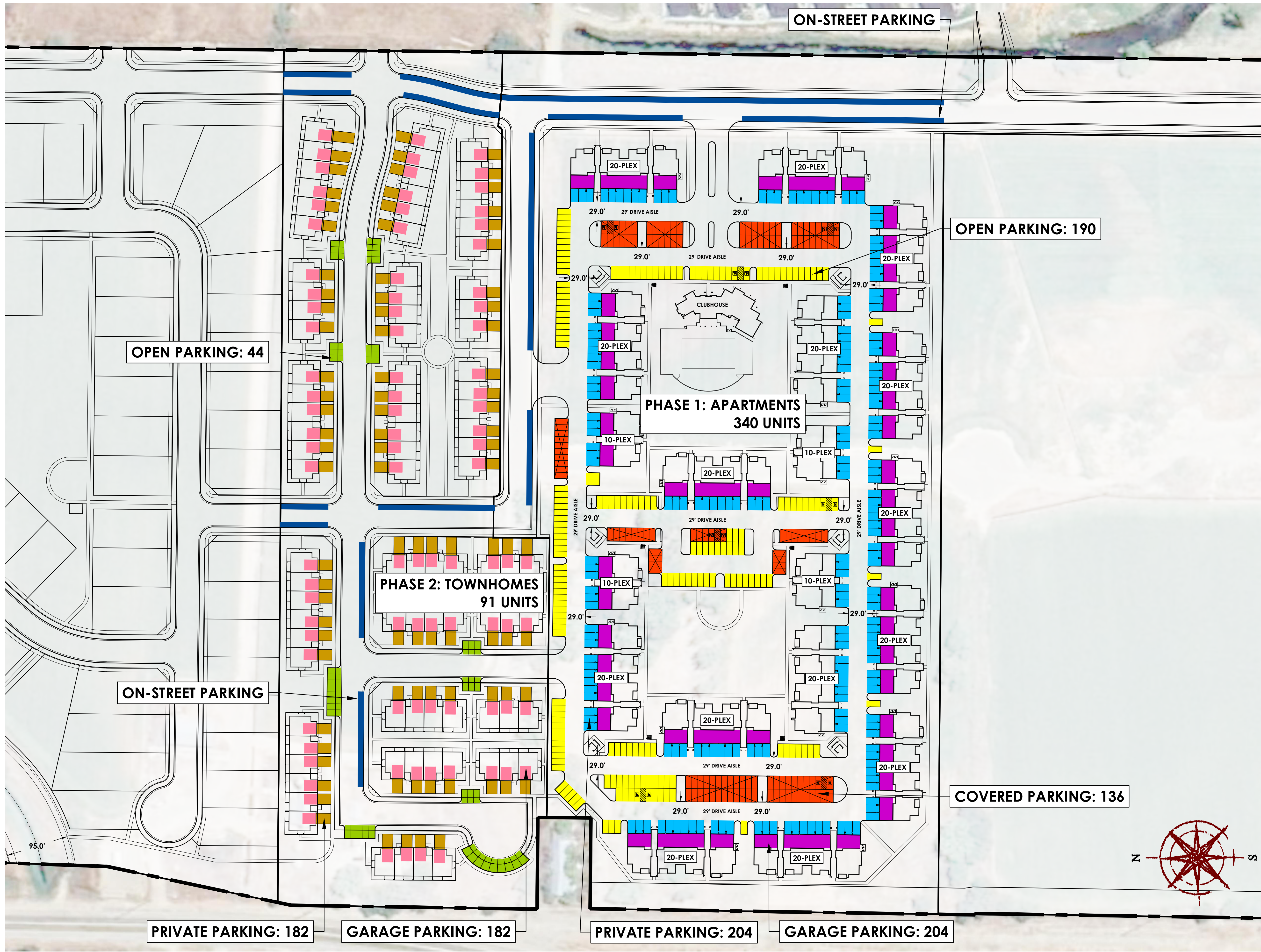


TALEGA VILLAGE *open space exhibit*

STAR CITY, ADA COUNTY
 12/22/2023
 21-0488



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PARKING

PARKING REQUIREMENTS (PER STAR CITY CODE 8-4B-3)

1-BD UNITS	1.5 STALLS/UNIT, INCLUDING 1 COVERED
2- OR 3-BD UNITS	2 STALLS/UNIT, INCLUDING 1 COVERED
GUEST PARKING	0.25 STALLS/UNIT
BIKE PARKING	1 BIKE STALL/25 UNITS

APARTMENT PARKING TABULATIONS

OPEN PARKING	190 STALLS
COVERED PARKING	136 STALLS
DRIVEWAY PARKING	204 STALLS
GARAGE PARKING (COVERED)	204 STALLS
BIKE PARKING	30 STALLS
TOTAL APARTMENT PARKING	340 COVERED STALLS, 734 TOTAL STALLS (INCLUDES 14 ADA STALLS)

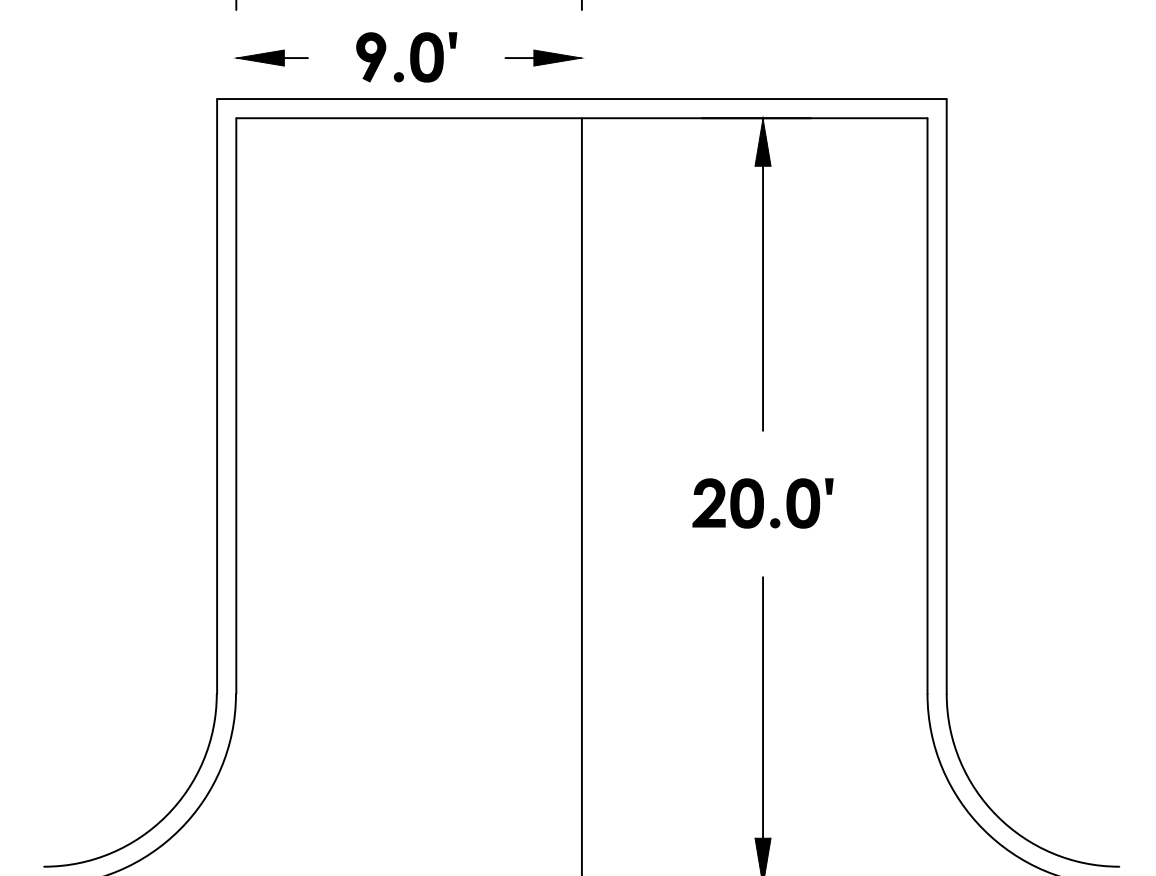
TOWNHOME PARKING TABULATIONS

OPEN PARKING	44 STALLS
DRIVEWAY PARKING	182 STALLS
GARAGE PARKING (COVERED)	182 STALLS
BIKE STALLS	5
TOTAL TOWNHOME PARKING	182 COVERED STALLS, 408 TOTAL STALLS
GUEST PARKING RATIO	0.48 STALLS/UNIT

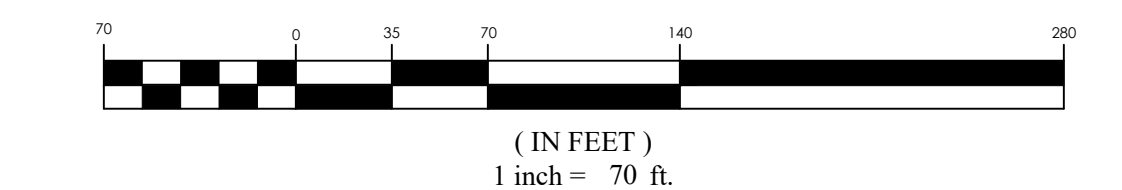
LEGEND

- APARTMENT OPEN PARKING (190 STALLS)
- APARTMENT COVERED PARKING (136 STALLS)
- APARTMENT PRIVATE PARKING (204 STALLS)
6 STALLS/10-PLEX, 12 STALLS/20-PLEX
- APARTMENT GARAGE PARKING (204 STALLS)
6 STALLS/10-PLEX, 12 STALLS/20-PLEX
- TOWNHOME OPEN PARKING (44 STALLS)
- TOWNHOME PRIVATE PARKING (182 STALLS)
2 STALLS/UNIT
- TOWNHOME GARAGE PARKING (182 STALLS)
2 STALLS/UNIT
- ON-STREET PARKING

TYPICAL PARKING DIMENSIONS

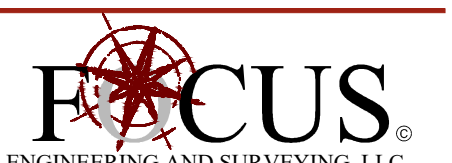


GRAPHIC SCALE

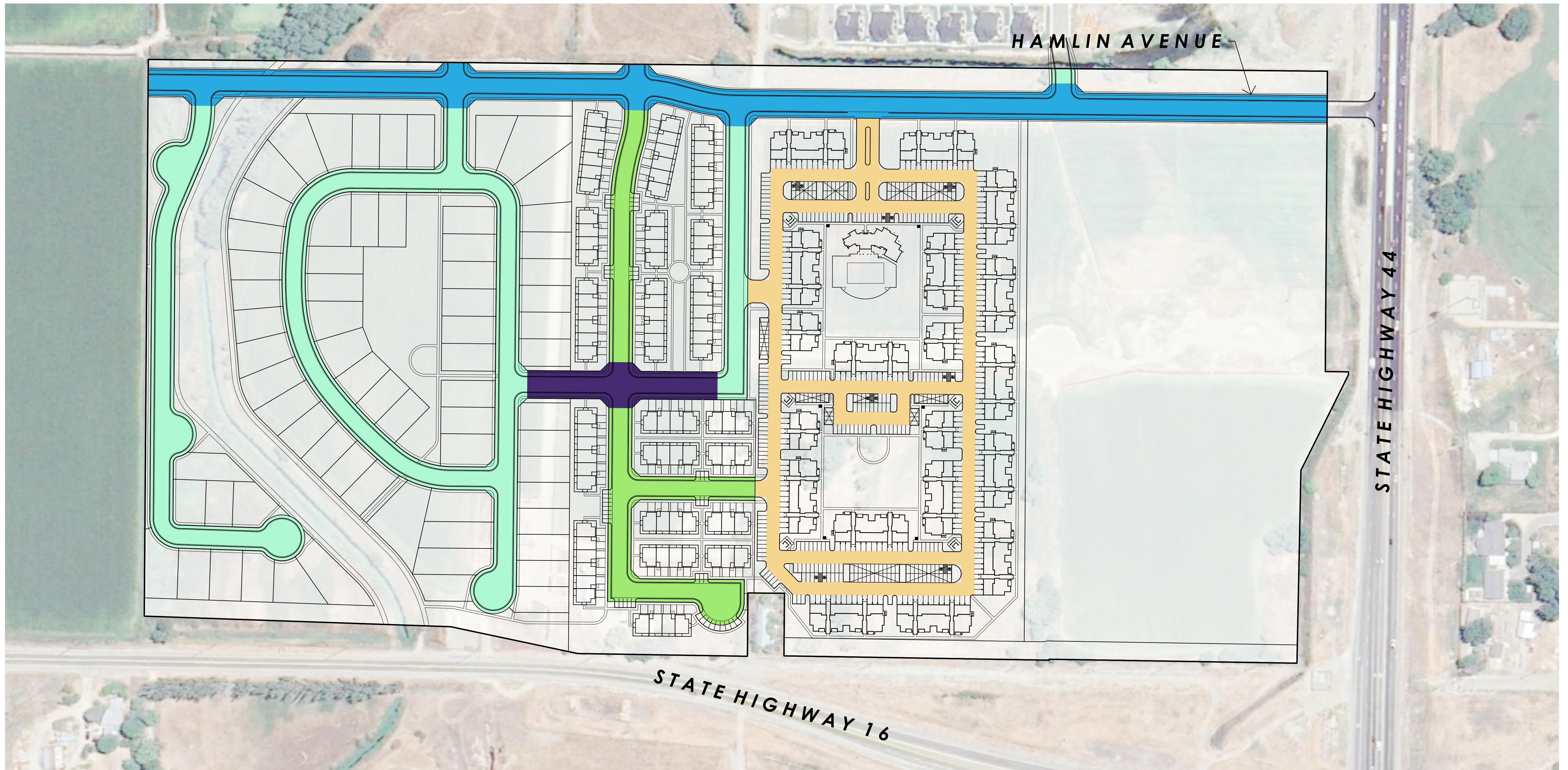


TALEGA VILLAGE parking exhibit

STAR CITY, ADA COUNTY
1/2/2024
21-0488

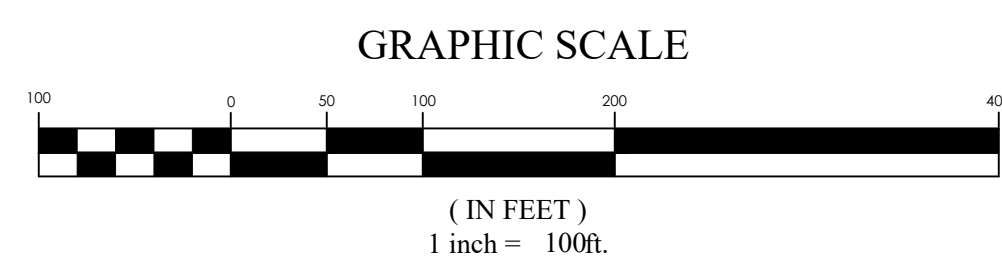


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LEGEND

- 29' DRIVE AISLE
- 50' PRIVATE ROAD
- 50' RESIDENTIAL ROAD
- 60' RESIDENTIAL ROAD
- 60' RESIDENTIAL ROAD WITH MEDIAN

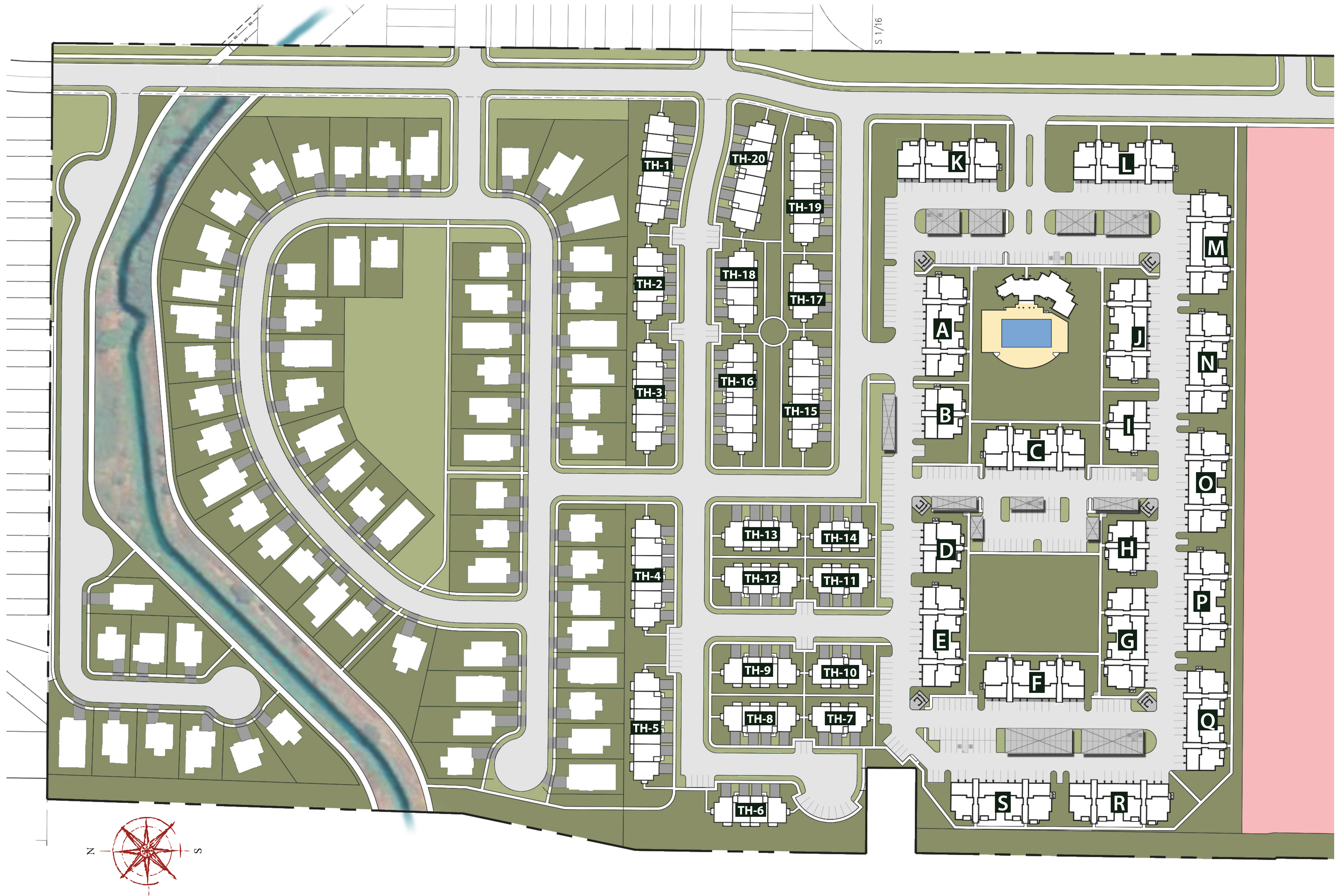


TALEGA VILLAGE roadway exhibit

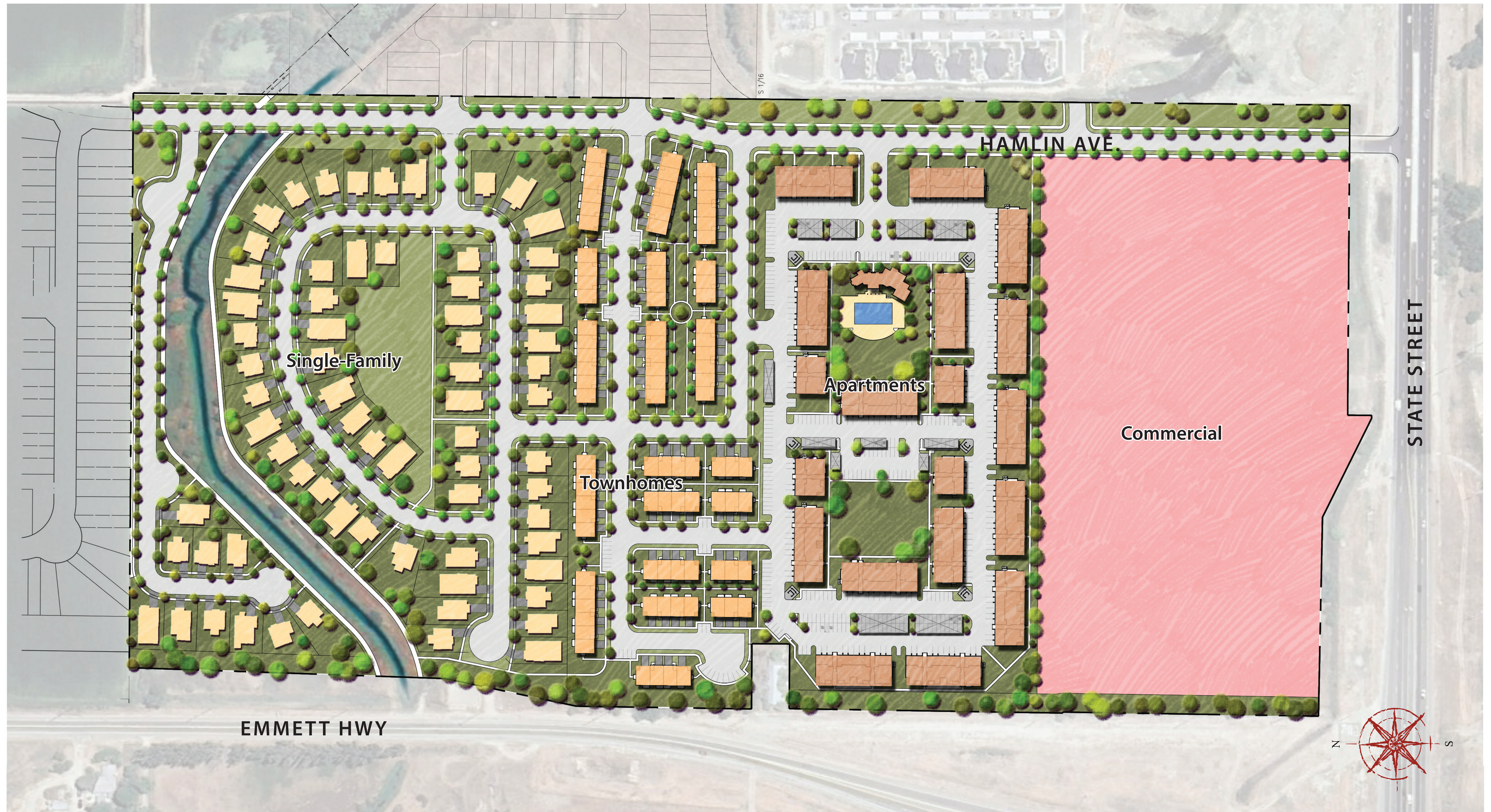
STAR CITY, ADA COUNTY, IDAHO

1/2/2024

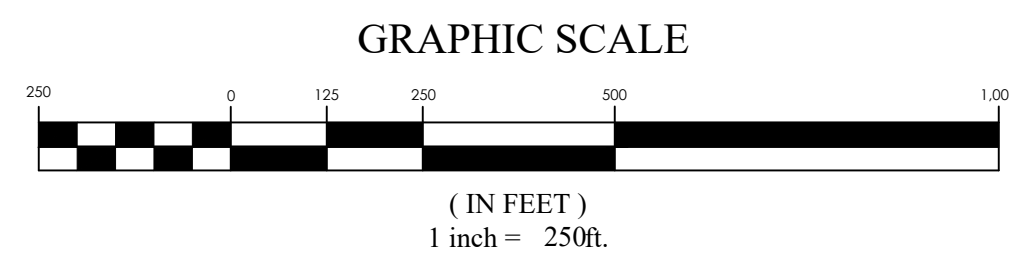
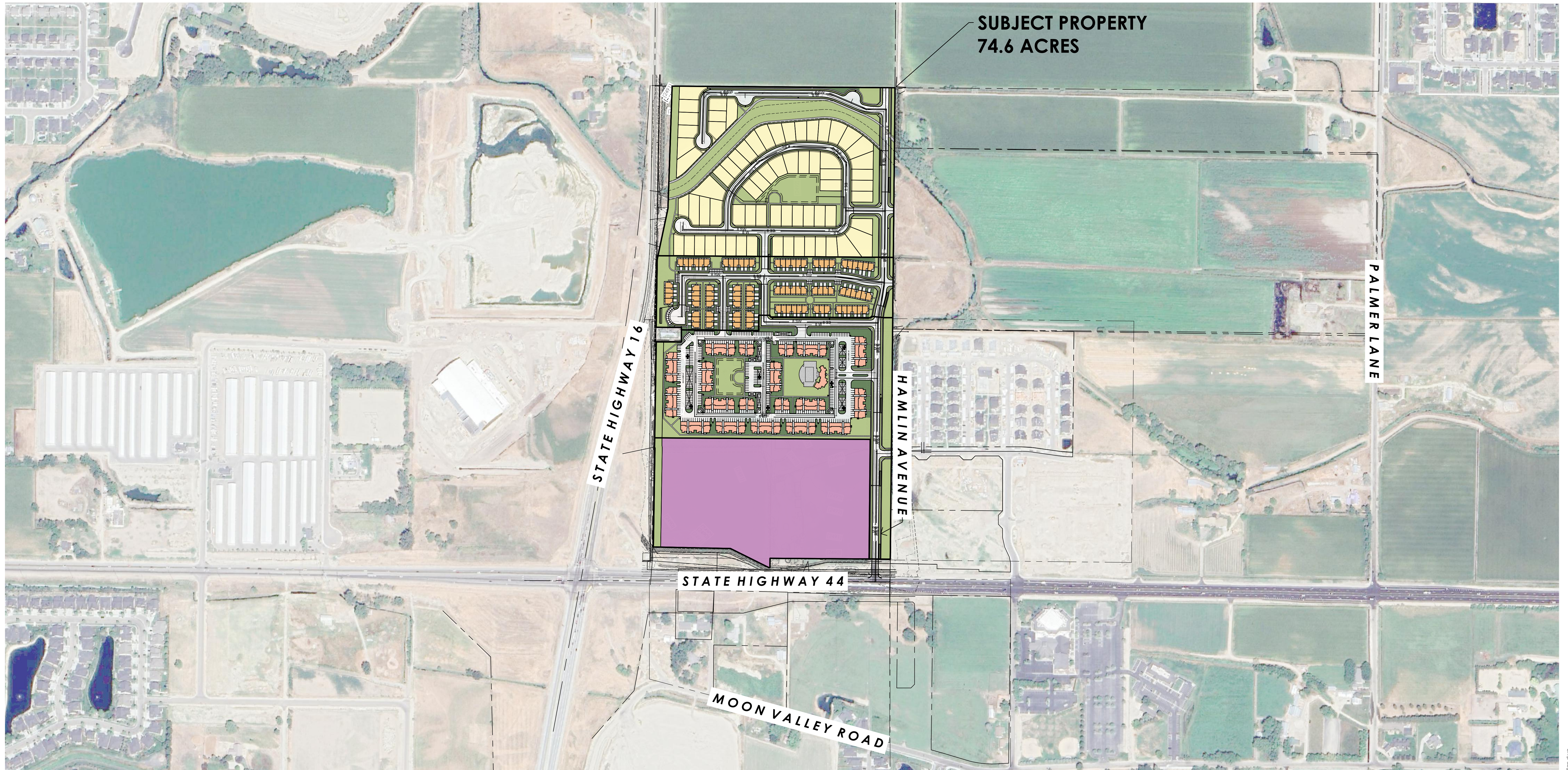
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TALEGA VILLAGE community map



TALEGA VILLAGE color master plan

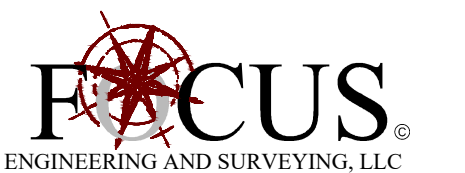


TALEGA VILLAGE vicinity map

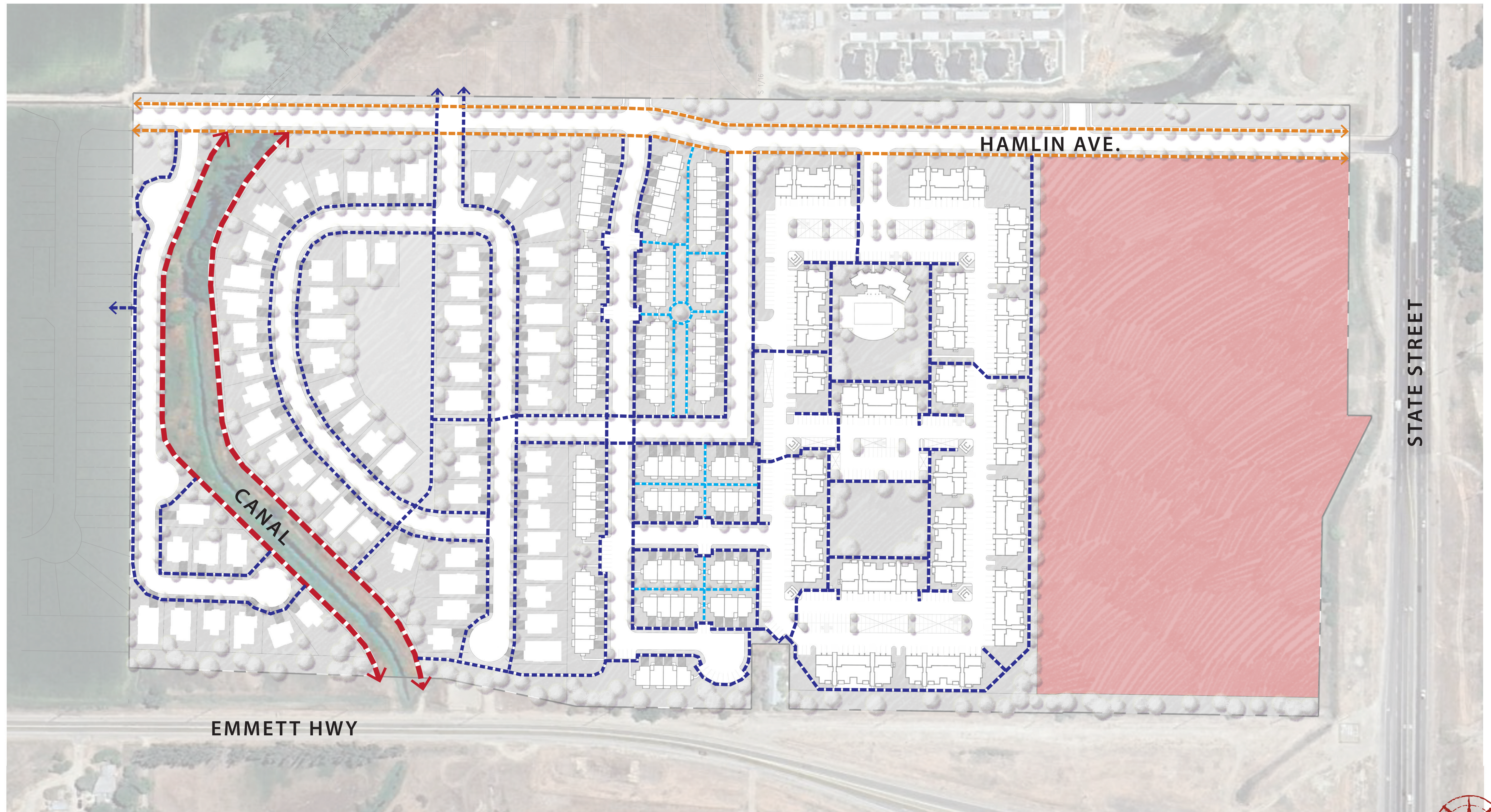
STAR CITY, ADA COUNTY, IDAHO

1/2/2024

21-0488



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10' TRAIL

7' TRAIL

5' SIDEWALK

4' SIDEWALK



TALEGA VILLAGE walkability plan



7



8



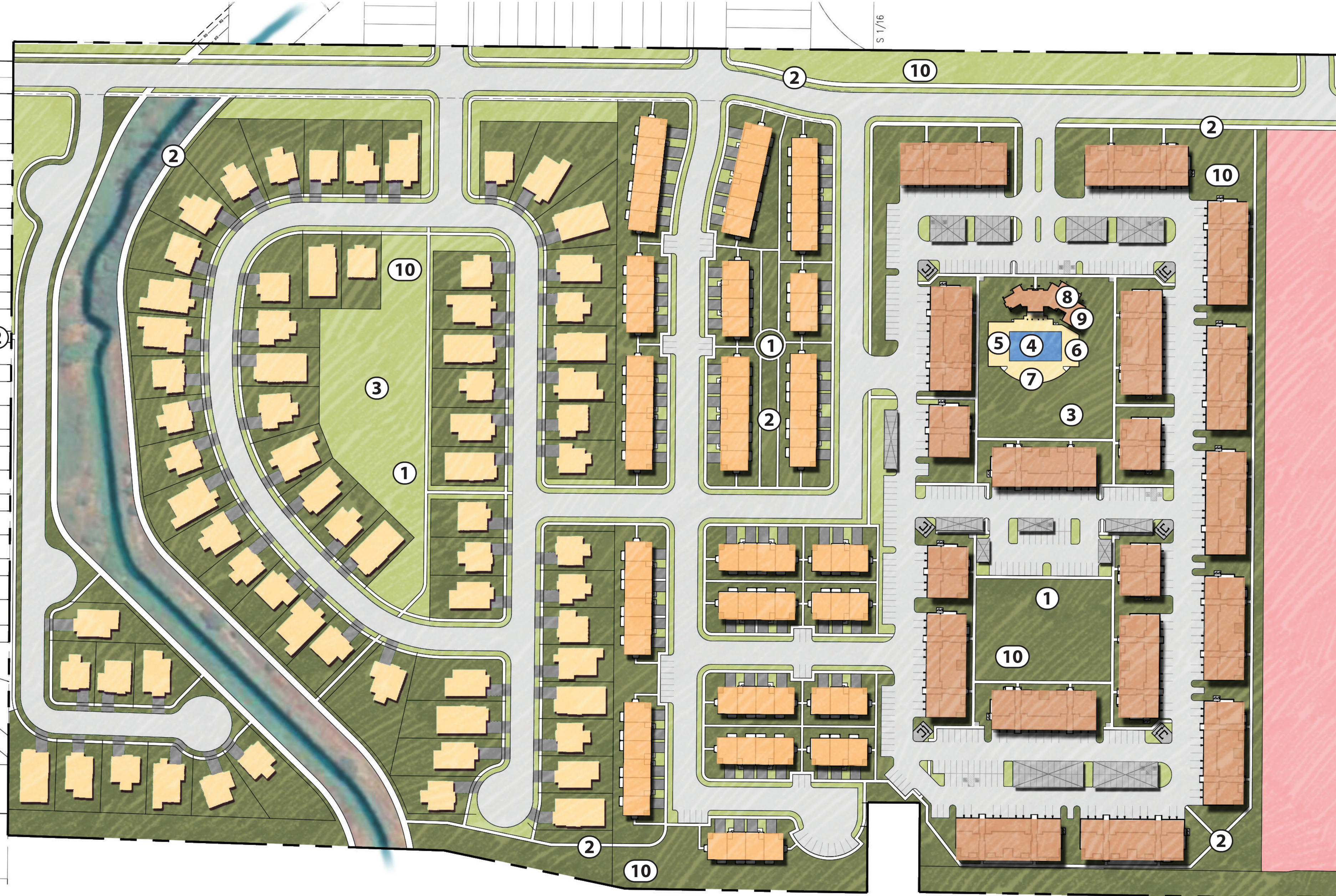
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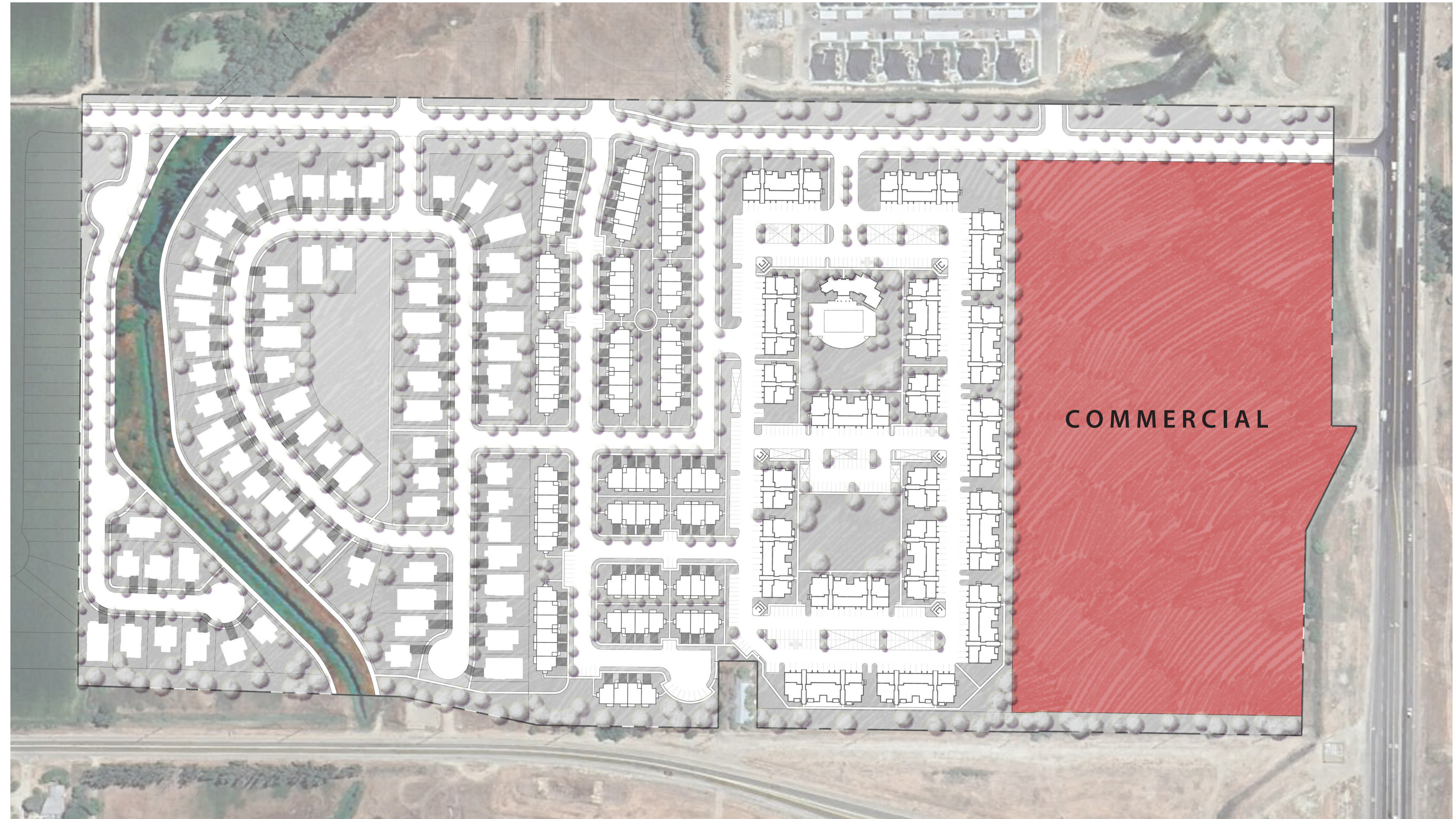
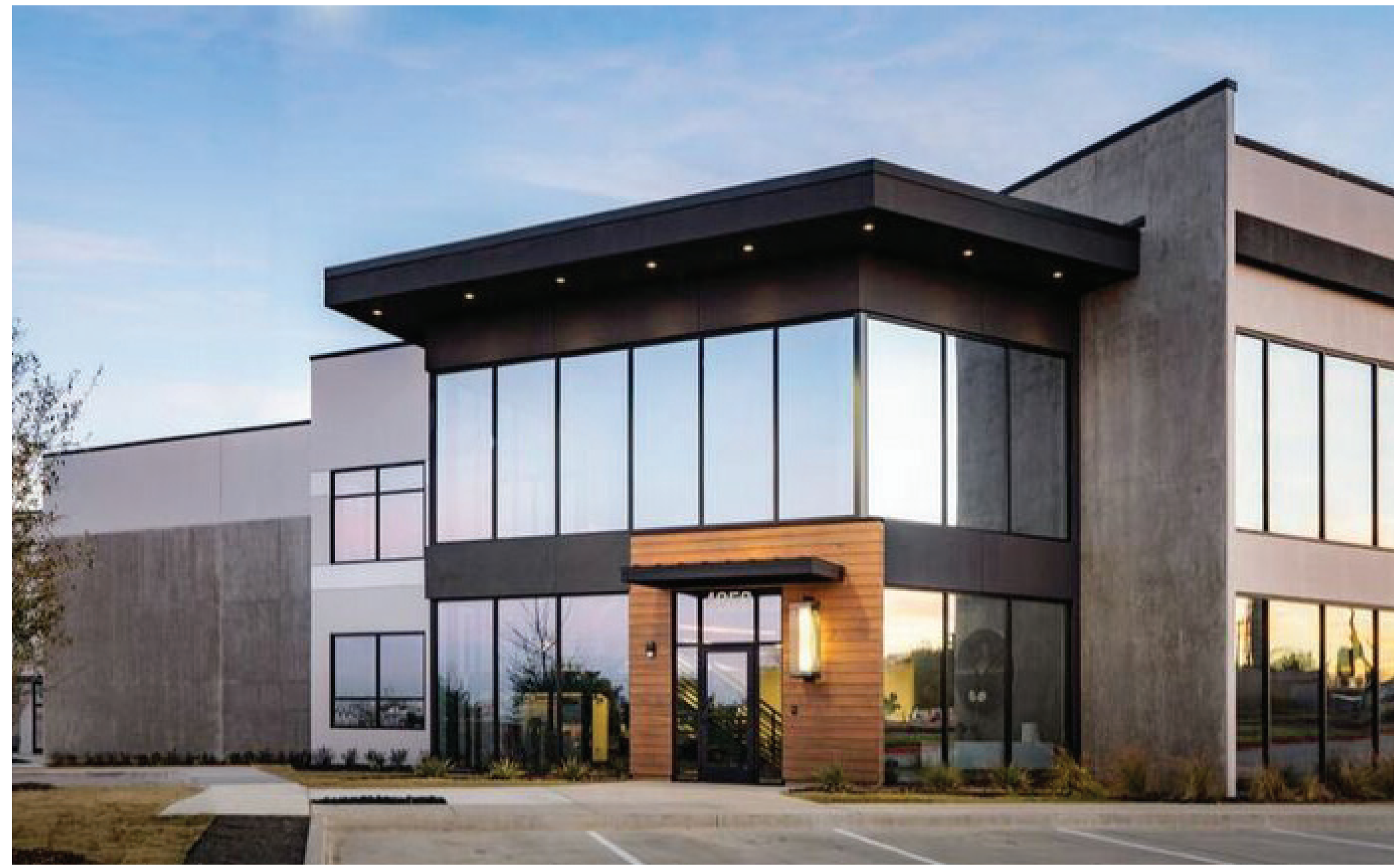


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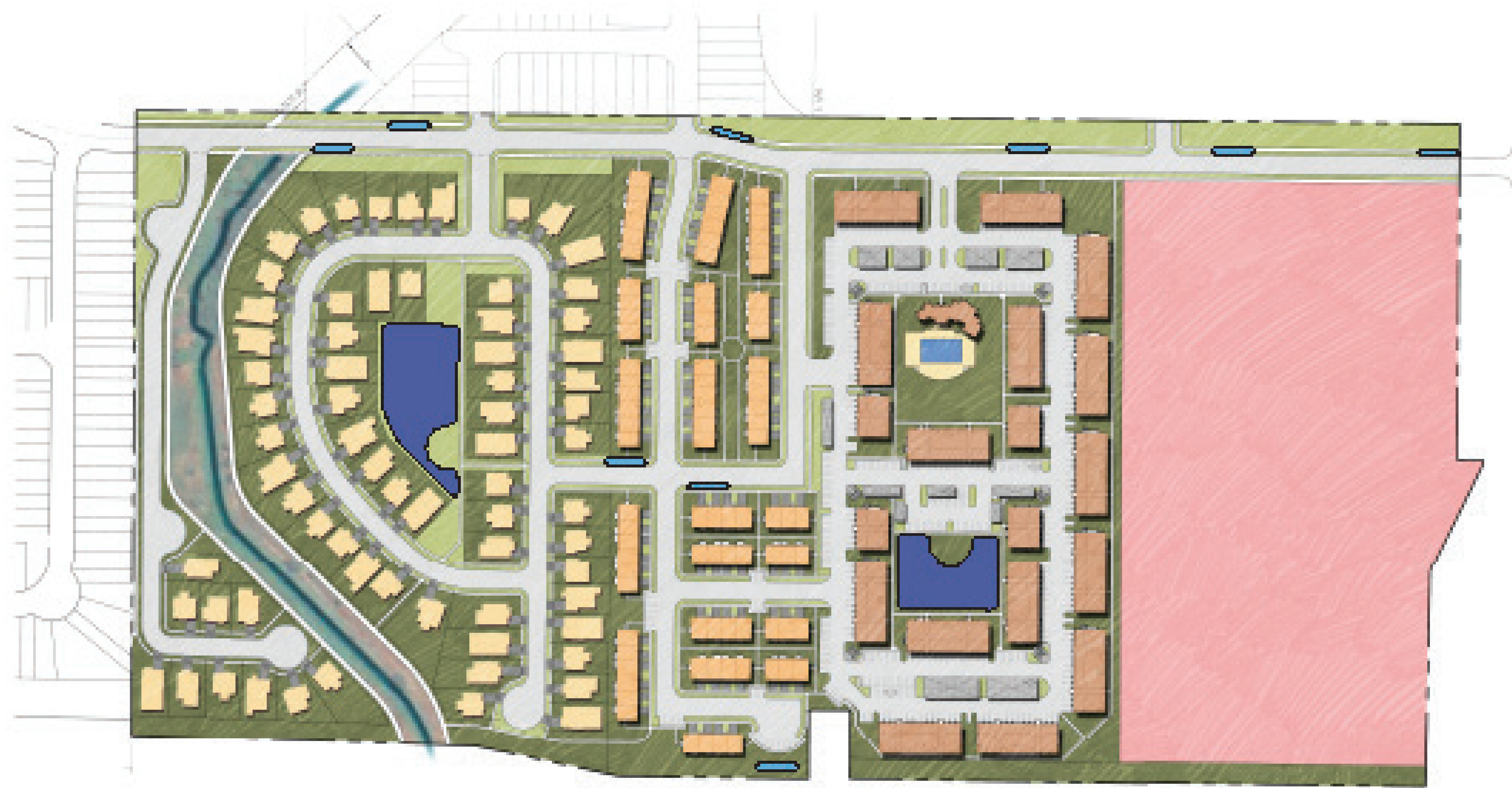
- 1 - Playground
- 2 - Trails & Pedestrian Connections
- 3 - Open Play Field
- 4 - Pool Amenity (3,600 sq. ft.)
- 5 - Spa
- 6 - Cabanas with TVs
- 7 - BBQ Areas
- 8 - Clubhouse
- 9 - Indoor Fitness Center
- 10 - Additional Open Space (beyond minimum requirement)



TALEGA VILLAGE amenities



TALEGA VILLAGE commercial



 RETENTION POND

 SEEPAGE BEDS



TALEGA VILLAGE drainage plan

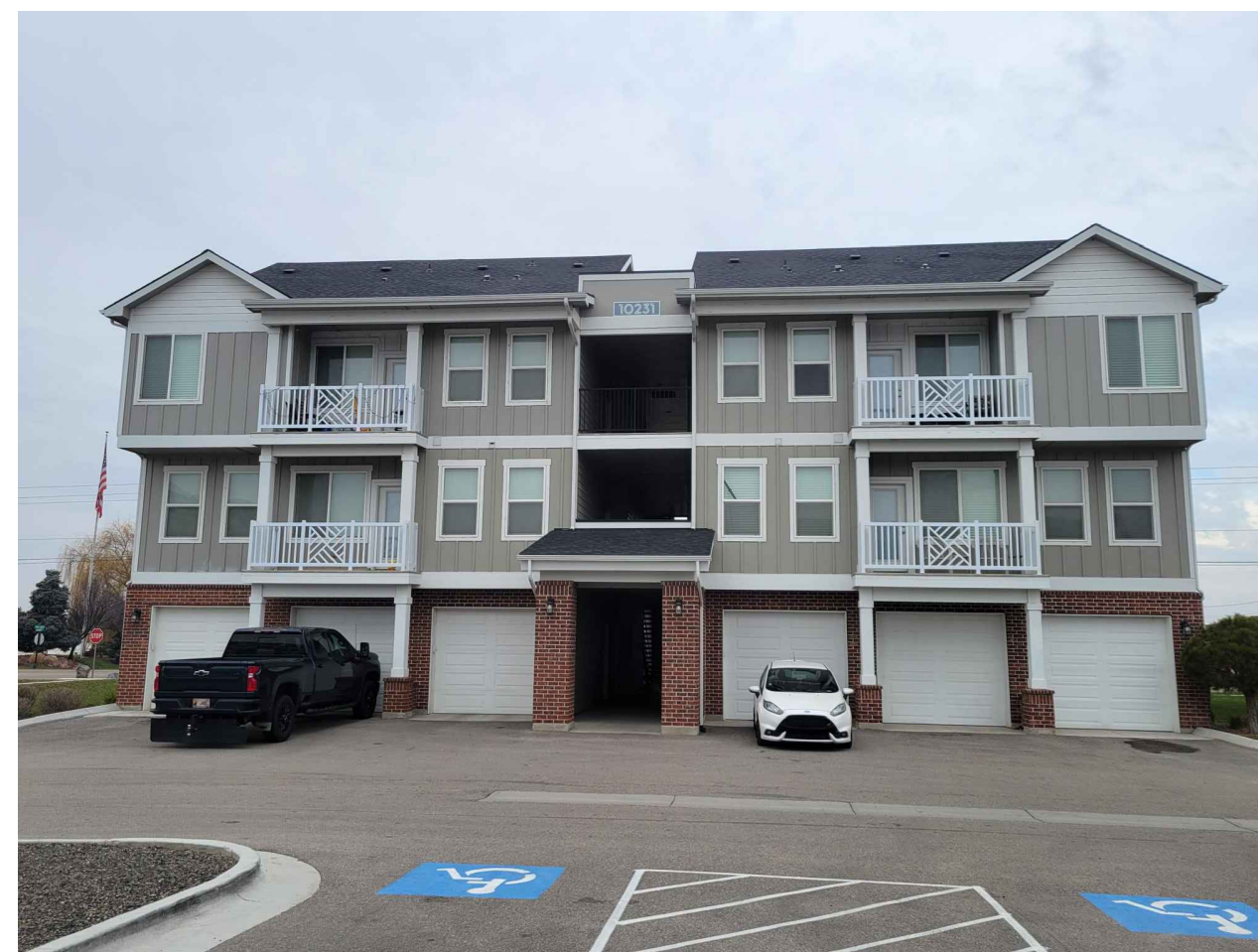
SINGLE FAMILY ELEVATIONS



TOWNHOME ELEVATIONS



APARTMENT ELEVATIONS



TALEGA VILLAGE home plan elevations exhibit

STAR CITY, ADA COUNTY
12/21/2023
21-0488

To: City of Star

From: Jason Watson, PE, PTOE
FOCUS Engineering & Surveying, LLC

File: Talega Village

Date: December 13, 2023

**Reference: Talega Village (Northern Star Development) Traffic Statement –
Hamlin Right In Only**

INTRODUCTION

In order to address the traffic concerns brought up by city staff, this traffic statement was generated to further breakdown the traffic generated by the proposed Talega Village development by phases. A full traffic impact study was completed for the Northern Star Development, now known as Talega Village, in August 2022. This traffic study was accepted by Idaho Transportation Department and Ada County Highway District. Acceptance letters and emails can be found in the back of this memo. To further break down the timing of the construction of this development and associate the traffic generated during each phase, the following timeline indicates each phase.

- Phase 1a – 120 apartment units, improve Hamlin Ave from Shultz to Hwy 44, connect Hamlin Ave to Amazon Drive (2026)
- Phase 1b – 100 apartment units (2027)
- Phase 1c – 120 apartment units (2028)
- Phase 2a – 48 townhome units and improve Hamline Ave to the north (2030)
- Phase 2b – 47 townhome units (2031)
- Phase 3 – 65 single-family units (2032)
- The commercial phase (timing unknown, driven by market)

Using the Institute of Transportation Engineers (ITE) Trip Generation Manuals, traffic generated by the apartments, townhomes, single-family homes and commercial were all generated. The following figures break down the traffic generated during each phase along with the growth in traffic along Highway 44 throughout the projected construction timeframe of this development. Along with the projected traffic in this area, the anticipated level of service at the Hamlin Avenue/Hwy 44 intersection and the Short Road/Hwy 44 intersections are illustrated in the following tables.

It can be seen from the level of service tables, with each phase of the residential development (phases 1a to 3) the Hamlin Ave/Hwy 44 intersection and the Short Road/Hwy 44 intersection will function with acceptable levels of service “C” or better for each traffic movement.

It should be noted, the intersection of Short Road and Highway 44 currently does not function with acceptable levels of service with the northbound and southbound left turn movements. In the traffic impact study for the Amazon Developments, it recommends the Short Road and Hwy 44 intersection to be reconfigured to right-in/right-out/left-in (RIROLI) movements. The analysis we performed for this traffic statement, assumes the Short Road/Hwy 44 intersection functions under this lane configuration.

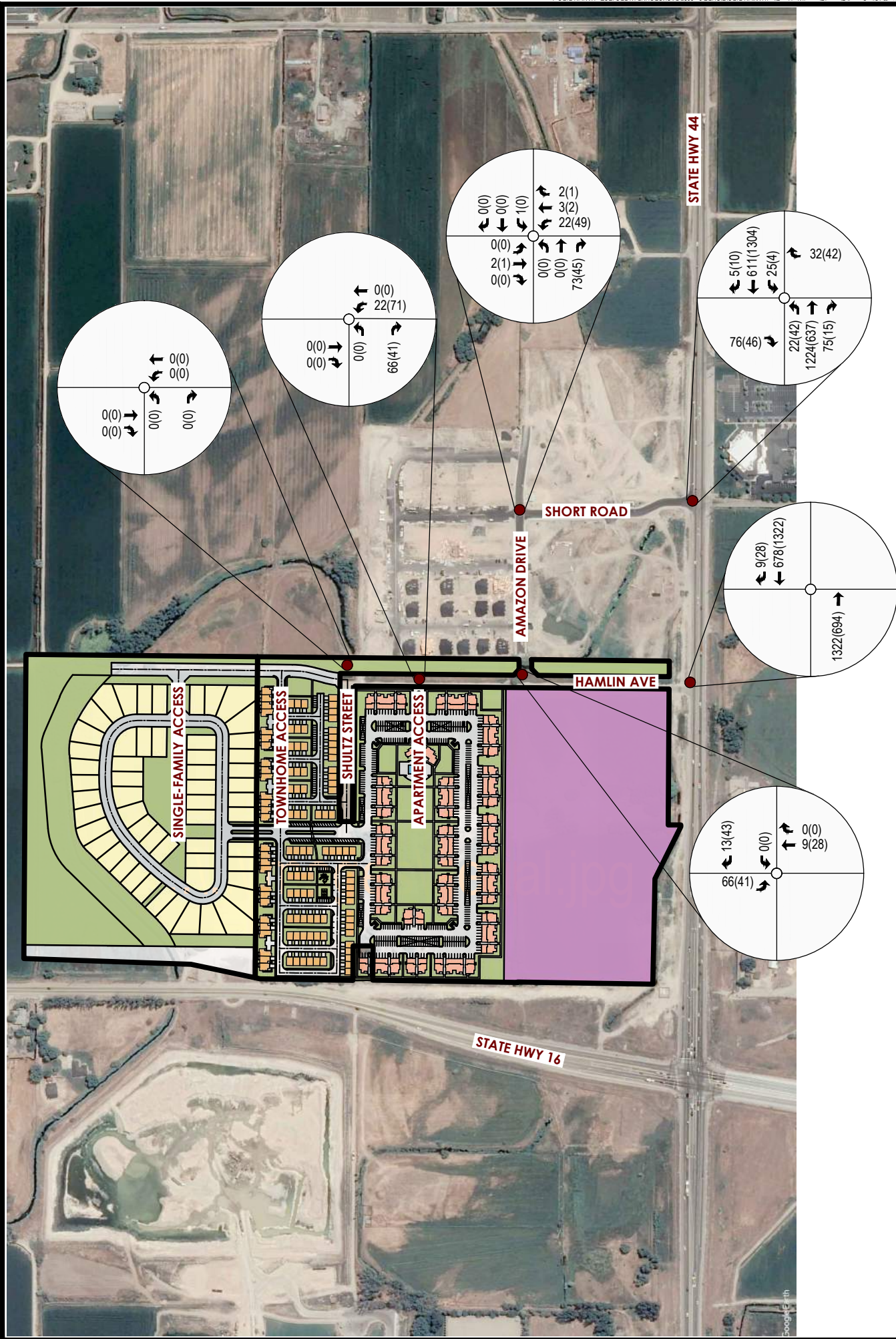
Idaho Transportation Department also has a future phased project to grade separate Highway 16 and Highway 44. This project is not funded and therefore the timing of this project is unknown at this time. Highway 44 was recently widened to add an additional eastbound and westbound through lane. With the reconstruction of the Highway 16 and Highway 44 intersection, ITD has mentioned there is a possibility that Hamlin Ave may become a Right In Only (RI Only), and remove the southbound right turn onto Highway 44. If this were to happen, this would shift all the exiting traffic from the Talega Village development to use the RIROLI Short Road and Highway 44 intersection. This analysis illustrates the levels of service if this scenario were to happen.

This traffic statement also illustrates the addition of the commercial phase. The specific land uses for the commercial phase are unknown at this time, therefore General Office was used to generate traffic associated with this phase of the development. The timeline of the commercial phase is also unknown as it will be driven by the market and economic needs in this area. In order to illustrate the traffic impacts associated with the commercial phase, at each of the previously described phases (1a, 1b, 1c, etc.) the traffic generated by the commercial phase was added to illustrate a scenario if the commercial were constructed during that year. The level of service tables illustrate that with the addition of Phase 1a and 1b, along with the commercial phase, the right in only Hamlin Ave/Hwy 44 intersection and the RIROLI Short Road/Hwy 44 intersection will function at acceptable levels of service. However, if the commercial phase is constructed during 2028 with the addition of Phase 1c, then these two intersections will start to fall below acceptable levels of service. Therefore, at that time, additional connections such as Amazon Drive connecting to Palmer Lane to the east, or Hamlin Ave connecting to the north to tie into the planned developments north of Talega Village, will be needed to accommodate the traffic.

Level of Service Table 1:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	B	14.8	0.09	B	11	0.07
		EBL	A	9	0.02	B	13	0.06
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13	0.06	A	9.1	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	10.9	0.08	C	15.3	0.08

With the addition of Phase 1a (120 apartment units), the full width construction of Hamlin Avenue to a Collector Road from Shultz Road to Highway 44, and the connection of Amazon Drive to Hamlin Avenue, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RI/OLI intersection will function with acceptable levels of service "C" or better for each traffic movement.



NORTHERN STAR DEVELOPMENT
FIGURE 2 - 2027 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a & 1b
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 2:

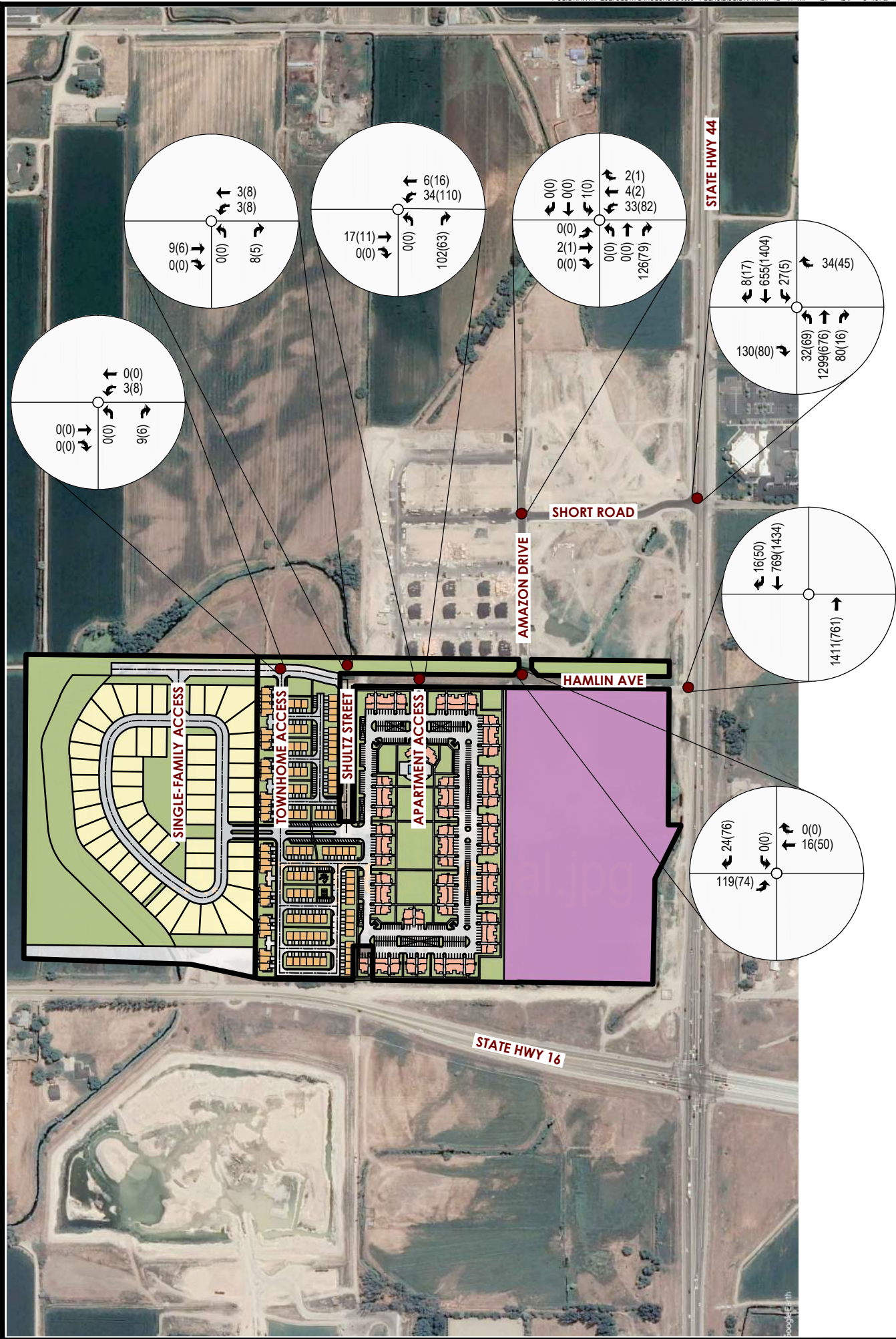
Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	15.1	0.09	B	11	0.07
		EBL	A	9.1	0.03	B	13.7	0.1
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13.2	0.06	A	9.1	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	11.3	0.13	B	16.4	0.14

With the addition of Phase 1b (100 apartment units) to the previous phase and surrounding traffic, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RI/OLI intersection will function with acceptable levels of service "C" or better for each traffic movement.

Level of Service Table 3:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	15.3	0.1	B	11.1	0.08
		EBL	A	9.2	0.04	B	14.7	0.16
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13.5	0.06	A	9.2	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	11.9	0.19	C	17.9	0.22

With the addition of Phase 1c (120 apartment units) to the previous development phases 1a and 1b, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RIROLI intersection will function with acceptable levels of service "C" or better for each traffic movement.

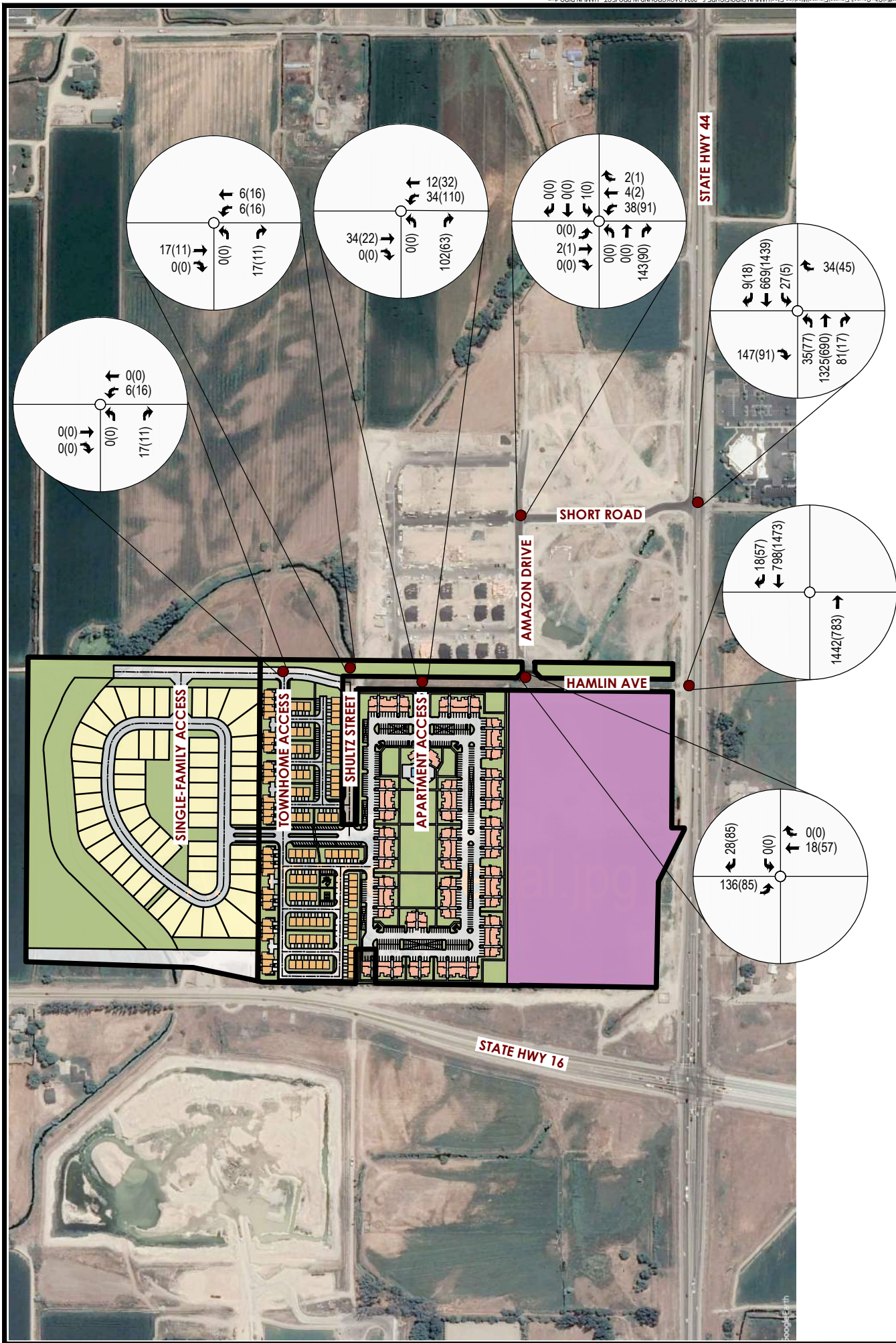


NORTHERN STAR DEVELOPMENT
FIGURE 4 - 2030 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a, 1b, 1c & 2a
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 4:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	15.9	0.1	B	11.3	0.08
		EBL	A	9.3	0.04	C	15.7	0.19
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	14	0.07	A	9.3	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	12.4	0.23	C	19.4	0.26

With the addition of Phase 2a (48 townhomes) to the previous development phases 1a, 1b and 1c, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RI/OLI intersection will function with acceptable levels of service "C" or better for each traffic movement. With the addition of Phase 2a, Hamlin Ave would be constructed to the northern boundary of the Talega Village. However, this analysis illustrates without the connection to future development to the north and just the two connections to Hwy 44 via Hamlin Ave and Short Road, the levels of service are acceptable with the traffic generated by Talega Village.

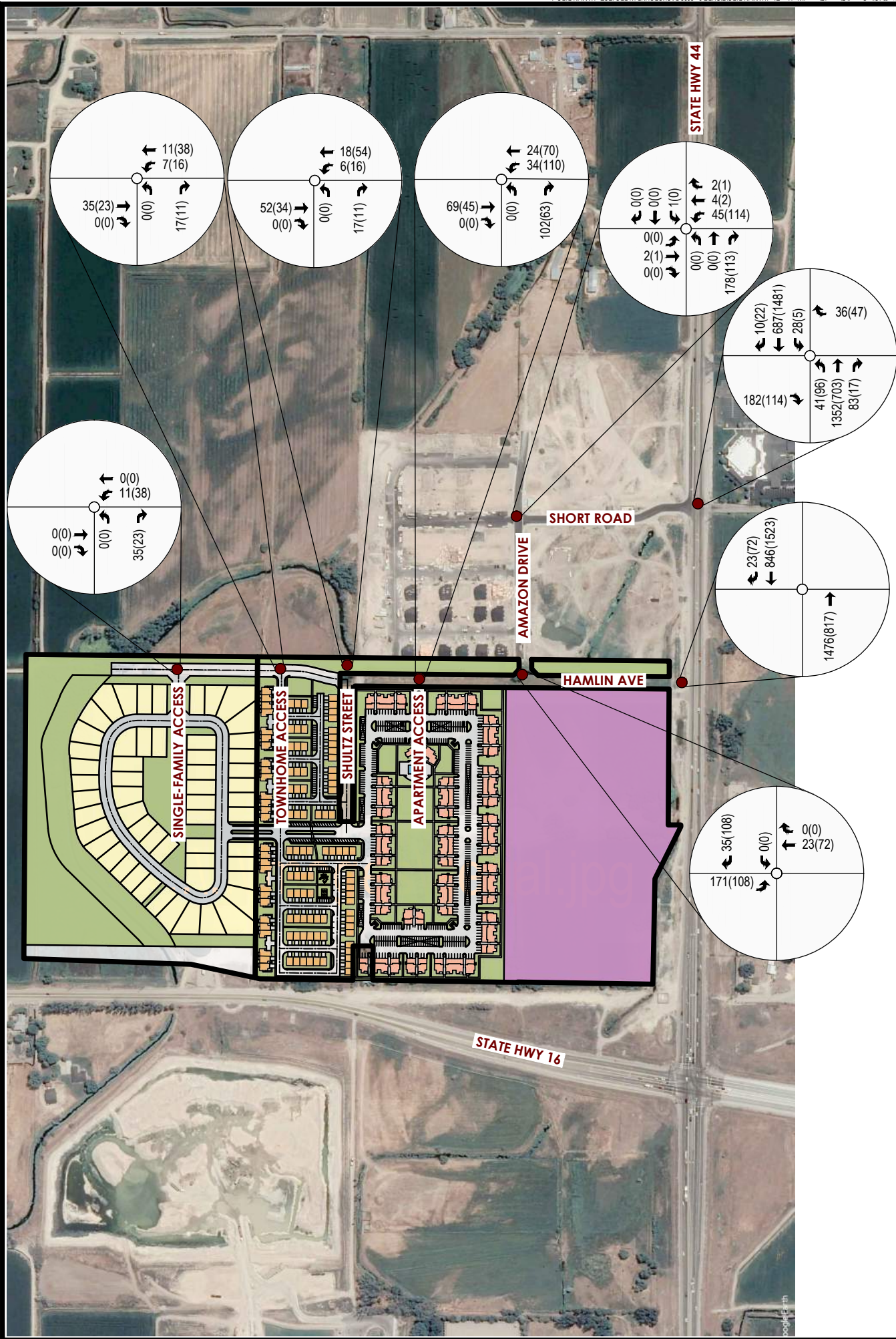


NORTHERN STAR DEVELOPMENT
FIGURE 5 - 2031 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a, 1b, 1c, 2a & 2b
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 5:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	16.1	0.11	B	11.4	0.08
		EBL	A	9.4	0.05	C	16.5	0.22
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	14.3	0.07	A	9.4	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	12.8	0.26	C	20.8	0.31

With the addition of Phase 2b (47 townhomes) to the previously developed phases 1a, 1b, 1c, and 2a, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RIROLI intersection will function with acceptable levels of service "C" or better for each traffic movement.



NORTHERN STAR DEVELOPMENT
FIGURE 6 - 2032 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a,1b,1c,2a,2b & 3
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

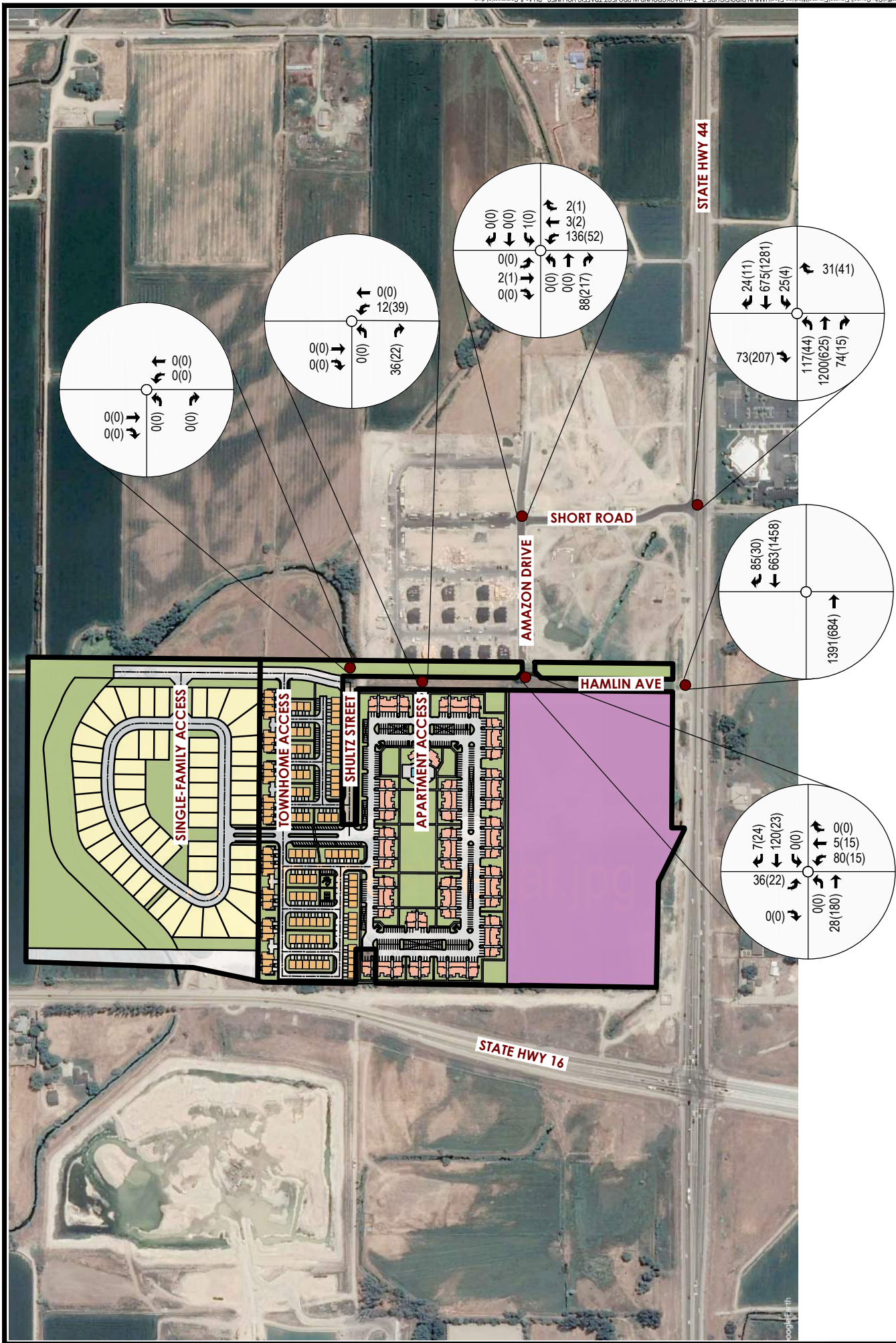
Level of Service Table 6:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	16.5	0.11	B	11.5	0.09
		EBL	A	9.5	0.05	C	18.1	0.28
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	14.6	0.08	A	9.4	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	13.7	0.33	C	23.7	0.4

With the addition of Phase 3 (65 single-family lots) to the previously developed phases 1a, 1b, 1c, 2a and 2b, both the Hamlin Ave/Hwy 44 RI Only intersection and the Short Road/Hwy 44 RI/OLI intersection will function with acceptable levels of service “C” or better for each traffic movement.

This analysis illustrates that with all the residential development planned within the Talega Village development, the RI Only intersection of Hamlin Ave and Hwy 44 will function with acceptable levels of service. The RI/OLI intersection of Short Road and Hwy 44 will also function with acceptable levels of service.

The specific land uses for the commercial phase of this development are unknown at this time. The timing of the commercial phase is also unknown as it will be driven by the economy and need within this area. In order to generate traffic associated with this commercial phase, and also as illustrated in the previously approved traffic impact study for this development, General Office was used. Using the land use code for General Office, we generated traffic associated with this phase of the development. Since the timing of this phase is unknown, we applied the traffic associated with this phase to each of the previously planned phases. The following figures illustrate the traffic volumes with the addition of the commercial phase to each phase. The level of service tables are also illustrated.

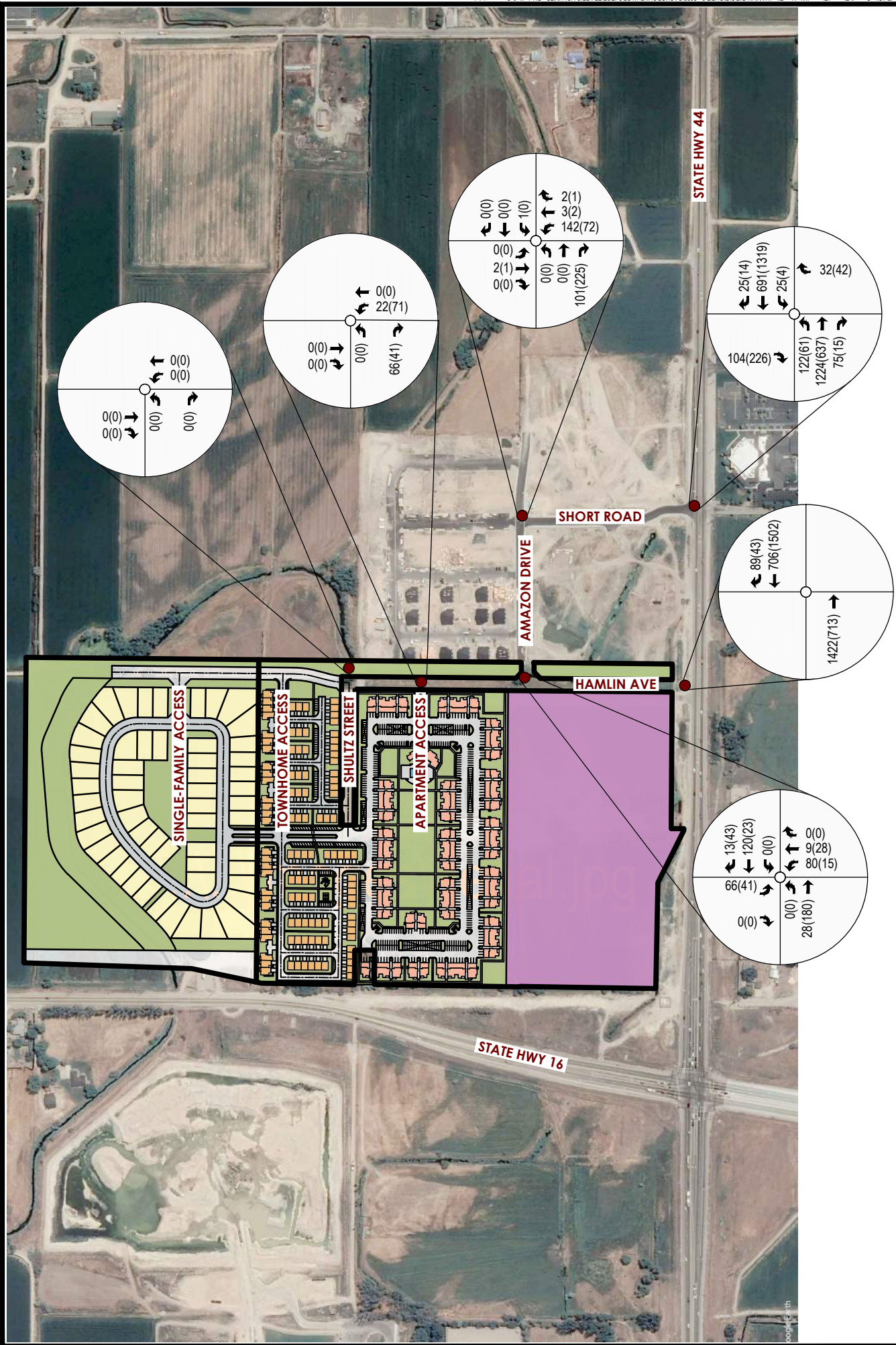


NORTHERN STAR DEVELOPMENT
FIGURE 7 - 2026 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a & Commercial
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 7:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	B	14.8	0.09	B	11	0.07
		EBL	B	10.1	0.16	B	13.6	0.1
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13	0.06	A	9.1	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	11.6	0.13	D	28.7	0.61

With the addition of the commercial phase in 2026 with the construction of Phase 1a, the RI Only Hamlin Ave/Hwy 44 intersection and the Short Road/Hwy 44 intersection will continue to function with acceptable levels of service.

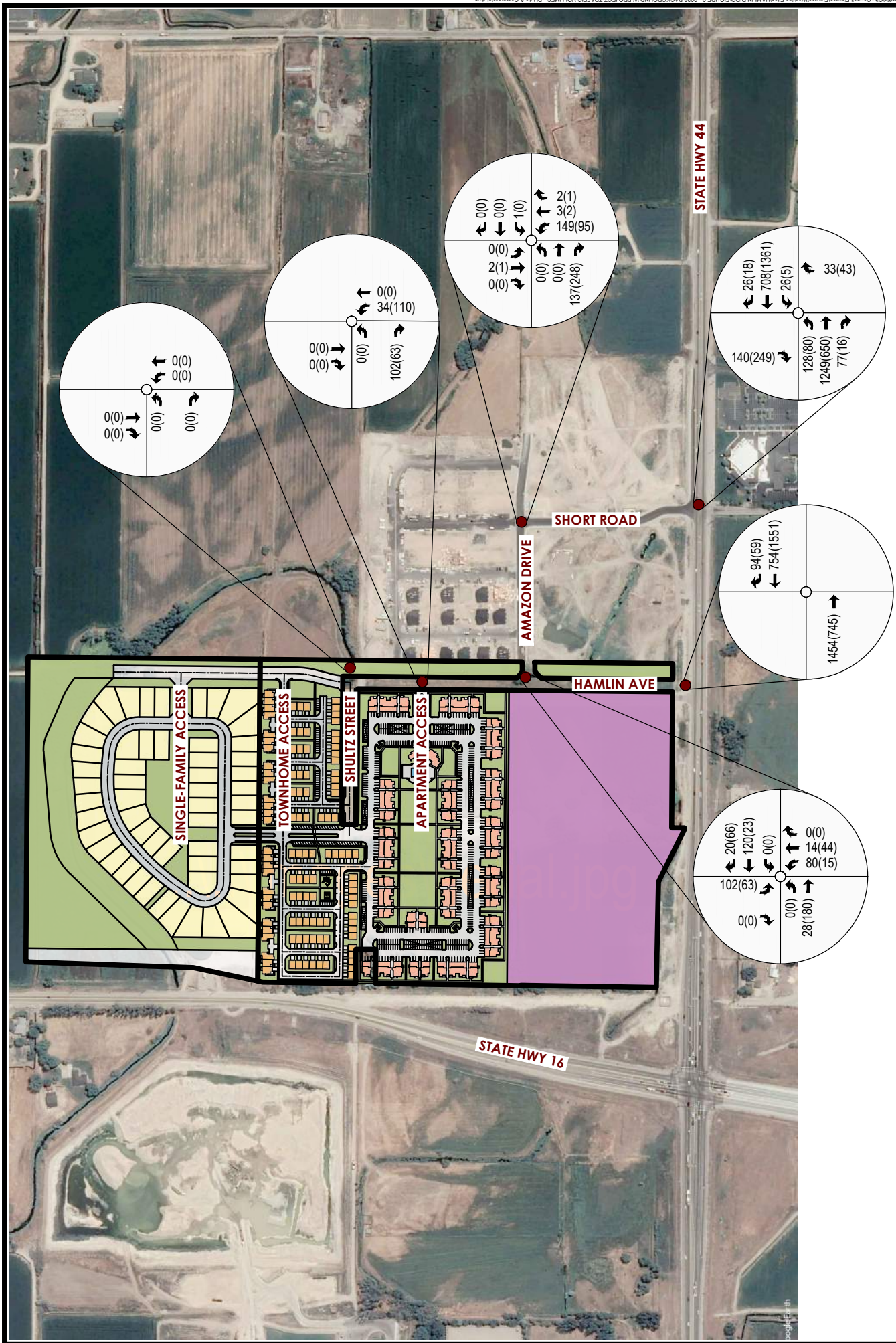


NORTHERN STAR DEVELOPMENT
FIGURE 8 - 2027 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a,1b & Commercial
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 8:

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	-	-	-	-	-	-
2	Short Road SH 44	NBR	C	15.1	0.09	B	11	0.07
		EBL	B	10.2	0.17	B	14.4	0.15
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13.2	0.06	A	9.1	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	12.2	0.19	D	34.4	0.69

In 2027, with the construction of Phase 1b, if the commercial phase is also added to this area, the Hamlin Ave/Hwy 44 RI Only intersection and Short Rd/Hwy 44 RI/OLI intersection will continue to function with acceptable levels of service.



NORTHERN STAR DEVELOPMENT
 FIGURE 9 - 2028 BACKGROUND W/ PROJECT TRAFFIC VOLUMES - PH 1a, 1b, 1c & Commercial
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

Level of Service Table 9:

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	-	-	-	-	-	-
2 Short Road SH 44	NBR	C	15.3	0.1	B	11.1	0.08
	EBL	B	10.4	0.18	C	15.5	0.21
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	B	13.5	0.06	A	9.2	0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBR	B	13	0.26	E	44.5	0.79

As illustrated in the table above, if the commercial phase is constructed in 2028 with Phase 1c, the Short Road/Hwy 44 RIROLI intersection will begin to fall below the acceptable levels of service in the PM peak hour. At this time, it would be recommended that additional connections are necessary. These connections may include Hamlin Ave connecting to the planned development to the north. This connection would provide additional routes to access onto Highway 16, or to Palmer Lane. Another connection could be Amazon Drive connecting to the east onto Palmer Lane. Palmer Lane and Highway 44 is planned to be signalized which would assist vehicles in making a left turn to travel east along Highway 44.

Please feel free to contact me with any questions or comments.

Sincerely,

FOCUS ENGINEERING & SURVEYING, LLC



Jason Watson, PE, PTOE
Transportation Department Manager
801.352.0075
jwatson@focusutah.com



**Your Safety • Your Mobility
Your Economic Opportunity**

IDAHO TRANSPORTATION DEPARTMENT

P.O. Box 8028 • Boise, ID 83707-2028

(208) 334-8300 • itd.idaho.gov

September 29, 2022

Jason Watson, PE, PTOE
Focus Engineering & Surveying, LLC.
6949 S High Tech Dr, Ste 200
Midvale, UT 84047
801-352-0075

VIA EMAIL

RE: Northern Star Development – ITD Traffic Impact Study Acceptance Letter

To Whom it May Concern,

Thank you for providing the Idaho Transportation Department (ITD) the Northern Star development TIS to review. The proposed development is located north of SH-44, east of SH-16 and west of Hamlin Avenue in Star, Idaho. The proposed development will consist of 55 single-family units, 110 townhome units, 310 apartment units, and 18 acres of commercial/office. We have completed our review. However, ITD is not requiring study of these impacts and they do not warrant any further consideration. ITD does not have objections to the development nor has any requests currently.

If you have any questions or concerns, please contact me at Andrew.marini@itd.idaho.gov or 208-334-8336.

Sincerely,

Andrew Marini
ITD – District 3
Development Services Coordinator

cc:

Mindy Wallace, PE – ACHD

Jason Watson

From: Paige Bankhead <pbankhead@achdidaho.org>
Sent: Friday, August 5, 2022 3:07 PM
To: Jason Watson; Regan Hansen
Cc: jramseyconstruction@gmail.com; snickel@staridaho.org
Subject: RE: [EXTERNAL] RE: Northern Star Development Traffic Impact Study

Caution: This email originated from outside of FOCUS. Do not click links or open attachments unless you are positive of the sender's identity and have verified the content is safe.

Hi Jason,

Thank you. The study is acceptable. I'm sorry, I forgot one other item: please provide the percentage of site traffic at each intersection. We can accept the study, but please provide this information before the application submittal so that we have it for when we write the staff report with ACHD's final requirements. The staff report will be assigned to a Planner by my supervisor when the development application transmittal is received from the City of Star. She assigns these weekly every Thursday.

Thanks,

Paige Bankhead, PE
Traffic Engineer

Ada County Highway District
Development Services
1301 N. Orchard St. Ste. 200
Phone: (208) 387-6293



From: Jason Watson <jwatson@focus-es.com>
Sent: Tuesday, August 2, 2022 11:33 AM
To: Paige Bankhead <pbankhead@achdidaho.org>; Regan Hansen <Regan.Hansen@itd.idaho.gov>
Cc: jramseyconstruction@gmail.com
Subject: RE: [EXTERNAL] RE: Northern Star Development Traffic Impact Study

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Paige,

From: Dawn Battles <Dbattles@achdidaho.org>
Sent: Wednesday, January 3, 2024 3:28 PM
To: Jason Watson <jwatson@focus-es.com>
Cc: Ryan Field <rfield@staridaho.org>; Shawn Nickel <snickel@staridaho.org>; Thomas Romney <tromney@focus-es.com>; Chad Garner <cgarner@focus-es.com>; Dennis Jordan <djordan@focus-es.com>; Trenton Smith <tsmith@focus-es.com>; jramseyconstruction@gmail.com
Subject: SPP22-0006 Talega Village Traffic Study

Jason,

The ACHD report I issued in September 2023 is based off the TIS that was approved by ACHD in April 2022. For future reference, ACHD does not issue a report unless the TIS is approved by ACHD.

The question regarding ACHD being good to go with Talega Village is too broad of a question to just answer yes or no. The Planning Department has issued a report with Site Specific Conditions of Approval that are required as part of the development. As part of those Site Specific Conditions of Approval, plans are required to be submitted to ACHD for review and approval and the plans shall include the Site Specific Conditions of Approval required in the report. An Engineer Tech will be assigned the plans submitted for review and approval. I hope this helps clarify your question.

Happy New Year!

Thanks,

Dawn Battles

Senior Planner | Development Services

Ada County Highway District (ACHD)
1301 N. Orchard Street, Suite 200, Boise, ID 83706

Phone: (208)387-6218

www.achdidaho.org

Connect with us on social! @achdidaho



From: Brandon Atchley <batchley@achdidaho.org>
Sent: Wednesday, January 3, 2024 2:58 PM
To: Dawn Battles <Dbattles@achdidaho.org>; Mindy Wallace <Mwallace@achdidaho.org>
Subject: FW: Talega Village Traffic Study

Hi Dawn and Mindy,
Let me know how you'd like me to handle this. They called regarding changes in phasing time of the project, and was reached out by City/ITD to my understanding.

Thanks,

Brandon Atchley

Assistant Traffic Engineer | Traffic Services

1301 N Orchard Street, Ste 200, Boise, ID 83706

Phone: (208) 387-6294



From: Jason Watson <Sent: Wednesday, January 3, 2024 13:10

To: Brandon Atchley <batchley@achdidaho.org>

Cc: rfield@staridaho.org; snickel@staridaho.org; Thomas Romney <tromney@focus-es.com>; Chad Garner <cgarner@focus-es.com>; Dennis Jordan <djordan@focus-es.com>; Trenton Smith <tsmith@focus-es.com>; jramseyconstruction@gmail.com

Subject: Talega Village Traffic Study

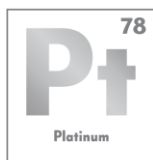
Caution: This is an external email and has a suspicious subject or content. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Happy New Year Brandon,

I just wanted to follow up from our phone conversation we had before the Holiday break with respect to the Talega Village Traffic Study. Just confirming that ACHD has accepted and provided their report for the Talega Village development, see attached. The attached email from Paige is the acceptance. We discussed the ITD project along Hwy 44 and Hwy 16 and some timing of the Phase 3 of that project, which is currently not funded and the timing is unknown. As far as ACHD is concerned with this project, we are good to go, correct?

Just wanted to send a follow up. I have CC'd Shawn and Ryan with the city on this so they are in the loop. If I missed anything, please let me know.

Thanks again Brandon for taking the time to chat with me and I hope you have a great new year...



JASON WATSON PTOE, PE
TRANSPORTATION

O: 801-352-0075

M: 480-540-0010

JWATSON@FOCUS-ES.COM

FOCUS-ES.COM

6949 S. HIGH TECH DRIVE

SUITE 200

MIDVALE, UT 84047



CITY OF STAR

LAND USE STAFF REPORT

TO: Mayor & Council

FROM: City of Star Planning & Zoning Department *Shen T. Mink*

MEETING DATE: **December 5, 2023 – PUBLIC HEARING (tabled from 11-21-23)**

FILE(S) #: AZ-22-11 - Annexation and Zoning
RZ-23-03 – Rezone
DA-22-12 – Development Agreement
PP-22-17 – Preliminary Plat for Talega Village Subdivision
CUP-22-05 – Talega Village Multi-Family

OWNER/APPLICANT/REPRESENTATIVE

Representative:

Chad Garner
Focus Engineering & Surveying
6949 S. High Tech Dr., Ste. 200
Midvale, UT 84047

Owner/Applicant:

Derk Pardoe
3454 Stone Mountain Lane
Sandy, UT 84092

REQUEST

Request: The Applicant is requesting approval of an Annexation and Zoning (Residential R-10-DA), a Rezone (from R-1 & C-2 to Residential R-10-DA), a Development Agreement, a Preliminary Plat for proposed residential and commercial uses consisting of 162 buildable lots (1 commercial lot, 1 multi-family lot, 65 single-family residential lots, 95 townhome lots and multiple common lots), and a Conditional Use Permit for a proposed multifamily residential use (340 units), A residential density of 10 du/acre is proposed. The property is located at 58 N. Truman Place and 8370 W. Shults Court in Star, Idaho. The entire property consists of 74.61 acres.

PROPERTY INFORMATION

Property Location: The subject property is generally located on the northeast corner of State Highway 16 and State Highway 44. Ada County Parcels: R3720002880,

R3720003030, R3720002500, R3720002480, R3720001505, R3720002412,
& S0409417201.

Existing Site Characteristics: The property currently is vacant.

Irrigation/Drainage District(s): Middleton Irrigation Association
Middleton Mill Ditch Company
P.O. Box 848
Middleton, ID 83644

Pioneer Ditch Company
P.O. Box 70
Star, Idaho 86369

Flood Zone: This property is not currently located in a Special Flood Hazard Area.

Special On-Site Features:

- ✪ Areas of Critical Environmental Concern – No known areas.
- ✪ Evidence of Erosion – No evidence.
- ✪ Fish Habitat – No.
- ✪ Floodplain – No.
- ✪ Mature Trees – Several existing mature trees.
- ✪ Riparian Vegetation – None.
- ✪ Steep Slopes – None.
- ✪ Stream/Creek – Yes, Drainage District No. 2 main drain in the northern portion of property.
- ✪ Unique Animal Life – No unique animal life has been identified.
- ✪ Unique Plant Life – No unique plant life has been identified.
- ✪ Unstable Soils – No known issues.
- ✪ Historical Assets – No historical assets have been observed.
- ✪ Wildlife Habitat – No known sensitive wildlife habitat observed.

APPLICATION REQUIREMENTS

Pre-Application Meeting Held	December 1, 2021
Neighborhood Meeting Held	March 15, 2022
Application Submitted & Fees Paid	November 21, 2022
Application Accepted	October 10, 2023
Residents within 300' Notified	November 2, 2023
Agencies Notified	August 15, 2023
Legal Notice Published	November 7, 2023

HISTORY

On March 6, 2018, the Council voted 4 to 0 to approve CPA-18-01 Comprehensive Plan Map Amendment to Commercial; AZ-18-01, Annexation and Zoning to Commercial (C2) for the Eagle Crossroads, LLC. Application.

On December 8, 2021, Council approved the 2020 Comprehensive Plan Map Amendment, recognizing this property with single-family, townhomes, multi-family and commercial.

SURROUNDING ZONING/COMPREHENSIVE PLAN MAP/LAND USE DESIGNATIONS
--

	Zoning Designation	Comp Plan Designation	Land Use
Existing	Commercial (C-2) Residential (R-1) Rural Urban Transition (RUT)	Commercial/High Density Residential/Compact Residential/Neighborhood Residential	Vacant
Proposed	Commercial (C-2-DA) Residential (R-10-DA)	Commercial/High Density Residential/Compact Residential/Neighborhood Residential	Commercial/Multi-Family Residential/Single-Family Residential
North of site	Residential (R-6-DA) City of Eagle	City of Eagle Comprehensive Plan	Approved 400 residential lot Cascade Springs Subdivision
South of site	Commercial (C-1) Residential (R-1) Rural Urban Transition (RUT)	Commercial	Hwy 44 Single Family Residential Vacant Agricultural
East of site	Residential (R-13/R-5) Commercial (C-2) Mixed Use (MU)	Commercial/High Density Residential/ Neighborhood Residential/Eagle's Jurisdiction	Multi-Family Residential (Amazon Falls) Vacant (Junction Crossing)/Agricultural
West of site	Rural Urban Transition (RUT) Mixed Use (MU) Light Industrial (LI) Greyloch	Mixed Use Light Industrial	Hwy 16 Vacant Greyloch Cabinets

UNIFIED DEVELOPMENT CODE:

8-1B-1: ANNEXATION AND ZONING; REZONE:

B. Standards:

1. The subject property shall meet the minimum dimensional standards of the proper district.
2. The city may require a development agreement in conjunction with the annexation and zoning, or rezone, pursuant to Idaho Code section 67-6511A, which may include a concept plan. In addition to other processes permitted by city and state code, exceptions or waivers of standards, other than use, may be permitted through execution of a development agreement. A development agreement and concept plan shall be required for any rezone to a mixed-use zone, high density zone or land which includes steep slope (land over 25%) or floodway.
3. The termination of a development agreement shall result in the reversal of the official zoning map amendment approval and applicable development approval for any undeveloped portion of property subject to the development agreement. The undeveloped property subject to the development agreement shall be rezoned to the district classification as designated by the development agreement. When no designation is provided, the property shall revert to its original zoning or, if the original designation no longer exists, to the closest current equivalent zoning as determined by the current Comprehensive Plan Land Use Map designation.
4. An amendment or termination of a previously recorded development agreement shall be recorded in the office of the county recorder by the clerk.
5. An approved development agreement must be executed within ninety (90) days of the meeting at which the development agreement is approved by the city council. A one-time administrative extension of maximum thirty (30) days may be granted by the zoning administrator. Additional extensions may be approved by majority vote of the city council. Failure to execute the development agreement within the required timeframe will result in the denial of all related applications.

C. Required Findings: The council shall review the application at the public hearing. In order to grant an annexation and zoning or rezone, the council shall make the following findings:

1. The map amendment complies with the applicable provisions of the comprehensive plan;
2. The map amendment complies with the regulations outlined for the proposed district;
3. The map amendment shall not be materially detrimental to the public health, safety, and

welfare; and

4. The map amendment shall not result in an adverse impact upon the delivery of services by any political subdivision providing public services within the city.

5. The annexation (as applicable) is in the best interest of city.

8-1B-4: CONDITIONAL USES:

A. Purpose: The purpose of this section is to establish procedures that allow for a particular use on a specific property subject to specific terms and conditions of approval.

B. Applicability: The provisions of this section apply to all uses identified as conditional use within this title. In addition to other processes permitted by city and state code, exceptions or waivers of standards, other than use, may be permitted through issuance of a conditional use permit, development agreement or PUD.

C. Process:

1. The applicant shall complete a pre-application conference with the administrator prior to submittal of an application for a conditional use.

2. A neighborhood meeting shall be held by the applicant pursuant to Section 8-1A-6C of this title.

3. An application and appropriate application fees shall be submitted to the City on forms provided by the city.

4. Prior to issuing the conditional use permit, the administrator may require additional information, including studies, concerning the social, economic, fiscal or environmental effects of the proposed conditional use. Traffic studies may be required by the transportation authority prior to acceptance of an application.

D. Standards: In approving any conditional use, the city council may prescribe appropriate conditions, bonds and safeguards in conformity with this title that:

1. Minimize adverse impact of the use on other property.

2. Control the sequence and timing of the use.

3. Control the duration of the use.

4. Assure that the use and the property in which the use is located is maintained properly.

5. Designate the location and nature of the use and the property development.

6. Require the provision for on site or off-site public facilities or services.

7. Require more restrictive standards than those generally required in this title.

8. Require mitigation of adverse impacts of the proposed development upon service delivery by any political subdivision, including school districts, that provides services within the city.

E. Findings: The council shall base its determination on the conditional use permit request upon the following:

1. That the site is large enough to accommodate the proposed use and meet all the dimensional and development regulations in the district in which the use is located.

2. That the proposed use shall meet the intent of the Star comprehensive plan and be in compliance with the requirements of this title.

3. That the design, construction, operation and maintenance will be compatible with other uses in the general neighborhood and with the existing or intended character of the general vicinity.
4. That the proposed use, if it complies with all conditions of the approval imposed, will not adversely affect other property in the vicinity.
5. That the proposed use will be served adequately by essential public facilities and services such as highways, streets, schools, parks, police and fire protection, drainage structures, refuse disposal, water, and sewer.
6. That the proposed use will not create excessive additional costs for public facilities and services and will not be detrimental to the economic welfare of the community.
7. That the proposed use will not involve activities or processes, materials, equipment and conditions of operation that will be detrimental to any persons, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors.
8. That the proposed use will not result in the destruction, loss or damage of a natural, scenic or historic feature considered to be of major importance as determined by the City.

F. Time Limitations and Extensions:

1. A conditional use permit, upon council approval, shall be valid for a maximum period of twenty-four (24) months unless otherwise approved by the City Council. During this time, the applicant shall commence the use as permitted in accord with the conditions of approval, satisfy the requirements set forth in the conditions of approval, and acquire building permits and commence construction of permanent footings or structures on or in the ground. Once all requirements are satisfied, permits are acquired and the use is commenced, the conditional use permit will become permanent unless otherwise revoked by the city council.
2. A conditional use permit that also requires plating: The final plat must be recorded within this twenty-four (24) month period.
 - a. For projects with multiple phases, the twenty-four (24) month deadline shall apply to the first phase. In the event that the development is made in successive contiguous segments or multiple phases, such phases shall be constructed within successive intervals of one year from the original date of approval. If the successive phases are not submitted within the one-year interval, the conditional use approval of the future phases shall be null and void.
3. Time Extension. Upon written request and filed by the applicant prior to the termination of the period in accord with this subsection F, the administrator may authorize a single, administrative time extension to commence the use not to exceed one (1), twelve (12) month period. The administrator may require the conditional use comply with the current provisions of this chapter. Additional requests must be approved by the council.
 - a. Council approval of requests for time extension for an approved conditional use shall be determined by the city council at a public hearing and will not be granted if any of the following conditions exist:
 - (1) Significant amendments to the comprehensive plan or this unified development code have been adopted that change the basis under which the conditional use permit was granted.
 - (2) Significant changes in land use have occurred in the area that will impact or be impacted by the project.
 - (3) Hazardous conditions have developed or have been discovered that will impact the project.
4. Community facilities and/or services are no longer adequate to serve the project.

a. The city council may place additional requirements, modify the previous approval or deny the request for time extension.

b. No more than one-time extension may be granted to a single conditional use.

G. Transfers and Modifications:

1. Conditional use permits are an entitlement to the specific property on which the approval was granted and upon property sale the entitlement transfers to the new owner(s) without further application or approval, provided, however, the new owner(s) shall be bound by the same conditions of approval as the original permit holder(s). This is for a specific use and may not be used for other applications.

2. A conditional use permit is not transferable from one property to another.

3. All requested modifications to an approved conditional use shall be considered by the city council at a public hearing. The city council may modify the conditions, limitations and/or scope of the permit.

H. Revocation:

1. A conditional use permit may be revoked or modified by the city council, upon notice and public hearing, for breach or violation of any condition of approval or limitation of the permit.

2. If the city council decides to revoke a conditional use permit, either on its own action or upon complaint to the city council, the administrator shall notify the permit holder of its intention to revoke the conditional use permit and provide the permit holder with the opportunity to contest the revocation.

3. Fifteen (15) days' prior notice of the hearing shall be given to the permit holder and all property owners of record (to be obtained from the County Assessor's office) within the radius required in subsection 8-1A-4B of this article.

4. The council shall make findings of fact and conclusions of law supporting its decision to revoke the conditional use permit. If the council decides not to revoke the conditional use permit, no findings of fact and conclusions of law shall be made.

5. An affected person may appeal the decision of the city council under the administrative procedure act of the state of Idaho, Idaho Code title 67, chapter 52.

8-3A-1: ZONING DISTRICTS AND PURPOSE ESTABLISHED:

The following zoning districts are hereby established for the interpretation of this title, the zoning districts have been formulated to realize the general purposes as set forth in this title. In addition, the specific purpose of each zoning district shall be as follows:

RESIDENTIAL DISTRICT: To provide regulations and districts for various residential neighborhoods. Gross density in a Residential (R) district shall be determined according to the numeral following the R. The numeral designates the maximum number of dwelling units per acre. In zoning designations of R-1, R-2, R-3, R-4 and R-5, housing shall be single family detached unless approved with a PUD or development agreement. Connection to municipal water and sewer facilities are required for all subdivision and lot split applications submitted after the effective date hereof in all districts exceeding one dwelling unit per acre. Wells and septic systems may be permitted for larger lots in this land use designation that are not adjacent

to municipal services, as determined by the Sewer District, and if approved by the applicable Health Department. Private streets may be approved in this district for access to newly subdivided or split property. This district does allow for some non-residential uses as specified in 8-3A-3.

(C-2) GENERAL BUSINESS DISTRICT: To provide for the establishment of areas for commercial uses allowed in other commercial zones and commercial uses which are more intensive than those permitted in other commercial zones, and typically located adjacent to arterial roadways and not immediately adjacent to residential, including the establishment of areas for travel related services such as hotels, motels, service stations, drive-in restaurants, offices, limited warehousing, commercial services and retail sales.

DA DEVELOPMENT AGREEMENT: This designation, following any zoning designation noted on the official zoning map of the city (i.e., C-2-DA), indicates that the zoning was approved by the city with a development agreement, with specific conditions of zoning.

8-3A-3: USES WITHIN ZONING DISTRICTS

The following table lists principal permitted (P), accessory uses (A), conditional (C), or prohibited (N) uses.

ZONING DISTRICT USES	R	C-2
Dwelling		
Multi-family ¹	C	N
Single-family attached	P	N
Single-family detached	P	N

Notes:

1. Indicates uses that are subject to specific use standards in accord with chapter 5 of this title.

8-3A-4: ZONING DISTRICT DIMENSIONAL STANDARDS:

Zoning District	Maximum Height Note Conditions	Minimum Yard Setbacks Note Conditions			
		Front ⁽¹⁾	Rear	Interior Side	Street Side

R-6 to R-11 attached housing	35'	15' to living area 20' to garage 10' if alley load	15' 4' if alley load	7.5' (2)	20'
C-2	35'	20'	5'	0(4)	20'

Notes:

1. Front yard setback shall be measured from the face of the garage to the face of the sidewalk, allowing for 20' of parking on the driveway without overhang onto the sidewalk.
2. Zero-Lot-Line and reduced front and rear setback waivers may be requested through the Development Agreement process. All other side yard setback requests for detached structures shall not be granted waivers, unless as part of a Planned Unit Development.
3. All setbacks in the CBD, C-1, C-2, LO, IL, PS, RC and M-U zone shall maintain a minimum 15' when adjacent to a residential use or zone.
4. As approved by the Fire District.

8-3B-3: ADDITIONAL RESIDENTIAL DISTRICT STANDARDS

- A. Comply with Section 8-3A-1: ZONING DISTRICTS AND PURPOSE ESTABLISHED.
- B. When development is planned with lots that directly abut existing lots within a Rural Residential area, or "Special Transition Overlay Area" as shown on the Comprehensive Plan Land Use map, an appropriate transition shall be provided for the two abutting residential lot types. A transition shall take into consideration site constraints that may exist and may include clustering of the urban lots in order to provide an open space area avoiding urban lots directly abutting rural residential lots, or may include the provision of a buffer strip avoiding urban lots directly abutting rural residential lots, or may include setbacks within the urban lots similar to the rural residential lots directly abutting, or may include the provision of one half to one acre size lots directly abutting the rural residential lots.
- C. Urban style development, as guided by provisions within the comprehensive plan and this Title, is required to limit urban sprawl, however, densities of no more than 1 to 2 dwelling units per acre are to be designed within the floodplain, ridgeline developable areas and hillside developable areas (both as defined within the comprehensive plan).
- D. Housing developments with densities of R-11 and higher shall be designed to limit height, increase setbacks and/or provide additional landscaping along the perimeter of the development, if determined by the council, where abutting areas are planned for lower densities.
- E. Rezoning to R-11 and higher shall not be allowed unless adequate ingress/egress to major transportation corridors is assured.

F. All new residential, accessory uses or additions/remodels within the residential zones shall pave all unpaved driveways to the home.

G. Spite strips, common lots, unreasonable development phasing, or other means of any type purposely or unintentional that may result in the blocking of services or development, including but not limited to sewer, water, streets, or utilities are prohibited in any zoning district within the City of Star.

H. In any development that requires a traffic signal as part of the approval process, the developer shall be responsible for providing an Emergency Opticom System to the intersection.

8-3C-1: ADDITIONAL COMMERCIAL DISTRICT STANDARDS:

ALL COMMERCIAL DISTRICTS:

A. Comply with Section 8-3A-1: ZONING DISTRICTS AND PURPOSE ESTABLISHED.

B. New commercial developments shall incorporate site and architectural design recommendations from the Architectural Overlay Design Guidelines for the Central Business District and Riverfront Center.

C. Site Improvements: 1) Prior to any ground disturbance for any commercial, industrial or other non-residential buildings, a Commercial Site Improvements application shall be submitted to the City for approval by the City Engineer. This shall include any new site development initiated prior to a City Building permit.

2) In any development that requires a traffic signal as part of the approval process, the applicant shall be responsible for providing an Emergency Opticom System to the intersection.

3) One (1) full-size copy of the construction drawings, drawn in accordance with the requirements hereinafter stated. The construction Drawings shall be submitted on good quality paper, be professionally drafted, shall have the dimensions of not less than twenty-four inches by thirty-six inches (24" x 36"), and shall be drawn to a scale of not less than one inch to one hundred feet (1"=100') and contain a drafting date and north arrow.

a. Application shall include compliance with Section 8-4A-8 and 8-4A-11 of this ordinance.

b. Construction drawings shall include both above ground and below ground improvements, including the proposed building envelope of proposed improvements. Said improvements must include proposed finished grades of all impervious surfaces, and shall be in conformance with all Federal, State, and local regulations.

c. Electronic file of all application materials in original .pdf format shall be submitted with the application on a thumb drive.

8-3G-1: ARCHITECTURAL OVERLAY DISTRICT:

A. An Architectural Overlay District boundary is all of the existing CBD north of the Boise River, and approximately 750' on either side of SH-44 from city limit to city limit, including future annexations. This shall also include all other non-residential zoned uses and properties throughout the City. Single-family dwellings that are part of an approved PUD or Conditional Use Permit shall comply with this section.

- B. Architectural Overlay District includes the entirety of the South of the River Area Plan.
- C. The "STAR DESIGN GUIDELINES, CENTRAL BUSINESS DISTRICT AND RIVERFRONT CENTER" (the Guidelines), is adopted through this ordinance. It may be amended from time to time by a Resolution of the Star City Council and shall be used within the Architectural Overlay District.
- D. If the Architectural Overlay District Guidelines conflict with other parts of the City of Star code, the Architectural Overlay District Guidelines shall be used.

8-4B-3: REQUIRED NUMBER OF OFF-STREET PARKING SPACES:

- A. Required parking spaces for other permitted or conditional uses not listed herein or uses that are listed but may be different from normal operation, shall be determined by the administrator and/or Council. Among the factors for determining the number of spaces to be required for a use not listed herein, the administrator may compare the proposed use with a use which has similar traffic generating characteristics as outlined in the most recent version of the institute of transportation engineers trip generation manual.
- B. Minimum Number of Off-Street Parking Spaces: The minimum number of required off street vehicle parking spaces for residential uses shall be:

Type Of Use	Off-Street Parking Spaces Required
RESIDENTIAL	
Apartments or multi-family dwellings	For each unit with 2 or more bedrooms - 2 including 1 covered; for each 1 bedroom or studio unit - 1.5 including 1 covered. Guest parking shall be provided at a ratio of .25 spaces per unit.

COMMON OPEN SPACE AND SITE AMENITY REQUIREMENTS

8-4E-1: APPLICABILITY:

The standards for common open space and site amenities shall apply to all residential developments with a density exceeding one dwelling unit per acre.

8-4E-2: STANDARDS:

- A. Open Space and Site Amenity Requirement (see also Chapter 8 "Architectural Review"):
 1. The total land area of all common open space shall equal or exceed fifteen percent (15%) of the total gross acreage of land area of the development. A minimum of 10% of the total gross acreage of the development shall be for useable area open space. Open space shall be

designated as a total of 15% minimum for residential developments in all zones with densities of R-2 or greater.

2. Each development is required to have at least one site amenity.

3. One additional site amenity shall be required for each additional twenty (20) acres of development area, plus one additional amenity per 75 residential units.

4. Developments with a density of less than 1 dwelling unit per acre may request a waiver of open space and amenities to the Council. Developments with a density of less than 2 dwelling units per acre may request a 50% reduction in total required open space and amenities to the Council.

5. For multi-family developments, see Section 8-5-20 for additional standards.

B. Qualified Usable Area Open Space: The following qualifies to meet the useable area open space requirements:

1. Any open space that is active or passive in its intended use, and accessible or visible by all residents of the development, including, but not limited to:

a. Open grassy area of at least fifty feet by one hundred feet (50' x 100') in area;

b. Qualified natural areas, as determined by the Administrator;

c. Ponds or water features where active fishing, paddle boarding or other activities are provided (50% qualifies towards total required usable area open space, must be accessible by all residents to qualify.) ponds must be aerated;

d. A plaza.

e. Common lots that include a pathway providing local or regional connectivity that is a minimum of 20' in width.

f. Irrigation easements/ditches when a pathway is included (to be measured from the center of the ditch to the property line of the common lot).

2. Additions to a public park or other public open space area.

3. The buffer area along collector and arterial streets may be included in required overall common open space for residential subdivisions.

4. Parkways along local residential streets with detached sidewalks that meet all the following standards may count toward the common open space requirement:

a. The parkway is a minimum of eight feet (8') in width from street curb to edge of sidewalk and includes street trees as specified otherwise herein.

b. Except for alley accessed dwelling units, the area for curb cuts to each residential lot or common driveway shall be excluded from the open space calculation. For purposes of this calculation, the curb cut area shall be a minimum area of twenty-six feet (26') by the width of the parkway.

c. Stormwater detention facilities do not qualify to meet the common area open space requirements, unless all of the following is met:

1. Must be at least fifty feet by one hundred feet (50' x 100') in area;

2. Specifically designed as a dual use facility, as determined by the administrator, to include minimal slopes, grass throughout, and guarantee of water percolation within 24 hours of storm event.

3. Is located in a development that has a second usable open space area that contains a qualified site amenity as herein defined.

5. Visual natural space, including open ditches, wetlands, slopes or other areas that may not be readily accessible to residents, and is provided with open style fencing, may qualify for up to 20% of the required open space total, as determined by the Administrator.

C. Qualified Site Amenities: Qualified site amenities shall include, but not be limited to, the following:

1. Clubhouse;
 2. Fitness facilities, indoors or outdoors;
 3. Public art;
 4. Picnic area; or
 5. Recreation amenities:
 - a. Swimming pool with an enlarged deck and changing and restroom facility (pools shall count towards 3 required site amenities).
 - b. Children's play structures.
 - c. Sports courts.
 - d. Additional open space in excess of 10% qualified usable space.
 - e. RV parking for the use of the residents within the development.
 - f. School and/or Fire station sites if accepted by the district.
 - g. Pedestrian or bicycle circulation system amenities meeting the following requirements:
 - (1) The system is not required for sidewalks adjacent to public right of way;
 - (2) The system connects to existing or planned pedestrian or bicycle routes outside the development; and
 - (3) The system is designed and constructed in accord with standards set forth by the city of Star;
- D. Location: The common open space and site amenities shall be located on a common lot or an area with a common maintenance agreement.

E. Maintenance:

1. All common open space and site amenities shall be owned by and be the responsibility of an owners' association for the purpose of maintaining the common area and improvements thereon.

8-5-21: MULTI-FAMILY DWELLING/DEVELOPMENT:

Multi-family developments with multiple properties shall be considered as one property for the purpose of implementing the standards set forth in this section.

A. Storage of Recreational Vehicles: No recreational vehicles, snowmobiles, boats or other personal recreation vehicles shall be stored on the site unless provided for in a separate, designated and screened area, and approved as part of the development.

B. Developments with Twenty Units Or More: Developments with twenty (20) units or more shall provide the following:

1. A property management office.
2. A maintenance storage area.

3. A map of the development at an entrance or convenient location for those entering the development.

C. Open Space Requirement (see also Chapter 8 "Architectural Review").

1. The total land area of all common open space shall equal or exceed fifteen percent (15%) of the gross land area of the development. Ten percent (10%) of that area shall be usable open space.

2. Private Open Space: In addition to the common open space and site amenity requirements of this title, a minimum of eighty (80) square feet of additional, private, usable open space shall be provided for each residential unit not planned as single-family detached. This requirement can be satisfied through porches, patios, decks, and enclosed yards. Landscaping, entryway and other accessways do not count toward this requirement.

D. Amenities

1. The number of amenities shall depend on the size of multi-family development as follows:

a. A multi-family development with less than twenty (20) units, two (2) amenities shall be provided from two (2) separate amenity categories.

b. A multi-family development between twenty (20) and seventy-five (75) units, three (3) amenities shall be provided, with one from each amenity category.

c. A multi-family development with seventy-five (75) units or more, four (4) amenities shall be provided, with at least one from each amenity category.

d. A multi-family development with more than one hundred (100) units, the Council shall require additional amenities commensurate to the size of the proposed development.

e. All multi-family developments greater than 75 units shall be required to provide a swimming pool with a changing and restroom facilities, and an enlarged deck. The minimum pool size shall be equal to the following:

(1) Developments between 75 and 149 units = 1,600 square feet

(2) Developments between 150 and 299 units = 2,400 square feet

(3) Developments over 300 units = minimum of 3,600 square feet

E. Any required traffic impact study shall be submitted and accepted by the appropriate transportation authority prior to submittal of an application. A hearing date before the Council shall not be scheduled until the traffic impact study has been approved and the transportation authority has issued a Staff report on the development application.

2. Amenity Categories. The council may consider other amenities in addition to those listed below.

- a. Clubhouse.
 - b. Fitness facilities -Indoor/Outdoor.
 - c. Enclosed bike storage.
 - d. Public art.
 - e. Covered bus stops as approved by the School District or_Regional Transportation Authority.
 - f. Ponds or water features.
 - g. Plaza.
 - h. Recreation areas.
 - i. Pool.
 - j. Walking trails and/or bike paths.
 - k. Children's play structures.
 - l. Sports courts.
 - m. Natural Areas (as approved by Council).
 - n. RV parking for the use of the residents within the development.
 - o. Additional open space in excess of 5% usable space.
 - p. School and/or Fire station sites if accepted by the district.
 - q. Pedestrian or bicycle circulation system amenities meeting the following requirements:
 - (1) The system is not required for sidewalks adjacent to public right of way;
 - (2) The system connects to existing or planned pedestrian or bicycle routes outside the development; and
 - (3) The system is designed and constructed in accord with standards set forth by the city of Star
- E. Maintenance and Ownership Responsibilities: All multi-family developments shall record legally binding documents that state the maintenance and ownership responsibilities for the management of the development, including, but not limited to, structures, parking, common areas, and other development features.
- F. Architectural standards in Chapter 8 shall be applied to all multi-family developments.
- G. Signs:
- (1) Addressing Signage. The following shall apply to all multi-family developments:

- A. Approval from Fire District and Addressing Authority.
- B. The sign(s) shall be front or back lit from dusk to dawn.
- C. Sign materials shall be of wood, plastic or metal.
- D. Minimum size of the plan view diagram portion of the sign shall be 3'x3' or presented at a larger size to be easily readable and visible from the distance of the intended viewer.
- E. Text on the map shall be of a contrasting color to the background of the sign.
- F. Maps can be produced as a digital print on a variety of substrates such as vinyl, paper, or a laminated graphic. The method of production needs to be compatible with the environmental conditions as well as with the structure that the map is to be integrated with.
- G. Isometric or Three-Dimensional Signs are allowed if approved by the addressing agent.
- H. Orientation: Vehicle oriented maps should always be positioned in the direction that a vehicle is facing.
- I. The sign(s) shall be inspected annually by the owner/property manager for damage, visibility and legibility and appearance issues.
- J. Nearby vegetation should be kept back from the sign(s) and low plantings used as to not block the sign when fully grown.

FIGURE 8-5-20(a)
ADDRESSING SIGN STYLE



COMPREHENSIVE PLAN:

8.2.3 Land Use Map Designations:

NEIGHBORHOOD RESIDENTIAL - Suitable primarily for single family residential use. Densities in the majority of this land use area are to range from 3.01 units per acre to 5 dwelling units per acre. Densities not exceeding 1 to 2 units per acre are to be encouraged in areas of the floodplain, ridgeline developable areas, hillside developable areas, and where new residential lots are proposed immediately adjacent to existing residential lots of one acre and larger where those existing larger lots are not likely to be subdivided in the future.

COMPACT RESIDENTIAL - Suitable primarily for residential use allowing a mix of housing types such as single family, two family, and multi-family. Densities range from 5.01 units per acre to 10 units per acre.

HIGH DENSITY RESIDENTIAL - Suitable primarily for multi-family. This use should generally be located in close proximity to commercial centers and primary transportation corridors. The use is also suitable within the Central Business District in mixed-use buildings with commercial or office uses on the first floor and high density residential on upper floors. Densities range from 10.01 units per acre and up. Density may be limited to ensure compatibility and transition between uses adjacent to the site. Design specifications may include increased setbacks for multi-story buildings, landscape buffers, and transitional densities. Rezoning to this designation should not be allowed unless adequate ingress/egress to major transportation corridors are assured.

COMMERCIAL - Suitable primarily for the development of a wide range of commercial activities including offices, retail, and service establishments. Rezoning to this designation should not be allowed unless adequate ingress/egress to major transportation corridors are assured. Light industrial uses may be considered at the discretion of the City Council without amending this plan.

8.3 Goal:

Encourage the development of a diverse community that provides a mix of land uses, housing types, and a variety of employment options, social and recreational opportunities, and where possible, an assortment of amenities within walking distance of residential development.

8.4 Objectives:

- Implement the Land Use Map and associated policies as the official guide for development.
- Manage urban sprawl in order to minimize costs of urban services and to protect rural areas.
- Encourage land uses that are in harmony with existing resources, scenic areas, natural wildlife areas, and surrounding land uses.

- Encourage commercial development that is consistent with a family friendly feel, not overburdening the community with big box and franchise uses and discourage the development of strip commercial areas.

8.5.6 Policies Related Mostly to the Commercial Planning Areas:

- Assist in the provision of coordinated, efficient, and cost-effective public facilities and utility services, carefully managing both residential and non-residential development and design, and proactively reinforcing downtown Star's role as the urban core while protecting existing property rights. B. Encourage commercial facilities to locate on transportation corridors. C. Locate neighborhood services within walking distance to residential development. D. Discourage the development of strip commercial areas. E. Maintain and develop convenient access and opportunities for shopping and employment activities. F. Commercial areas of five acres or less should be encouraged in residential land use designations with appropriate zoning to allow for commercial services for residential neighborhoods and to limit trip lengths. Such commercial areas should be submitted for approvals with a Conditional Use Permit or Development Agreement to assure that conditions are placed on the use to provide for compatibility with existing or planned residential uses. These areas should be oriented with the front on a collector or arterial street.
- #### 8.5.9 Additional Land Use Component Policies:
- Encourage flexibility in site design and innovative land uses.
 - Work with Ada County Highway District (ACHD), Canyon Highway District #4 (CHD4), and Idaho Department of Transportation (ITD) for better coordination of roadway and access needs.
 - Support well-planned, pedestrian-friendly developments.
 - Dark sky provision should be adopted within the code to assure down style lighting in all developments and Star should consider joining the International Dark Sky Association.

8.5.8 Policies Related Mostly to Open Space and Special Areas:

A. Projects that hold a residential designation, where the developers would like to provide or dedicate amenities similar to those allowed in the Public Use/Parks/Open Space designation, may transfer unused density from these areas to other areas within the development, as may be approved by the City Council through the Planned Unit Development or Development Agreement processes.

B. Where possible, open space should be located to be contiguous to public lands and existing open space areas.

C. Open space should be designed to capitalize on and expand the open space areas around natural features and environmentally sensitive areas. Priorities for preservation include: The most sensitive resources – floodways and floodplains (including riparian and wetland areas), slopes in

excess of 25%, locally significant features, and scenic viewpoints. Fragmentation of open space areas should be minimized so that resource areas are able to be managed and viewed as an integrated network.

D. Open space areas along the Boise River should be designed to function as part of a larger regional open space network.

E. Require the conservation and preservation of open spaces and public access to the Boise River and BLM lands and interconnected pathways, open to the public, through new developments.

F. The city should work with property owners adjacent to the Boise River to maintain and enhance the river corridor as an amenity for residents and visitors and to obtain public pathway easements and to have pathways constructed. Uses which complement this public access include trails and interpretive signage.

G. Common areas in subdivisions should be centrally located for the residents use and should include micro-path connections where feasible.

H. Discourage development within the floodplain, excluding within the Riverfront Center area, in which development could mitigate floodplain areas and provide for civic space within the floodway and adjacent areas.

I. Floodway areas are to remain "open space" because of the nature of the floodway which can pose significant hazards during a flood event. Within the Riverfront Center, this floodway area should be developed as civic gathering area, open and park space, with the design allowing for floodwaters to inundate the area without contributing to hazard risk.

J. Floodway areas are excluded from being used for calculating residential and development densities.

K. Any portion of the floodway developed as a substantially improved wildlife habitat and/or wetlands area that is open to and usable by the public for open space, such as pathways, ball fields, parks, or similar amenities, as may be credited toward the minimum open space required for a development, if approved by the City Council.

L. Encourage land uses that are in harmony with existing resources, scenic areas, natural wildlife areas, and surrounding land uses.

M. Areas over 25% slope are to be "no development" areas except for city approved trails and except where isolated areas of steep slope are located on property where site grading can easily modify the steep slope area for buildable area. In those cases where grading can be accomplished to modify the isolated steep slope areas the surrounding land use designation will apply within the area designated "steep slope."

N. Clustering of housing is to be encouraged where needed to preserve hillsides, natural features, and to avoid mass grading of land in areas determined to be preserved.

8.5.9 Additional Land Use Component Policies:

- Encourage flexibility in site design and innovative land uses.
- Work with Ada County Highway District (ACHD), Canyon Highway District #4 (CHD4), and Idaho Department of Transportation (ITD) for better coordination of roadway and access needs.

- Support well-planned, pedestrian-friendly developments.
- Dark sky provision should be adopted within the code to assure down style lighting in all developments and Star should consider joining the International Dark Sky Association.

18.4 Implementation Policies:

- F. Development Agreements allow the city to enter into a contract with a developer upon rezoning. The Development Agreement may provide the city and the developer with certain assurances regarding the proposed development upon rezoning.

PROJECT OVERVIEW

ANNEXATION & ZONING:

The annexation, zoning, and rezone request from County Rural Urban Transition (RUT) and Residential (R-1) and General Business District (C-2) to Residential (R-10-DA) on the applicant’s property will allow for the development and subdivision of the subject property into a residential subdivision with accompanying commercial uses that will be consistent with the recently adopted Comprehensive Plan. The property consists of a total of 74.61 acres, including 55.68 acres for residential use and 18.93 acres for commercial use. The total proposed residential units is 500, with an overall gross residential density of 8.98 dwelling units per acre, which excludes the 18.93 acres that is currently designated for commercial in the calculations. A further density breakdown shows:

- Approximately 2.17 dwelling units per acre for the single family residential dwellings - The current Comprehensive Plan Land Use Map designates this portion of the property as Neighborhood Residential, with an allowed density of 3-5 dwelling units per acre;
- Approximately 9.25 dwelling units per acre for the townhomes – The current Comprehensive Plan Land Use Map designates the portion of the property as Compact Residential, with an allowed density of 5-10 dwelling units per acre;
- Approximately 22 dwelling units per acre for the multi-family dwellings - The current Comprehensive Plan Land Use Map designates this portion of the property as High Density Residential, with an allowed density of 10 plus dwelling units per acre.

The requested land uses of residential and commercial within the annexation and zoning and rezone applications meet the intent of the zoning designations intended in the Comprehensive Plan.

PRELIMINARY PLAT:

The proposed Preliminary Plat contains 161 residential lots, 1 commercial lot and 19 common area lots for a total of 181 total lots. The Preliminary Plat contains 65 single family residential lots with an average lot size of 8,400 square feet, 95 townhome lots with and 340 apartment units. The 65 single family residential lots range in size from 6,623 square feet to 15,690 square feet with the average buildable lot area of approximately 8,400 square feet. The 95 townhome lots range in size from 4,851 square feet to 9,016 square feet with the average lot size of 6,974 square feet. The 340 apartments are located on 1 parcel.

The Preliminary Plat has been submitted with information that does not meet UDC and the Ada County Surveyor requirements for plats. Specifically, platted lots require lot and block numbers, and common lots should be numbered within the individual blocks and not as parcels (A-Q). A revised Preliminary Plat shall be submitted prior to final plat application that clearly shows compliance with all Ada County platting procedures.

All streets are proposed to be public within the single family and townhome residential portion of the development, with private driveways proposed within the multi-family residential section. Residential roads are proposed as follows: The road section for the Hamlin collector road and one internal roadway between the single family and the multi-family proposes a 60-foot wide right of way, with a roadway measurement of 36 feet from back of curb to back of curb, and a 5-foot-wide detached sidewalk with an 8-foot-wide park strip. **The UDC requires sidewalks along collectors to be a minimum of 7 feet. The sidewalks along both sides of Hamlin Avenue shall be revised to include a 7 foot width.** The remaining roadway sections in the residential development include a 50-foot-wide right of way with 36 feet from back of curb to back of curb and a 5-foot-wide detached sidewalk with an 8-foot-wide park strip.

The project has 55.68 acres of residential housing area. Section 8-4E-2 of the Unified Development Code states *"The total land area of all common open space shall equal or exceed fifteen percent (15%) of the total gross acreage of land area of the development. A Minimum of 10% of the total gross acreage of the development shall be for useable area open space. Open space shall be designated as a total of 15% minimum for residential developments in all zones with densities of R-2 or greater."* As the submitted site plan does not appear to have the correct calculations for open space, Staff has done its own calculation, and the residential area appears to exceed the required amount of open space. With 55.68 acres of total residential area, the development should have a total of 8.35 acres of total open space (15%) and 5.57 acres of usable open space (10%). Staff calculations of the submitted plans are as follows:

- **Total provided Open Space* = 20.67 acres (37%). This breaks down as follows for the 3 individual residential sections of the development:**
 - **Single-Family = 8.54 acres (32.5%)**
 - **Townhomes = 9.09 acres (77.6%)**
 - **Multi-Family = 3.04 acres (17.2%)**

- **Total provided Usable Open Space* =**
 - **Single Family = 5.98 acres (22.7%)**
 - **Townhomes = 2.13 acres (18.2%)**
 - **Multi-Family = 2.52 acres (14.3%)**

***All provided calculations have been determined by Staff as best as possible, as correctly detailed breakdowns of the open spaces has not been provided. Staff will require accurate calculations of total open space and usable open space from the applicant prior to final approval. This should include separated actual acreages of the 3 different residential types so Staff can properly review the calculations.**

It is also unclear from the information submitted as to what type of common lots “Parcels G & H” are. If they are to be landscaped usable open space lots, they should be accessible to the residential portion of the development. They appear to be too large for the Hwy 16 required buffer. Staff recommends a pathway connection between Lots 3022 & 3023 to access the area.

Section 8-4E-2 also states *“Each development is required to have a least one site amenity. One additional site amenity shall be required for each additional twenty (20) acres of development area, plus one additional amenity per 75 residential units.”* The Applicant is proposing 500 residential units on 55.68 acres, which requires a minimum of nine (9) amenities. The Applicant is proposing a tot lot, dog park, clubhouse, pool, 3 large open areas, a picnic shelter, walking paths and a bench as amenities. These meet the required number and kind of amenities as outline in the Unified Development Code. **The pool shall be required to be a minimum of 3,600 square feet in size. It is assumed and also recommended that all amenities and open spaces shall be utilized by the residents of all 500 residential units.**

Section 8-8C-2 paragraph J states *“Any road designated as a principal arterial on the applicable highway district function class map: A minimum of forty feet (40') wide buffer area (not including right of way) shall be provided with the following plants per one hundred (100) linear feet of right of way: four (4) shade trees, three (3) evergreen trees, two (2) flowering/ornamental trees, and twelve (12) shrubs. Each required shade tree may be substituted with two (2) flowering/ornamental trees, provided that not more than fifty percent (50%) of the shade trees are substituted. A minimum seven foot (7') high buffer consisting of a berm, wall, fence, or combination thereof shall be provided within the buffer area. The maximum slope for any berm shall be three feet (3') horizontal distance to one foot (1') vertical distance. Unsightly fencing shall not be permitted.”* The Applicant has provided the correct buffer along Hwy 16 and the proposed landscape appears to satisfy the code requirements.

The development is currently provided with ingress/egress to the south from Highway 44 (State Street) via Hamlin Avenue. This is currently a right in/right out only and is subject to further access modification once the Hwy 16/44 interchange is constructed. There is a secondary access proposed via Amazon Drive, a public road through the Amazon Falls development off Short

Road. This connection is not yet built and will need to cross the drainage ditch to connect to Hamlin Avenue. **The council should consider the limited access and may want to condition this connection to be completed prior to any construction activities when making a decision on the application.** The Applicant will need to receive approval from both transportation agencies (ITD and ACHD) and possibly the proper irrigation district and adhere to their requirements for access and improvements.

The applicant has provided a conceptual phasing plan showing 4 phases for the development. Phase 1 appears to be the apartments (17.67 acres), Phase 2 the townhomes (11.7 acres), Phase 3 the single family residential (26.3 acres) and Phase 4 the commercial portion (18.93 acres) of the development. **The council should consider this phasing plan and the timing of the commercial development when making a decision on the application.**

ADDITIONAL DEVELOPMENT FEATURES:

- Sidewalks
Sidewalks are proposed at five-foot (5') widths and will be detached throughout the subdivision. **The Hamlin Avenue sidewalks shall be 7 feet minimum.** The Applicant is proposing 8-foot landscape strips throughout, satisfying the Unified Development Code.
- Streetlights
A streetlight location plan and design sample has been submitted by the applicant. Streetlights shall reflect the "Dark Sky" criteria with all lighting. The same streetlight design shall continue throughout the entire development. The proposed streetlight locations and proposed fixtures satisfy code and the City's requirements for a common style of streetlight. **Although the streetlight plan and design meet City Code, upon installation and inspection, shielding of lights may be required to prevent light trespass as necessary.**
- Subdivision and Street Names
The Applicant has provided approval from Ada County for the subdivision name with the application packet. **No street name approval was included in the application materials, this will be required before signing the final plat.**
- Landscaping
As required by the Unified Development Code, Chapter 8, Section 8-8C-2-M (2) Street Trees; A minimum of one street tree shall be planted for every thirty-five (35) linear feet of street frontage. For open areas, one shade tree shall be planted for every four thousand (4,000) square feet. The applicant shall use "Treasure Valley Tree Selection Guide", as adopted by the Unified Development Code. The proposed landscape plan appears to meet these requirements for street trees. **In instances**

where street trees will be planted by the builder, certificate of occupancy may be held up if trees are not planted in accordance with this code.

Applicant should be prepared to address Staff's question on the landscaping and usability of "Parcels G & H".

- Mail Cluster

The Applicant has provided an approval letter from the Eagle Postmaster of a location for the mail clusters, however the map showing the approved location was not included in the application materials. **Staff will require this map prior to signing the final plat. Per Section 8-4A-20, all mailboxes and clusters shall be covered with an architecturally designed cover, to be approved by the Administrator prior to final plat signature. All covers shall be provided with lighting and shall be stained/painted and kept in good condition at all times. The administrator may issue a letter of violation to the HOA when any mailbox cluster or cover falls into disrepair. Maintenance shall be included in the CC&R's.**

- Block Length

Part of Hamlin Avenue is already constructed, as the northern section is extended, Staff suggests the Applicant work with the Highway District and Fire District with regards to traffic calming techniques. Staff is supportive of the waiver to the block lengths in this development as only 1 appears to exceed the 750' limit.

- Setbacks

The applicant is not requesting any setback waivers and will adhere to the setbacks outlined in this report and as follows:

- Single-Family Detached = 15'/20' Front; 7.5' Side Yard; 15' Rear; 20' Street Side
- Townhomes = 0' Front; Zero-Lot Lines for Interior Sides; 5' Rear; 5' Exterior Side
- Multi-Family = N/A

- Common Driveways

The preliminary plat is currently showing two common driveways in the townhome section (lots 2030 & 2031). Section 8-6B-2D of the Unified Development Code states *"Common driveways shall serve a maximum of two (2) dwelling units and shall approved by the Fire District."* **Staff recommends that the two lots be eliminated from the plat, as the Fire District has been denying all common and shared driveways due to emergency access and turn-around issues.**

- Old Grange Hall Property:

The old grange hall property located currently at 8377 W Shultz Court is surrounded by this project. As Hwy 16 is improved, it will be necessary to provide access to this out-parcel internally within the Talega Village development. A cul-

de-sac turn-around is designed north of the parcel. The right of way should be extended to provide legal access to this parcel.

CONDITIONAL USE PERMIT:**

The applicant is requesting approval of a Conditional Use Permit for 340 apartment units in approximately 22 buildings. The applicant has not indicated if the apartment units will be one or two bedroom units. For a two-bedroom unit, parking requirements are calculated at 2 spaces for each unit with 1 space being covered and .25 spaces per unit for guest parking. The Applicant is proposing approximately 500 parking spaces, based on what Staff can estimate. **This number is short approximately 265 parking spaces.** Section 8-4B-2 of the Unified Development Code requires parking stalls to be a minimum of nine feet (9') wide and twenty feet (20') deep. **Parking stall measurements are not clearly marked on the submitted plan. Prior to final approval, the Applicant shall provide to Staff a site plan that clearly meets all the requirements of the Unified Development Code.**

Section 8-4B-3H of the Unified Development Code states that one bicycle parking space shall be provided for every twenty-five (25) vehicle parking spaces. Based on the required number of parking spaces, **the Applicant will be required to provide 30 bicycle spaces, this is not clearly denoted on the submitted plan.**

The Applicant has provided elevations for the proposed apartments, which appear to be three (3) stories tall. Section 8-4B-2 of the UDC requires "*all drive aisles adjacent to a building shall be a minimum of 25'0" or as required by the fire code, unless the building is 30 feet in height or greater, at which point the drive aisle shall be 26'0" or as otherwise approved by the Fire District.*" **The drive aisles are not clearly marked on the submitted site plan or preliminary plat. The Applicant will be required to submit a site plan that clearly shows all drive aisle measurements, meeting code as required.**

The Applicant is not asking for an exception of the height requirement, therefore buildings will be limited to thirty-five feet (35') in height, unless otherwise approved by Council.

All signage, including building and directionals require separate permit and approval from Staff prior to installation.

The applicant has submitted very brief color renderings of the proposed building, which will still need to go through design review (Certificate of Zoning Compliance) for approval prior to building permits being issued.

It is unclear from the site plan if the following requirements of Section 8-5-21 of the UDC has been included as part of the multi-family development. This includes:

- **Any storage for recreational vehicles**

- Location of the management office
- Location of maintenance storage area
- Location of the map of the development, including vehicle orientation map
- Maintenance and ownership responsibilities documents
- Architectural standards and materials
- Bicycle parking

****The site plan submitted for review for the multi-family residential provides very minimal information necessary for Staff to properly review the layout. Staff recommends that, if Council approves the land use, that the applicant be required to submit a detailed site plan with information as required in Section 8-5-21 of the UDC, and that the site plan be brought before the Council and/or Design Review Committee for review and final approval. Because of the appearance of needed extra parking, the 500 unit count proposed may not be achievable.**

DEVELOPMENT AGREEMENT:

Through the Development Agreement process, the applicant is proposing to work with the City to provide further insurance that the development will be built as presented and/or modified by the Council through the review process. Items that should be considered by the applicant and Council include the following:

- **ITD Proportionate Share Fees at \$1,000.00 per residential unit**
- **Density**
- **Fire Sprinklers Requirements**
- **Parking Requirements**
- **Commercial Acreage/Use**
- **Traffic**
- **Potential phasing limitations on the project**
- **Access to the old Grange Hall property**
- **Guest parking for townhomes**
- **Hamlin Avenue 7' sidewalks**
- **Usability of "Parcels G & H" as related to landscaping**
- **Open space usage for entire development**
- **Access to Amazon Falls Drive prior to construction**
- **Elimination of common drive lots**

AGENCY RESPONSES

ITD	March 21, 2023/October 25, 2023
ACHD	September 26, 2023
Ada County Dev. Services	February 27, 2023

COMPASS
West Ada School District
Central District Health
Star Fire Department

March 13, 2023
March 29, 2023
March 3, 2023
Pending

PUBLIC RESPONSES

No public comments have been received.

STAFF ANALYSIS & RECOMMENDATIONS

Based upon the information provided to Staff in the applications and agency comments received to date, Staff finds that the proposed request for annexation and zoning, rezone, and preliminary plat, as conditioned, meets the requirements, standards and intent for development as they relate to the Unified Development Code and Comprehensive Plan. **Regarding the conditional use permit for the multi-family residential, Staff would need additional information to make a clear recommendation on all aspects of the CUP application. Staff would recommend that the Council consider approval of the land use for multi-family residential with a maximum allowed density to be confirmed once the revised site plan is fully reviewed to determine if additional parking is required and density need to be reduced.**

Traffic Concerns:

Staff is concerned with the amount of traffic that will be generated by the uses in this development upon full build-out in relationship with the current access to the site. Currently, Hamlin Avenue is the only access to the site. With the additional connection to Amazon Falls Drive to the east and access to Hwy 44 via Short Road, there will still be considerable traffic from this development, in addition to the currently approved residential and commercial developments north, east and west of Short Road. And if Hamlin Avenue is further restricted by ITD once the interchange is constructed, the strain on Short Road will be extreme. Staff has been informed by representatives of the two developments to the north and northeast of Talega Village (Cascade Springs and Fountain Park Subdivisions) that connection from Hamlin Road north towards Floating Feather Road and east towards Palmer Lane, are anticipated to be a minimum of 5-years out, based on current phasing of those projects and with the current market. The Palmer Lane signal light will also be necessary to handle all of the current and future traffic from the currently approved developments in Star and Eagle in this immediate area. Council may want to consider additional phasing and/or unit limitation conditions on this development until the proposed improvement to the traffic system are completed prior to final build-out of this development. While ACHD and ITD have provided initial review comments for this development, Staff has had discussions with both ITD and the Fire

District regarding concerns on access and traffic. These two agencies will be providing additional comment prior to the public hearing.

The Council should consider the entire record and testimony presented at their scheduled public hearing prior to rendering its decision on the matter. Should the Council vote to approve the applications, either as presented or with added or revised conditions of approval, Council shall direct Staff to draft findings of fact and conclusions of law for the Council to consider at a future date.

FINDINGS

The Council may **approve, conditionally approve, deny** or **table** this request. In order to approve these applications, the Unified Development Code requires that Council must find the following:

ANNEXATION/REZONE FINDINGS:

1. The map amendment complies with the applicable provisions of the Comprehensive Plan.

The purpose of the Star Comprehensive Plan is to promote the health, safety, and general welfare of the people of the City of Star and its Impact Area. Some of the prime objectives of the Comprehensive Plan include:

- ✓ *Protection of property rights.*
- ✓ *Adequate public facilities and services are provided to the people at reasonable cost.*
- ✓ *Ensure the local economy is protected.*
- ✓ *Encourage urban and urban-type development and overcrowding of land.*
- ✓ *Ensure development is commensurate with the physical characteristics of the land.*

The goal of the Comprehensive Plan for Land Use is to encourage the development of a diverse community that provides a mixture of land uses, housing types, and a variety of employment options, social and recreational opportunities, and where possible provides an assortment of amenities within walking distance of a residential development. The Council must find compliance with the Comprehensive Plan.

2. The map amendment complies with the regulations outlined for the proposed district, specifically, the purposes statement.

The Council must find that the proposal complies with the proposed district and purpose statement. The purpose of the residential districts is to provide regulations and districts for various residential neighborhoods with gross densities in compliance with the intent of the Comprehensive Plan designation. Housing shall be single family detached unless approved with a PUD or development agreement. Connection to municipal water and sewer facilities are required for all subdivision and lot split applications in all districts exceeding one dwelling unit per acre. Private streets may be approved in this district for

access to newly subdivided or split property.

3. The map amendment shall not be materially detrimental to the public health, safety, and welfare; and

The Council must find that there is no indication from the material submitted by any political agency stating that this annexation and zoning of this property will be materially detrimental to the public health, safety or welfare.

4. The map amendment shall not result in an adverse impact upon the delivery of services by any political subdivision providing public services within the city including, but not limited to, school districts.

The Council must find that it has not been presented with any information from agencies having jurisdiction that public services will be adversely impacted other than traffic, which will continue to be impacted as the City grows.

5. The annexation is in the best interest of the city.

The Council must find that this annexation is reasonably necessary for the orderly development of the City.

PRELIMINARY PLAT FINDINGS:

1. The plat is in compliance with the Comprehensive Plan.

The City must find that this Plat follows designations, spirit and intent of the Comprehensive Plan regarding residential development and meets several of the objectives of the Comprehensive Plan such as:

1. *Designing development projects that minimize impacts on existing adjacent properties, and*
2. *Managing urban sprawl to protect outlying rural areas.*

2. Public Services are available or can be made available and are adequate to accommodate the proposed development.

The City must find that Agencies having jurisdiction on this parcel were notified of this action, and that it has not received notice that public services are not available or cannot be made available for this development.

3. There is public financial capability of supporting services for the proposed development;

The City must find that they have not been notified of any deficiencies in public financial capabilities to support this development.

4. The development will not be detrimental to the public health, safety or general welfare;

The City must find that it has not been presented with any facts stating this Preliminary Plat will be materially detrimental to the public health, safety and welfare. Residential uses are a permitted use.

5. The development preserves significant natural, scenic or historic features;
The City must find that there are no known natural, scenic, or historic features that have been identified within this Preliminary Plat.

Upon granting approval or denial of the application, the Council shall specify:

1. The Ordinance and standards used in evaluating the application;
2. The reasons for recommending approval or denial; and
3. The actions, if any, that the applicant could take to obtain approval.

Upon granting approval or denial of the application, the Council shall specify:

1. The Ordinance and standards used in evaluating the application;
2. The reasons for recommending approval or denial; and
3. The actions, if any, that the applicant could take to obtain approval.

CONDITIONAL USE PERMIT FINDINGS:

1. That the site is large enough to accommodate the proposed use and meet all the dimensional and development regulations in the district in which the use is located.

The Council must find that the site of the proposed use would be large enough to accommodate the proposed use or meet all of the dimensional and development regulations in the district in which the use would be located.

2. That the proposed use will be harmonious with the Star comprehensive plan and in accord with the requirements of this title.

The Council must find that the proposed use request is harmonious with the Star Comprehensive Plan and is in accord with the requirements of this Title. The proposed development should meet the intent or purpose of the Mixed-Use District.

3. That the design, construction, operation and maintenance will be compatible with other uses in the general neighborhood and with the existing or intended character of the general vicinity and that such use will not adversely change the essential character of the same area.

The Council must find that the operation of the proposed use would be compatible with the other uses in the general area.

4. That the proposed use, if it complies with all conditions of the approval imposed, will not adversely affect other property in the vicinity.

The Council must find that the proposed use, with imposed conditions of approval, would not adversely affect other property in the vicinity.

5. That the proposed use will be served adequately by essential public facilities and services such as highways, streets, schools, parks, police and fire protection, drainage structures, refuse

disposal, water, and sewer.

The Council must find that the proposed use be adequately served by essential public facilities and services.

6. That the proposed use will not create excessive additional costs for public facilities and services and will not be detrimental to the economic welfare of the community.

The Council must find that the proposed use would not create excessive additional costs for public facilities and would not be detrimental to the economic welfare of the community.

7. That the proposed use will not involve activities or processes, materials, equipment and conditions of operation that will be detrimental to any persons, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors.

The Council must find that the proposed use would involve activities that would not be detrimental to any person, property or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors.

8. That the proposed use will not result in the destruction, loss or damage of a natural, scenic or historic feature considered to be of major importance.

The Council must find that the proposed use would not result in the destruction, loss or damage of natural, scenic or historic feature of major importance since none are apparent on this site.

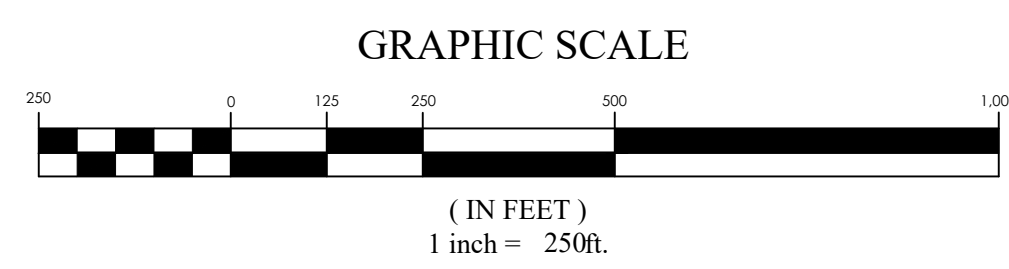
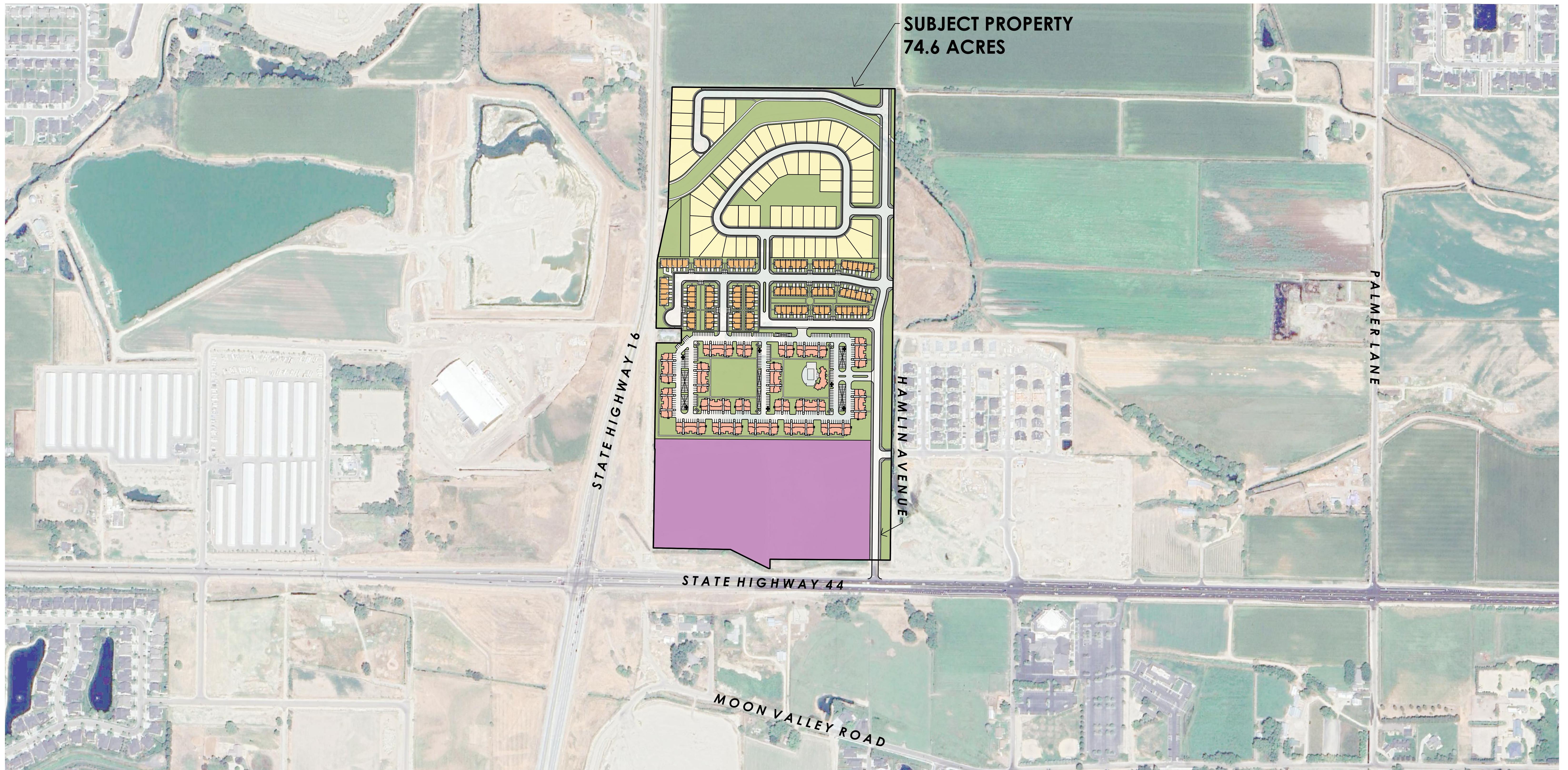
CONDITIONS OF APPROVAL

1. The approved Conditional Use shall comply with all statutory requirements of applicable agencies and districts having jurisdiction in the City of Star.
2. **The applicant shall enter into a Development Agreement with the City, agreeing to proportionate share assessment by ITD regarding impacts to the State Highway System. ITD has calculated the fees to be \$1000.00 per residential unit for a total of \$500,000 (\$1000 x 500). These fees will be collected by the City of Star, by phase, prior to final plat signature. The development agreement shall be signed and recorded as part of the ordinance for annexation and zoning and shall contain the details of the fees to be collected.**
3. **A revised preliminary plat shall be submitted indicating the 7 feet sidewalk along both sides of Hamlin Avenue and showing the correct lot and block numbering as required by Ada Count and the City of Star. This shall be submitted prior to final plat approval.**
4. **Prior to issuance of a building permit, all Star Sewer and Water District requirements shall be met. A letter of approval from the District shall be submitted with the building permit.**
5. **Prior to issuance of any building permits for any use in this development, a final plat shall be recorded with Ada County.**

6. **The multi-family buildings will need to go through the design review process (Certificate of Zoning Compliance) and receive approval prior to issuing building permits.**
7. **The applicant may be responsible for additional mitigation measures regarding noise and lighting for existing, adjacent residential uses when it is determined by the City that unreasonable, negative impacts are a direct result of the business activity. This shall include, but not be limited to additional landscaping, fencing/walls, and light shields or relocation of light poles.**
8. **The Applicant shall revise the site plan for the apartments so show the correct number of parking spaces, proper size spaces, location and correct number of bicycle parking spots and clearly marked drive aisle dimensions. This site plan shall be required to be reviewed by Council and/or the Design Review Committee prior to final approval of the CUP.**
9. **The Applicant shall revise the site plan for the townhomes and remove the 2 lots with the common driveways. This updated site plan will be required prior to signing the mylar for the final plat.**
10. **The Applicant shall provide renderings of the cover for the mail clusters and receive Staff approval, prior to signing the final plat.**
11. **The Applicant shall provide documentation from Ada County that the proposed street names have been approved and they shall be accurately reflected on the final plat prior to signature.**
12. Pressurized irrigation systems shall comply with the Irrigation District(s) and the City of Star Codes. Plans for pressurized irrigation systems shall be submitted to, and approved by the City of Star Engineer, prior to installation.
13. A form signed by the Star Sewer & Water District shall be submitted to the City prior to issuance of building permit stating that all conditions of the district have been met, including annexation into the District.
14. The applicant shall provide a sign, to be located at all construction entrances, indicating the rules for all contractors that will be working on the property starting at grading and running through occupancy that addresses items including but not limited to dust, music, dogs, starting/stopping hours for contractors (7a.m. start time). **Sign shall be approved by the City prior to start of any construction.**
15. The applicant shall obtain all the proper building permits from the City Building Department prior to occupancy of the unit.
16. The Conditional Use Permit may be revoked or modified by the City Council for any violation of any Condition of Approval.
17. **The applicant shall obtain a sign permit prior to any signage being placed on the site or building.**
18. A Certificate of Zoning Compliance will be required prior to the start of construction.
19. Any additional Condition of Approval as required by Staff and City Council.
20. Any Conditions of Approval as required by Star Fire Protection District.

COUNCIL DECISION

The Star City Council _____ File Number AZ-22-11/RZ-23-03/DA-22-12/PP-22-17/CUP-22-05 for Talega Village Subdivision on _____, 2023.



TALEGA VILLAGE vicinity map

STAR CITY, ADA COUNTY, IDAHO

5/18/2023

21-0488

ANNEXATION & ZONING – REZONE APPLICATION
NARRATIVE

May 19, 2023

The property located on the northeast corner of State Highway 16 and State Highway 44, referred to Talega Village, is being considered for development. The overall site consisting of 74.6 acres is under consideration for annexation into Star City and rezoning to the R-10 and C-2 zone. The R-10 zone would consist of 57.4 acres while the C-2 zone would consist of 17.2 acres. Within the proposed R-10 zone is a proposed multifamily residential development phase consisting of 19.4 acres and portions of seven parcels with three identified addresses (shown below).

IDENTIFIED ADDRESSES: **58 N Truman Pl.**
 8245 W Shultz Ct.
 8370 W Shultz Ct.

PARCEL NUMBERS:

R3720001507
R3720001509
R3720002500
R3720002480
A portion of R3720001505
A portion of R3720002412
A portion of S0409417201

The applicant is requesting annexation of the property into the City of Star and a rezone from RUT (Rural Urban Transition), R1 (Single Family Residential), and C-2 (General Commercial) to R-10 (Residential – 10 units/acre) and C-2 (General Commercial) with a development agreement and preliminary plat approval of approximately 17.2 acres of commercial & retail and 57.4 acres of residential consisting of approximately 65 single-family lots, 95 townhome units, and 340 apartment units with an overall density of 9.1 units per acre. The average lot size of the single family portion is approximately 8,400 square feet.

The purpose of this annexation and rezone application is to annex the property into the City of Star and rezone the property to allow for greater flexibility in the placement of commercial and residential. The intent is to incorporate a variety of housing types to appeal to a wide range of home buyers while still implementing commercial and single family residential uses as currently shown in the general plan.



City of Star
 P.O. Box 130
 Star, Idaho 83669
 P: 208-286-7247 F: 208-286-7569

ANNEXATION & ZONING - REZONE APPLICATION

***All information must be filled out to be processed.

FILE NO.: <u>AZ-22-11</u>
Date Application Received: <u>5/27/2023</u> Fee Paid: _____
Processed by: City: <u>Barbara Norgrove</u>

Applicant Information:

PRIMARY CONTACT IS: Derk Pardoe

Applicant Name: Derk Pardoe
 Applicant Address: 3454 Stone Mountain Ln. Sandy, UT Zip: 84092
 Phone: 801-808-2357 Email: derkpardoe@gmail.com

Owner Name: Derk Pardoe
 Owner Address: 3454 Stone Mountain Ln. Sandy, UT Zip: 84092
 Phone: 801-808-2357 Email: derkpardoe@gmail.com

Representative (e.g., architect, engineer, developer):
 Contact: Chad Garner Firm Name: Focus Engineering & Surveying
 Address: 6949 S High Tech Dr. Ste. 200 Zip: 84047
 Phone: 801-352-0075 Email: cgarner@focus-es.com

Property Information:

Site Address: 58 N Truman Pl 8370 W Shultz Ct Parcel Number: (see below)
8245 W Shultz Ct

Total Acreage of Site: ±74.6 acres

Total Acreage of Site in Special Flood Hazard Area: N/A

Proposed Zoning Designation of Site: R-10 & C-2

Parcel Numbers: R3720002880, R3720003030, R3720001505, R3720001507, R3720001509,

Zoning Designations: S0409417201, R3720002500, R3720002480, R3720002412

	Zoning Designation	Comp Plan Designation	Land Use
Existing	C-2, R1, RUT	Commercial, High Density Residential, Compact Residential, Neighborhood Residential	Commercial, High Density Residential, Compact Residential, Neighborhood Residential
Proposed	C-2 & R-10	Commercial, Compact Residential	Commercial, Compact Residential
North of site	RUT	N/A	N/A
South of site	C-1, R1, RUT (Hwy 44)	Commercial	Commercial
East of site	MU, R-13, RUT	Commercial, High Density Residential, Neighborhood Residential	Commercial, High Density Residential, Neighborhood Residential
West of site	RUT (Hwy 16)	ITD 44/16 R.O.W.	ITD 44/16 R.O.W.

Special On-Site Features (Yes or No – If yes explain):

Areas of Critical Environmental Concern - No
 Evidence of Erosion - No
 Fish Habitat - No
 Floodplain - No
 Mature Trees - No
 Riparian Vegetation - No
 Steep Slopes - No
 Stream/Creek - Yes, runs east/west on north side of development
 Unique Animal Life - No
 Unique Plant Life - No
 Unstable Soils - No
 Wildlife Habitat - No
 Historical Assets - No

Application Requirements:

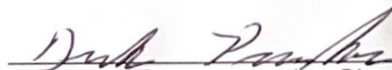
(Applications are required to contain one copy of the following unless otherwise noted. **When combining with other applications (Prelim Plat, CUP, etc.) please include one paper copy for all applications**)

Applicant (√)	Description	Staff (√)
DP	Pre-application meeting with the Planning Department required prior to neighborhood meeting.	
DP	Copy of neighborhood meeting notice sent to property owners within 300 feet and meeting sign-in sheet. (Please contact the City for addresses & labels) (Applicants are required to hold a neighborhood meeting to provide an opportunity for public review of the proposed project prior to the submittal of an application.)	
DP	Completed and signed Annexation & Zoning/Rezone Application	
DP	Fee: (Include Development Agreement Fee). Please contact the City for current fee. Fees may be paid in person with check or electronically with credit card. Please call City for electronic payment. Additional service fee will apply to all electronic payments.	
	Narrative fully describing the proposed project (must be signed by applicant)	
DP	Legal description of the property to be annexed and/or rezoned: <ul style="list-style-type: none"> • Include a metes & bounds description to the section line/centerline of all adjacent roadways, stamped and signed by a registered professional land surveyor, with a calculated closure sheet. • Scaled exhibit map showing the boundaries of the legal description in compliance w/the requirements of the Idaho State Tax Commission Property Tax Administrative Rules IDAPA 35.01.03.225.01h. • If requesting more than one zoning designation, include a legal description for each zone along with an overall annexation/rezone boundary description. Also include the boundaries of each different zone on the map. • Submit word.doc and pdf version with engineer's seal. 	
DP	Recorded warranty deed for the subject property	

DP	If the signature on this application is not the owner of the property, an original notarized statement (affidavit of legal interest) from the owner stating the applicant is authorized to submit this application.	
DP	One (1) 8½" X 11" copy and electronic copy in pdf. format of vicinity map showing the location of the subject property	
DP	One (1) full-size 24" X 36" copy and one (1) 11" X 17" copy of associated CUP/PUD Site Plan/Preliminary Plat. If this application is not accompanied by a plat or site plan, please submit conceptual development plan for the property.	
DP	Electronic copy in pdf. format of submitted plat, site or conceptual plan.	
DP	List of name(s) and address(es) of all canal or irrigation ditches within or contiguous to the proposed development.	
DP	One (1) copy of names and addresses printed on address labels, of property owners within three hundred feet (300') of the external boundaries of the property being considered as shown on record in the County Assessor's office. Please contact the City to request addresses and labels.	
DP	Two (2) copies of the Electronic versions of submitted application including neighborhood meeting information, signed application, narrative, legal description, warranty deed, vicinity map, preliminary plat/site plan, irrigation district information, <u>shall be submitted in original pdf format (no scans for preliminary plat/site plans) on two (2) thumb drives only (no discs)</u> with the files named with project name and plan type.	
DP	Signed Certification of Posting with pictures. (see attached posting requirements and certification form) – To be completed by applicant after acceptance of application. Staff will notify applicant of hearing and posting date.	
DP	*Applicant agrees to enter into a Development Agreement with this application. Applicant's Signature: <u>Derk Pardoe</u>	
DP	Property shall be annexed into Star Sewer and Water District prior to Final Plat approval, building permits. Please contact SSWD for details.	

FEE REQUIREMENT:

*** I have read and understand the above requirements. I further understand fees will be collected at the time of filing an application. I understand that there may be other fees associated with this application incurred by the City in obtaining reviews or referrals by architect, engineering, or other professionals necessary to enable the City to expedite this application. I understand that I, as the applicant, am responsible for all payments to the City of Star.*


Applicant/Representative Signature

5/26/23
Date



CONDITIONAL USE PERMIT APPLICATION

***All applicable information must be filled out to be processed.

FILE NO.: CU-22-05	Fee Paid: _____
Date Application Received: 5/27/2023	
Processed by: City: Barbara Norgrove	

Applicant Information:

PRIMARY CONTACT IS: Derk Pardoe

Applicant Name: Derk Pardoe
Applicant Address: 3454 Stone Mountain Ln. Sandy, UT Zip: 84092
Phone: 801-808-2357 Email: derkpardoe@gmail.com

Owner Name: Derk Pardoe
Owner Address: 3454 Stone Mountain Ln. Sandy, UT Zip: 84092
Phone: 801-808-2357 Email: derkpardoe@gmail.com

Representative (e.g., architect, engineer, developer):
Contact: Chad Garner Firm Name: Focus Engineering & Surveying
Address: 6949 S High Tech Dr. Ste. 200 Zip: 84047
Phone: 801-352-0075 Email: cgarner@focus-es.com

R3720001507, R3720001509,
R3720002500, R3720002480
Part of R3720001505

Property Information:

Site Address: 58 N Truman Pl 8370 W Shultz Ct. Parcel Number: Part of R3720002412 Part of S0409417201

Requested Condition(s) for Conditional Use: Requesting a conditional use for multifamily residential dwellings. The proposed boundaries of this multifamily development are currently zoned in Boise as C-2 and R1. We are currently filing for annexation into Star City and requesting a rezone of the entire property to the C-2 and R-10 zone. The multifamily residential dwellings would fall in the R-10 zone.

	Zoning Designation	Comp Plan Designation
Existing	C-2, R1, small portion of RUT	Commercial, High Density Residential, Compact Residential, Neighborhood Residential
Proposed	C-2 & R-10	Commercial & Compact Residential
North of site	RUT	N/A
South of site	C-1, R1, RUT (Hwy 44)	Commercial
East of site	MU, R-13, RUT	Commercial, High Density Residential, Neighborhood Residential
West of site	RUT (Hwy 16)	ITD 44/16 R.O.W.

Site Data:

Total Acreage of Site: ±19.4 acres for apartments; ±74.6 acres for entire development
Proposed Percentage of Site Devoted to Bldg Coverage: Approx. 23%
Proposed Percentage of Site Devoted to Landscaping: Approx. 35%
Number of Parking spaces: Proposed 701 stalls Required 686 stalls
Requested Front Setback: 10' Requested Rear Setback: 10'
Requested Side Setback: 0' Requested Side Setback: 0'
Requested Side Setback: 20' between buildings
Existing Site Characteristics: Existing homes, some abandoned buildings, partially improved portions of Hamlin Drive, Shultz St, and Shultz Cir, existing irrigation, storm drain, and overhead powerlines.
Number and Uses of Proposed Buildings: 19 residential multifamily building + 1 clubhouse building
Location of Buildings: Throughout property
Gross Floor Area of Proposed Buildings: Approx. 500,000 SQFT
Describe Proposed On and Off-Site Traffic Circulation: Property is near the intersection of Highways 16 and 44. Main access would be located off of Hamlin Ave, which is accessed from Highway 44. There would be circular traffic flow with internal roads/drive aisles located off of Shultz St and Hamlin Ave.
Proposed Signs – number, type, location: Entry monument signage at east entrance.
(include draft drawing) Secondary entry monument at north entrance.
Public Services (state what services are available and what agency is providing the service):
Potable Water - Star Sewer and Water
Irrigation Water - Middleton Mill Canal
Sanitary Sewer - Star Sewer and Water
Schools - Eagle Elementary, Star Middle School, Eagle High School
Fire Protection - Middleton/Star Fire District
Roads - Roads within property to be privately owned and maintained.

Flood Zone Data (This Info Must Be Filled Out Completely Prior to Acceptance):

Subdivision/Project Name: Talega Village Phase: 1

Special Flood Hazard Area: total acreage 0 number of homes/structures
0 Subject property does not have any special flood hazard areas.

- a. A note must be provided on the site plan documenting the current flood zone in which the property or properties are located. The boundary line must be drawn on the plan in situations where two or more flood zones intersect over the property or properties being surveyed.
- b. FEMA FIRM panel(s): #160xxxxxC, 160xxxxxE, etc.: 16001C0130J
FIRM effective date(s): mm/dd/year 06/19/2020
Flood Zone(s): Zone X, Zone A, Zone AE, Zone AH, etc.: Zone X
Base Flood Elevation(s): AE ____ .0 ft., etc.: N/A
- c. Flood Zones are subject to change by FEMA and all land within a floodplain is regulated by Chapter 10 of the Star City Code.

Application Requirements:

(Applications are required to contain one copy of the following unless otherwise noted.)

Applicant (√)	Description	Staff (√)
	Pre-application meeting with Planning Department required prior to neighborhood meeting.	
	Copy of neighborhood meeting notice sent to property owners within 300 feet and meeting sign-in sheet. (Please contact the City for addresses & labels) (Applicants are required to hold a neighborhood meeting to provide an opportunity for public review of the proposed project prior to the submittal of an application.)	
	Completed and signed Conditional Use Application	
	Fee: Please contact the City for current fee. Fees may be paid in person with check or electronically with credit card. Please call City for electronic payment. Additional service fee will apply to all electronic payments.	
	Narrative fully describing the existing use, and the proposed project. (must be signed by applicant)	
	Legal description of the property (word.doc and electronic version with engineer's seal):	
	Copy of recorded warranty deed.	
	If the signature on this application is not the owner of the property, an original notarized statement (affidavit of legal interest) from the owner stating the applicant is authorized to submit this application.	
	One (1) copy of names and addresses printed on address labels, of property owners within three hundred feet (300') of the external boundaries of the property being considered as shown on record in the County Assessor's office. Please contact the City to request addresses and labels.	
	List of names(s) and address(es) of all canal or irrigation ditches within or contiguous to the proposed development.	
	Vicinity map showing the location of the subject property	
	One (1) full-size copy and One (1) 11"x 17" reduction of the Site Plan	
	One (1) full-size copy and One (1) 11"x 17" reduction of the landscape plan (if applicable)	
	Building elevations showing construction materials	
	Two (2) copies electronic versions of submitted application including signed application, narrative, legal description, warranty deed, vicinity map, site plan, landscape plan, building elevations, shall be submitted in original pdf format (no scans) on a thumb drive only (no discs) with the files named with project name and plan type. We encourage you to also submit at least one (1) color version for presentation purposes.	
	Signed Certification of Posting with pictures. (see attached posting requirements and certification form) – To be completed by application after acceptance of application. Staff will notify applicant of hearing and posting date.	

Site Plan (If applicable):

	The following items must be included on the site plan:	
	• Date, scale, north arrow, and project name	
	• Names, addresses, and phone number of owner(s), applicant, and engineer, surveyor or planner who prepared the site plan	
	• Existing boundaries, property lines, and dimensions of the lot	
	• Relationship to adjacent properties, streets, and private lanes	
	• Easements and right-of-way lines on or adjacent to the lot	
	• Existing and proposed zoning of the lot, and the zoning and land use of all adjacent properties	
	• Building locations(s) (including dimensions to property lines)	
	• Parking and loading areas (dimensioned)	
	• Traffic access drives and traffic circulation (dimensioned)	

	<ul style="list-style-type: none"> • Open/common spaces 	
	<ul style="list-style-type: none"> • Refuse and service areas 	
	<ul style="list-style-type: none"> • Utilities plan, including the following: Sewer, water, irrigation, and storm drainage (existing & proposed) 	
	<ul style="list-style-type: none"> • All on-site lighting proposed – Must Meet City “Dark Sky” Ordinances 	

Landscape Plan (If applicable):

	The following items must be included on the landscape plan:	
	<ul style="list-style-type: none"> • Date, scale, north arrow, and project name 	
	<ul style="list-style-type: none"> • Names, addresses, and phone numbers of the developer and the person and/or firm preparing the plan 	
	<ul style="list-style-type: none"> • Existing natural features such as canals, creeks, drains, ponds, wetlands, floodplains, high groundwater areas, and rock outcroppings 	
	<ul style="list-style-type: none"> • Location, size, and species of all existing trees on site with trunks 4 inches or greater in diameter, measured 6 inches above the ground. Indicate whether the tree will be retained or removed. 	
	<ul style="list-style-type: none"> • Existing buildings, structures, planting areas, light poles, power poles, walls, fences, berms, parking and loading areas, vehicular drives, trash areas, sidewalks, pathways, storm water detention areas, signs, street furniture, and other man-made elements 	
	<ul style="list-style-type: none"> • Existing and proposed contours for all areas steeper than 20% slope. Berms shall be shown with one-foot contours 	
	<ul style="list-style-type: none"> • Sight Triangles as defined in 8-4 A-7 of this Ordinance 	
	<ul style="list-style-type: none"> • Location and labels for all proposed plants, including trees, shrubs, and groundcovers (trees must not be planted in City water or sewer easements). Scale shown for plant materials shall reflect approximate mature size 	
	<ul style="list-style-type: none"> • Proposed screening structures 	
	<ul style="list-style-type: none"> • Design drawings(s) of all fencing proposed 	
	<ul style="list-style-type: none"> • Calculations of project components to demonstrate compliance with requirements of this ordinance, including: <ul style="list-style-type: none"> ➤ Number of street trees and lineal feet of street frontage ➤ Width of street buffers (exclusive of right-of-way) ➤ Width of parking lot perimeter landscape strip ➤ Buffer width between different land uses ➤ Number of parking stalls and percent of parking area with internal landscaping ➤ Total number of trees and tree species mix ➤ Mitigation for removal of existing trees, including number of caliper inches being removed 	

SIGNS (If applicable):

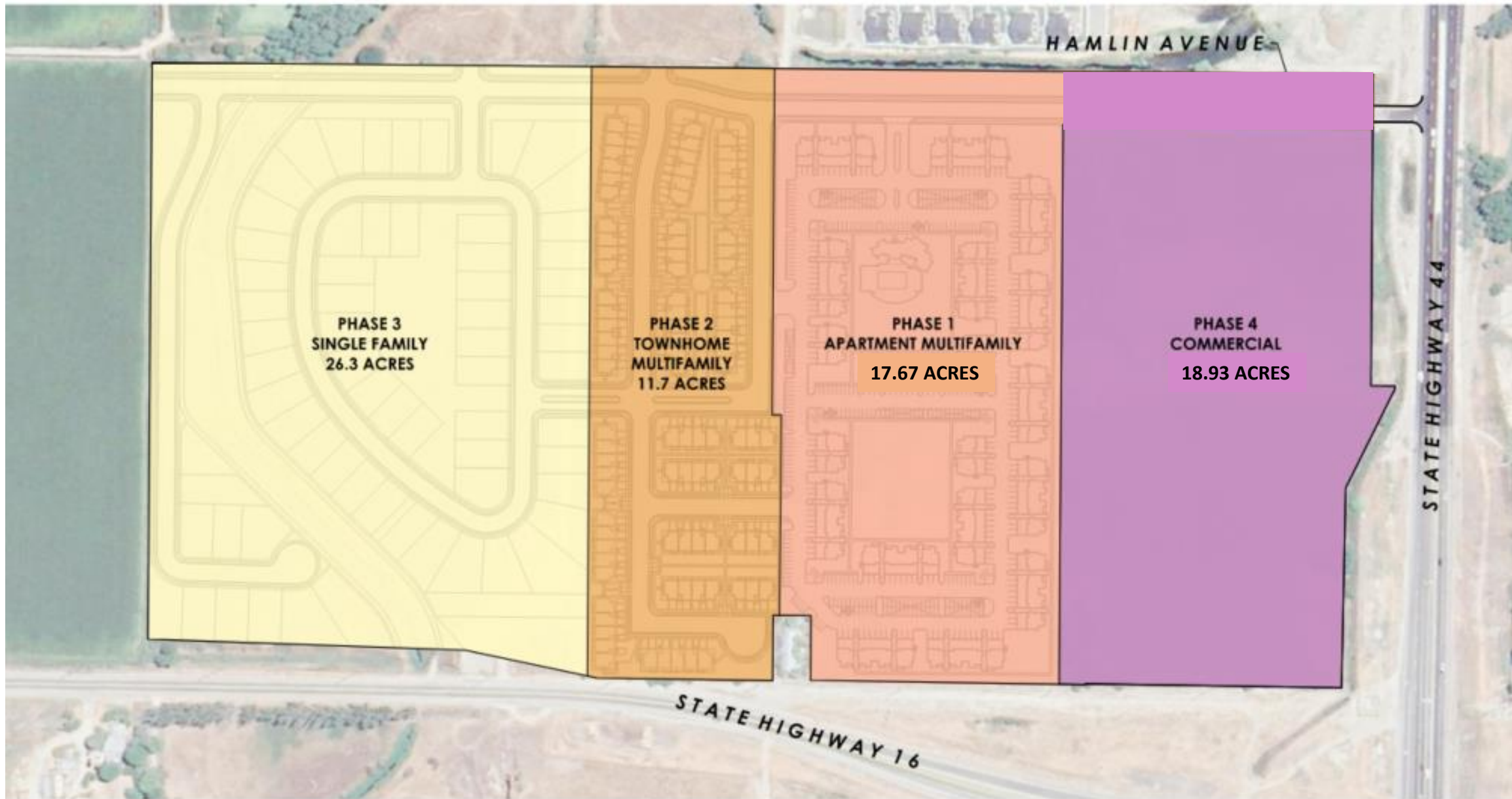
All signs will require separate submittal of a sign application.

FEE REQUIREMENT:

***** I have read and understand the above requirements. I further understand fees will be collected at the time of filing an application. I understand that there may be other fees associated with this application incurred by the City in obtaining reviews or referrals by architect, engineering, or other professionals necessary to enable the City to expedite this application. I understand that I, as the applicant, am responsible for all payments to the City of Star.***

Derk Pardoe

11/28/22

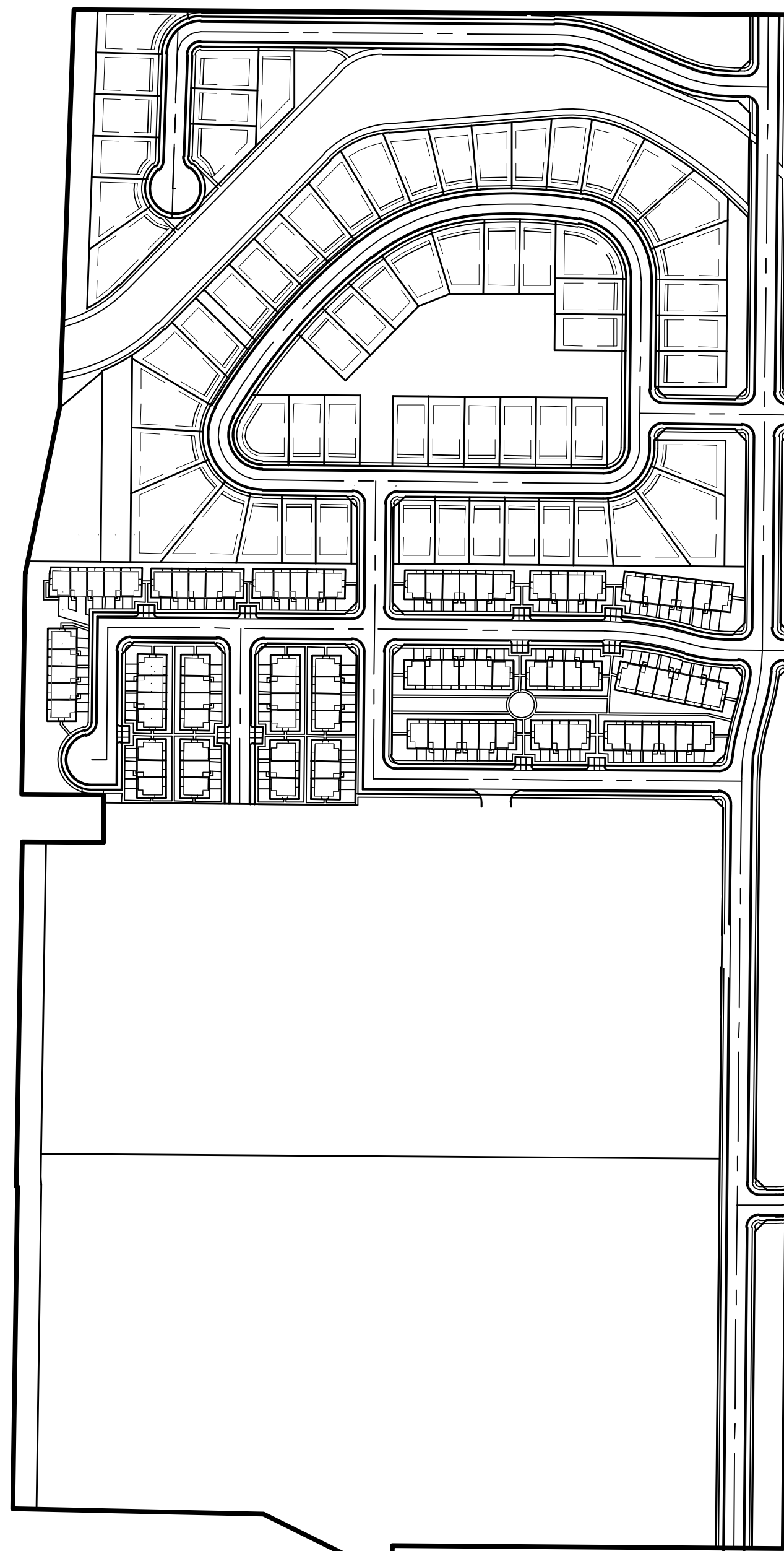


TALEGA VILLAGE

PREPARED FOR:
CIG ENTERPRISES
LOCATED IN:
STAR, IDAHO



VICINITY MAP
NTS



SITE MAP

Sheet List Table	
Sheet Number	Sheet Title
C1	COVER SHEET
C2.1	PRELIMINARY PLAT
C2.2	PRELIMINARY PLAT
C2.3	PRELIMINARY PLAT
C2.4	PRELIMINARY PLAT
C3	PRELIMINARY SITE PLAN
C4.1	GRADING & DRAINAGE PLAN
C4.2	GRADING & DRAINAGE PLAN
C4.3	GRADING & DRAINAGE PLAN
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN SINGLE FAMILY
L1.2	LANDSCAPE PLAN SINGLE FAMILY
L1.3	LANDSCAPE PLAN SINGLE FAMILY
L1.4	LANDSCAPE PLAN SINGLE FAMILY
L1.5	LANDSCAPE PLAN SINGLE FAMILY
L1.6	LANDSCAPE PLAN SINGLE FAMILY
L1.7	LANDSCAPE PLAN SINGLE FAMILY
L1.8	LANDSCAPE PLAN TOWNHOMES
L1.9	LANDSCAPE PLAN TOWNHOMES
L1.10	LANDSCAPE PLAN TOWNHOMES
L1.11	LANDSCAPE DETAILS

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL ADHERE TO CITY OF STAR AND ISPCW STANDARD PLANS AND SPECIFICATIONS.
- ALL UTILITIES AND ROAD IMPROVEMENTS SHOWN ON THE PLANS HEREIN SHALL BE CONSTRUCTED USING REFERENCE TO SURVEY CONSTRUCTION STAKES PLACED UNDER THE SUPERVISION OF A PROFESSIONAL LICENSED SURVEYOR WITH A CURRENT LICENSE ISSUED BY THE STATE OF IDAHO. ANY IMPROVEMENTS INSTALLED BY ANY OTHER VERTICAL OR HORIZONTAL REFERENCE WILL NOT BE ACCEPTED OR CERTIFIED BY THE ENGINEER OF RECORD.
- THIS DRAWING SET IS SCALED TO BE PRINTED ON A 24" X 36" SIZE OF PAPER (ARCH. D). IF PRINTED ON A SMALLER PAPER SIZE, THE DRAWING WILL NOT BE TO SCALE AND SHOULD NOT BE USED TO SCALE MEASUREMENTS FROM THE PAPER DRAWING. ALSO USE CAUTION, AS THERE MAY BE TEXT OR DETAIL THAT MAY BE OVERLOOKED DUE TO THE SMALL SIZE OF THE DRAWING.

NOTICE

BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER.

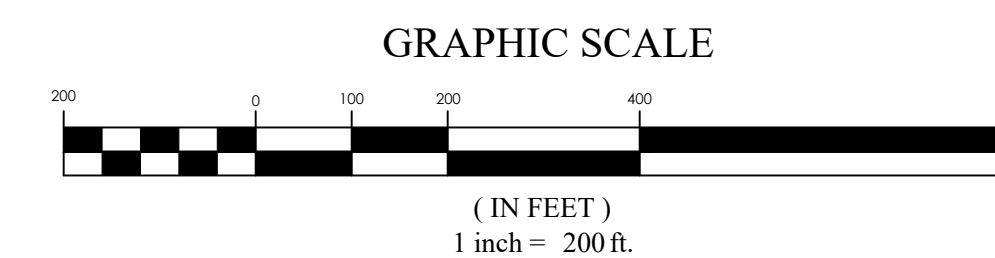
ENGINEER'S NOTES TO CONTRACTOR

- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS, TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. IF UTILITY LINES ARE ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT IDENTIFIED BY THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CITY, THE OWNER, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
- ALL CONTOUR LINES SHOWN ON THE PLANS ARE AN INTERPRETATION BY CAD SOFTWARE OF FIELD SURVEY WORK PERFORMED BY A LICENSED SURVEYOR. DUE TO THE POTENTIAL DIFFERENCES IN INTERPRETATION OF CONTOURS BY VARIOUS TYPES OF GRADING SOFTWARE BY OTHER ENGINEERS OR CONTRACTORS, FOCUS DOES NOT GUARANTEE OR WARRANT THE ACCURACY OF SUCH LINEWORK. FOR THIS REASON, FOCUS WILL NOT PROVIDE ANY GRADING CONTOURS IN CAD FOR ANY TYPE OF USE BY THE CONTRACTOR. SPOT ELEVATIONS AND PROFILE ELEVATIONS SHOWN IN THE DESIGN DRAWINGS GOVERN ALL DESIGN INFORMATION ILLUSTRATED ON THE APPROVED CONSTRUCTION SET. CONSTRUCTION EXPERTISE AND JUDGMENT BY THE CONTRACTOR IS ANTICIPATED BY THE ENGINEER TO COMPLETE BUILD-OUT OF THE INTENDED IMPROVEMENTS.

CONTACTS

ENGINEER & SURVEYOR
FOCUS ENGINEERING & SURVEYING, LLC
1001 N. ROSARIO STREET, SUITE 100
MERIDIAN, IDAHO 83642
(208) 974-0075
PROJECT MANAGER: DENNIS JORDAN
SURVEY MANAGER: TRENTON SMITH

OWNER/DEVELOPER
CIG ENTERPRISES
2255 E SUNNYSIDE AVE
SALT LAKE CITY, UTAH 84158
DERKPARDOE@GMAIL.COM
CONTACT: DERK PARDOE



FOR REVIEW ONLY

TALEGA VILLAGE
STAR, IDAHO
COVER SHEET

REVISION BLOCK	DATE	DESCRIPTION
1	11/28/2023	
2		
3		
4		
5		
6		

COVER SHEET

Scale: 1"=200'
Date: 11/28/2023
Sheet: C1

C1

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PRELIMINARY PLAT TALEGA VILLAGE

ADA COUNTY, IDAHO

LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH., RANGE 1 WEST.,
B.M. ADA COUNTY, IDAHO.



GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.



FOR REVIEW ONLY

TALEGA VILLAGE
ADA COUNTY, IDAHO
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH.,
RANGE 1 WEST., B.M. ADA COUNTY, IDAHO.
PRELIMINARY PLAT

REVISION BLOCK	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

PRELIMINARY PLAT
Scale: 1"=100'
Date: 5/25/2023
Sheet: C2

LEGEND

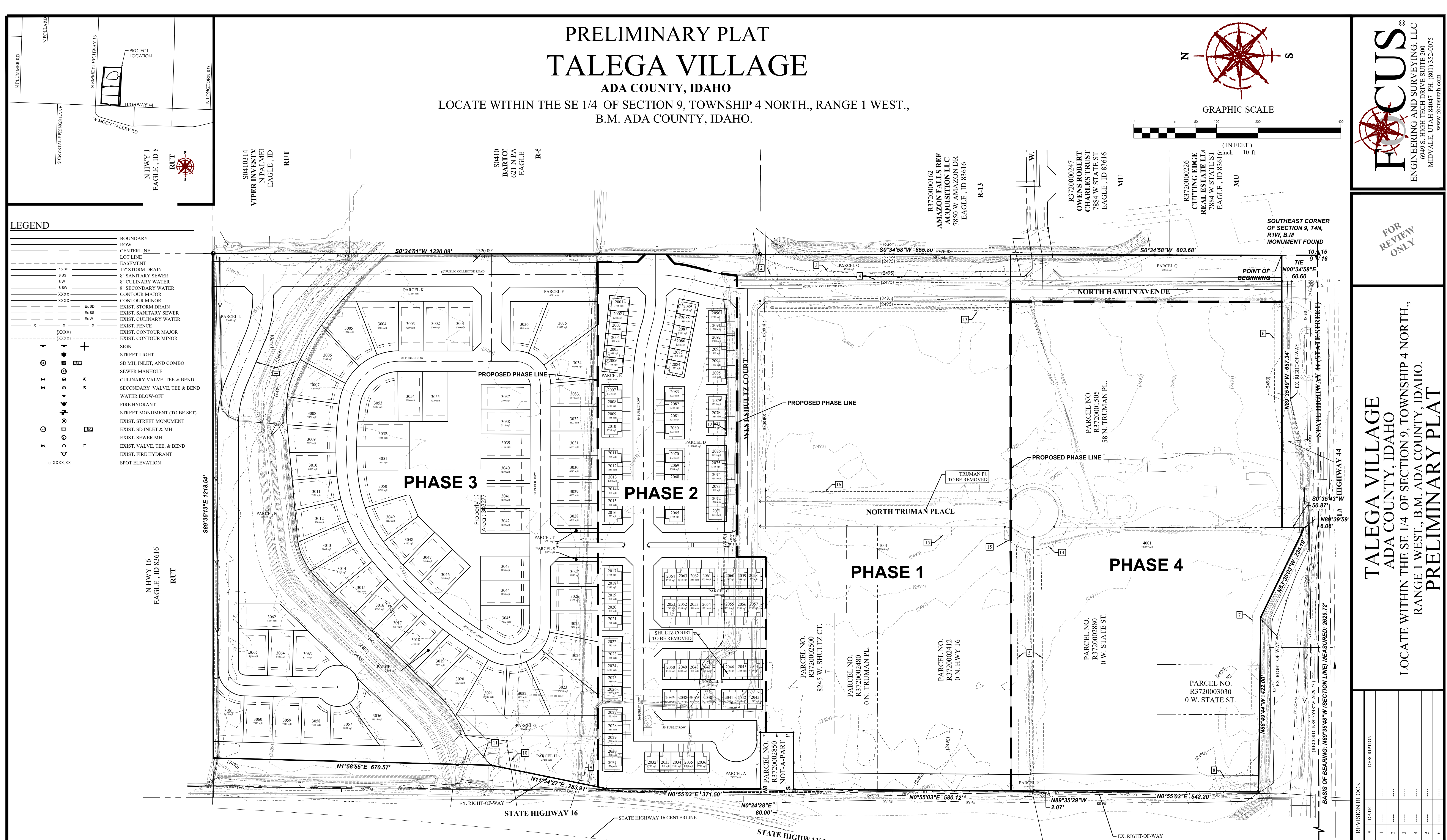
---	BOUNDARY
---	ROW
---	CENTERLINE
---	LOT LINE
---	EASEMENT
---	15" STORM DRAIN
---	8" SANITARY SEWER
---	8" CULINARY WATER
---	8" SECONDARY WATER
---	CONTOUR MAJOR
---	CONTOUR MINOR
---	EXIST. STORM DRAIN
---	EXIST. SANITARY SEWER
---	EXIST. CULINARY WATER
---	EXIST. FENCE
---	EXIST. CONTOUR MAJOR
---	EXIST. CONTOUR MINOR
---	SIGN
---	STREET LIGHT
---	SD MH, INLET, AND COMBO
---	SEWER MANHOLE
---	CULINARY VALVE, TEE, & BEND
---	SECONDARY VALVE, TEE & BEND
---	WATER BLOW-OFF
---	FIRE HYDRANT
---	STREET MONUMENT (TO BE SET)
---	EXIST. STREET MONUMENT
---	EXIST. SD INLET & MH
---	EXIST. SEWER MH
---	EXIST. VALVE, TEE, & BEND
---	EXIST. FIRE HYDRANT
---	SPOT ELEVATION

1 OF 4
ENGINEER
TOM ROMNEY
FOCUS ENGINEERING AND SURVEYING
1001 N. ROSARIO STREET, SUITE 100
MERIDIAN, ID 83642.
PHONE: (801) 403-5281
EMAIL: TROMNEY@FOCUS-ES.COM

SURVEYOR
JOHN GLETNE
5099 S VALLEY ST, BOISE, ID 83709
PHONE: (208) 261-2226
EMAIL: JOHN@VALLEYLANDSURVEYING.COM

DEVELOPER
DERK PARDOE
3454 STONE MOUNTAIN LANE, SANDY, UT 84092.
EMAIL: DERKPARDOE@GMAIL.COM

OWNERS OF RECORD
CIG ENTERPRISES, LLC
2255 E SUNNYSIDE AVE.
SALT LAKE CITY, UTAH 84158.

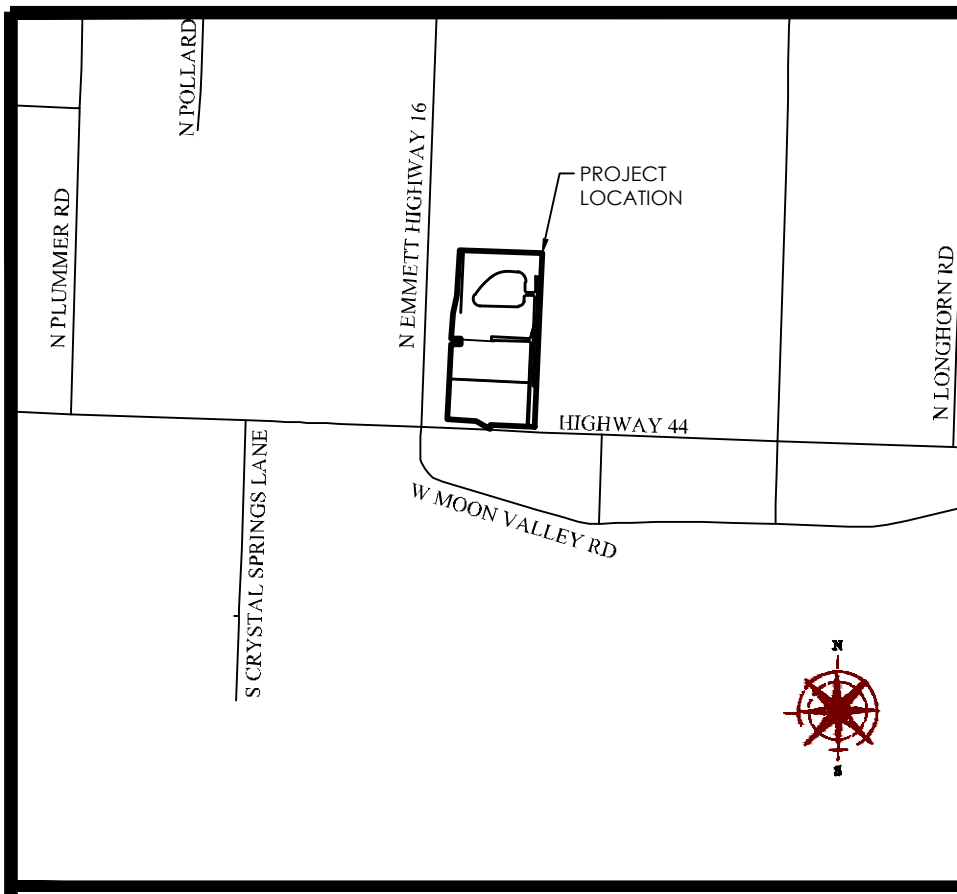
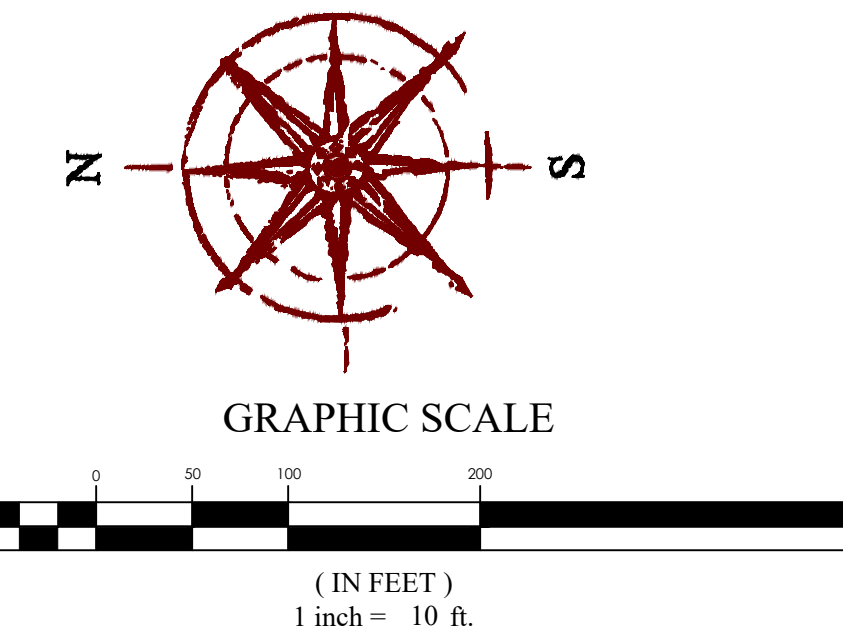


SOUTH 1/4 CORNER OF SECTION 9, T4N, R1W, B.M. FOUND ALUM CAP MONUMENT



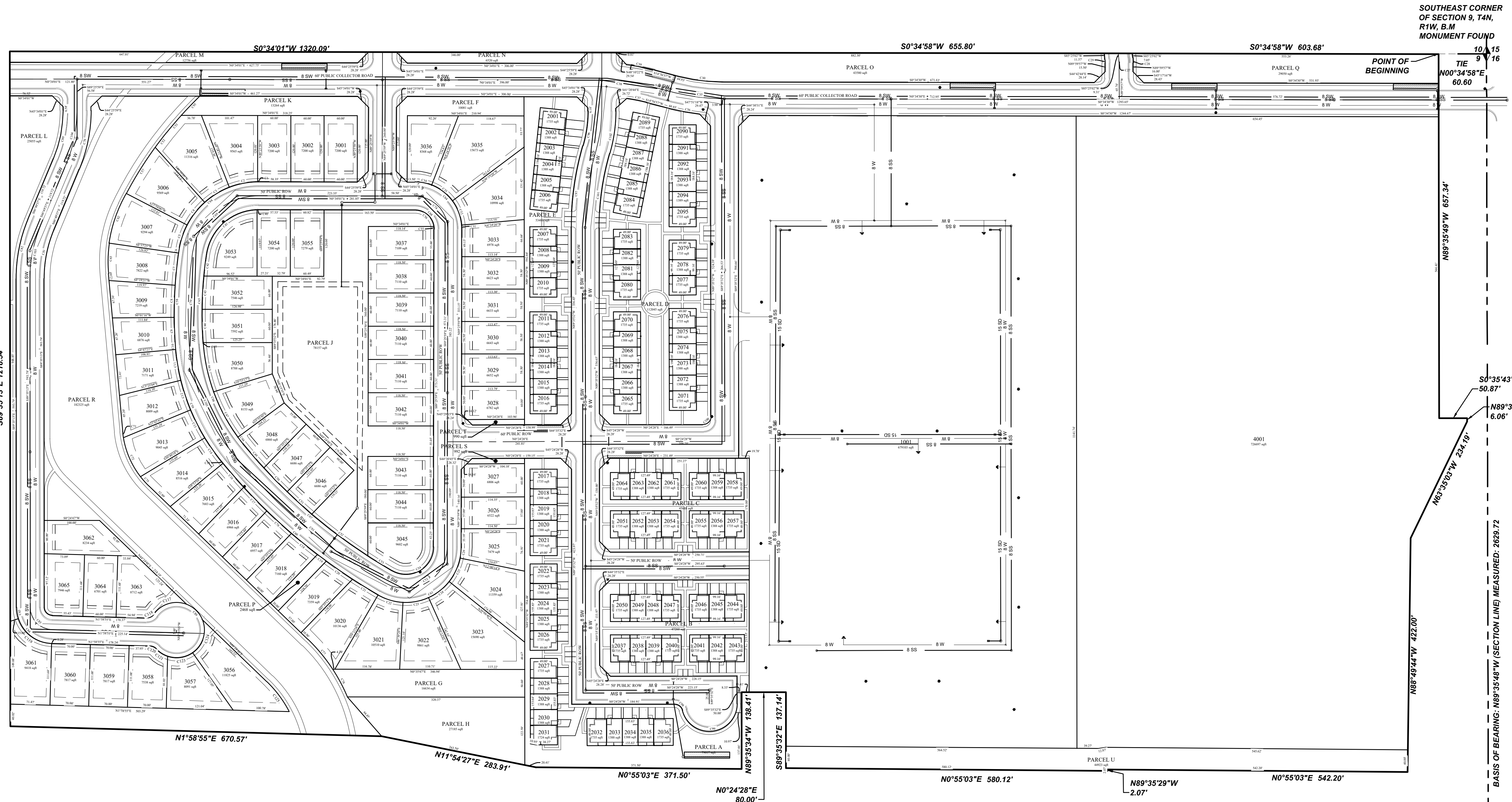
PRELIMINARY PLAT TALEGA VILLAGE

ADA COUNTY, IDAHO
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH., RANGE 1 WEST.,
B.M. ADA COUNTY, IDAHO.



LEGEND

—	BOUNDARY
—	ROW
—	CENTERLINE
—	LOT LINE
—	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
Ex SW	EXIST. SECONDARY WATER
X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
+	SIGN
⊙	STREET LIGHT
⊙	SD MH, INLET, AND COMBO
⊙	SEWER MANHOLE
⊙	CULINARY VALVE, TEE & BEND
⊙	SECONDARY VALVE, TEE & BEND
⊙	WATER BLOW-OFF
⊙	FIRE HYDRANT
⊙	STREET MONUMENT (TO BE SET)
⊙	EXIST. STREET MONUMENT
⊙	EXIST. SD INLET & MH
⊙	EXIST. SEWER MH
⊙	EXIST. VALVE, TEE, & BEND
⊙	EXIST. FIRE HYDRANT
○	SPOT ELEVATION



FOR REVIEW ONLY

TALEGA VILLAGE
ADA COUNTY, IDAHO
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH.,
RANGE 1 WEST., B.M. ADA COUNTY, IDAHO.
PRELIMINARY PLAT

REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

2 OF 4
ENGINEER
TOM ROMNEY
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1001 N. ROSARIO STREET, SUITE 100
MERIDIAN, ID 83642.
PHONE: (801) 403-5281
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SOUTH 1/4 CORNER OF SECTION 9, T4N, R1W, B.M. FOUND ALUM CAP MONUMENT



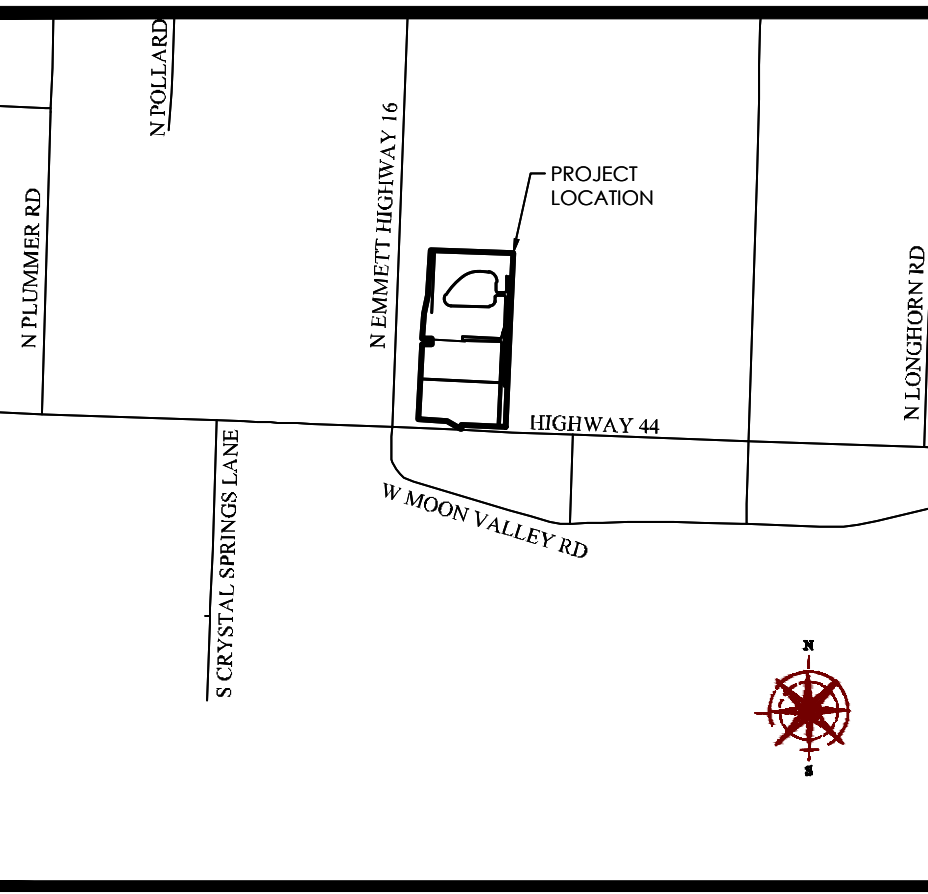
PRELIMINARY PLAT
Scale: 1"=100'
Date: 5/25/2023
Sheet: C2.1
Drawn: MJT
Job #: 21-0488

Z:\2021\21-0488 Talega Village\design\21-0488\vwg\sheets\preliminary\subdivision\21-0488 C2.1 Preliminary Plat.dwg

PRELIMINARY PLAT TALEGA VILLAGE

ADA COUNTY, IDAHO

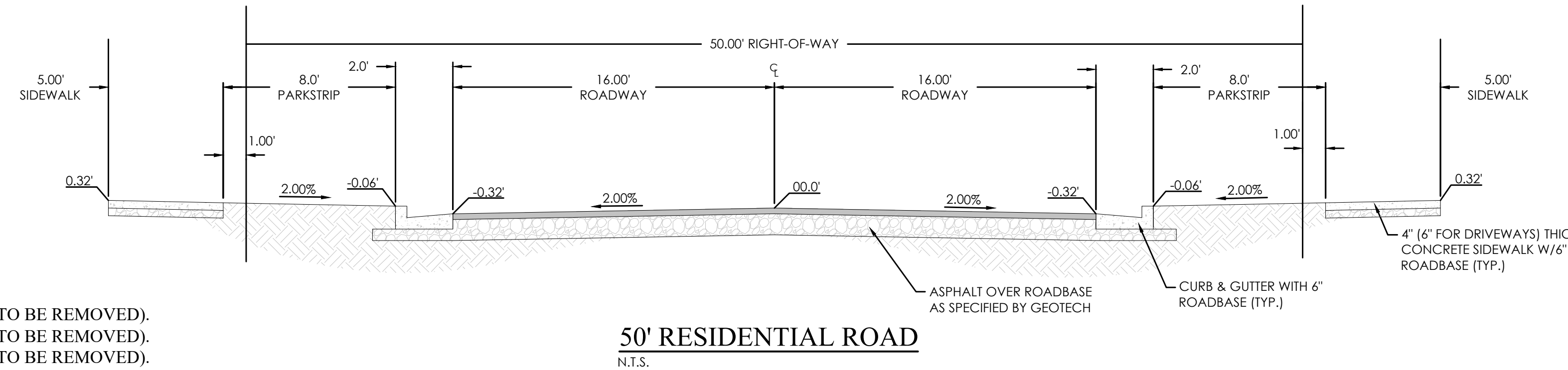
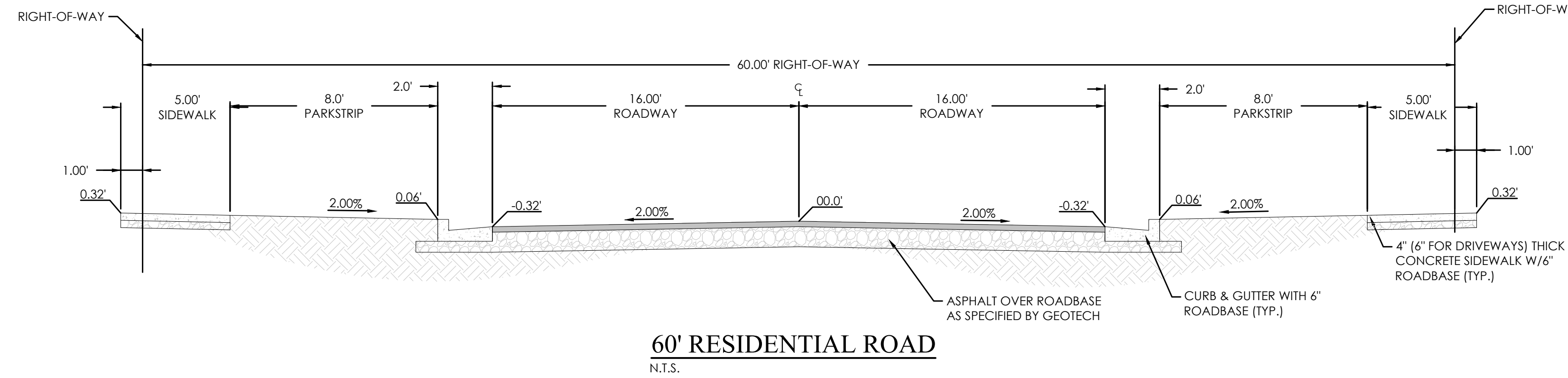
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH., RANGE 1 WEST.,
B.M. ADA COUNTY, IDAHO.



- BOUNDARY LINE
- SECTION LINE
- - - EXIST. EASEMENT LINE
- - - EXIST. PROPERTY LINE
- - - EXIST. RIGHT-OF-WAY LINE
- - - EXIST. CONTOUR MAJOR
- - - EXIST. CONTOUR MINOR
- - - EXIST. STORM DRAIN
- - - EXIST. SANITARY SEWER
- - - EXIST. CULINARY WATER
- - - EXIST. SECONDARY WATER
- - - EXIST. IRRIGATION
- - - EXIST. NATURAL GAS
- - - EXIST. COMMUNICATIONS
- - - EXIST. OVERHEAD POWER
- - - EXIST. UNDERGROUND POWER
- - - EXIST. FENCE
- - - EXIST. IRRIGATION DITCH FLOWLINE
- - - EXIST. CONCRETE, CURB & GUTTER
- - - EXIST. EDGE OF ASPHALT
- - - PROPOSED CURB & GUTTER
- SECTION MONUMENT (FOUND)
- SECTION MONUMENT (NOT FOUND)
- BOUNDARY MARKER
- EXIST. SD INLET, MANHOLE & COMBO BOX
- EXIST. SEWER MANHOLE
- EXIST. WATER VALVE & WATER METER
- EXIST. FIRE HYDRANT
- EXIST. IRRIGATION BOX
- EXIST. GAS VALVE & GAS METER
- EXIST. STREET LIGHT
- EXIST. POWER POLE
- EXIST. ELECTRICAL BOX
- EXIST. COMMUNICATIONS BOX

EASEMENTS NOTES:

- 1 DRY CREEK CANAL EASEMENT 25' FROM TOP OF BANK ON EACH SIDE. ACCESS EASEMENT INST. NO. 2017-121572
- 2 DRY CREEK CANAL EASEMENT 25' FROM TOP OF BANK
- 3 ACHD SIDEWALK EASEMENT INST. NO. 2019-046199.
- 4 MIDDLETON MILL CANAL EASEMENT 25' FROM TOP OF BANK.
- 5 DRAINAGE DISTRICT 2 EASEMENT 25' FROM TOP OF BANK.
- 6 DRAINAGE DISTRICT 2 EASEMENT 25' FROM TOP OF BANK.
- 7 20' TELECOMMUNICATIONS EASEMENT, INST. NO. 9001613 & 9129096.
- 8 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 111101448.
- 9 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 111101448.
- 10 TELECOMMUNICATIONS EASEMENT, INST. NO. 8961467.
- 11 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 111101448.
- 12 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST. NO. 111092656.
- 13 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 112005782. (TO BE REMOVED).
- 14 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 112005783. (TO BE REMOVED).
- 15 ITD PERMANENT DRAINAGE AND IRRIGATION EASEMENT, INST NO. 111092656. (TO BE REMOVED).
- 16



GENERAL NOTES:

1. ALL PUBLIC UTILITY EASEMENTS PLATTED HEREON ARE IN PERPETUITY FOR INSTALLATION, MAINTENANCE, REPAIR AND REPLACEMENT OF PUBLIC UTILITIES, SIDEWALKS AND APPURTENANT PARTS THEREOF AND THE RIGHT TO REASONABLE ACCESS TO GRANTOR'S PROPERTY FOR THE ABOVE DESCRIBED PURPOSES. THE EASEMENT SHALL RUN WITH THE REAL PROPERTY AND SHALL BE BINDING UPON THE GRANTOR AND THE GRANTOR'S SUCCESSORS, HEIRS, AND ASSIGNS.
2. ALL COMMON AREAS AND STREETS OR DRIVES TO SERVE AS PUBLIC UTILITY EASEMENTS.
3. ALL AREAS ARE COMMON AREAS AND FACILITIES EXCEPT AS OTHERWISE SPECIFICALLY DESIGNATED.
4. THE INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO ALL CITY STANDARDS, RESOLUTIONS AND ORDINANCES.
5. BUILDING PERMITS WILL NOT BE ISSUED UNTIL ALL IMPROVEMENTS HAVE BEEN INSTALLED AND ACCEPTED BY THE CITY IN WRITING OR BONDED FOR.
6. THIS AREA IS SUBJECT TO THE NORMAL, EVERYDAY SOUNDS, ODORS, SIGHTS, EQUIPMENT, FACILITIES, AND ANY OTHER ASPECTS ASSOCIATED WITH AGRICULTURAL LIFESTYLES. FUTURE RESIDENTS SHOULD ALSO RECOGNIZE THE RISK INHERENT WITH LIVESTOCK.
7. SANITARY SEWER AND DOMESTIC WATER SERVICE TO BE PROVIDED BY STAR SEWER AND WATER DISTRICT.
8. SUBJECT PROPERTY DOES NOT FALL WITHIN FEMA FLOOD HAZARD ZONES A AND X. SEE FIRM PANEL.
9. ALL LOTS ARE HEREBY DESIGNATED AS HAVING A PERMANENT EASEMENT FOR PUBLIC UTILITIES, IRRIGATION AND LOT DRAINAGE OVER THE TEN (10) FEET ADJACENT TO ANY PUBLIC STREET. THIS EASEMENT SHALL NOT PRECLUDE THE CONSTRUCTION OF HARD-SURFACED DRIVEWAYS AND WALKWAYS TO EACH LOT.
10. UNLESS OTHERWISE SHOWN AND DIMENSIONED, ALL LOT ARE HEREBY DESIGNATED AS HAVING A PERMANENT EASEMENT FOR PUBLIC UTILITIES, IRRIGATION AND LOT DRAINAGE OVER THE FIVE (5) FEET ADJACENT TO ANY INTERIOR SIDE LOT LINE, AND OVER THE TWELVE (12) FEET ADJACENT TO ANY REAR LOT LINE OR SUBDIVISION BOUNDARY.
11. THIS SUBDIVISION WILL BE SUBJECT TO THE TERMS OF A DEVELOPMENT AGREEMENT WITH THE CITY OF STAR.
12. IRRIGATION WATER SHALL BE PROVIDED FROM THE GROUNDWATER RIGHTS WITH IDWR (63-2957) IN COMPLIANCE WITH IDAHO CODE 31-3805(B). LOTS WITHIN THE SUBDIVISION SHALL BE ENTITLED TO IRRIGATION WATER RIGHTS, AND THE INDIVIDUAL LOTS SHALL BE SUBJECT TO IRRIGATION WATER ASSESSMENTS.
13. BUILDING SETBACKS AND DIMENSIONAL STANDARDS IN THIS SUBDIVISION SHALL BE IN COMPLIANCE WITH THE APPLICABLE ZONING REGULATIONS OF THE CITY OF STAR OR AS APPROVED UNDER THE DEVELOPMENT AGREEMENT.
14. DIRECT LOT ACCESS TO STATE HIGHWAY 16 AND 44 IS PROHIBITED. (EXCEPT EMERGENCY VEHICLE ACCESS)

PRELIMINARY PLAT DEVELOPMENT DATA	
TOTAL ACRES (ENTIRE DEVELOPMENT)	74.60 AC
SINGLE-FAMILY LOTS	(16.9%) 12.6 AC
TOWNHOME UNITS	(4.6%) 3.4 AC
PUBLIC RIGHT-OF-WAY	(14.9%) 11.1 AC
TOTAL OPEN SPACE	(63.7%) 47.5 AC
TOTAL USABLE OPEN SPACE	(58.6%) 43.7 AC
TOTAL LOTS	
SINGLE-FAMILY RESIDENTIAL	65
TOWNHOMES RESIDENTIAL	95
MULTI-FAMILY LOT	1
COMMON LOTS/PARCELS	5
COMMERCIAL LOT	1
OPEN SPACE	14
TOTAL LOTS	181
LOT AREA DATA	
SMALLEST LOT SIZE (SINGLE-FAMILY)	6,686 SQ. FT.
SMALLEST LOT SIZE (TOWNHOMES)	4,859 SQ. FT.
AVERAGE LOT SIZE (SINGLE FAMILY)	8,400 SQ. FT.
AVERAGE LOT SIZE (TOWNHOMES)	6,974 SQ. FT.
RESIDENTIAL DENSITY	
OVERALL DENSITY	2.39 DU/AC
RESIDENTIAL GROSS DENSITY	8.7 UNITS/AC
ZONING	
EXISTING:	RUT, R-1 & C-2
PROPOSED:	R-10 & C-2



FOR REVIEW ONLY

**TALEGA VILLAGE
ADA COUNTY, IDAHO**
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH.,
RANGE 1 WEST., B.M. ADA COUNTY, IDAHO.
PRELIMINARY PLAT

REVISION BLOCK		
#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

PRELIMINARY PLAT

Scale: N.T.S. Drawn: MJT
Date: 5/25/2023 Job #: 21-0488
Sheet: C2.2

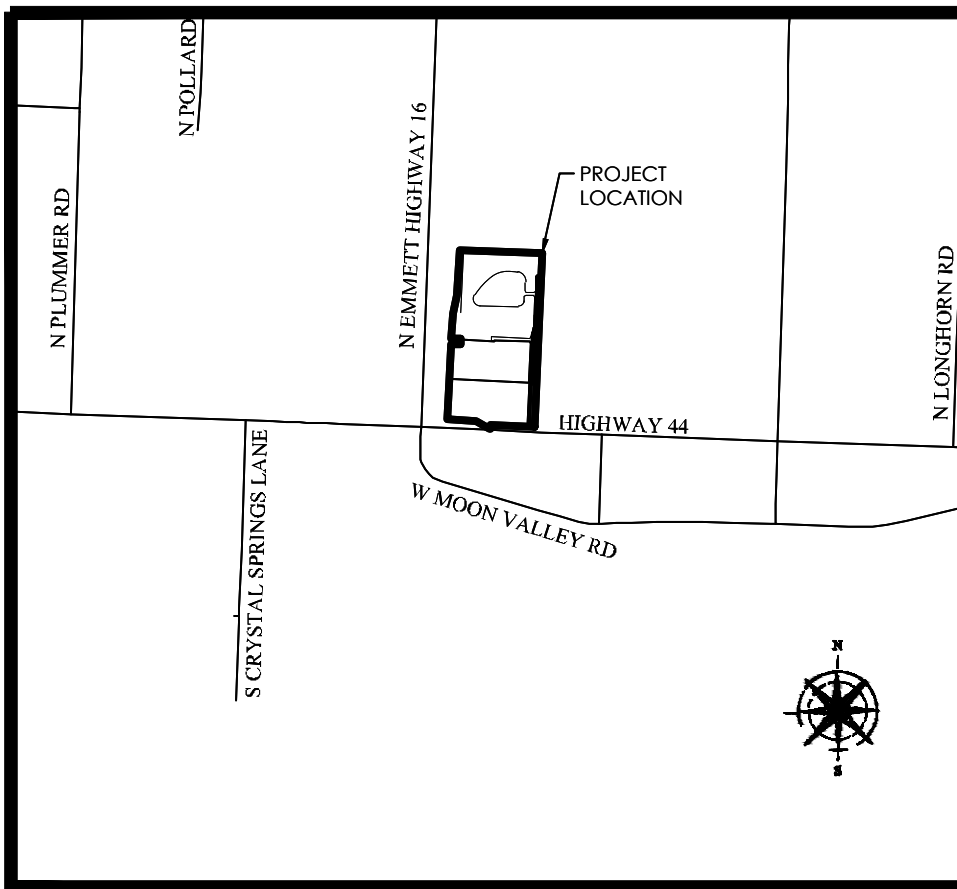
ENGINEER
TOM ROMNEY
FOCUS ENGINEERING AND SURVEYING
1001 N. ROSARIO STREET, SUITE 100
MERIDIAN, ID 83642.
PHONE: (801) 403-5281
EMAIL: TROMNEY@FOCUS-ES.COM

SURVEYOR
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PHONE: (208) 261-2226
EMAIL: JOHN@VALLEYLANDSURVEYING.COM

DEVELOPER
DERK PARDOE
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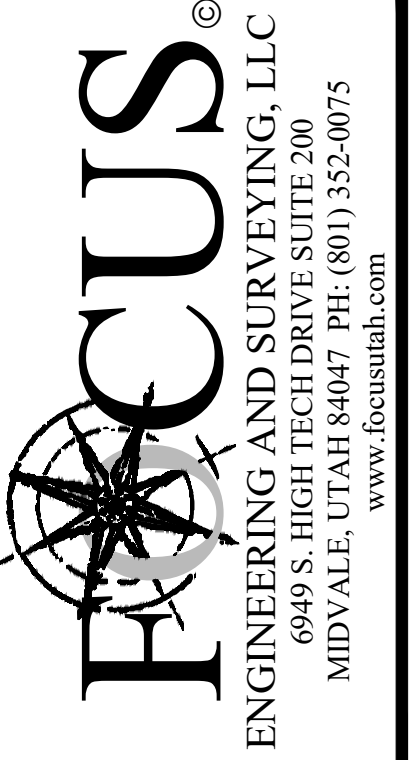
OWNERS OF RECORD
CIG ENTERPRISES, LLC
2255 E SUNNYSIDE AVE.
SALT LAKE CITY, UTAH 84158.





PRELIMINARY PLAT TALEGA VILLAGE

ADA COUNTY, IDAHO
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH., RANGE 1 WEST.,
B.M. ADA COUNTY, IDAHO.



FOR REVIEW ONLY

TALEGA VILLAGE
ADA COUNTY, IDAHO
LOCATE WITHIN THE SE 1/4 OF SECTION 9, TOWNSHIP 4 NORTH.,
RANGE 1 WEST., B.M. ADA COUNTY, IDAHO.
PRELIMINARY PLAT

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	145.00	0°39'11"	1.65	S00°14'25"W	1.65
C2	145.00	20°36'39"	52.16	S10°23'30"E	51.88
C3	145.00	20°40'02"	52.30	S31°01'50"E	52.02
C4	145.00	20°40'02"	52.30	S51°41'52"E	52.02
C5	145.00	18°59'23"	48.06	S71°31'35"E	47.84
C6	775.00	0°21'18"	4.80	S81°11'56"E	4.80
C7	775.00	4°18'04"	58.18	S83°31'37"E	58.17
C8	775.00	4°18'04"	58.18	S87°49'42"E	58.17
C9	775.00	3°47'27"	51.27	N88°07'33"E	51.27
C10	375.00	1°01'17"	6.68	N85°43'11"E	6.68
C11	375.00	8°37'37"	56.46	N80°53'44"E	56.41
C12	375.00	8°37'37"	56.46	N72°16'07"E	56.41
C13	375.00	8°37'37"	56.46	N63°38'30"E	56.41
C14	375.00	7°58'43"	52.22	N55°20'20"E	52.18
C15	1025.00	0°14'49"	4.42	N51°13'35"E	4.42
C16	1025.00	3°11'33"	57.11	N49°30'24"E	57.10
C17	1025.00	3°21'22"	60.04	N46°13'56"E	60.03
C18	1025.00	3°22'00"	60.23	N39°30'55"E	60.22
C19	1025.00	1°07'36"	20.16	N37°16'07"E	20.16
C20	1025.00	3°13'45"	57.77	N35°05'26"E	57.76

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C21	1025.00	3°00'30"	53.82	N31°58'19"E	53.81
C22	100.00	27°07'29"	47.34	N16°54'19"E	46.90
C23	100.00	27°07'29"	47.34	N10°13'11"W	46.90
C24	100.00	27°06'25"	47.31	N37°20'08"W	46.87
C25	100.00	27°06'25"	47.31	N64°26'33"W	46.87
C26	100.00	11°26'13"	19.96	S83°42'52"E	19.93
C27	100.00	4°35'01"	8.00	S87°42'32"W	8.00
C28	125.00	4°35'01"	10.00	N87°42'32"E	10.00
C29	75.00	4°35'01"	6.00	N87°42'32"E	6.00
C30	315.00	14°22'27"	79.03	S07°45'43"W	78.82
C31	85.00	5°08'21"	7.62	S87°59'51"W	7.62
C32	85.00	31°55'19"	47.36	S69°28'00"W	46.75
C33	85.00	31°55'19"	47.36	S37°32'41"W	46.75
C34	85.00	21°01'01"	31.18	S11°04'32"W	31.00
C35	345.00	14°22'27"	86.55	S07°45'43"W	86.33
C36	375.00	8°07'07"	53.14	S10°53'23"W	53.09
C37	325.00	6°26'38"	36.55	N11°43'38"E	36.53
C38	355.00	14°22'26"	89.11	N07°45'29"E	88.88
C39	385.00	7°40'56"	51.62	N11°06'29"E	51.58
C40	95.00	1°29'34"	2.47	N00°10'46"W	2.47

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C41	95.00	80°05'45"	132.80	N40°58'25"W	122.25
C42	725.00	3°05'48"	39.18	N82°34'11"W	39.18
C43	725.00	4°44'58"	60.10	N86°29'33"W	60.08
C44	725.00	4°44'44"	60.05	S88°45'36"W	60.03
C45	725.00	0°09'25"	1.98	S86°18'32"W	1.98
C46	325.00	15°47'14"	89.55	S78°20'13"W	89.27
C47	325.00	16°26'44"	93.28	S62°13'14"W	92.96
C48	325.00	2°38'53"	15.02	S52°40'26"W	15.02
C49	975.00	3°24'03"	57.87	S49°38'57"W	57.86
C50	975.00	3°31'41"	60.04	S46°11'05"W	60.03
C51	975.00	3°31'41"	60.04	S42°39'24"W	60.03
C52	671.49	2°47'49"	32.78	N51°58'25"W	32.78
C53	975.00	7°25'28"	126.34	S37°10'49"W	126.26
C54	755.00	3°07'23"	41.15	N49°00'49"W	41.15
C55	975.00	3°00'01"	51.06	S31°58'04"W	51.05
C56	50.00	119°54'02"	104.63	S29°28'58"E	86.56
C57	35.00	8°12'48"	5.02	N86°27'37"E	5.01
C58	35.00	81°47'12"	49.96	N41°27'37"E	45.83
C59	671.49	8°26'20"	98.90	N57°35'30"W	98.81
C60	775.00	12°44'53"	172.44	N87°23'44"W	172.08

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C59	375.00	34°52'51"	228.29	S68°47'24"W	224.78
C60	1025.00	20°52'55"	373.57	S40°54'31"W	371.51
C61	100.00	119°54'02"	209.27	S29°28'58"E	173.12
C62	254.66	21°26'03"	95.27	N70°17'53"W	94.71
C63	237.50	13°21'26"	55.37	N88°04'59"W	55.24
C64	85.00	90°00'00"	133.52	N45°34'01"E	120.21
C65	725.00	12°44'53"	161.31	N87°23'44"W	160.98
C66	325.00	34°52'51"	197.85	S68°47'24"W	194.81
C67	975.00	20°52'55"	355.35	S40°54'31"W	353.38
C68	35.00	90°00'00"	54.98	N45°34'01"E	49.50
C69	120.00	81°35'18"	170.88	N40°13'38"W	156.80
C70	750.00	12°44'53"	166.87	N87°23'44"W	166.53
C71	157.50	4°12'15"	11.56	S83°08'11"W	11.55
C72	157.50	28°09'13"	77.39	S66°57'27"W	76.61
C73	75.00	119°54'02"	156.95	S29°28'58"E	129.84
C74	60.00	90°00'00"	94.25	N45°34'01"E	84.85
C75	157.50	8°28'03"	23.28	S48°38'50"W	23.26
C76	1025.00	3°21'20"	60.03	N42°52'35"E	60.02
C77	312.50	12°50'39"	70.05	S50°50'07"W	69.91
C78	312.50	10°24'36"	56.78	S62°27'45"W	56.70

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C79	275.00	22°36'21"	108.50	S78°07'48"E	107.80
C80	225.00	22°36'21"	88.77	S78°07'48"E	88.20
C81	225.00	22°45'36"	89.38	N78°12'25"W	88.79
C82	275.00	22°45'36"	109.24	N78°12'25"W	108.52
C83	65.00	18°11'43"	20.64	S81°18'55"W	20.56
C84	65.00	88°25'52"	100.32	S46°11'51"W	90.66
C85	40.00	88°25'52"	61.74	S46°11'51"W	55.79
C86	50.00	283°36'29"	247.49	N86°21'54"E	61.84
C87	15.00	57°25'16"	15.03	S26°43'43"E	14.41
C88	1000.00	20°52'55"	364.46	S40°54'31"W	362.45
C89	145.00	81°35'18"	206.48	N40°13'38"W	189.47
C90	755.00	3°41'01"	48.54	S45°36'43"E	48.53
C91	225.00	16°07'34"	63.33	S81°22'12"E	63.12
C92	525.00	16°17'08"	149.22	N81°26'58"W	148.72
C93	15.00	76°39'27"	20.07	N38°44'12"E	18.61
C94	50.00	166°39'27"	145.44	S06°15'48"E	99.32
C95	15.00	90°00'00"	23.56	S44°35'32"E	21.21
C96	475.00	16°17'08"	135.01	N81°26'58"W	134.56
C97	275.00	16°07'34"	77.40	S81°22'12"E	77.15
C98	350.00	34°52'51"	213.07	S68°47'24"W	209.80

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C104	250.00	22°36'21"	98.64	S78°07'48"E	98.00
C105	250.00	22°45'36"	99.31	N78°12'25"W	98.66
C106	50.00	76°46'42"	67.00	S17°02'59"E	62.10
C107	15.00	57°25'16"	15.03	S26°43'43"E	14.41
C108	65.00	70°14'08"	79.68	N37°05'59"E	74.78
C109	15.00	46°11'13"	12.09	N25°04'32"E	11.77
C110	50.00	28°54'03"	25.22	N33°43'07"E	24.95
C111	50.00	54°08'09"	47.24	N07°48'00"W	45.50
C112	50.00	77°38'42"	67.76	N73°41'25"W	62.69
C113	206.00	18°45'05"	67.42	N53°47'20"E	67.12

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SALT LAKE CITY, UTAH 84158.

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
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PRELIMINARY PLAT
Scale: N.T.S. Drawn: MJT
Date: 5/25/2023 Job #: 21-0488
Sheet: C2.3



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FOR
 REVIEW
 ONLY

TALEGA VILLAGE
 STAR, IDAHO
PRELIMINARY SITE PLAN

REVISION BLOCK	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

**PRELIMINARY
 SITE PLAN**

Scale: 1"=100'
 Date: 11/28/2023
 Sheet: C3

Drawn: DCJ
 Job #: 21-0488



LEGEND

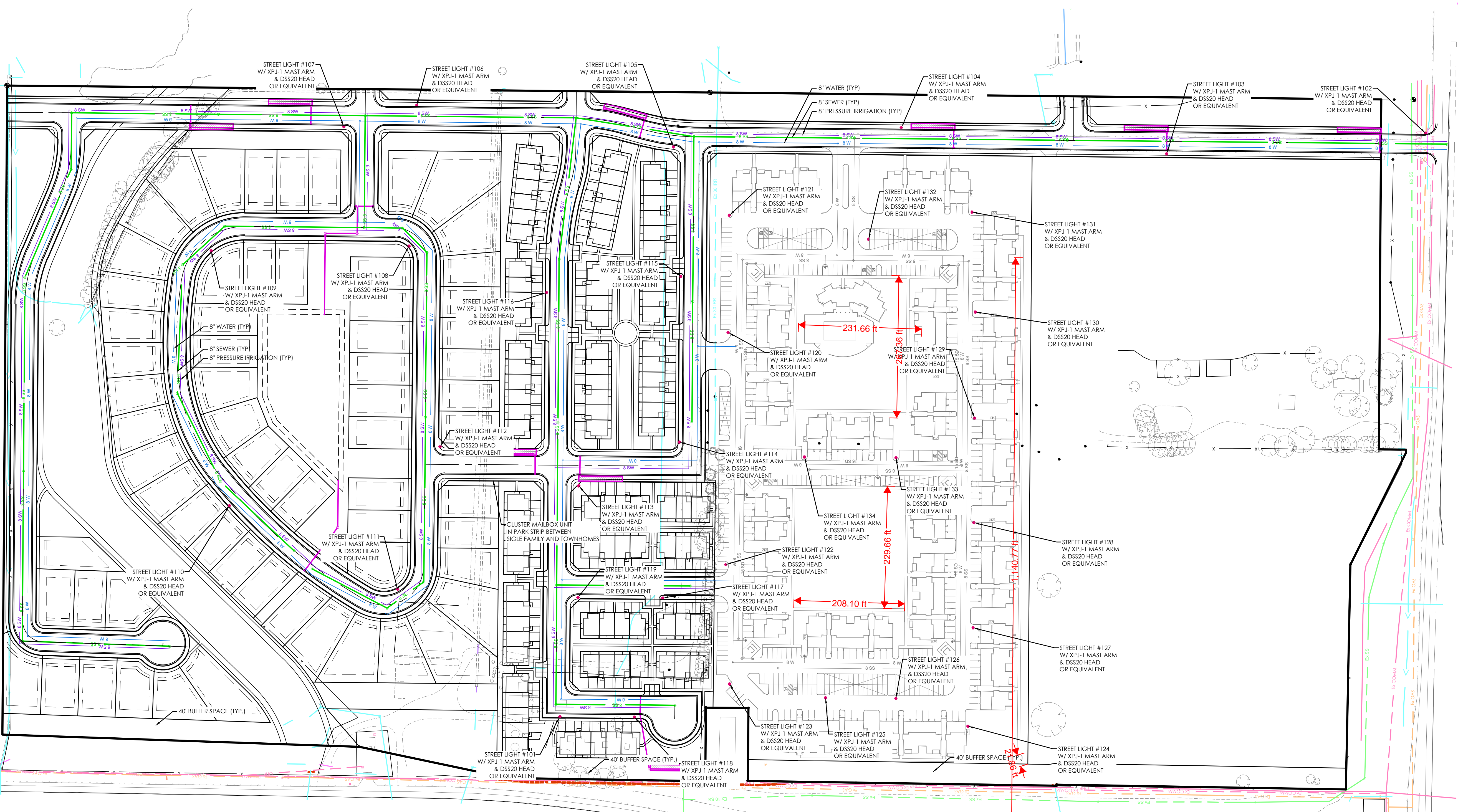
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- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE, & BEND
- SECONDARY VALVE, TEE, & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION

N

S

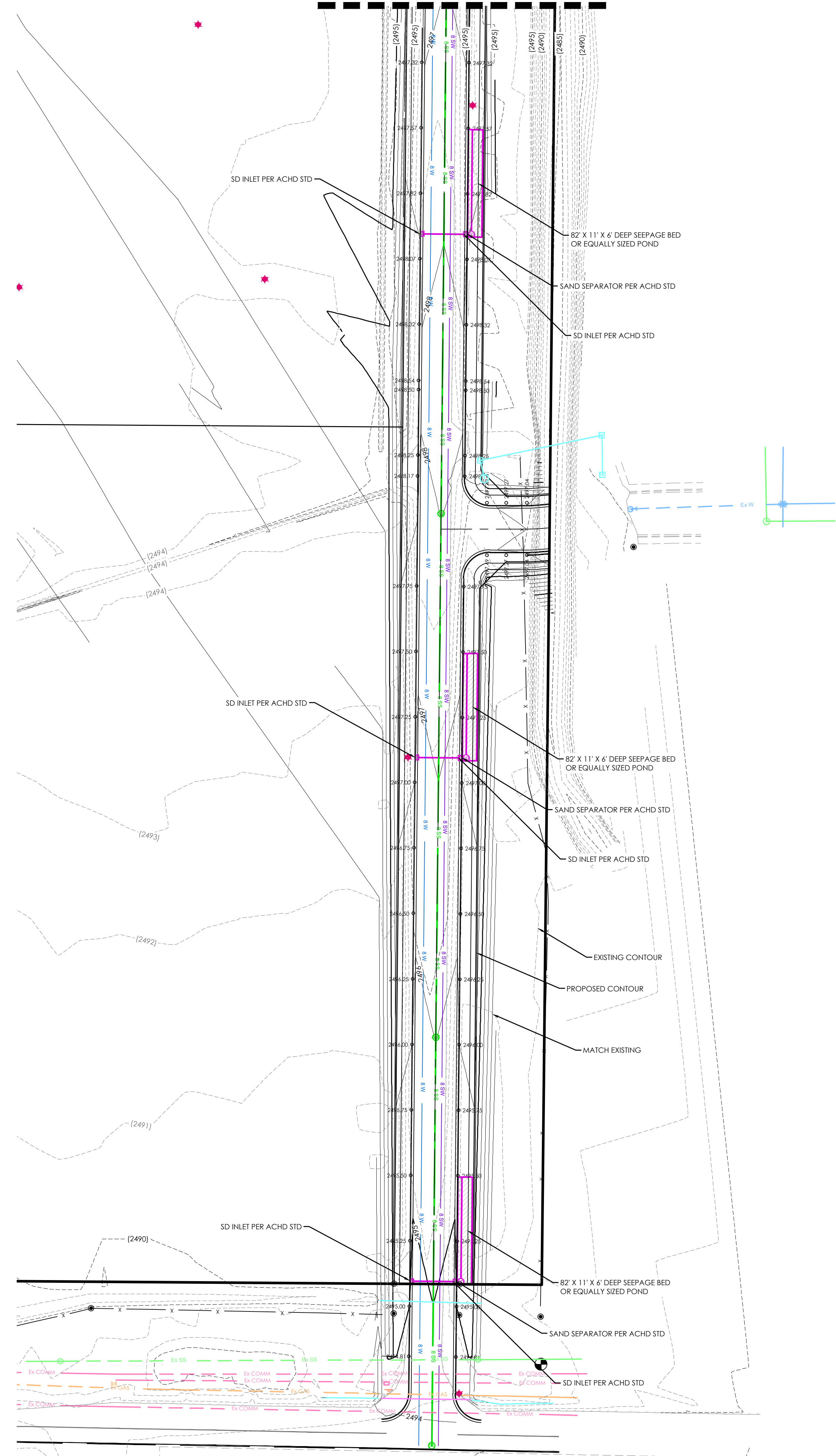
GRAPHIC SCALE

(IN FEET)
 1 inch = 100 ft.



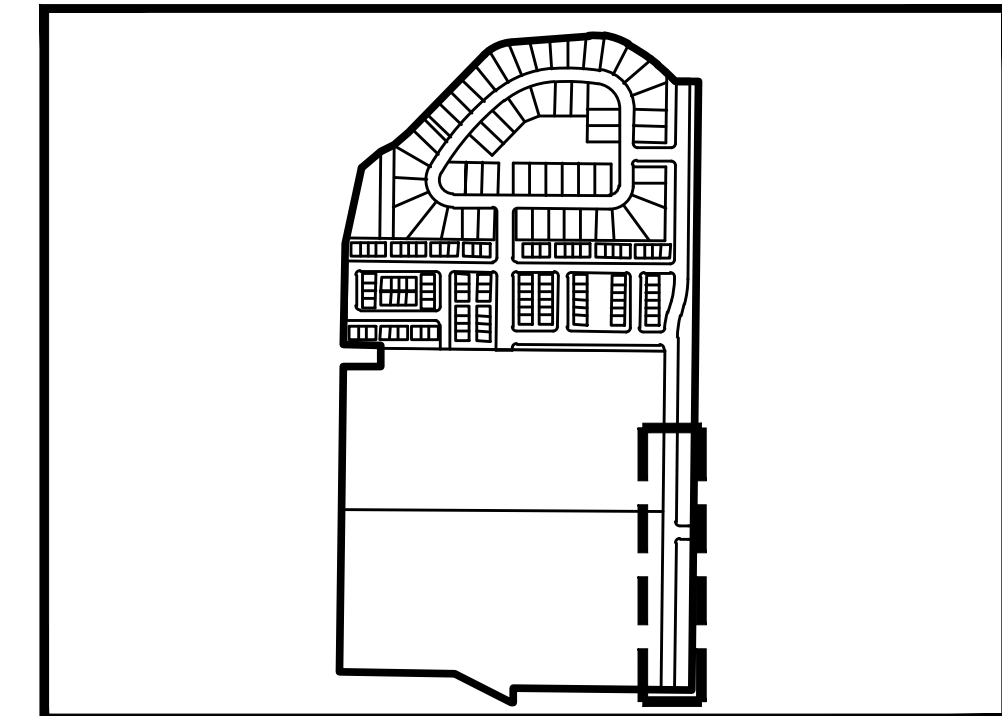
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MATCH SHEET C4.2

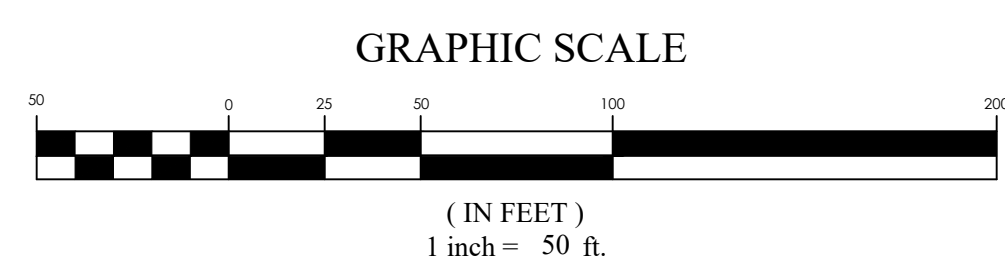


LEGEND

—	BOUNDARY
—	ROW
—	CENTERLINE
—	LOT LINE
—	EASEMENT
—	15" STORM DRAIN
—	8" SANITARY SEWER
—	8" CULINARY WATER
—	8" SECONDARY WATER
—	CONTOUR MAJOR
—	CONTOUR MINOR
XXXX	EXIST. STORM DRAIN
—	EXIST. SANITARY SEWER
—	EXIST. CULINARY WATER
—	EXIST. SECONDARY WATER
—	EXIST. FENCE
—	EXIST. CONTOUR MAJOR
—	EXIST. CONTOUR MINOR
+	SIGN
+	STREET LIGHT
+	SD MH, INLET, AND COMBO
+	SEWER MANHOLE
+	CULINARY VALVE, TEE & BEND
+	SECONDARY VALVE, TEE & BEND
+	WATER BLOW-OFF
+	FIRE HYDRANT
+	STREET MONUMENT (TO BE SET)
+	EXIST. STREET MONUMENT
+	EXIST. SD INLET & MH
+	EXIST. SEWER MH
+	EXIST. VALVE, TEE, & BEND
+	EXIST. FIRE HYDRANT
+	SPOT ELEVATION



KEY MAP
N.T.S.



FOR REVIEW ONLY

TALEGA VILLAGE
STAR, IDAHO
GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
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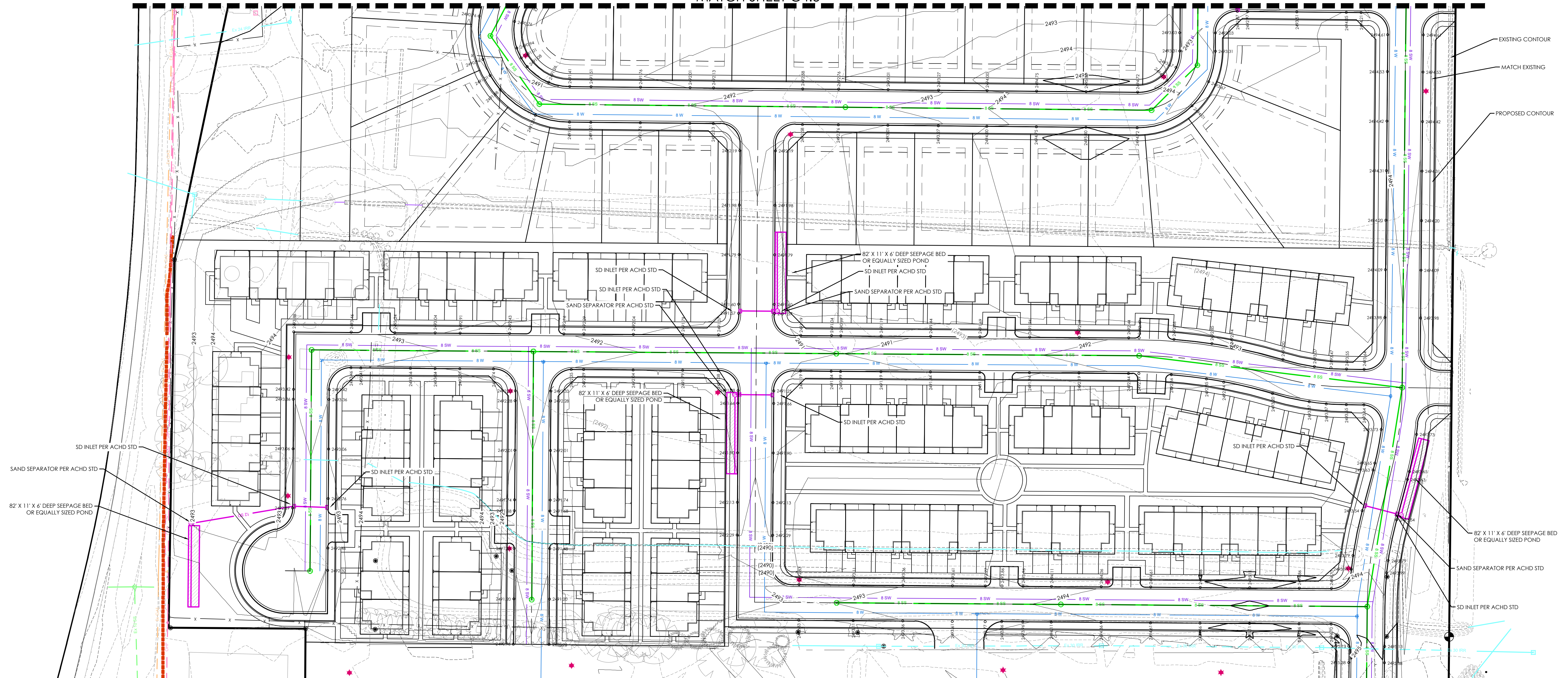
GRADING & DRAINAGE PLAN

Scale: 1" = 50'	Drawn: DCJ
Date: 11/28/2023	Job #: 21-0488
Sheet: C4.1	

Z:\2021\21-0488 Talega Village\design\21-0488\wp\streets\preliminary\subdivision\21-0488 C4.1 Preliminary Grading and Drainage.dwg

FOR REVIEW ONLY

TALEGA VILLAGE
 STAR, IDAHO
GRADING & DRAINAGE PLAN



EXISTING CONTOUR
 MATCH EXISTING
 PROPOSED CONTOUR

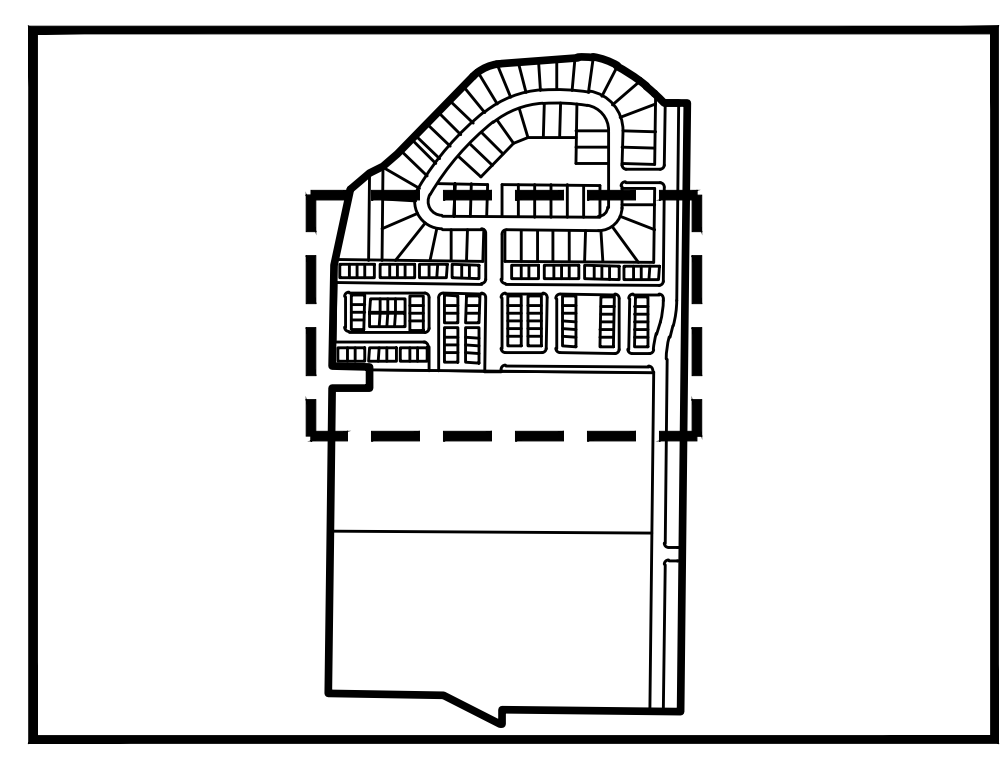
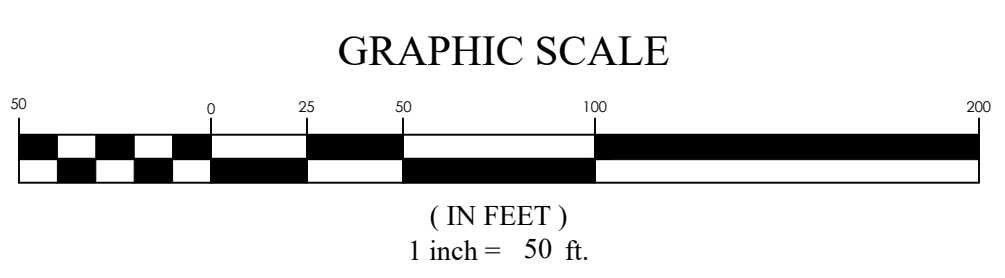
SD INLET PER ACHD STD
 SAND SEPARATOR PER ACHD STD
 82' X 11' X 6' DEEP SEEPAGE BED OR EQUALLY SIZED POND

82' X 11' X 6' DEEP SEEPAGE BED OR EQUALLY SIZED POND
 SAND SEPARATOR PER ACHD STD
 SD INLET PER ACHD STD

MATCH SHEET C4.1

LEGEND

—	BOUNDARY
—	ROW
—	CENTERLINE
—	LOT LINE
---	EASEMENT
—	15" SD
—	8" SS
—	8" CW
—	8" SW
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
—	EXIST. STORM DRAIN
—	EXIST. SANITARY SEWER
—	EXIST. CULINARY WATER
—	EXIST. FENCE
XXXXX	EXIST. CONTOUR MAJOR
XXXXX	EXIST. CONTOUR MINOR
+	SIGN
+	STREET LIGHT
+	SD MH, INLET, AND COMBO
+	SEWER MANHOLE
+	CULINARY VALVE, TEE & BEND
+	SECONDARY VALVE, TEE & BEND
+	WATER BLOW-OFF
+	FIRE HYDRANT
+	STREET MONUMENT (TO BE SET)
+	EXIST. STREET MONUMENT
+	EXIST. SD INLET & MH
+	EXIST. SEWER MH
+	EXIST. VALVE, TEE, & BEND
+	EXIST. FIRE HYDRANT
+	SPOT ELEVATION



KEY MAP
 N.T.S

REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

GRADING & DRAINAGE PLAN

Scale: 1"=50'	Drawn: DCJ
Date: 11/28/2023	Job #: 21-0488
Sheet: C4.2	



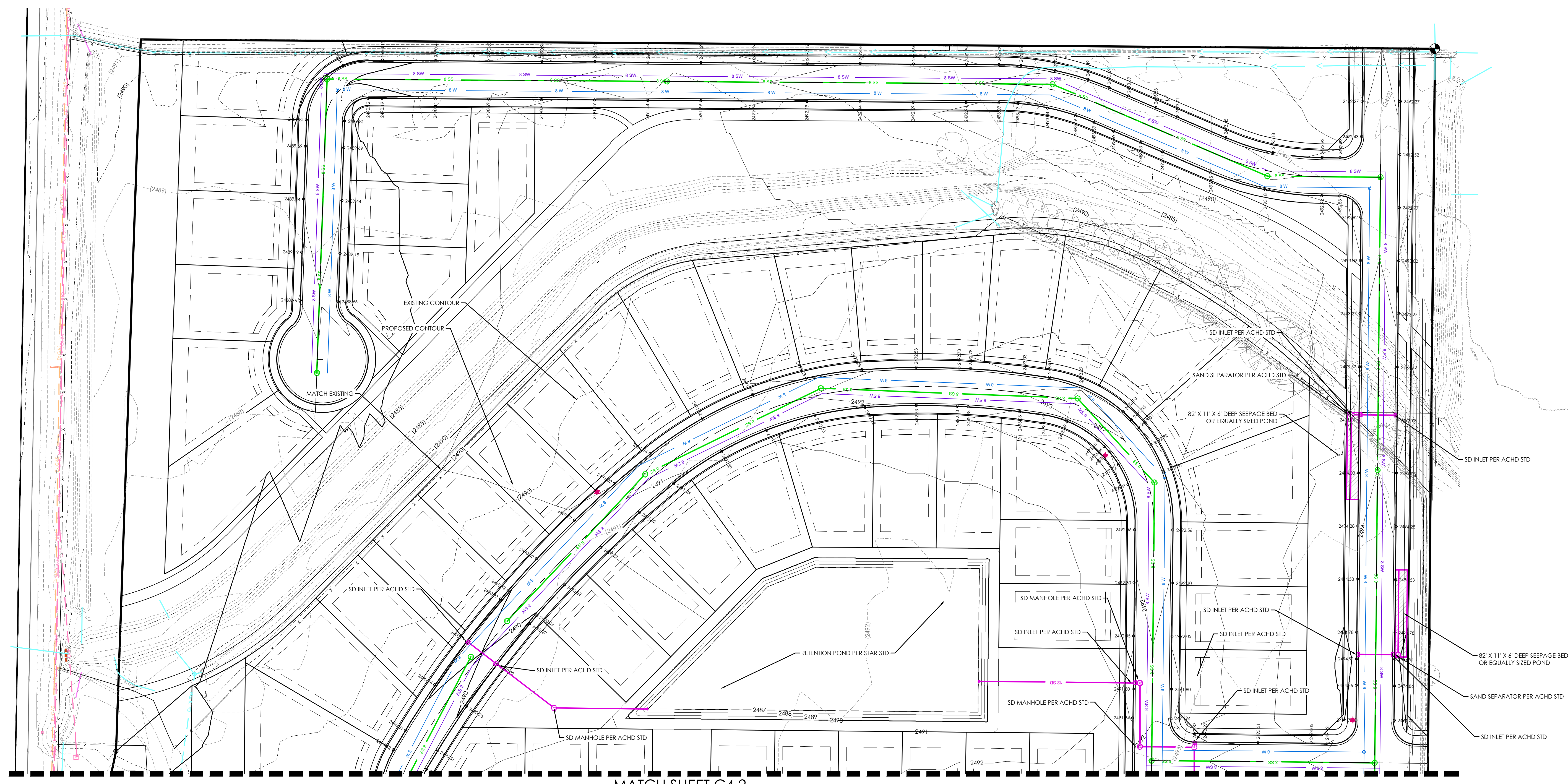
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FOR
 REVIEW
 ONLY

TALEGA VILLAGE
 STAR, IDAHO
GRADING & DRAINAGE PLAN

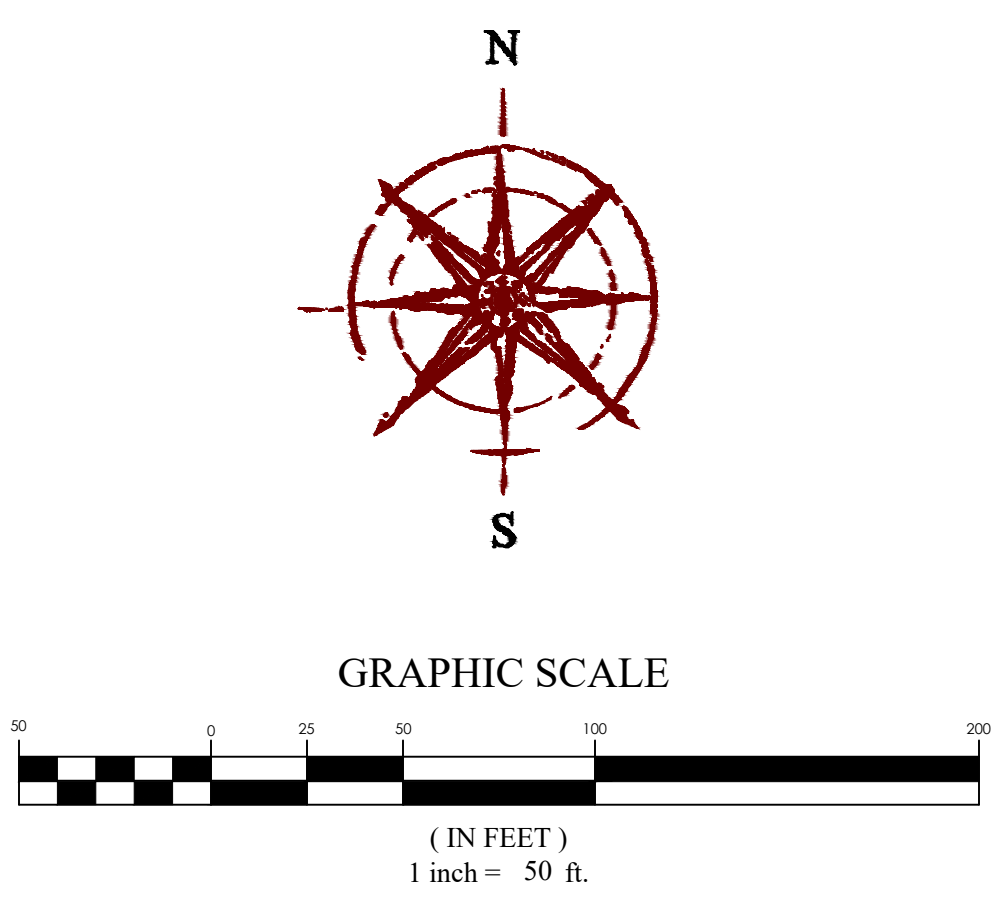
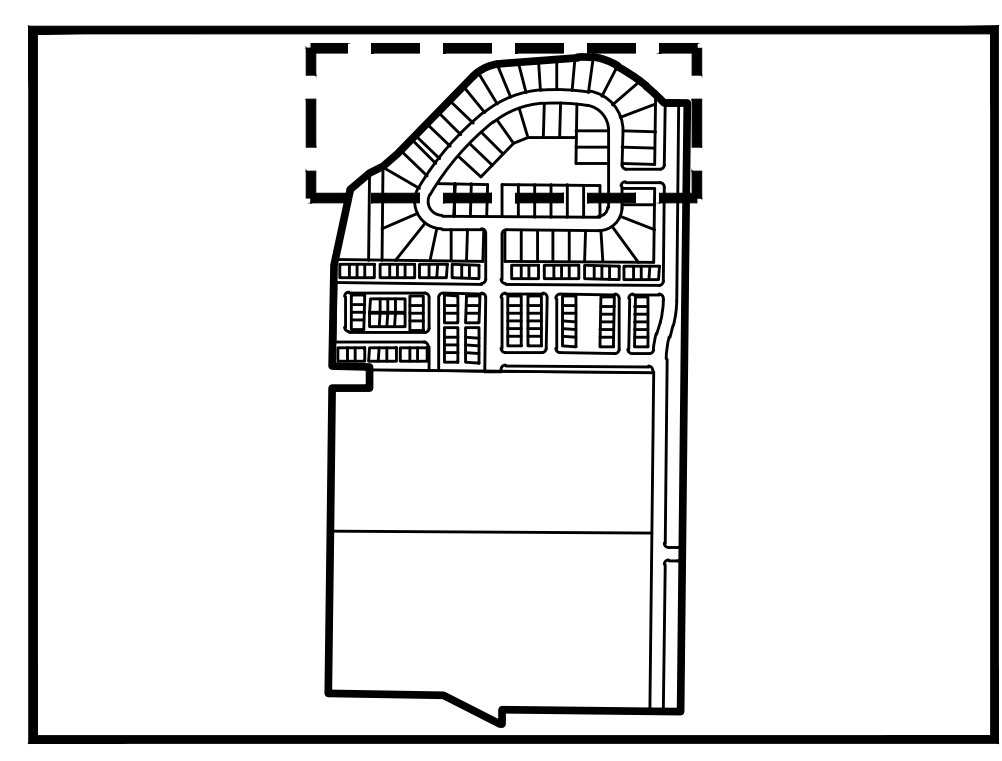
REVISION BLOCK	
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GRADING & DRAINAGE PLAN	
Scale: 1"=50'	Drawn: DCJ
Date: 11/28/2023	Job #: 21-0488
Sheet:	C4.3



MATCH SHEET C4.2

- LEGEND**
- BOUNDARY
 - ROW
 - CENTERLINE
 - LOT LINE
 - - - EASEMENT
 - 15" SD 15" STORM DRAIN
 - 8" SS 8" SANITARY SEWER
 - 8" W 8" CULINARY WATER
 - 8" SW 8" SECONDARY WATER
 - XXXX CONTOUR MAJOR
 - XXXX CONTOUR MINOR
 - Ex SD EXIST. STORM DRAIN
 - Ex SS EXIST. SANITARY SEWER
 - Ex W EXIST. CULINARY WATER
 - Ex SW EXIST. SECONDARY WATER
 - x EXIST. FENCE
 - [XXXX] EXIST. CONTOUR MAJOR
 - [XXXX] EXIST. CONTOUR MINOR
 - + SIGN
 - STREET LIGHT
 - SD MH, INLET, AND COMBO SEWER MANHOLE
 - SEWER MANHOLE
 - CULINARY VALVE, TEE & BEND
 - SECONDARY VALVE, TEE & BEND
 - WATER BLOW-OFF
 - FIRE HYDRANT
 - STREET MONUMENT (TO BE SET)
 - EXIST. STREET MONUMENT
 - EXIST. SD INLET & MH
 - EXIST. SEWER MH
 - EXIST. VALVE, TEE, & BEND
 - EXIST. FIRE HYDRANT
 - o XXXX.XX SPOT ELEVATION



Z:\2021\21-0488 Talega Village\Design\21-0488\cwg\streets\preliminary\subdivision\21-0488 C4.3 Preliminary Grading and Drainage.cwg

FOR REVIEW ONLY

TALEGA VILLAGE PHASE 2 & 3
 STAR CITY, IDAHO
OVERALL LANDSCAPE PLAN

REVISION BLOCK	DATE	DESCRIPTION
1		
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OVERALL LANDSCAPE PLAN

Scale: 1"=100' Drawn: BW
 Date: 11/29/2023 Job #: 21-0488
 Sheet: **L1.0**

OVERALL PHASES 2-3 PLANT SCHEDULE

	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	
TREES	AP	Acer platanoides	Norway Maple	2" Cal.	56	
	AX	Acer x freemanii	Freeman Maple	2" Cal.	65	
	SB	Amelanchier x grandiflora	Serviceberry	2" Cal.	45	
	CC	Cercis canadensis	Eastern Redbud	2" Cal.	46	
	CF	Cornus florida	Flowering Dogwood	2" Cal.	13	
	GY	Ginkgo biloba 'JN9' TM	Sky Tower Ginkgo	2" Cal.	35	
	JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper	6" Ht.	18	
	M5	Malus x 'Spring Snow'	Spring Snow Crabapple	2" Cal.	51	
	PF	Prunus anisata 'Formal Form'	Formal Form Bristlecone Pine	6" Ht.	21	
	PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry	2" Cal.	57	
	FJ	Pyrus calleryana 'Jazzam' TM	Jack Gallery Pear	2" Cal.	59	
	QR	Quercus robur	English Oak	2" Cal.	7	
	UA	Ulmus x 'Accolade'	Accolade Elm	2" Cal.	52	
	SHRUBS	AMG	Aronia melanocarpa 'UCONNAMO12' TM	Ground Hug Black Chokeberry	2 gal.	76
		BTC	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry	5 gal.	34
		BG	Berberis thunbergii 'Goruzam' TM	Golden Ruby Japanese Barberry	5 gal.	85
BDH		Buddleja davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush	2 gal.	78	
BGM		Buxus x 'Green Mountain'	Green Mountain Boxwood	5 gal.	22	
CAB		Cornus alba 'Bailhalo' TM	Ivory Halo Dogwood	5 gal.	92	
CSK		Cornus sericea 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood	2 gal.	108	
EAC		Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush	5 gal.	54	
POL		Physocarpus opulifolius 'Donna May' TM	Little Devil Ninebark	5 gal.	121	
PMM		Pinus mugo var. pumilo	Dwarf Mugo Pine	5 gal.	40	
PLC		Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel	5 gal.	61	
SSS		Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea	5 gal.	61	
SJD		Spiraea japonica 'Double Play Doozie'	Doozie Spirea	2 gal.	33	
SBL		Syringa x 'SM5JBP7' 'Bloomerang'	Bloomerang Dark Purple Lilac	5 gal.	47	
VCS		Viburnum carlesii 'SMVVCB' TM	Spice Baby Koreanspice Viburnum	5 gal.	105	
ORNAMENTAL GRASSES		CAK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	133
	HSS	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass	1 gal.	86	
	MSG	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass	1 gal.	72	
	PAH	Pennisetum alopecuroides 'Hamelin'	Hamelin Fountain Grass	1 gal.	72	
PERENNIALS	H50	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 gal.	36	
	PAL	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	1 gal.	26	
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	
GROUND COVERS	KB	Poa pratensis	Kentucky Bluegrass	sod	235,183 sf	

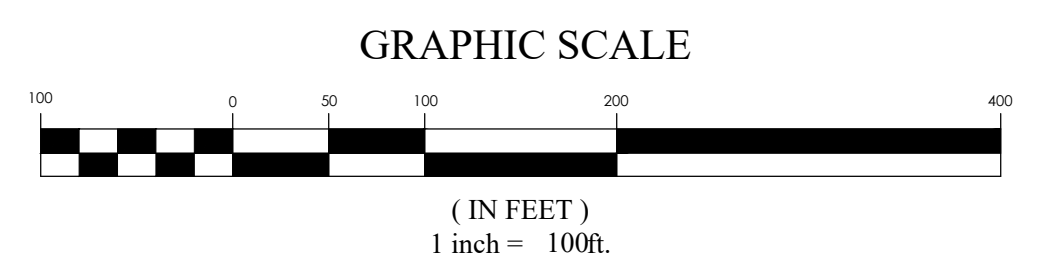
OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
1	RIVER ROCK, SIZE 2"	93,774 sf	
2	PLAYGROUND WOOD MULCH, 14" DEPTH	1,385 sf	
3	STEEL EDGING, TBD.	5,216 lf	
4	PICNIC SHELTER, T.B.D.	1	
5	PLAYGROUND STRUCTURE, T.B.D.	1	
6	BENCH, TBD.	4	

LANDSCAPE NOTES

- LAWN AREAS WILL BE SODDED WITH KENTUCKY BLUEGRASS BLEND OVER 4 INCHES GOOD GRADE TOPSOIL.
- TOP DRESS ALL SHRUB BED AREAS AND OTHER AREAS LABELED RIVER ROCK OR CRUSHED GRAVEL WITH A 4" DEPTH OF MULCH BY TYPE AND PLAN LOCATION AS SPECIFIED IN THE REFERENCE NOTE SCHEDULE. PLACE ROCK MULCH OVER DEWITT PRO-5 WEED BARRIER FABRIC. FABRIC SHALL BE INSTALLED AFTER PRE-EMERGENT HAS BEEN APPLIED.
- INSTALL STEEL EDGING FOR MOW STRIPS BETWEEN LAWN AREAS AND PLANTING BEDS.
- CONTRACTOR TO CONDUCT THEIR OWN QUANTITY TAKE-OFFS IN THE PLAN AND VERIFY ANY DISCREPANCIES WITH THE LANDSCAPE ARCHITECT.

NOTE:
 REFERENCE SHEET L1.10 FOR DETAILS AND SEPARATE LANDSCAPE TABULATION CHARTS & SCHEDULES FOR PHASES 2&3.



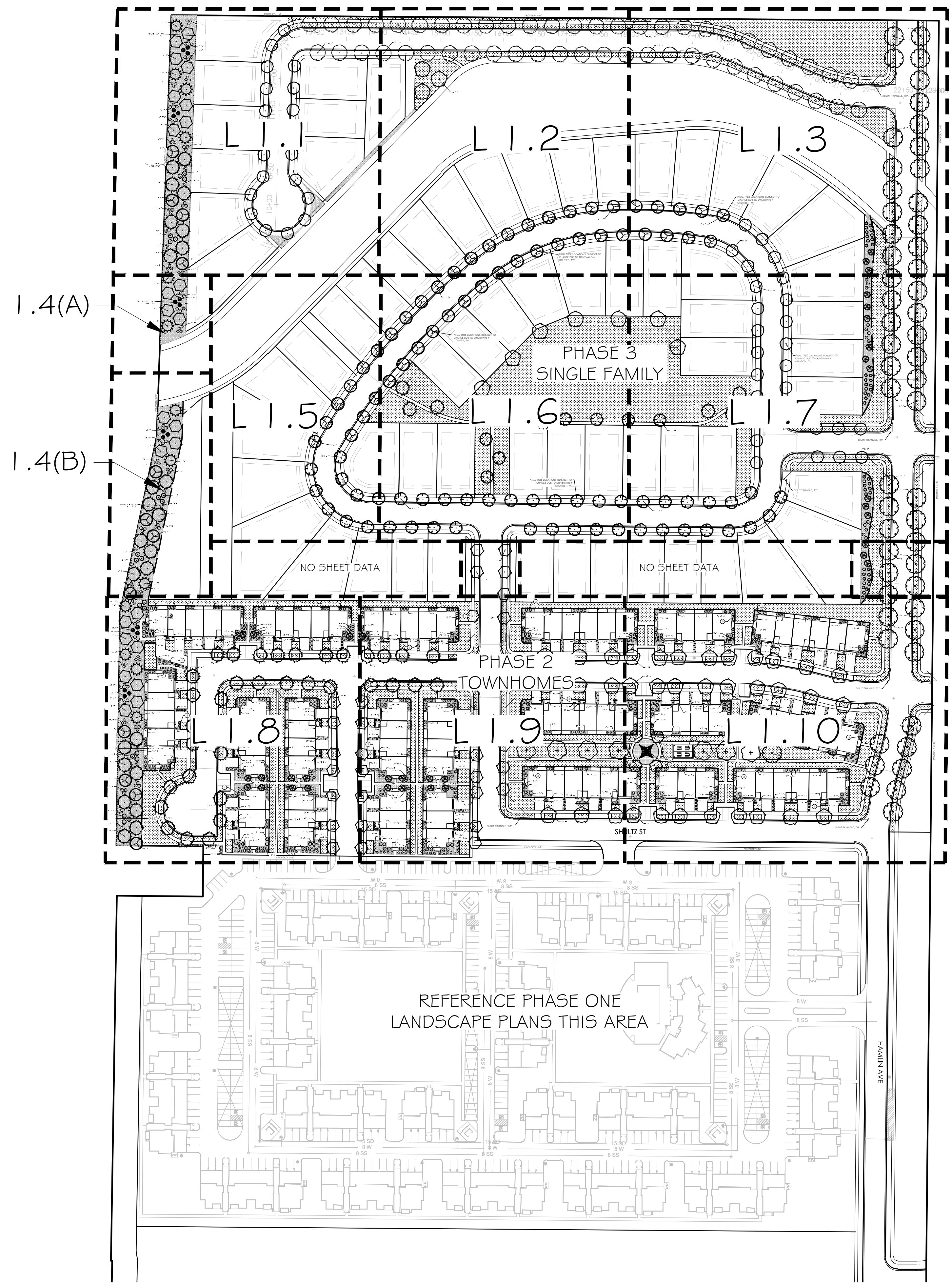
OWNER/APPLICANT
 DERK PARDOE
 3454 STONE MOUNTAIN LN.
 SANDY, UT 84092
 801-808-2357

OWNER/APPLICANT
 JASON RAMSEY
 RAMSEY CONSTRUCTION
 7950 HORSESHOE BEND RD. STE. 106
 BOISE, ID 83714
 208-941-1711

SURVEYOR
 JOHN GLETNE
 VALLEY LAND SURVEYING
 5099 S VALLEY ST.
 BOISE, ID 83709
 208-261-2226

PLANNER
 CHAD GARNER
 FOCUS ENGINEERING & SURVEYING
 6949 S HIGH TECH DR. STE. 200
 MIDVALE, UT 84047
 801-352-0075

ENGINEER
 JACOB HOLMES
 FOCUS ENGINEERING & SURVEYING
 1001 N ROSARIO ST. STE. 100
 MERIDIAN, ID
 801-352-0075



REFERENCE PHASE ONE
 LANDSCAPE PLANS THIS AREA

FOR
 REVIEW
 ONLY

TALEGA VILLAGE PHASE 3
 STAR CITY, IDAHO
 LANDSCAPE PLAN

#	DATE	DESCRIPTION
1	11/29/2023	ISSUED FOR PERMIT
2		
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LANDSCAPE PLAN	
Scale: 1"=20'	Drawn: BW
Date: 11/29/2023	Job #: 21-0488
Sheet:	L1.1

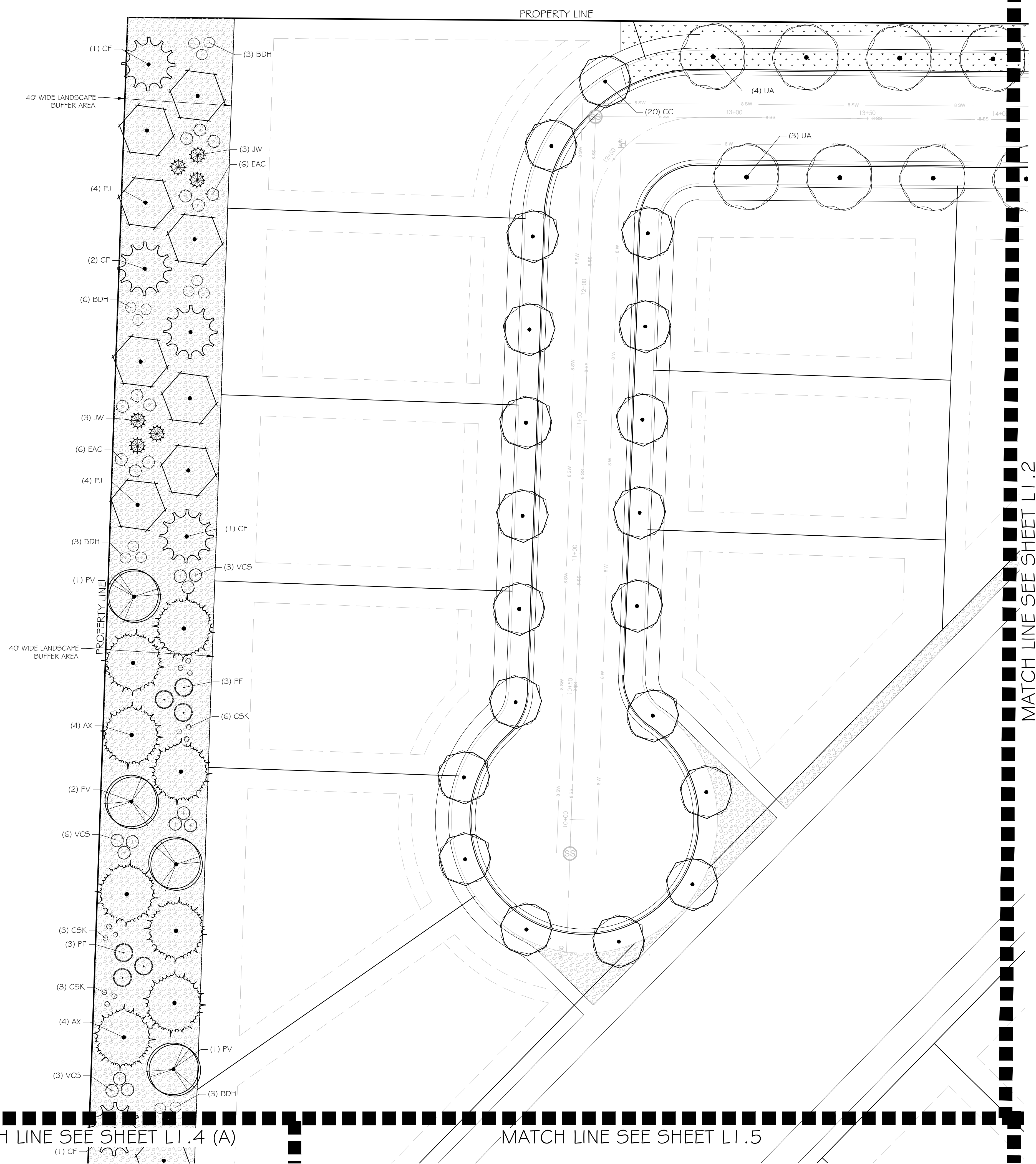
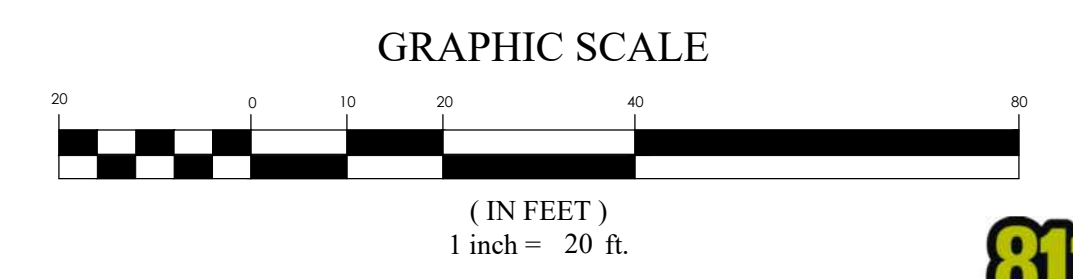
OVERALL PHASES 2-3 PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	
TREES			
AP	<i>Acer platanoides</i>	Norway Maple	
AX	<i>Acer x freemanii</i>	Freeman Maple	
SB	<i>Amelanchier x grandiflora</i>	Serviceberry	
CC	<i>Cercis canadensis</i>	Eastern Redbud	
CF	<i>Cornus florida</i>	Flowering Dogwood	
GY	<i>Ginkgo biloba 'UN9' TM</i>	Sky Tower Ginkgo	
JW	<i>Juniperus scopulorum 'Wichita Blue'</i>	Wichita Blue Juniper	
M5	<i>Malus x 'Spring Snow'</i>	Spring Snow Crabapple	
PF	<i>Pinus anstata 'Formal Form'</i>	Formal Form Bristlecone Pine	
PV	<i>Prunus virginiana 'Canada Red'</i>	Canada Red Chokecherry	
F1	<i>Pyrus calleryana 'Jazzam' TM</i>	Jack Callery Pear	
QR	<i>Quercus robur</i>	English Oak	
UA	<i>Ulmus x 'Accolade'</i>	Accolade Elm	
SHRUBS			
AMG	<i>Aronia melanocarpa 'UCONNAMO12' TM</i>	Ground Hug Black Chokeberry	
BTC	<i>Berberis thunbergii 'Concorde'</i>	Concorde Japanese Barberry	
BG	<i>Berberis thunbergii 'Gonzam' TM</i>	Golden Ruby Japanese Barberry	
BDH	<i>Buddleja davidii 'Buzz Hot Raspberry'</i>	Hot Raspberry Butterfly Bush	
BGM	<i>Buxus x 'Green Mountain'</i>	Green Mountain Boxwood	
CAB	<i>Cornus alba 'Balthalo' TM</i>	Ivory Halo Dogwood	
CSK	<i>Cornus senega 'Kelsey'</i>	Kelsey's Dwarf Red Twig Dogwood	
EAC	<i>Eucorymus alatus 'Grove Compactus'</i>	Grove Compact Burning Bush	
POL	<i>Physocarpus opulifolius 'Dorna May' TM</i>	Little Devil Ninebark	
PMM	<i>Pinus mugo var. pumilio</i>	Dwarf Mugo Pine	
PLC	<i>Prunus laurocerasus 'Chestnut Hill'</i>	Chestnut Hill English Laurel	
SSS	<i>Sorbaria sorbifolia 'Sem'</i>	Sem Ash Leaf Spirea	
SJD	<i>Spiraea japonica 'Double Play Doozie'</i>	Doozie Spirea	
SBL	<i>Syringa x 'SMSJB7' 'Bloemerang'</i>	Bloemerang Dark Purple Lilac	
VCS	<i>Viburnum carlesii 'SMVCB' TM</i>	Spice Baby Koreanspice Viburnum	
ORNAMENTAL GRASSES			
CAK	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	Karl Foerster Feather Reed Grass	
HSS	<i>Helictotrichon sempervirens 'Sapphire'</i>	Sapphire Blue Oat Grass	
MSG	<i>Miscanthus sinensis 'Gold Bar'</i>	Gold Bar Eulalia Grass	
PAH	<i>Pennisetum alopecuroides 'Hameln'</i>	Hameln Fountain Grass	
PERENNIALS			
HSO	<i>Hemerocallis x 'Stella de Oro'</i>	Stella de Oro Daylily	
PAL	<i>Perovskia atriplicifolia 'Little Spire'</i>	Little Spire Russian Sage	
SYMBOL			
GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME
	KB	<i>Poa pratensis</i>	Kentucky Bluegrass

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
	1 RIVER ROCK, SIZE 2"
	2 PLAYGROUND WOOD MULCH, 14" DEPTH
	3 STEEL EDGING, TBD.
	4 PICNIC SHELTER, T.B.D.
	5 PLAYGROUND STRUCTURE, T.B.D.
	6 BENCH, TBD.

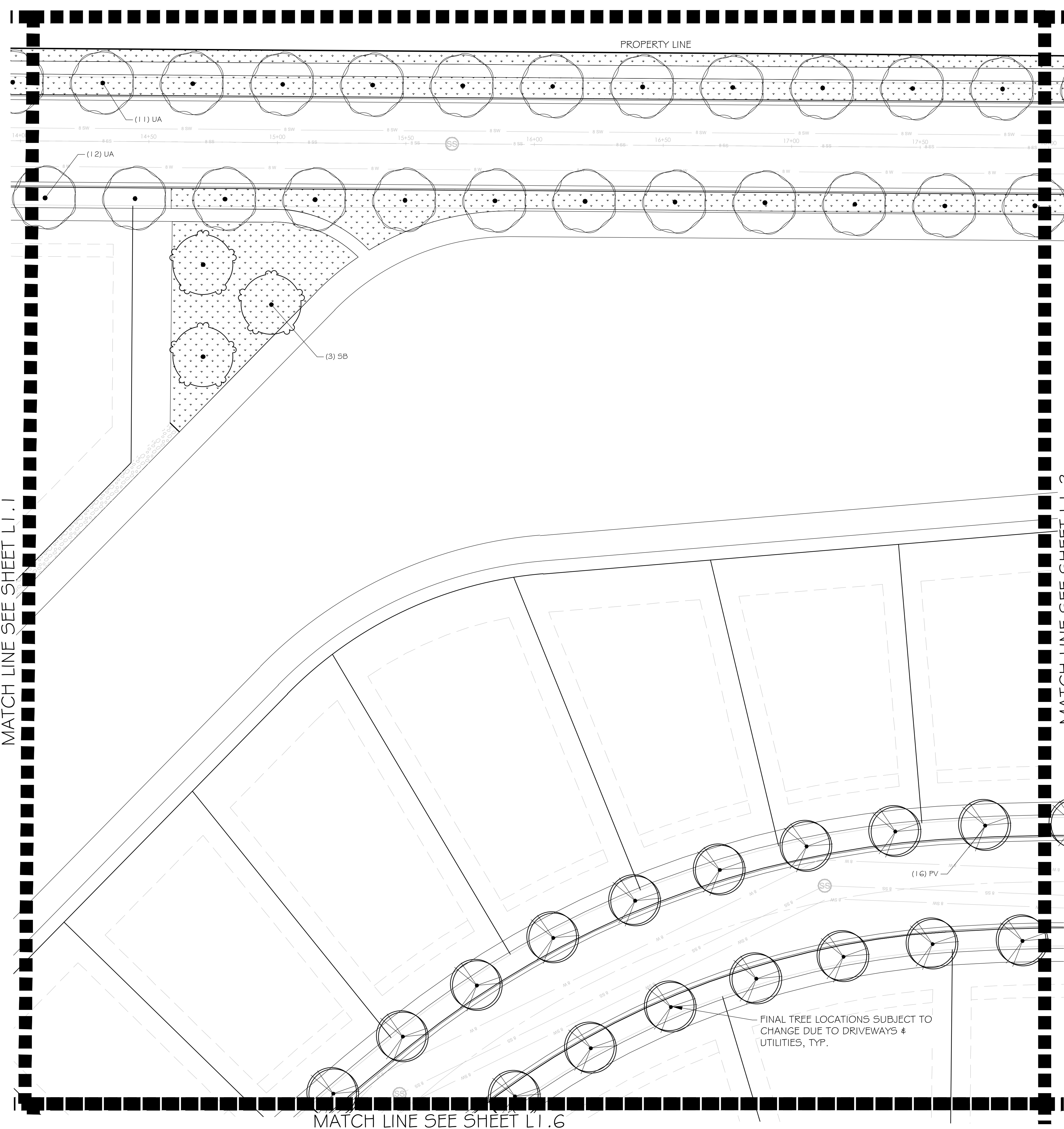
NOTE:
 REFERENCE SHEET L1.1 FOR DETAILS AND
 SEPARATE LANDSCAPE TABULATION CHARTS &
 SCHEDULES FOR PHASES 2&3.



MATCH LINE SEE SHEET L1.4 (A)

MATCH LINE SEE SHEET L1.5

MATCH LINE SEE SHEET L1.2



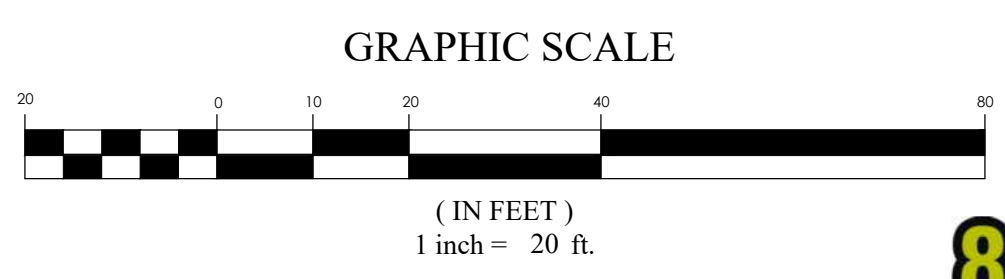
OVERALL PHASES 2-3 PLANT SCHEDULE

	CODE	BOTANICAL NAME	COMMON NAME	
TREES	AP	<i>Acer platanoides</i>	Norway Maple	
	AV	<i>Acer x freemanii</i>	Freeman Maple	
	SB	<i>Servicaster</i>	Servicaster	
	CC	<i>Amelanchier x grandiflora</i>	Eastern Redbud	
	CF	<i>Cornus florida</i>	Flowering Dogwood	
	GY	<i>Ginkgo biloba 'NJ9' TM</i>	Sky Tower Ginkgo	
	JW	<i>Juniperus scopulorum 'Wichita Blue'</i>	Wichita Blue Juniper	
	MS	<i>Malus x 'Spring Snow'</i>	Spring Snow Crabapple	
	PF	<i>Pinus aristata 'Formal Form'</i>	Formal Form Bristlecone Pine	
	PV	<i>Prunus virginiana 'Canada Red'</i>	Canada Red Chokecherry	
	PJ	<i>Fyrus calleryana 'Jazzam' TM</i>	Jack Gallery Pear	
	QR	<i>Quercus robur</i>	English Oak	
UA	<i>Ulmus x 'Accolade'</i>	Accolade Elm		
SHRUBS	AMG	<i>Aronia melanocarpa 'UCONNAMO12' TM</i>	Ground Hug Black Chokeberry	
	BTC	<i>Berberis thunbergii 'Concorde'</i>	Concorde Japanese Barberry	
	BG	<i>Berberis thunbergii 'Goruzam' TM</i>	Golden Ruby Japanese Barberry	
	BDH	<i>Buddleia davidii 'Buzz Hot Raspberry'</i>	Hot Raspberry Butterfly Bush	
	BGM	<i>Buxus x 'Green Mountain'</i>	Green Mountain Boxwood	
	CAB	<i>Cornus alba 'Bailhalo' TM</i>	Ivory Halo Dogwood	
	CSK	<i>Cornus senceae 'Kelsey'</i>	Kelsey's Dwarf Red Twig Dogwood	
	EAC	<i>Euonymus alatus 'Grove Compactus'</i>	Grove Compact Burning Bush	
	POL	<i>Physocarpus opulifolius 'Donna May' TM</i>	Little Devil Ninebark	
	PMM	<i>Pinus mugo var. pumilo</i>	Dwarf Mugo Pine	
	PLC	<i>Prunus laurocerasus 'Chestnut Hill'</i>	Chestnut Hill English Laurel	
	SSS	<i>Sorbaria sorbifolia 'Sem'</i>	Sem Ash Leaf Spirea	
	SJD	<i>Spiraea japonica 'Double Play Doozie'</i>	Doozie Spirea	
	SBL	<i>Syringa x 'SMSJBP7' 'Bloomingrang'</i>	Bloomingrang Dark Purple Lilac	
	VCS	<i>Viburnum carlesii 'SMVGB' TM</i>	Spice Baby Koreanspice Viburnum	
	ORNAMENTAL GRASSES	CAK	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	Karl Foerster Feather Reed Grass
		HSS	<i>Helictotrichon sempervirens 'Sapphire'</i>	Sapphire Blue Oat Grass
		MSG	<i>Miscanthus sinensis 'Gold Bar'</i>	Gold Bar Eulalia Grass
PAH		<i>Pennisetum alopecuroides 'Hamel'</i>	Hamel Fountain Grass	
PERENNIALS	HSO	<i>Hemerocallis x 'Stella de Oro'</i>	Stella de Oro Daylily	
	PAL	<i>Perovskia atriplicifolia 'Little Spire'</i>	Little Spire Russian Sage	
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	
GROUND COVERS				
	KB	<i>Poa pratensis</i>	Kentucky Bluegrass	

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
	1 RIVER ROCK, SIZE 2"
	2 PLAYGROUND WOOD MULCH, 1 1/4" DEPTH
	3 STEEL EDGING, TBD.
	4 PICNIC SHELTER, T.B.D.
	5 PLAYGROUND STRUCTURE, T.B.D.
	6 BENCH, TBD.

NOTE:
REFERENCE SHEET L1.1 FOR DETAILS AND
SEPARATE LANDSCAPE TABULATION CHARTS &
SCHEDULES FOR PHASES 2&3.



FOR REVIEW ONLY

**TALEGA VILLAGE PHASE 3
STAR CITY, IDAHO
LANDSCAPE PLAN**

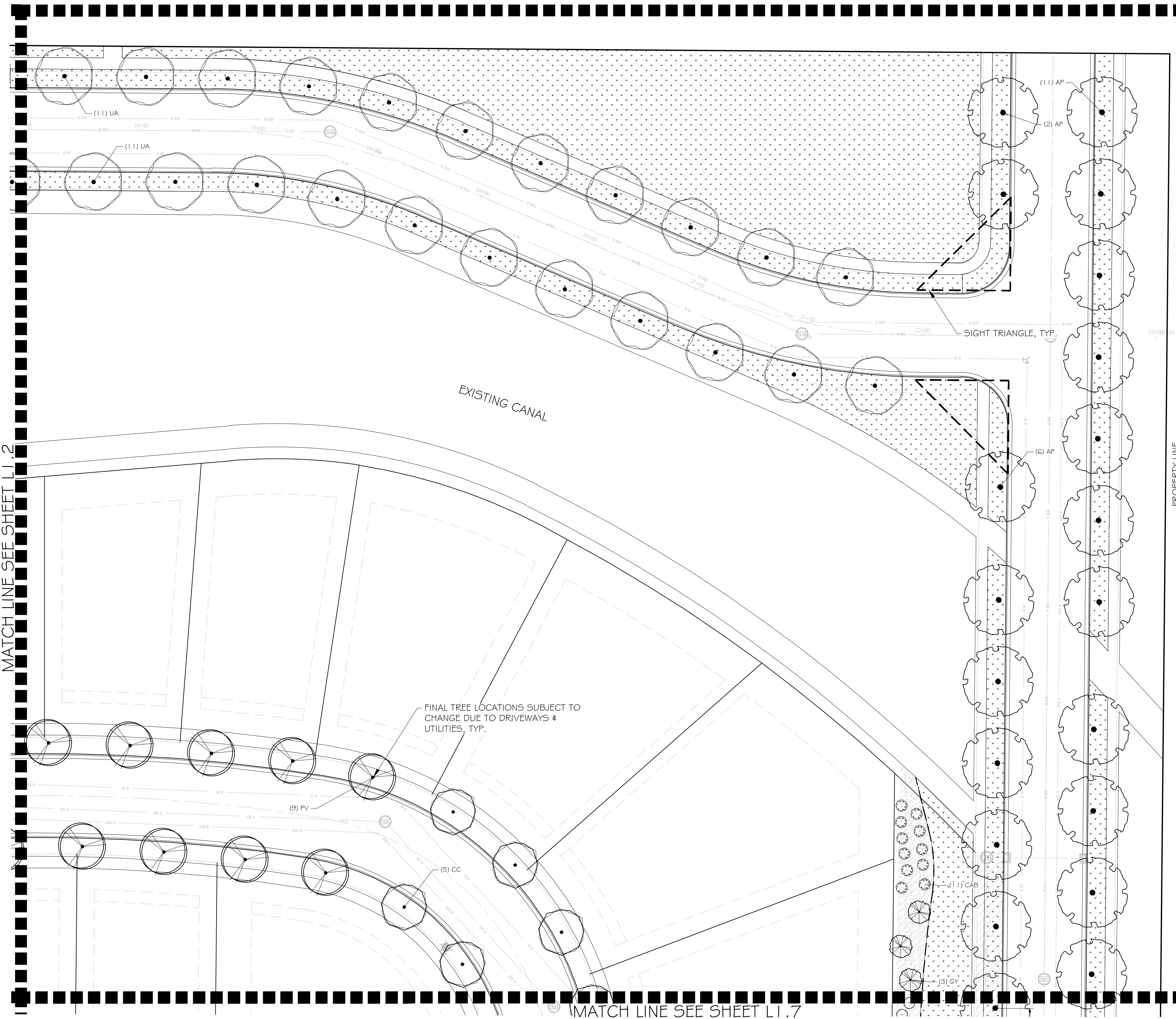
REVISION BLOCK	DATE	DESCRIPTION
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LANDSCAPE PLAN

Scale: 1"=20'
Date: 11/29/2023
Sheet: L1.2
Drawn: BW
Job #: 21-0488

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MATCH LINE SEE SHEET LI.2



FINAL TREE LOCATIONS SUBJECT TO CHANGE DUE TO DRIVEWAYS & UTILITIES, TYP.

MATCH LINE SEE SHEET LI.7

OVERALL PHASES 2-3 PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME
TREES		
AP	Acer platanoides	Norway Maple
AK	Acer x freemanii	Freeman Maple
SB	Amelanchier x grandiflora	Servicberry
CC	Cercis canadensis	Eastern Redbud
CF	Cornus florida	Flowering Dogwood
GY	Ginkgo biloba 'US9' TM	Sky Tower Ginkgo
JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper
MS	Malus x 'Spring Snow'	Spring Snow Crabapple
PF	Prunus aristata 'Formal Form'	Formal Form Brnstonecone Pine
PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry
PJ	Pyrus calleryana 'Jazzam' TM	Jack Callery Pear
QR	Quercus robur	English Oak
UA	Ulmus x 'Accolade'	Accolade Elm
SHRUBS		
AMG	Aronia melanocarpa 'UCONNAMO12' TM	Ground Hug Black Chokeberry
BTC	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry
BDH	Berberis thunbergii 'Conzani' TM	Golden Ruby Japanese Barberry
BDM	Buddleja davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush
BGM	Buxus x 'Green Mountain'	Green Mountain Boxwood
CAB	Cornus alba 'Ballhalo' TM	Ivory Halo Dogwood
COK	Cornus seneca 'Kelsey'	Kelsey's Dwarf Red Twig Dogw
EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush
FOL	Physocarpus opulifolius 'Donna May' TM	Little Devil Ninebark
PMM	Pinus mugo var. pumilo	Dwarf Mugo Pine
PLC	Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel
SSS	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea
SJD	Spiraea japonica 'Double Play Doozie'	Doozie Spirea
SBL	Syringa x 'SMSJBP7' 'Bloomingrang'	Bloomingrang Dark Purple Lilac
VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburn
ORNAMENTAL GRASSES		
CAR	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Gra
HSS	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass
MSG	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass
FAH	Fenestrum alopecuroides 'Hamelin'	Hamelin Fountain Grass
PERENNIALS		
H50	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily
FAL	Ferovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage
SYMBOL CODE BOTANICAL NAME COMMON NAME		
GROUND COVERS		
KB	Poa pratensis	Kentucky Bluegrass

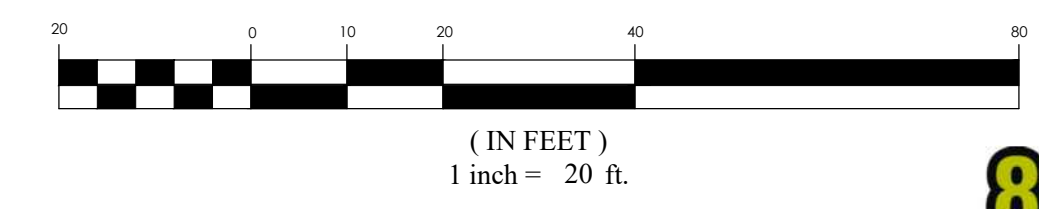
OVERALL PHASES 2-3 REFERENCE NOTES

SYMBOL	DESCRIPTION
①	RIVER ROCK, SIZE 2"
②	PLAYGROUND WOOD MULCH, 14" DEPTH
③	STEEL EDGING, TBD.
④	PICNIC SHELTER, T.B.D.
⑤	PLAYGROUND STRUCTURE, T.B.D.
⑥	BENCH, TBD.

NOTE: REFERENCE SHEET LI.1 FOR DETAILS AND SEPARATE LANDSCAPE TABULATION CHARTS & SCHEDULES FOR PHASES 2&3.



GRAPHIC SCALE



FOR REVIEW ONLY

TALEGA VILLAGE PHASE 3
STAR CITY, IDAHO
LANDSCAPE PLAN

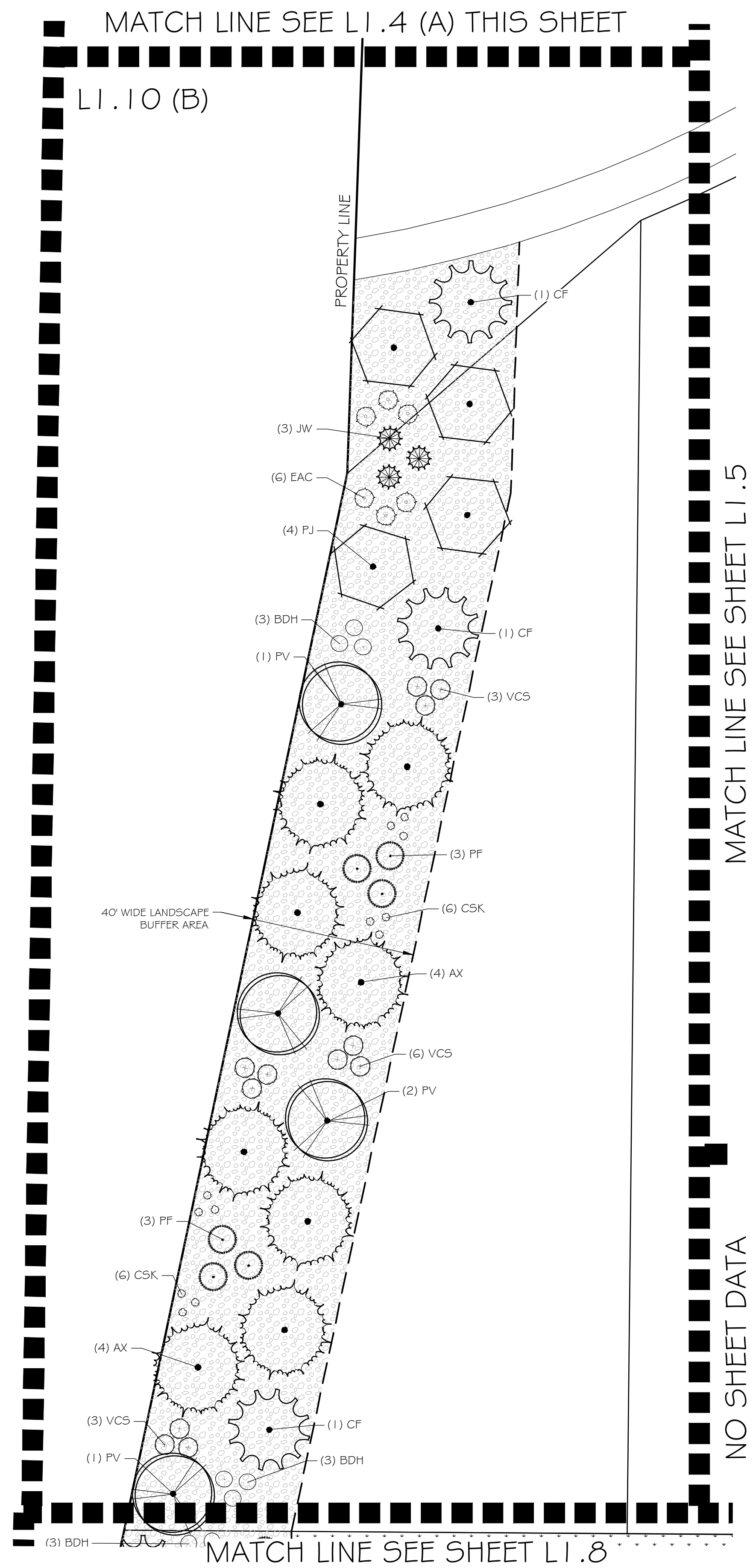
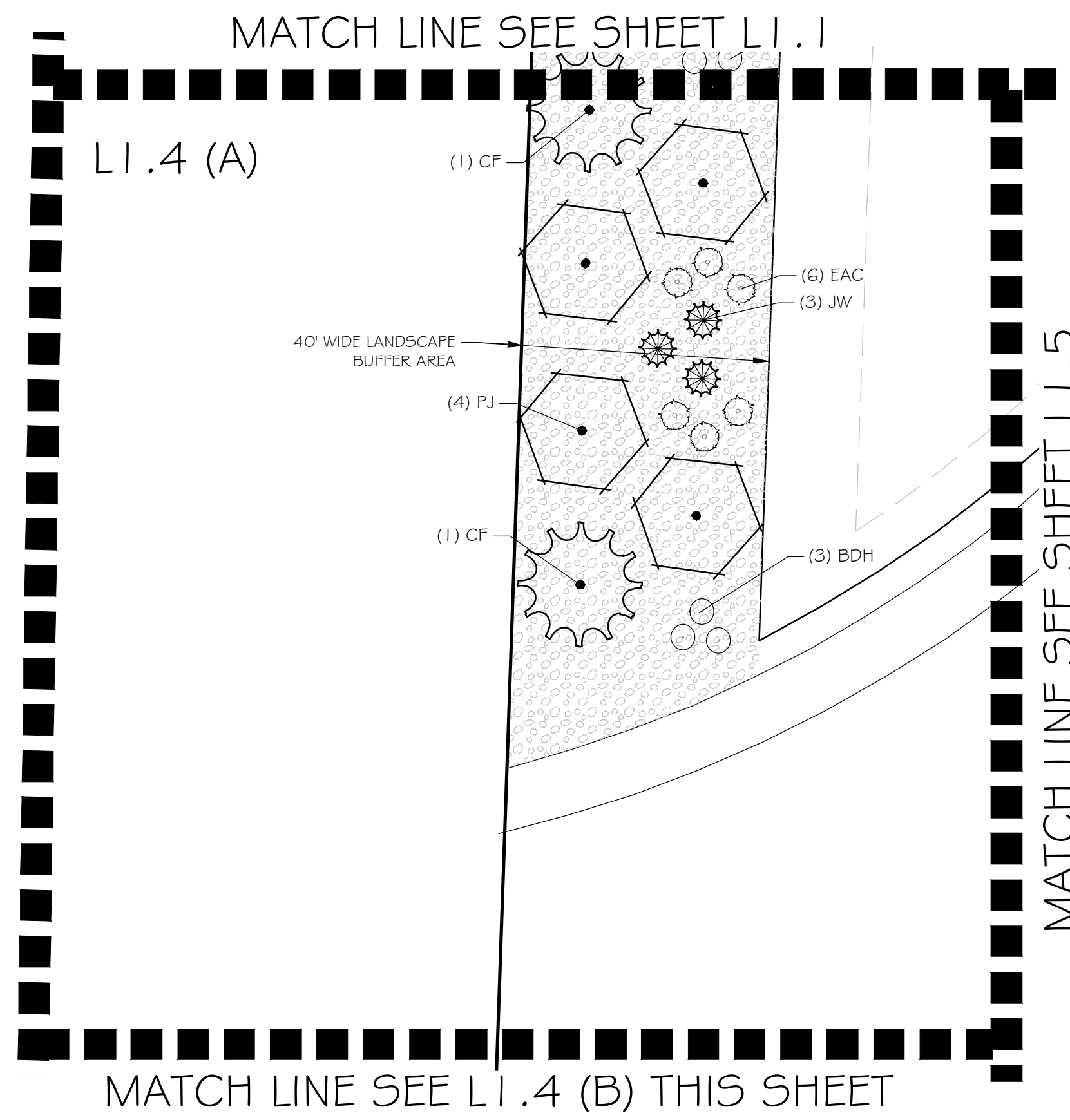
REVISION BLOCK	DATE	DESCRIPTION
1		
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LANDSCAPE PLAN

Scale: 1"=20'
Date: 11/29/2023
Sheet: L1.3

Drawn: BW
Job #: 21-0488

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OVERALL PHASES 2-3 PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME
TREES		
AP	Acer platanoides	Norway Maple
AX	Acer x freemanii	Freeman Maple
SB	Amelanchier x grandiflora	Serviceberry
CC	Cercis canadensis	Eastern Redbud
CF	Cornus florida	Flowering Dogwood
GY	Ginkgo biloba 'JIN9' TM	Sky Tower Ginkgo
JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper
MS	Malus x 'Spring Snow'	Spring Snow Crabapple
PF	Prunus aristata 'Formal Form'	Formal Form Bristlecone Pine
PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry
PJ	Pyrus calleryana 'Jazzam' TM	Jack Callery Pear
QR	Quercus robur	English Oak
UA	Ulmus x 'Accolade'	Accolade Elm
SHRUBS		
AMG	Aronia melanocarpa 'UCONNAMO12' TM	Ground Hug Black Chokeberry
BTC	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry
BG	Berberis thunbergii 'Goruzam' TM	Golden Ruby Japanese Barberry
BDH	Buddleja davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush
BGM	Buxus x 'Green Mountain'	Green Mountain Boxwood
CAB	Cornus alba 'Bailhalo' TM	Ivory Halo Dogwood
CSK	Cornus senceae 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood
EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush
POL	Physocarpus opulifolius 'Donna May' TM	Little Devil Ninebark
PMM	Pinus mugo var. pumilio	Dwarf Mugo Pine
PLC	Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel
S55	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spiraea
SJD	Spiraea japonica 'Double Play Doozie'	Doozie Spiraea
SBL	Syringa x 'SMSJBP77' 'Bloomingang'	Bloomingang Dark Purple Lilac
VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburnum

CODE	BOTANICAL NAME	COMMON NAME
ORNAMENTAL GRASSES		
CAK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass
H55	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass
MSG	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass
FAH	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass

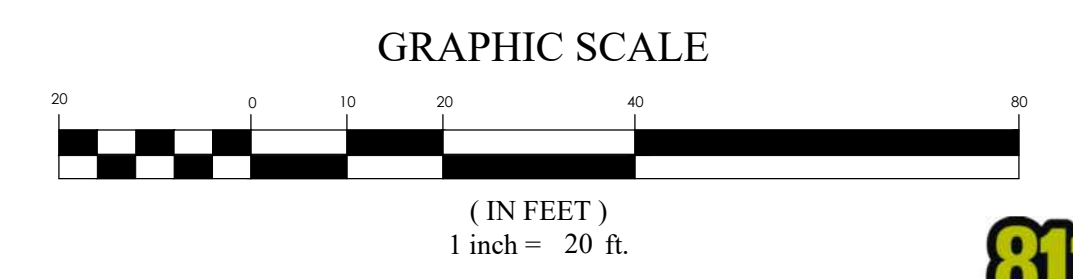
CODE	BOTANICAL NAME	COMMON NAME
PERENNIALS		
H50	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily
FAL	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME
	KB	Poa pratensis	Kentucky Bluegrass

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
	1 RIVER ROCK, SIZE 2"
	2 PLAYGROUND WOOD MULCH, 14" DEPTH
	3 STEEL EDGING, TBD.
	4 PICNIC SHELTER, T.B.D.
	5 PLAYGROUND STRUCTURE, T.B.D.
	6 BENCH, TBD.

NOTE:
REFERENCE SHEET L1.11 FOR DETAILS AND
SEPARATE LANDSCAPE TABULATION CHARTS &
SCHEDULES FOR PHASES 2&3.



FOR REVIEW ONLY

**TALEGA VILLAGE PHASE 3
STAR CITY, IDAHO
LANDSCAPE PLAN**

REVISION BLOCK	DATE	DESCRIPTION
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MATCH LINE SEE SHEET L1.1

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MATCH LINE SEE SHEET L1.4 (B)

MATCH LINE SEE SHEET L1.6

FINAL TREE LOCATIONS SUBJECT TO CHANGE DUE TO DRIVEWAYS & UTILITIES, TYP.

NO SHEET DATA

OVERALL PHASES 2-3 PLANT SCHEDULE

	CODE	BOTANICAL NAME	COMMON NAME
TREES			
	AP	<i>Acer platanoides</i>	Norway Maple
	AX	<i>Acer x freemanii</i>	Freeman Maple
	SB	<i>Amelanchier x grandiflora</i>	Serviceberry
	CC	<i>Cercis canadensis</i>	Eastern Redbud
	CF	<i>Cornus florida</i>	Flowering Dogwood
	GY	<i>Ginkgo biloba</i> 'JN9' TM	Sky Tower Ginkgo
	JW	<i>Juniperus scopulorum</i> 'Wichita Blue'	Wichita Blue Juniper
	MS	<i>Malus x 'Spring Snow'</i>	Spring Snow Crabapple
	PF	<i>Pinus aristata</i> 'Formal Form'	Formal Form Bristlecone Pine
	PV	<i>Prunus virginiana</i> 'Canada Red'	Canada Red Chokecherry
	PJ	<i>Pyrus calleryana</i> 'Jazzam' TM	Jack Callery Pear
	QR	<i>Quercus robur</i>	English Oak
	UA	<i>Ulmus x 'Accolade'</i>	Accolade Elm
SHRUBS			
	AMG	<i>Aronia melanocarpa</i> 'UCCONNAMO12' TM	Ground Hug Black Chokeberry
	BTC	<i>Berberis thunbergii</i> 'Concorde'	Concorde Japanese Barberry
	BG	<i>Berberis thunbergii</i> 'Goruzam' TM	Golden Ruby Japanese Barberry
	BDH	<i>Buddleja davidii</i> 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush
	BGM	<i>Buxus x 'Green Mountain'</i>	Green Mountain Boxwood
	CAB	<i>Cornus alba</i> 'Ballhalo' TM	Ivory Halo Dogwood
	CSK	<i>Cornus sericea</i> 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood
	EAC	<i>Euonymus alatus</i> 'Grove Compactus'	Grove Compact Burning Bush
	POL	<i>Physocarpus opulifolius</i> 'Donna May' TM	Little Devil Ninebark
	PMM	<i>Pinus mugo</i> var. <i>pumilo</i>	Dwarf Mugo Pine
	PLC	<i>Prunus laurocerasus</i> 'Chestnut Hill'	Chestnut Hill English Laurel
	SSS	<i>Sorbaria sorbifolia</i> 'Sem'	Sem Ash Leaf Spirea
	SJD	<i>Spiraea japonica</i> 'Double Play Doozie'	Doozie Spirea
	SBL	<i>Syringa x 'SMSJBP7'</i> 'Bloomerang'	Bloomerang Dark Purple Lilac
	VCS	<i>Viburnum carlesii</i> 'SMVCB' TM	Spice Baby Koreanspice Viburnum
ORNAMENTAL GRASSES			
	CAK	<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	Karl Foerster Feather Reed Grass
	HSS	<i>Helictotrichon sempervirens</i> 'Sapphire'	Sapphire Blue Oat Grass
	MSG	<i>Miscanthus sinensis</i> 'Gold Bar'	Gold Bar Eulalia Grass
	PAH	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass
PERENNIALS			
	H5O	<i>Hemerocallis x 'Stella de Oro'</i>	Stella de Oro Daylily
	PAL	<i>Perovskia atriplicifolia</i> 'Little Spire'	Little Spire Russian Sage
SYMBOL			
	CODE	BOTANICAL NAME	COMMON NAME
GROUND COVERS			
	KB	<i>Poa pratensis</i>	Kentucky Bluegrass

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
①	RIVER ROCK, SIZE 2"
②	PLAYGROUND WOOD MULCH, 1.4' DEPTH
③	STEEL EDGING, TBD.
④	PICNIC SHELTER, T.B.D.
⑤	PLAYGROUND STRUCTURE, T.B.D.
⑥	BENCH, TBD.

NOTE: REFERENCE SHEET L1.1 FOR DETAILS AND SEPARATE LANDSCAPE TABULATION CHARTS & SCHEDULES FOR PHASES 2&3.



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



FOR REVIEW ONLY

TALEGA VILLAGE PHASE 3
STAR CITY, IDAHO
LANDSCAPE PLAN

REVISION BLOCK	DATE	DESCRIPTION
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LANDSCAPE PLAN

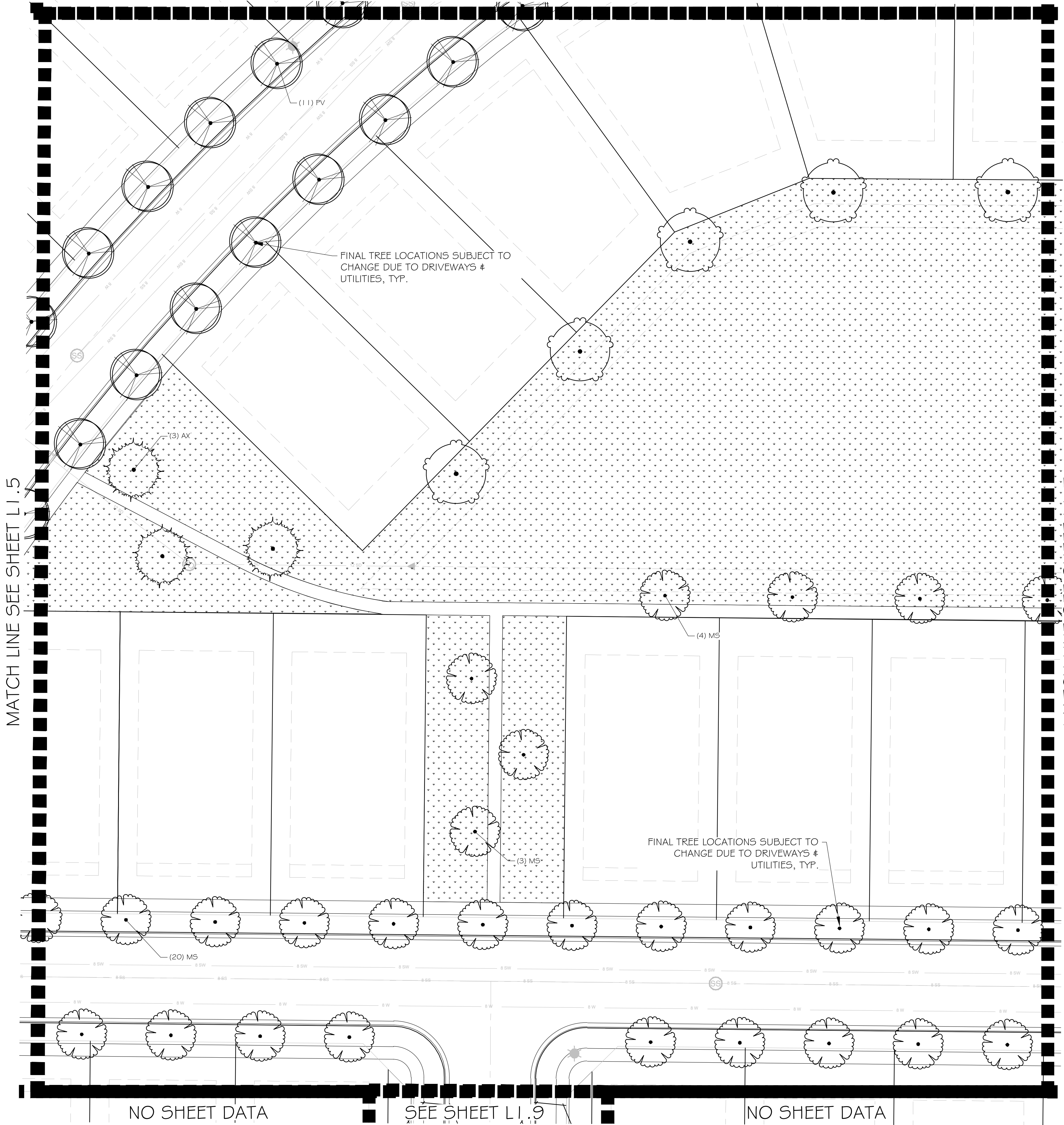
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Job #: 21-0488

L1.5

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MATCH LINE SEE SHEET L1.2



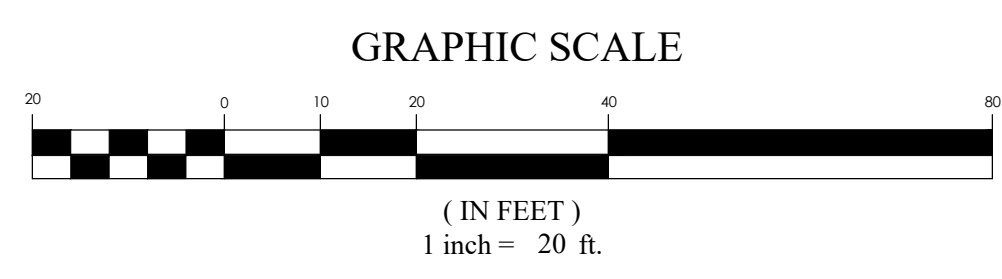
OVERALL PHASES 2-3 PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME
	AP	Acer platanoides	Norway Maple
	AX	Acer x freemanii	Freeman Maple
	SB	Amelanchier x grandiflora	Serviceberry
	CC	Cercis canadensis	Eastern Redbud
	CF	Cornus florida	Flowering Dogwood
	GY	Ginkgo biloba 'JN9' TM	Sky Tower Ginkgo
	JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper
	MS	Malus x 'Spring Snow'	Spring Snow Crabapple
	FF	Pinus aristata 'Formal Form'	Formal Form Brastedcone Pine
	PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry
	PJ	Pyrus calleryana 'Jazzani' TM	Jack Callery Pear
	QR	Quercus robur	English Oak
	UA	Ulmus x 'Accolade'	Accolade Elm
SHRUBS			
	AMG	Aronia melanocarpa 'UCONNAMO12' TM	Ground Hug Black Chokeberry
	BTC	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry
	BG	Berberis thunbergii 'Goruzami' TM	Golden Ruby Japanese Barberry
	BDH	Buddleia davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush
	BGM	Buxus x 'Green Mountain'	Green Mountain Boxwood
	CAB	Cornus alba 'Bailhala' TM	Ivory Halo Dogwood
	C5K	Cornus sericea 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood
	EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush
	POL	Physocarpus opulifolius 'Donna May' TM	Little Devil Ninebark
	PMM	Pinus mugo var. pumilio	Dwarf Mugo Pine
	PLC	Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel
	SSS	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea
	SJD	Spiraea japonica 'Double Play Doozie'	Doozie Spirea
	SBL	Synnoga x 'SM5JBPT' 'Bloomerang'	Bloomerang Dark Purple Lilac
	VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburnum
ORNAMENTAL GRASSES			
	CAK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass
	HSS	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass
	MSG	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass
	PAH	Pennisetum alopecuroides 'Hamelin'	Hamelin Fountain Grass
PERENNIALS			
	H5O	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily
	PAL	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage
SYMBOL			
	CODE	BOTANICAL NAME	COMMON NAME
GROUND COVERS			
	KB	Poa pratensis	Kentucky Bluegrass

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
①	RIVER ROCK, SIZE 2"
②	PLAYGROUND WOOD MULCH, 1.4" DEPTH
③	STEEL EDGING, TBD.
④	PICNIC SHELTER, T.B.D.
⑤	PLAYGROUND STRUCTURE, T.B.D.
⑥	BENCH, TBD.

NOTE: REFERENCE SHEET L1.1 FOR DETAILS AND SEPARATE LANDSCAPE TABULATION CHARTS & SCHEDULES FOR PHASES 2&3.



FOR REVIEW ONLY

TALEGA VILLAGE PHASE 3
STAR CITY, IDAHO
LANDSCAPE PLAN

REVISION BLOCK	DATE	DESCRIPTION
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LANDSCAPE PLAN

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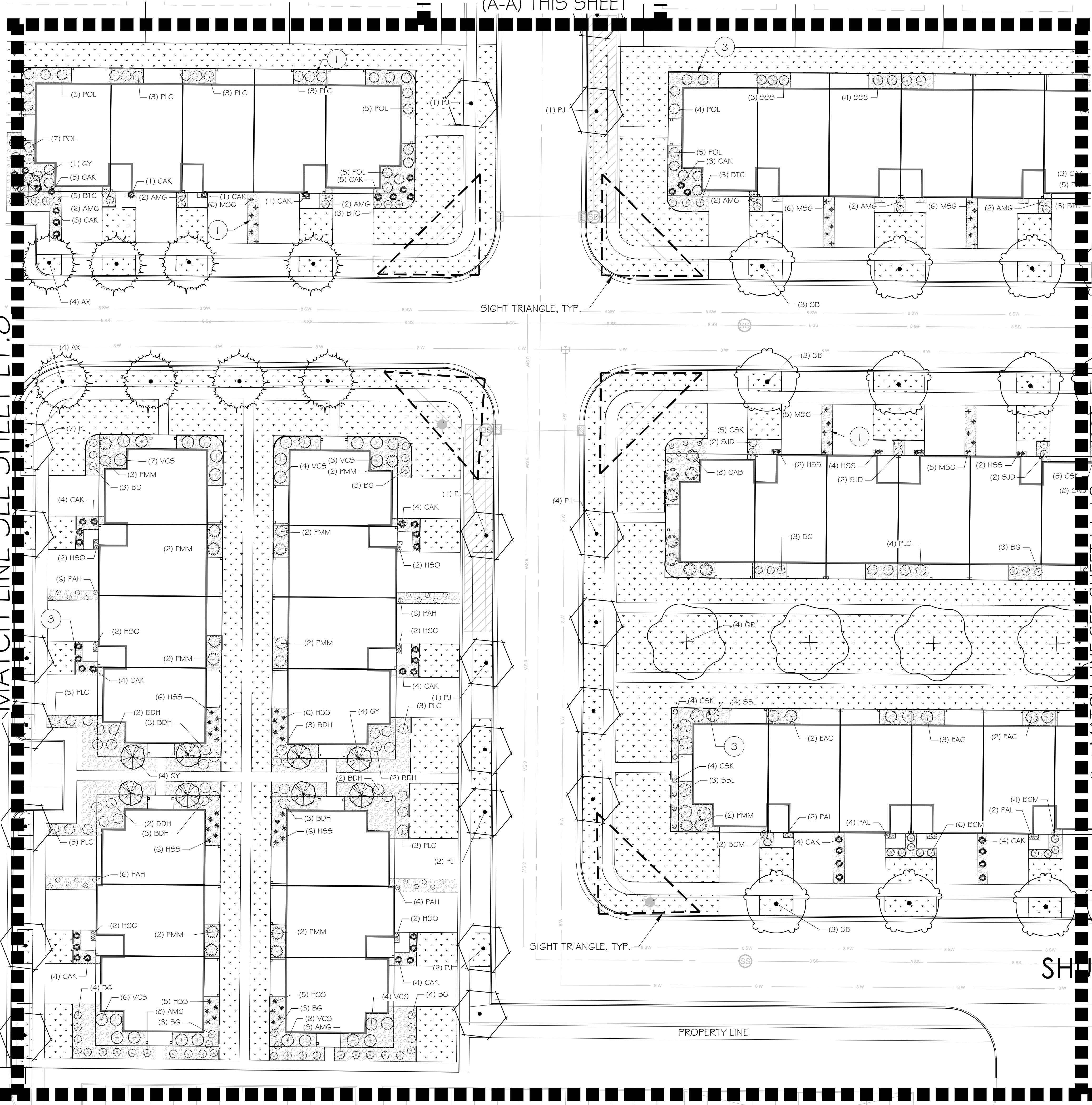
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OVERALL PHASES 2-3 PLANT SCHEDULE

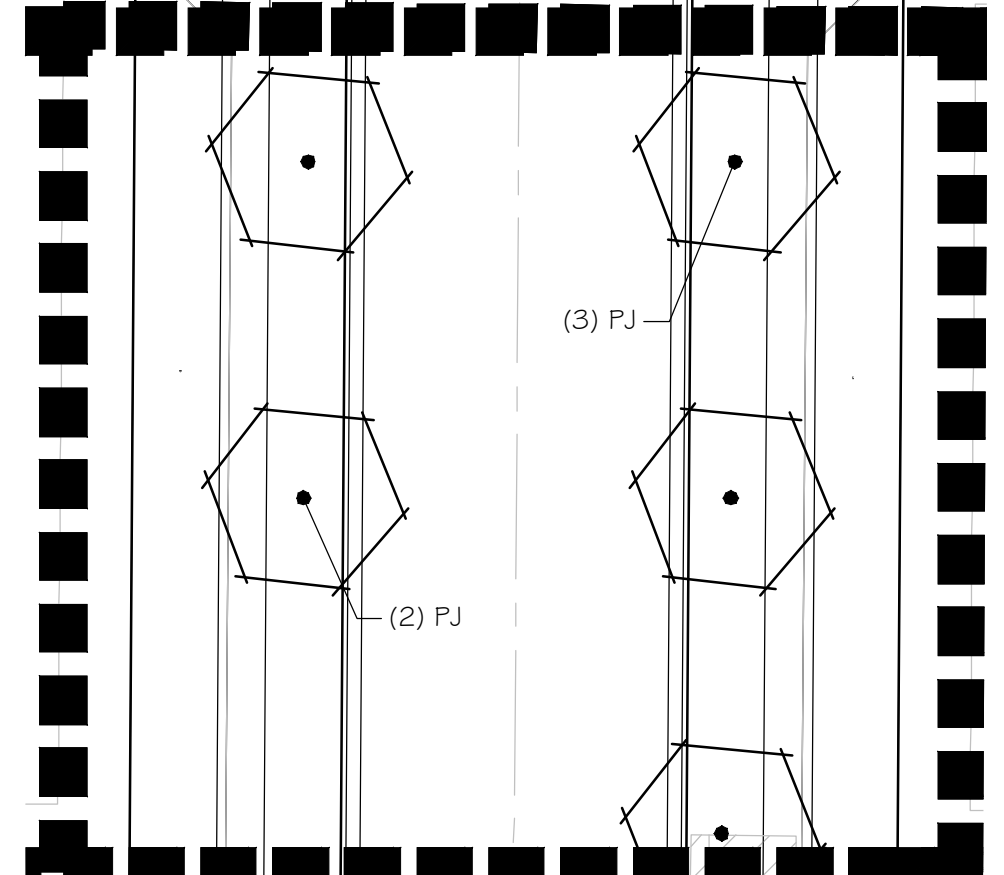
CODE	BOTANICAL NAME	COMMON NAME
TREES		
AP	Acer platanoides	Norway Maple
AX	Acer x freemanii	Freeman Maple
SB	Amelanchier x grandiflora	Serviceberry
CC	Cercis canadensis	Eastern Redbud
CF	Cornus florida	Flowering Dogwood
GY	Ginkgo biloba 'JIN9' TM	Sky Tower Ginkgo
JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper
MS	Malus x 'Spring Snow'	Spring Snow Crabapple
PF	Pinus aristata 'Formal Form'	Formal Form Bristlecone Pine
PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry
PJ	Pyrus calleryana 'Jazzam' TM	Jack Callery Pear
QR	Quercus robur	English Oak
UA	Ulmus x 'Accolade'	Accolade Elm
SHRUBS		
AMG	Aronia melanocarpa 'UCONNAMO12' TM	Ground Hug Black Chokeberry
BTC	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry
BG	Berberis thunbergii 'Goruzam' TM	Golden Ruby Japanese Barberry
BDH	Buddleia davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush
BGM	Buxus x 'Green Mountain'	Green Mountain Boxwood
CAB	Cornus alba 'Bailhalo' TM	Ivory Halo Dogwood
CSK	Cornus sericea 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood
EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush
POL	Physocarpus opulifolius 'Donna May' TM	Little Devil Ninebark
PMM	Pinus mugo var. pumilo	Dwarf Mugo Pine
PLC	Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel
SSS	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea
SJD	Spiraea japonica 'Double Play Doozie'	Doozie Spirea
SBL	Syringa x 'SM5JBP7' 'Bloomingrang'	Bloomingrang Dark Purple Lilac
VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburnum
ORNAMENTAL GRASSES		
CAK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass
HSS	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass
M5G	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass
PAH	Pennisetum alopecuroides 'Hamein'	Hamein Fountain Grass
PERENNIALS		
H5O	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily
PAL	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage
SYMBOL		
CODE	BOTANICAL NAME	COMMON NAME
GROUND COVERS		
KB	Poa pratensis	Kentucky Bluegrass

OVERALL PHASES 2-3 REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
①	RIVER ROCK, SIZE 2"
②	PLAYGROUND WOOD MULCH, 14" DEPTH
③	STEEL EDGING, TBD.
④	PICNIC SHELTER, T.B.D.
⑤	PLAYGROUND STRUCTURE, T.B.D.
⑥	BENCH, TBD.

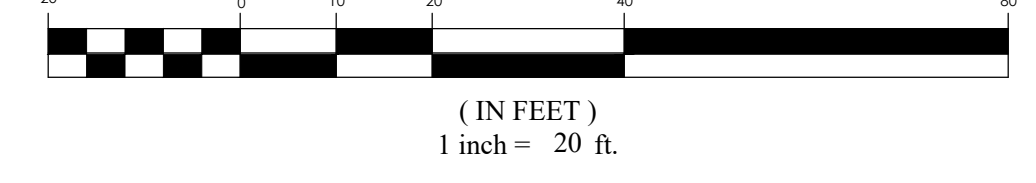
NOTE: REFERENCE SHEET LI.11 FOR DETAILS AND SEPARATE LANDSCAPE TABULATION CHARTS & SCHEDULES FOR PHASES 2&3.

MATCH LINE SEE SHEET LI.6



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GRAPHIC SCALE



FOR REVIEW ONLY

**TALEGA VILLAGE PHASE 2
STAR CITY, IDAHO
LANDSCAPE PLAN**

REVISION BLOCK	DATE	DESCRIPTION
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LANDSCAPE PLAN

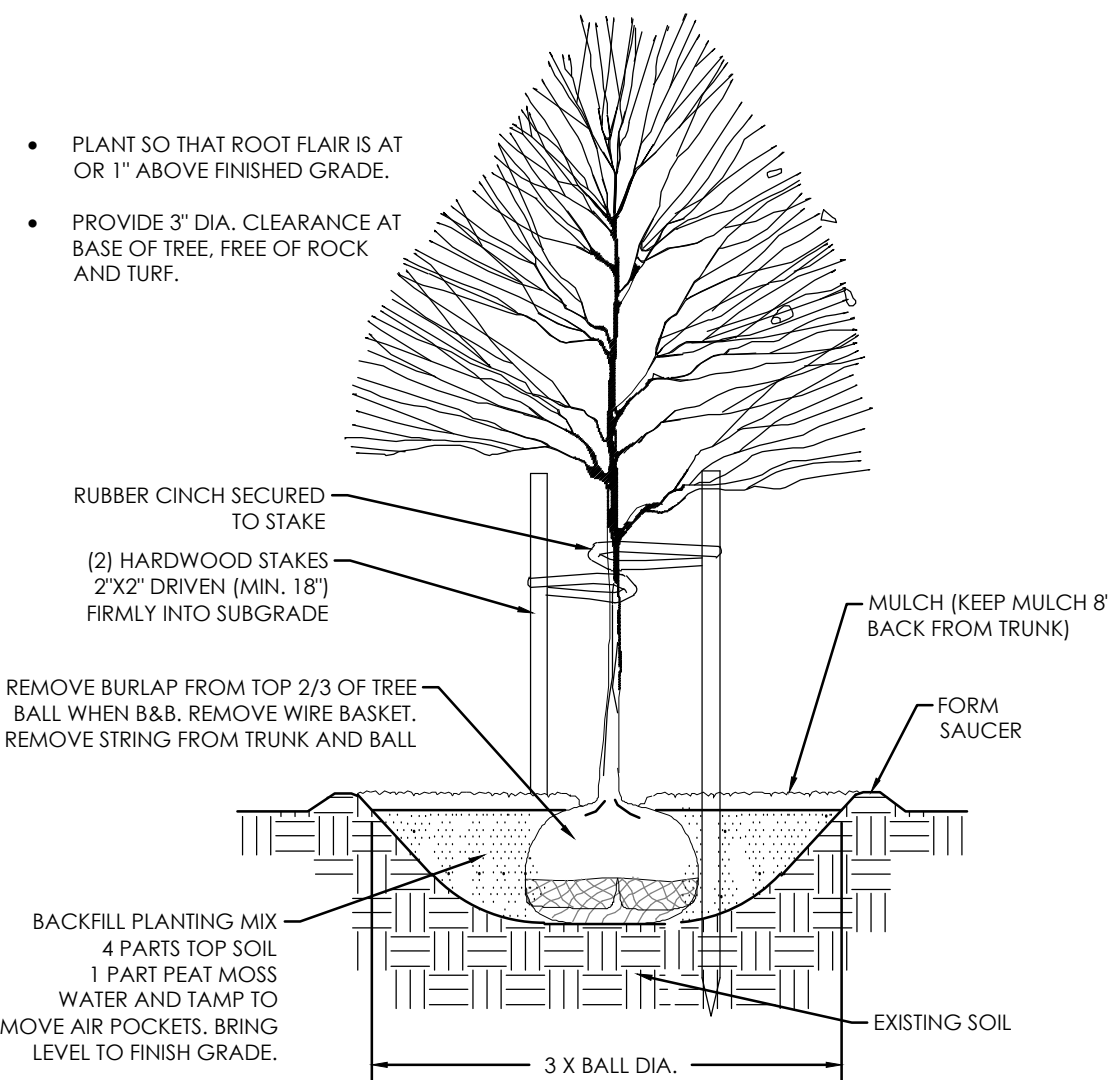
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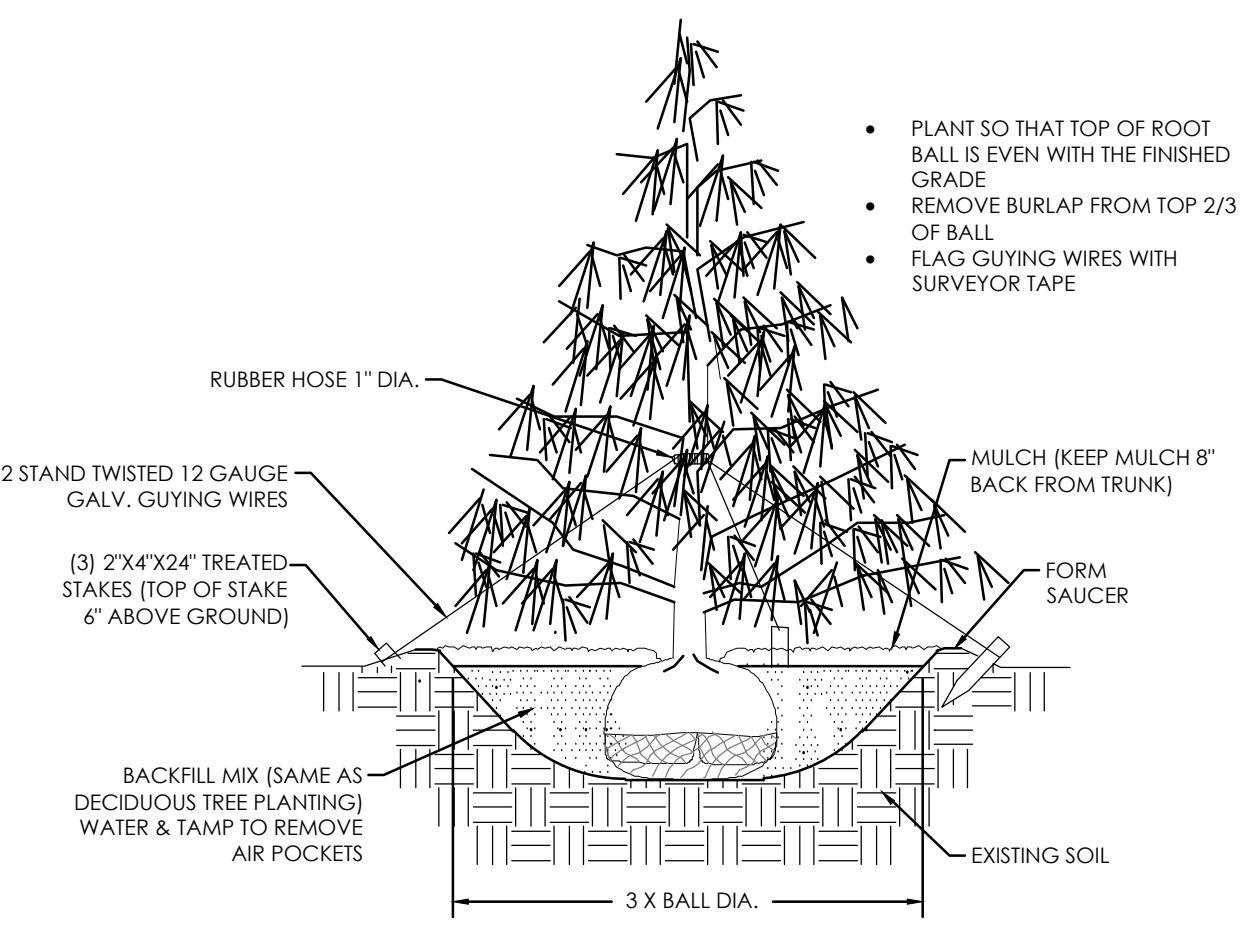
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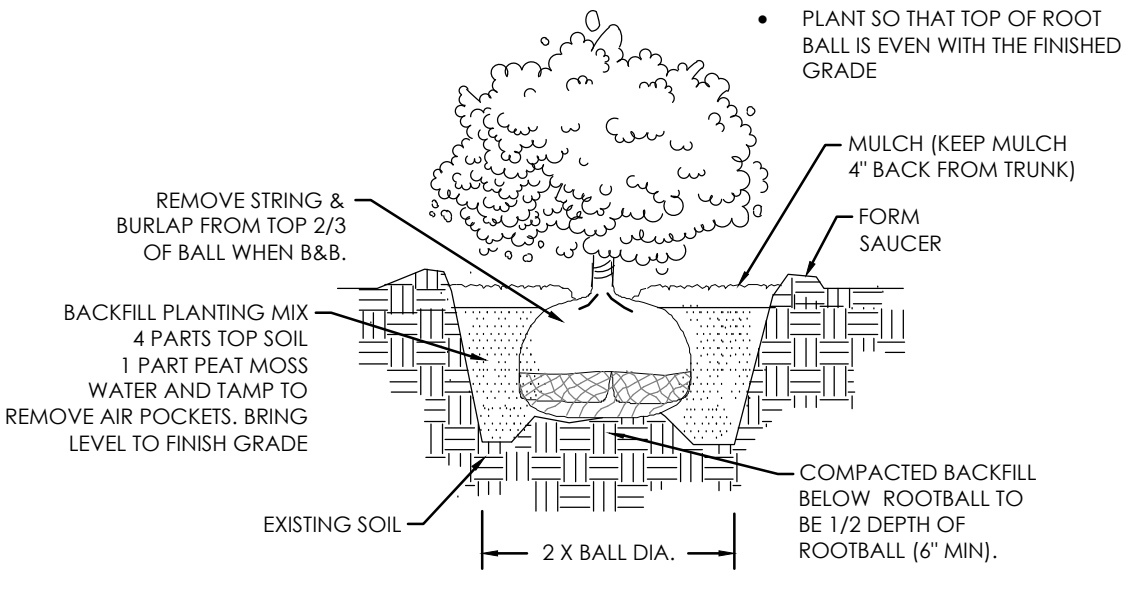
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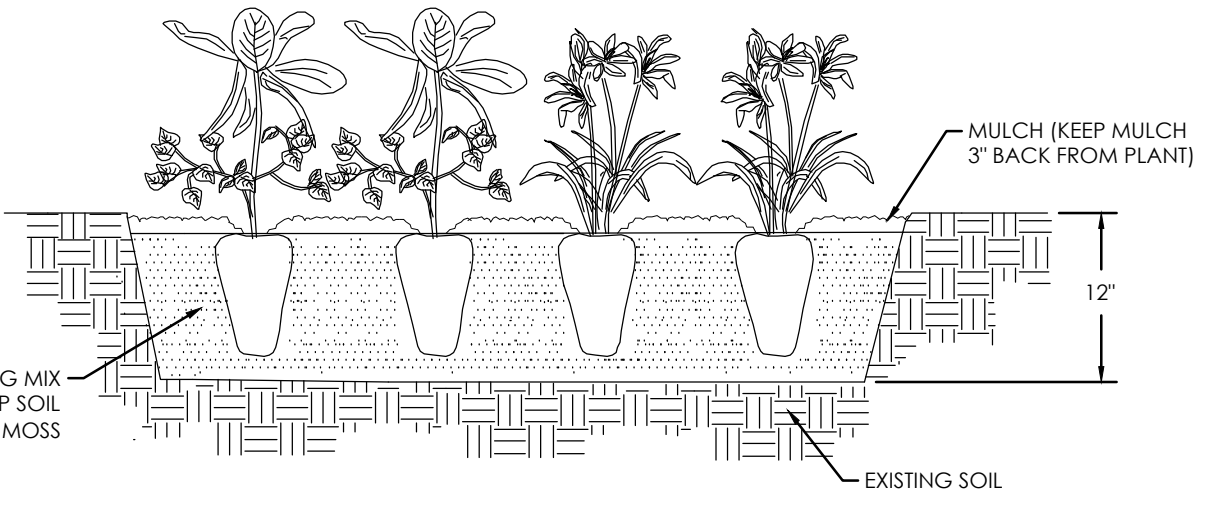
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NOT TO SCALE



B EVERGREEN PLANTING & GUYING
NOT TO SCALE



C SHRUB PLANTING
NOT TO SCALE



D PERENNIAL PLANTING
NOT TO SCALE

PLANT SCHEDULE TOWNHOMES PH.2

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
TREES				
AP	Acer platanoides	Norway Maple	2' Cal.	14
AX	Acer x freemanii	Freeman Maple	2' Cal.	43
SB	Amelanchier x grandiflora	Serviceberry	2' Cal.	35
CF	Cornus florida	Flowering Dogwood	2' Cal.	4
GY	Ginkgo biloba 'JN9' TM	Sky Tower Ginkgo	2' Cal.	20
JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper	6' Ht.	6
PF	Pinus aristata 'Formal Form'	Formal Form Bristlecone Pine	6' Ht.	9
PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry	2' Cal.	4
PJ	Pyrus calleryana 'Jazzam' TM	Jack Callery Pear	2' Cal.	38
QR	Quercus robur	English Oak	2' Cal.	7
SHRUBS				
AMG	Aronia melanocarpa 'UCONNAMO I 2' TM	Ground Hug Black Chokeberry	2 gal.	76
BTC	Berbers thunbergii 'Concorde'	Concorde Japanese Barberry	5 gal.	34
BG	Berbers thunbergii 'Goruzam' TM	Golden Ruby Japanese Barberry	5 gal.	85
BDH	Buddleja davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush	2 gal.	54
BGM	Buxus x 'Green Mountain'	Green Mountain Boxwood	5 gal.	22
CAB	Cornus alba 'Bailhalo' TM	Ivory Halo Dogwood	5 gal.	48
CSK	Cornus sericea 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood	2 gal.	84
EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush	5 gal.	30
FOL	Physocarpus opulifolius 'Dorina May' TM	Little Devil Ninebark	5 gal.	121
PMM	Pinus mugo var. pumilio	Dwarf Mugo Pine	5 gal.	40
PLC	Prunus laurocerasus 'Chestnut Hill'	Chestnut Hill English Laurel	5 gal.	61
SSS	Sorbaria sorbifolia 'Sem'	Sem Ash Leaf Spirea	5 gal.	61
SJD	Spiraea japonica 'Double Play Doozie'	Doozie Spirea	2 gal.	33
SBL	Syringa x 'SMSJBPF7' 'Bloomerang'	Bloomerang Dark Purple Lilac	5 gal.	47
VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburnum	5 gal.	67

ORNAMENTAL GRASSES

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
CAK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	133
HSS	Helictotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass	1 gal.	86
MSG	Miscanthus sinensis 'Gold Bar'	Gold Bar Eulalia Grass	1 gal.	72
PAH	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	1 gal.	72

PERENNIALS

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
H50	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 gal.	36
PAL	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	1 gal.	26

SYMBOL

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
(1)	KB	Poa pratensis	Kentucky Bluegrass	sod	100,104 sf

PLANT SCHEDULE SINGLE FAMILY PH.3

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
TREES				
AP	Acer platanoides	Norway Maple	2' Cal.	42
AX	Acer x freemanii	Freeman Maple	2' Cal.	22
SB	Amelanchier x grandiflora	Serviceberry	2' Cal.	10
CC	Cercis canadensis	Eastern Redbud	2' Cal.	46
CF	Cornus florida	Flowering Dogwood	2' Cal.	9
GY	Ginkgo biloba 'JN9' TM	Sky Tower Ginkgo	2' Cal.	15
JW	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper	6' Ht.	12
MS	Malus x 'Spring Snow'	Spring Snow Crabapple	2' Cal.	51
PF	Pinus aristata 'Formal Form'	Formal Form Bristlecone Pine	6' Ht.	12
PV	Prunus virginiana 'Canada Red'	Canada Red Chokecherry	2' Cal.	53
PJ	Pyrus calleryana 'Jazzam' TM	Jack Callery Pear	2' Cal.	21
UA	Ulmus x 'Accolade'	Accolade Elm	2' Cal.	52
SHRUBS				
BDH	Buddleja davidii 'Buzz Hot Raspberry'	Hot Raspberry Butterfly Bush	2 gal.	24
CAB	Cornus alba 'Bailhalo' TM	Ivory Halo Dogwood	5 gal.	44
CSK	Cornus sericea 'Kelsey'	Kelsey's Dwarf Red Twig Dogwood	2 gal.	24
EAC	Euonymus alatus 'Grove Compactus'	Grove Compact Burning Bush	5 gal.	24
VCS	Viburnum carlesii 'SMVCB' TM	Spice Baby Koreanspice Viburnum	5 gal.	38

SYMBOL

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
(1)	KB	Poa pratensis	Kentucky Bluegrass	sod	137,439 sf

REFERENCE NOTES TOWNHOMES PH.2

SYMBOL	DESCRIPTION	QTY	DETAIL
(1)	RIVER ROCK, SIZE 2"	51,153 sf	
(2)	PLAYGROUND WOOD MULCH, 1 1/4" DEPTH	1,385 sf	
(3)	STEEL EDGING, TBD.	4,041 lf	
(4)	PICNIC SHELTER, T.B.D.	1	
(5)	PLAYGROUND STRUCTURE, T.B.D.	1	
(6)	BENCH, TBD.	4	

REFERENCE NOTES- SINGLE FAMILY PH.3

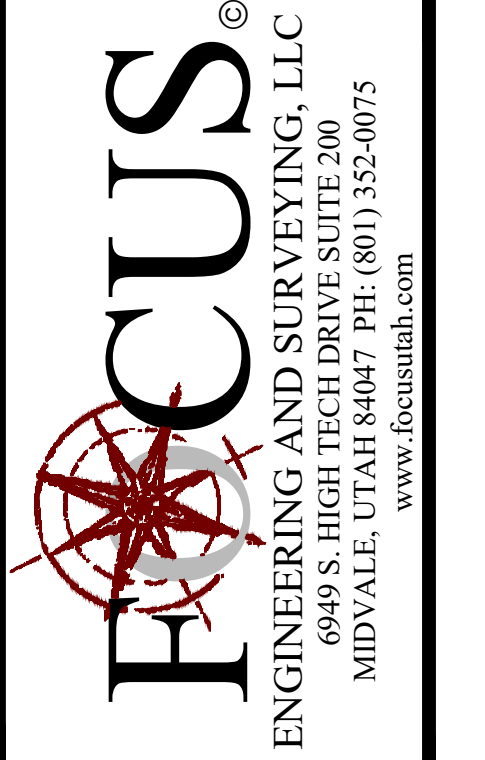
SYMBOL	DESCRIPTION	QTY	DETAIL
(1)	RIVER ROCK, SIZE 2"	42,621 sf	
(3)	STEEL EDGING, TBD.	1,175 lf	

Star Idaho Landscape City Requirements - Townhomes Phase 2

Mandatory Provisions				
Existing Site Trees	Existing trees identified by species and size			
Site Trees	1 Tree per 4,000 sf of overall landscape area			
Perimeter Landscape Buffer Strip	When a commercial or industrial use abuts a residential use, a 10 foot wide by 6 foot high landscaped buffer i.e. plants, berms, fences, or walls			
Street Trees	A minimum of one street tree shall be planted for every 35 linear feet of street frontage			
Parking Lot Trees	A terminal island for a single row of parking spaces shall be landscaped with at least one tree and shrubs, ground cover, or grass. A terminal island for a double row of parking spaces shall contain not less than two trees and shrubs, ground cover, or grass.			
Dumpster Screen	To conceal outdoor storage areas or trash receptacles when adjacent to or in view from a residential activity or public street right of way, a three foot wide by six foot high landscaped buffer is required.			
Internal Parking Landscape	Any lot with 51 or more parking spaces shall provide a minimum of 8% interior landscaping of the total overall lot area.			
Site Trees	Required	Provided	Comments	
Overall Landscape Area: 153,094 sf (3.5 ac.)	153,094 sf / 4,000 = 38.27	39	See parking lot tree quantities below.	
Use-able Landscape Area:	63,326 sf open space			
Parking Lot Trees	Required	Provided	Comments	
One canopy tree placed in landscape islands at the terminus of each parking row. A terminal island for a double row of parking spaces shall contain not less than two trees.	N/A	N/A		
Landscape Internal Parking	Required	Provided	Comments	
6 ft height masonry wall provided on South property line	N/A	N/A	Not applicable. No residential adj. exists	
Street Trees	Required	Provided	Comments	
All public & private streets to receive one street tree for every 35' linear feet of frontage	102	102		
Buffer Area	Required	Provided	Comments	
40' wide landscape buffer on western property line. Per each 100 linear feet of frontage provide 4 shade trees, 3 evergreen trees, 2 ornamental trees, and 12 shrubs	Yes	Yes	16 Canopy Trees, 8 Ornamental Trees, 15 Evergreen Trees, and 43 Shrubs	
Internal Parking Landscape	Required	Provided	Comments	
	N/A	N/A	Single family residential, no parking lot.	

Star Idaho Landscape City Requirements - Single-Family Phase 3

Mandatory Provisions				
Existing Site Trees	Existing trees identified by species and size			
Site Trees	1 Tree per 4,000 sf of overall landscape area			
Perimeter Landscape Buffer Strip	When a commercial or industrial use abuts a residential use, a 10 foot wide by 6 foot high landscaped buffer i.e. plants, berms, fences, or walls			
Street Trees	A minimum of one street tree shall be planted for every 35 linear feet of street frontage			
Parking Lot Trees	A terminal island for a single row of parking spaces shall be landscaped with at least one tree and shrubs, ground cover, or grass. A terminal island for a double row of parking spaces shall contain not less than two trees and shrubs, ground cover, or grass.			
Dumpster Screen	To conceal outdoor storage areas or trash receptacles when adjacent to or in view from a residential activity or public street right of way, a three foot wide by six foot high landscaped buffer is required.			
Internal Parking Landscape	Any lot with 51 or more parking spaces shall provide a minimum of 8% interior landscaping of the total overall lot area.			
Site Trees	Required	Provided	Comments	
Total Landscape Area: 152,910 sf (3.51 ac.)	152,910 sf / 4,000 = 38.23	39	See parking lot tree quantities below.	
Use-able Landscape Area:	96,240 sf open space			
Parking Lot Trees	Required	Provided	Comments	
One canopy tree placed in landscape islands at the terminus of each parking row. A terminal island for a double row of parking spaces shall contain not less than two trees.	N/A	N/A		
Landscape Internal Parking	Required	Provided	Comments	
6 ft height masonry wall provided on South property line	N/A	N/A	Not applicable. No residential adj. exists	
Street Trees	Required	Provided	Comments	
All public & private streets to receive one street tree for every 35' linear feet of frontage	236	236		
Buffer Area	Required	Provided	Comments	
40' wide landscape buffer on western property line. Per each 100 linear feet of frontage provide 4 shade trees, 3 evergreen trees, 2 ornamental trees, and 12 shrubs	Yes	Yes	32 Canopy Trees, 17 Ornamental Trees, 24 Evergreen Trees, and 98 Shrubs	
Internal Parking Landscape	Required	Provided	Comments	
Parking Lot Landscape: None Provided	N/A	N/A	Single family residential, no parking lot.	



FOR REVIEW ONLY

TALEGA VILLAGE PHASE 2 & 3
STAR CITY, IDAHO
LANDSCAPE DETAILS

REVISION BLOCK	
#	DATE
1	DATE
2	DATE
3	DATE
4	DATE
5	DATE
6	DATE

LANDSCAPE DETAILS

Scale: _____ Drawn: BW
Date: 11/29/2023 Job #: 21-0488
Sheet: L1.11



Z:\2021\10488 Talega Village Design\11-29-23\811.dwg Users\aparrinments CUP\11.0 - 11.1 LANDSCAPE PLAN.TOWNSHIP

SINGLE FAMILY ELEVATIONS



TOWNHOME ELEVATIONS



APARTMENT ELEVATIONS



TALEGA VILLAGE home plan elevations exhibit

STAR CITY, ADA COUNTY
5/17/2023
21-0488

Note: This plan is for illustrative purposes. Boundaries may be based on information obtained through public data and we can't confirm it's accuracy. It is recommended that a boundary survey be performed to determine actual boundary size and dimensions as well as other potential boundary conflicts.



Project/File: Talega Village/ SPP22-0006/ AZ-22-11/ RZ-22-03/ DA-22-12/ CU-22-05/ PP-22-17/ PR-22-08

This is an annexation, a rezone, a conditional use permit, a private street and a preliminary plat application to allow for the development of a 181-lot mixed use subdivision on 66-acres. The site is located at the northwest corner of SH-44 and SH-16.

Lead Agency: City of Star

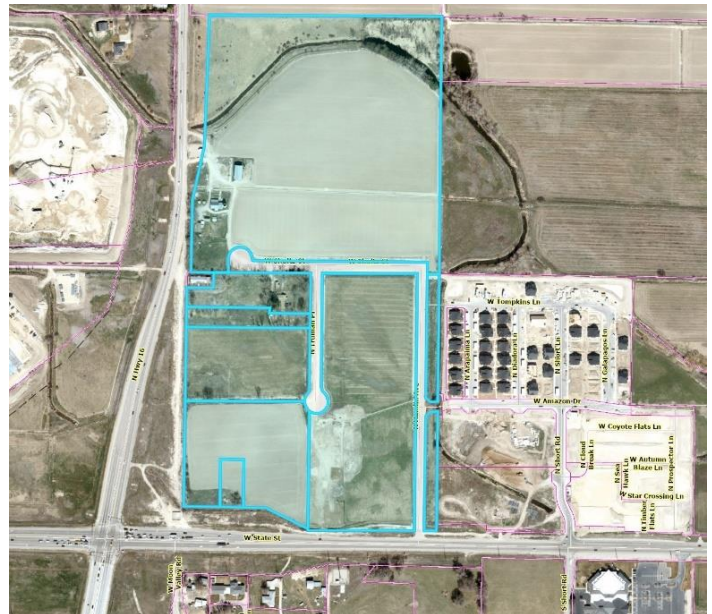
Site address: 58 N. Truman Place

Staff Approval: September 26, 2023

Applicant: Derk Pardoe
3454 Stone Mountain Lane
Sandy, UT 84092

Representative: Chad Garner
Focus Engineering & Surveying
6949 High Tech Drive Suite 200
Midvale, UT 84047

Staff Contact: Dawn Battles, Senior Planner
Phone: 387-6218
E-mail: dbattles@achdidaho.org



A. Findings of Fact

- Description of Application:** The applicant is requesting approval of an annexation with rezone from RUT (Rural-Urban Transition), R1 (Estate Residential) and C-2 (Commercial) to R-10-DA (Residential), a conditional use permit, a private street and a preliminary plat application to allow for the development of a 181 lot mixed-use development consisting of 1 commercial lot, 1 multi-family lot, 65 single family residential lots, 95 townhome lots, 5 common lots and 14 open space lots which will include 340 apartment units on 66-acres. The application includes a development agreement with the City of Star. The applicant's rezone proposal is consistent with the City of Star's future land use map which designates this area as commercial, high density residential, neighborhood residential and compact residential.

2. Description of Adjacent Surrounding Area:

Direction	Land Use	Zoning
North	Rural-Urban Transition (Ada County)	RUT
South	Rural-Urban Transition (Ada County), Residential, Commercial	RUT, R-1, C-1
East	Rural-Urban Transition (Ada County), Residential, Commercial	RUT, R-5-DA, C-2
West	Rural-Urban Transition (Ada County), Mixed Use, Light Industrial	RUT, MU, LI-DA

3. **Site History:** ACHD staff previously reviewed a portion of this site for an annexation with rezone and a comprehensive plan map amendment (STAR18-0004) in January 2018. The requirements of this staff report have been updated to reflect the current proposed site plan.
4. **Adjacent Development:** The following developments are pending or underway in the vicinity of the site:
 - Everton, a 241 lot mixed use development consisting of 212 single-family residential lots, 11 commercial lots and 18 common lots on 77-acres is located southeast of the site at the northeast corner of Palmer Lane and SH-44 and was approved by ACHD in August 2023.
 - Cascade Springs, a 470 lot residential subdivision consisting of 400 residential lots and 70 common lots is located directly adjacent to the north of the site and was approved by ACHD in March 2023.
 - Junction Crossing 2, a 9 lot mixed-use subdivision consisting of 3 mixed use lots, 3 commercial lots and 3 buildable lots which will comprise of 32 multi-family units, 80,000 square feet of commercial/office, an amphitheater, common areas and a park is located adjacent to the east of the site at the northeast corner of SH-44 and Hamlin Avenue and was approved in October 2022.
 - Junction Crossing, a 4 lot commercial subdivision consisting of 2 commercial lots and 2 common lots is located east of the site at the northeast corner of SH-44 and Short Road and was approved by ACHD in January 2022.
 - Fountain Park, a 278 residential lot subdivision consisting of 251 residential lots and 27 common lots on 60-acres is located directly adjacent to the east and was approved in August 2021.
5. **Transit:** Transit services are not available to serve this site.
6. **Pathway Crossings:** United States Access Board R304.5.1.2 Shared Use Paths. In shared use paths, the width of curb ramps runs and blended transitions shall be equal to the width of the shared use path.

AASHTO's Guidelines for the Development of Bicycle Facilities 5.3.5 Other Intersection Treatments: The opening of a shared use path at the roadway should be at least the same width as the shared use path itself. If a curb ramp is provided, the ramp should be the full width of the path, not including any flared sides if utilized. . . . Detectable warnings should be placed across the full width of the ramp.

FHWA's "Designing Sidewalks and Trails for Access" (1999) reflected common ADA-related concepts: Chapter 6, Page 16-6: The width of the ramp should be at least as wide as the average width of the trail to improve safety for users who will be traveling at various speeds. In addition, the overall width of the trail should be increased, so the curb ramp can be slightly offset to the side. The increased width reduces conflict at the intersection by providing more space for users at the bottom of the ramp.
7. **New Center Lane Miles:** The proposed development includes 1.06 centerline miles of new public road.
8. **Impact Fees:** There will be an impact fee that is assessed and due prior to issuance of any building permits. The assessed impact fee will be based on the impact fee ordinance that is in effect at that time. The impact fee assessment will not be released until the civil plans are approved by ACHD.
9. **Capital Improvements Plan (CIP)/ Integrated Five Year Work Plan (IFYWP):** There are no roadways, bridges or intersections in the general vicinity of the project that are in the Integrated Five Year Work Plan (IFYWP) or the District's Capital Improvement Plan (CIP).

10. Roadways to Bikeways Master Plan: ACHD's Roadways to Bikeways Master Plan (BMP) was adopted by the ACHD Commission in May of 2009 and was update in 2018. The plan seeks to implement the Planned Bicycle Network to support bicycling as a viable transportation option for Ada County residents with a wide range of ages and abilities, maintain bicycle routes in a state of good repair in order to ensure they are consistently available for use, promote awareness of existing bicycle routes and features and support encouragement programs and to facilitate coordination and cooperation among local jurisdictions in implementing the Roadways to Bikeways Plan recommendations.

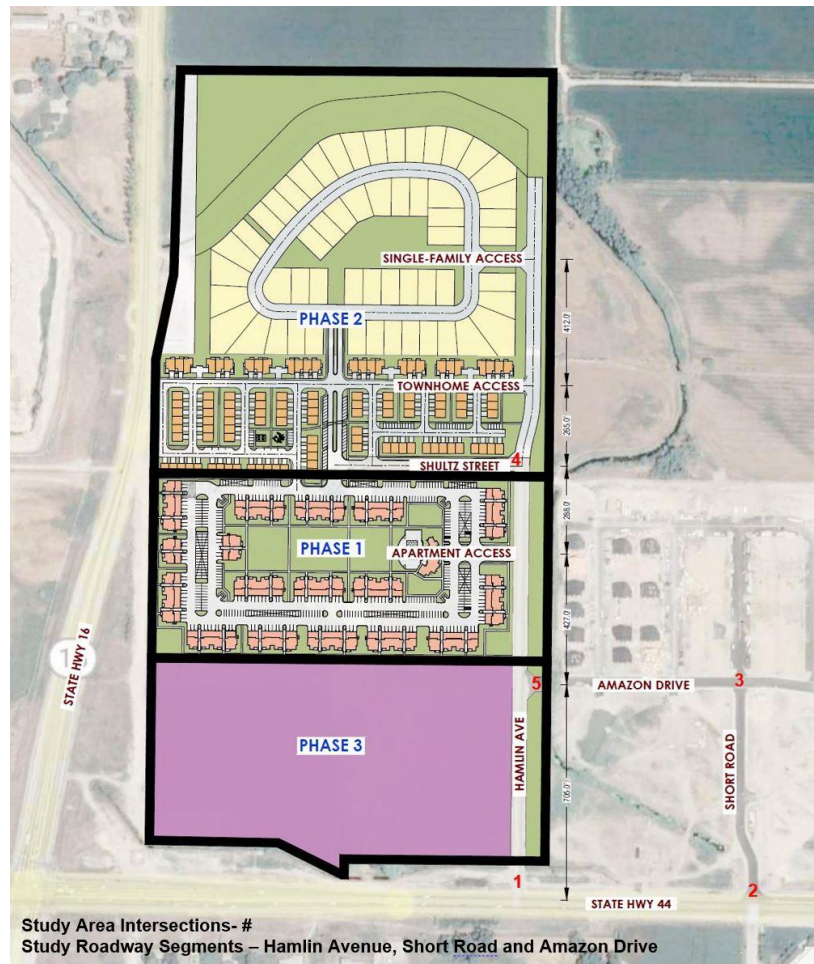
The BMP identifies Palmer Lane located east of the site as Level 2 facilities that will be constructed as part of a future ACHD project. The BMP does not identify bike facilities on Hamlin Avenue, Short Road, Schultz Street or Amazon Drive.

B. Traffic Findings for Consideration

1. Trip Generation: This development is estimated to generate 4,529 vehicle trips per day; 417 vehicle trips per hour in the PM peak hour, based on the traffic impact study.

2. Traffic Impact Study

Focus Engineering and Surveying, Inc. prepared a traffic impact study for the proposed Talega Village development. The executive summary of the findings **as presented by Focus Engineering and Surveying, Inc.** can be found as Attachment 3. The following executive summary is **not the opinion of ACHD staff**. ACHD has reviewed the submitted traffic impact study for consistency with ACHD policies and practices and may have additional requirements beyond what is noted in the summary. ACHD Staff comments on the submitted traffic impact study can be found below under staff comments.



a. Policy:

Mitigation Proposals: Mitigation recommendations shall be provided within the report. At a minimum, for each roadway segment and intersection that does not meet the minimum acceptable level of service planning threshold or v/c ratio, the report must discuss feasible measures to avoid or reduce the impact to the system. To be considered adequate, measures should be specific and feasible. Mitigation may also include:

- Revision to the Phasing Plan to coincide with the District’s planning Capital Projects.
- Reducing the scope and/or scale of the project.

Alternative Mitigation Measures: 7106.7.3 states that if traditional mitigation measures such as roadway widening and intersection improvements are infeasible as determined by ACHD, the TIS may recommend alternative mitigation measures. Alternative mitigation measures shall demonstrate that impacts from the project will be offset.

- If the impacted roadway segments and/or intersections are programmed as funded in the Integrated Five Year Work Plan (IFYWP) or the Capital Improvements Plan (CIP); no alternative mitigation is required.
- If the impacted roadway segments and/or intersections are not programmed in either the IFYWP or the CIP; the applicant may (i) analyze the shoulder hour and (ii) provide a safety analysis to determine alternative mitigation requirements.
 - If the impacted roadway segments and intersections meet the minimum acceptable level of service planning thresholds in the shoulder hour the applicant may suggest feasible alternative mitigation such as: sidewalks, bike facilities, connectivity, safety improvements, etc. within 1.5 miles of the proposed development.
 - If the shoulder hour planning thresholds are exceeded the applicant may request to enter into a Development Agreement and pay into the Priority Corridor Fund an amount determined by the ACHD to offset impacts from the project.
- Alternative Mitigation may also include:
 - Revision to the Phasing Plan to coincide with the District’s future Capital Projects.
 - Reducing the scope and/or scale of the project.

Level of Service Planning Thresholds: District Policy 7206.4.1 states that, Level of Service Planning Thresholds have been established for principal arterials and minor arterials within ACHD’s Capital Improvement Plan and are also listed in section 7106. Unless otherwise required to provide a Traffic Impact Study under section 7106, a proposed development with site traffic less than 10% of the existing downstream roadway or intersection peak hour traffic shall not be required to provide mitigation for a roadway or intersection that currently exceeds the minimum acceptable level of service planning threshold or V/C ratio.

b. TIS Findings: Staff have reviewed the submitted traffic impact study (TIS) and generally agree with the findings and recommendations. The TIS analyzed phases which included 2023 Plus Phase 1 total traffic, 2024 Plus Phase 2 total traffic, and 2030 Plus Phase 3 total traffic.

The study found the following intersection deficiencies described below, coupled with the percentage site traffic contributions relative to the PM peak hour total traffic, followed with their recommendations for improvements.

Intersections:

- Short Road/ SH-44 (8%)
 - The northbound and southbound left-turn lane exceeds ACHD's acceptable Level of Service Planning Thresholds in the AM and PM peak hours under 2030 background and 2030 total traffic conditions. In 2022, ITD widened SH-44 to five lanes between SH-16 and Linder Road. The TIS recommended the following capacity improvements under 2023 Plus Phase 1 total traffic, 2024 Plus Phase 2 total traffic and 2030 total traffic conditions:
 - Restrict to right-in/right-out/left-in
 - If restricted, then the eastbound left-turn lane exceeds ACHD's acceptable Level of Service Planning Thresholds in the PM peak hour under 2030 total traffic conditions.
 - Signal Warrant analysis indicated that the intersection meets warrants under 2030 total traffic conditions.
 - ITD did not submit comments regarding the TIS.
 - No additional improvements are recommended at this intersection on the ACHD roadways, as the proposed site traffic at this intersection will be less than 10% of the 2030 total traffic conditions. Therefore, consistent with District policy 7205.3.1 Level of Service Planning Threshold, which states, a proposed development with site traffic less than 10% of the existing downstream roadway or intersection peak hour traffic shall not be required to provide mitigation.
 - The applicant should coordinate with ITD and the City of Star to determine if any additional improvements or right-of-way are required on SH-44 at the intersection with Short Road.
- Hamlin Avenue and SH-44 (8%)
 - The southbound right-turn lane exceeds ACHD's acceptable Level of Service Planning Thresholds in the PM peak hours under 2030 total traffic if the Short Road/SH-44 intersection is restricted to right-in/right-out/left-in only as intended in the State Street Corridor Study.
 - ITD did not submit comments regarding the TIS.
 - No additional improvements are recommended at this intersection on the ACHD roadways, as the proposed site traffic at this intersection will be less than 10% of the 2030 total traffic conditions. Therefore, consistent with District policy 7205.3.1 Level of Service Planning Threshold, which states, a proposed development with site traffic less than 10% of the existing downstream roadway or intersection peak hour traffic shall not be required to provide mitigation.
 - The applicant should coordinate with ITD and the City of Star to determine if any additional improvements or right-of-way are required on SH-44 at the intersection with Hamlin Avenue.

Turn Lanes:

The applicant’s TIS included turn lane warrant analysis at all off-site and site access study area intersections with the exception of the proposed local street access located at the site’s north property line (See Findings #7), as the site plan was updated after the completion of the TIS. The following turn lanes are warranted based on the findings in the TIS:

- Short Road/SH-44
 - Extend the northbound approach an additional 140-feet
 - No site generated traffic is anticipated to impact this movement. Therefore, this improvement is not required.

c. Staff Comments/Recommendations: Based on the findings of the TIS, no additional improvements are recommended at the above listed intersections on the ACHD roadways, as the proposed site traffic at these intersections will be less than 10% of the 2030 total traffic conditions.

The applicant should coordinate with ITD and the City of Star to determine if any additional improvements or right-of-way are required on SH-44 at the intersection with Short Road and Hamlin Avenue.

3. Condition of Area Roadways

Traffic Count is based on Vehicles per hour (VPH)

Roadway	Frontage	Functional Classification	PM Peak Hour Traffic Count	PM Peak Hour Level of Service
**State Highway 44 State Street	1,085-feet	Principal Arterial	1,187	N/A
Hamlin Avenue	2,240-feet	Collector	6	Better than “D”
Short Road	None	Collector	13	Better than “D”
***Amazon Drive	88-feet	Commercial	N/A	N/A

- * Acceptable level of service for a two-lane collector is “D” (425 VPH).
- * Acceptable level of service for a three-lane collector is “D” (530 VPH).
- ** ACHD does not set level of service thresholds for State Highways.
- *** ACHD does not set level of service planning thresholds for local roads.

4. Average Daily Traffic Count (VDT)

Average daily traffic counts are based on ACHD’s most current traffic counts.

- The average daily traffic count for Hamlin Avenue north of SH-44 was estimated to be 28.
- The average daily traffic count on Amazon Drive west of Short Lane was estimated to be 774.
- The average daily traffic count on Short Road north of SH-44 was estimated to be 1,347.

C. Findings for Consideration

1. Public Streets vs. Private Streets

The applicant has proposed to improve a portion of an existing local public street, Shultz Street, abutting the site and is proposing to incorporate a portion of the existing local public streets, Shultz Street/Shultz Court and Truman Place into the site and to construct the internal local streets as public roadways. However, staff recommends the construction of private streets as there is no connectivity to the adjacent parcel to the north as it was approved to have lots constructed at the

site's north property line providing no public benefit and there is a proposed local street at the site's north property line that will provide access to only 10 single family lots. Furthermore, the internal street layout does not meet ACHD's policies as there is a local street proposed to dead end into a parking lot, there are roadways that exceed 750-feet in length and there are several perpendicular parking stalls proposed within the public right-of-way.

The following findings will provide three different scenarios which include the ACHD requirements if the roadways are to be constructed as private, the requirements for the existing public roadway, Hamlin Avenue, and if the roadways are to be constructed as public.

If Private Roads are constructed within the site, then the following conditions apply.

2. Private Roads

a. Policy:

Private Road Policy: District policy 7212.1 states that the lead land use agencies in Ada County establish the requirements for private streets. The District retains authority and will review the proposed intersection of a private and public street for compliance with District intersection policies and standards. The private road should have the following requirements:

- Designed to discourage through traffic between two public streets,
- Graded to drain away from public street intersection, and
- If a private road is gated, the gate or keypad (if applicable) shall be located a minimum of 50-feet from the near edge of the intersection and a turnaround shall be provided.

b. Staff Comments/Recommendations: As noted above, staff recommends the existing streets within the site, Shultz Street, Shultz Court, Truman Place be vacated or vacated/exchanged (See Findings for Consideration 3) and the internal roadways be constructed as private roadways. See image below for location of recommended private streets.

Additionally, if private roads are to be constructed, then the applicant should be required to vacate/exchange all of Shultz Street abutting the site.

If the City of Star approves private roads, the applicant shall be required to pave the private roadways their full widths and at least 30-feet into the site beyond the edge of pavement of all public streets and install pavement tapers with 15-foot curb radii abutting the existing roadway edge. If private roads are not approved by the City of Eagle, the applicant will be required to revise and resubmit the preliminary plat to provide public standard local streets in these locations.

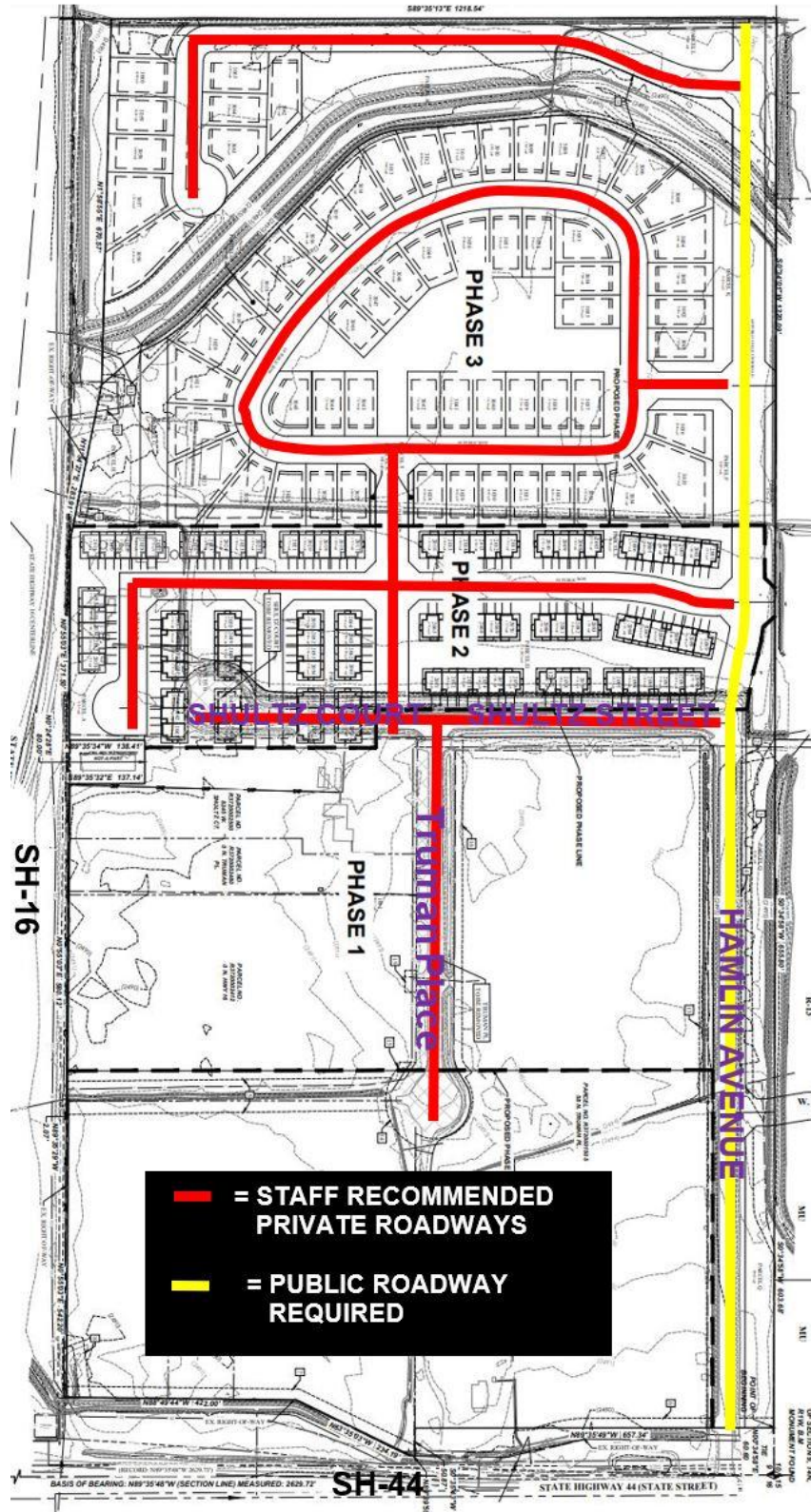
Street name and stop signs are required for the private road. The signs may be ordered through the District. Verification of the correct, approved name of the road is required.

ACHD does not make any assurances that the private road, which is a part of this application, will be accepted as a public road if such a request is made in the future. Substantial redesign and reconstruction costs may be necessary in order to qualify this road for public ownership and maintenance.

The following requirements must be met if the applicant wishes to dedicate the roadway to ACHD:

- Dedicate a minimum of 50-feet of right-of-way for the road.
- Construct the roadway to the minimum ACHD requirements.
- Construct a stub street to the surrounding parcels.

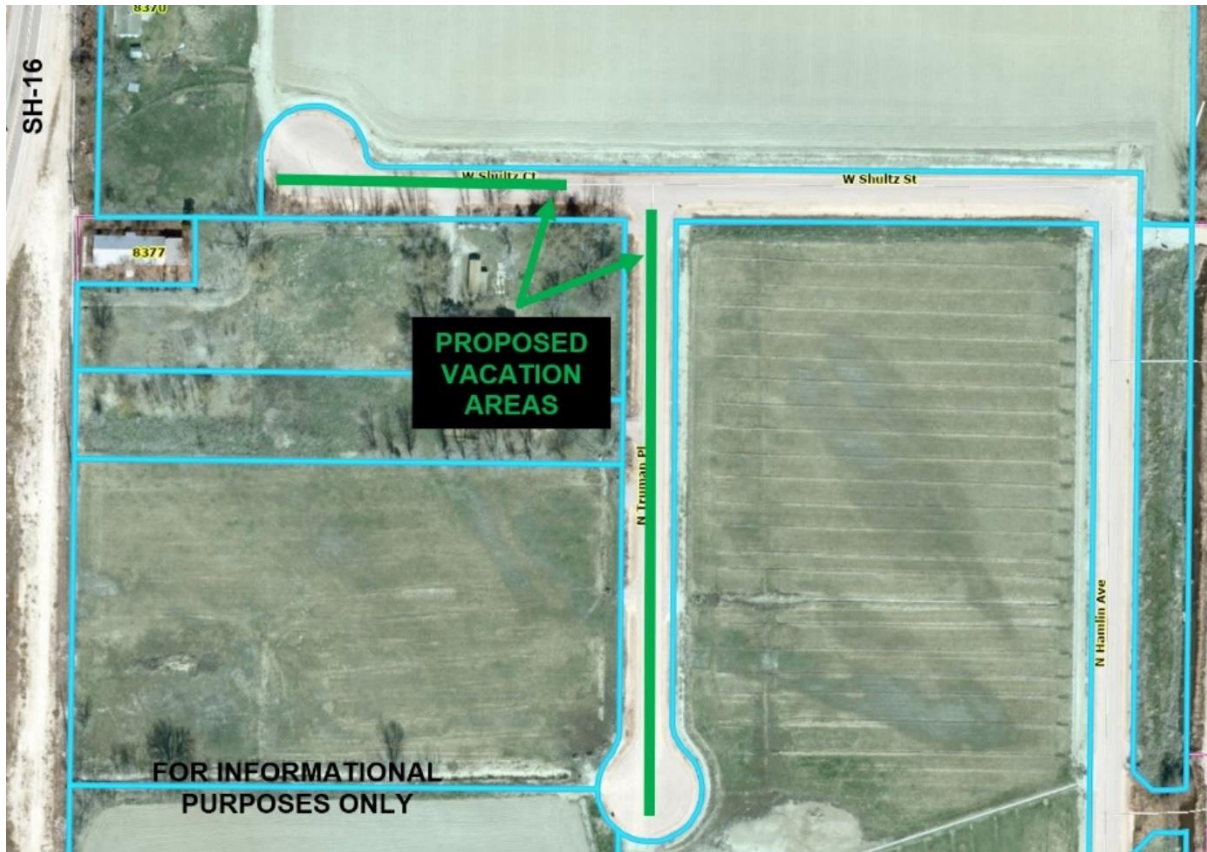
If the City of Star does not approve private roadways, then the applicant should be required to modify the site plan to meet District policies for ACHD to accept public streets.



The following conditions apply whether or not the internal roadways are public or private.

3. Vacation of Right-of-Way

a. **Applicant's Proposal:** The applicant is proposing to vacate a portion of the existing local streets, Shultz Street/Shultz Court and is proposing to vacate all of Truman Place within the site and incorporate those areas into the site as part of their development.



b. **Staff Comments/Recommendations:** At the time of this application, a vacation or vacation/exchange has not been completed. If the right-of-way is proposed to be vacated, then the applicant should apply to vacate/exchange a portion of Shultz Street/Shultz Court and Truman Place within the site by submitting an application to the Right-of-Way department prior to plan submittal. A right-of-way vacation or vacation/exchange is a separate application with its own public hearing process. Until the right-of-way of Shultz Street/Shultz Court and Truman Place have been vacated it is public right-of-way under the jurisdiction of ACHD. See Findings for Consideration #7 for the requirements of the roadways if they remain public right-of-way. If Shultz Street is not redesigned to meet District policy, then the applicant should apply to vacate/exchange the entire segment of Shultz Street abutting the site.

4. State Highway SH-44 / State Street

SH-44 is under the jurisdiction of the Idaho Transportation Department (ITD). The applicant, City of Star, and ITD should work together to determine if additional right-of-way or improvements are necessary on SH-44.

5. Maximum Traffic on One Access-Hamlin Avenue

a. **Policy:**

Maximum Traffic on One Access: District Policy 7206.3.3 states that if a proposed development only has one access to a public street that is a collector street, or if it proposes to

extend public streets from existing development with only collector street access to the public street system, the maximum forecast ADT (Average Daily Trips) to be allowed at any point on the collector street is 3,000. This volume may be reduced or increased based on information received from the lead land use agency, the applicable fire department, and/or emergency services. The District will also take into consideration the following items when determining whether or not to reduce or increase the maximum allowable ADT: railroad crossings, canal crossings, and topography.

Off-site Streets: District Policy 7208.2.3 states that if the proposed development is not served by a paved public street, the developer shall pave the street or widen the existing pavement to provide a 30-foot wide (minimum) paved street with 3-foot gravel shoulders from the proposed development to the public street specified by the District. Wider street widths may be required depending on the magnitude of the development and other factors, including the potential for bicycle, bus and pedestrian traffic.

- b. Staff Comments/Recommendations:** Amazon Drive on the east side of Hamlin Avenue across from the site was constructed as part of the first phase of the Amazon Falls development, with Amazon Drive stubbing to the Amazon Falls development's west property line. Originally, a spite strip restricted Amazon Drive from being constructed to connect to Hamlin Avenue; however, this issue has been resolved and the right-of-way for Amazon Drive to connect to Hamlin Avenue has been dedicated.

As part of ACHD's action on Junction Crossing 1, the applicant was required to construct Amazon Drive to intersect Hamlin Avenue prior to ACHD's approval of the first final plat for that development. The construction plans for the completion of Amazon Drive are currently under review by ACHD.

Until Amazon Drive can be constructed to intersect Hamlin Avenue, Hamlin Avenue will serve as the only public access for the site from SH-44. District Policy restricts the daily traffic to 3,000 trips per day for a collector road that serves as the sole access to a development. The study shows that the projected daily traffic on Hamlin Avenue will exceed 4,800 if Amazon Drive is not extended to connect to Hamlin Avenue. This development proposal is expected to generate approximately 4,529 daily trips which would cause the daily traffic on Hamlin Avenue to exceed 3,000 trips. Therefore, staff recommends that the applicant be required to construct Amazon Drive to intersect Hamlin Avenue with a minimum 30-feet of pavement and 3-foot wide gravel shoulders within the existing 50-feet of right-of-way prior to plan approval and ACHD's signature on the first final plat for this development. The applicant may also choose to fully construct Amazon Drive to connect to Hamlin Avenue as a 36-foot wide commercial street section with vertical curb, gutter and 5-foot wide attached concrete sidewalk



to match the existing Amazon Drive. All irrigation facilities are required to be relocated outside of the right-of-way.

6. Hamlin Avenue

- a. **Existing Conditions:** Hamlin Avenue is an existing roadway abutting a portion of the site, intersects SH-44 at the site's south property line and extends 1,375-feet north to the intersection with Shultz Street and is improved with 2-travel lanes, 26-feet of pavement and no curb, gutter or sidewalk abutting the site. There is 50-feet of right-of-way for Hamlin Avenue (25-feet from centerline).

As part of ACHD's approval of Cascade Springs, Hamlin Avenue, proposed to stub to the site's north property line.

b. **Policy:**

Collector Street Policy: District policy 7206.2.1 states that the developer is responsible for improving all collector frontages adjacent to the site or internal to the development as required below, regardless of whether access is taken to all of the adjacent streets.

Master Street Map and Typologies Policy: District policy 7206.5 states that if the collector street is designated with a typology on the Master Street Map, that typology shall be considered for the required street improvements. If there is no typology listed in the Master Street Map, then standard street sections shall serve as the default.

Street Section and Right-of-Way Policy: District policy 7206.5.2 states that the standard right-of-way width for collector streets shall typically be 50 to 70-feet, depending on the location and width of the sidewalk and the location and use of the roadway. The right-of-way width may be reduced, with District approval, if the sidewalk is located within an easement; in which case the District will require a minimum right-of-way width that extends 2-feet behind the back-of-curb on each side.

The standard street section shall be 46-feet (back-of-curb to back-of-curb). This width typically accommodates a single travel lane in each direction, a continuous center left-turn lane, and bike lanes.

Residential Collector Policy: District policy 7206.5.2 states that the standard street section for a collector in a residential area shall be 36-feet (back-of-curb to back-of-curb). The District will consider a 33-foot or 29-foot street section with written fire department approval and taking into consideration the needs of the adjacent land use, the projected volumes, the need for bicycle lanes, and on-street parking.

Continuation of Streets Policy: District Policy 7206.2.4 states that an existing street, or a street in an approved preliminary plat, which ends at a boundary of a proposed development shall be extended in that development. The extension shall include provisions for continuation of storm drainage facilities. Benefits of connectivity include but are not limited to the following:

- Reduces vehicle miles traveled.
- Increases pedestrian and bicycle connectivity.
- Increases access for emergency services.
- Reduces need for additional access points to the arterial street system.
- Promotes the efficient delivery of services including trash, mail and deliveries.
- Promotes appropriate intra-neighborhood traffic circulation to schools, parks, neighborhood commercial centers, transit stops, etc.
- Promotes orderly development.

Sidewalk Policy: District policy 7206.5.6 requires a concrete sidewalk at least 5-feet wide to be constructed on both sides of all collector streets. A parkway strip at least 6-feet wide between the back-of-curb and street edge of the sidewalk is required to provide increased safety and protection of pedestrians. Consult the District's planter width policy if trees are to be placed within the parkway strip. Sidewalks constructed next to the back-of-curb shall be a minimum of 7-feet wide.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

ACHD Master Street Map: ACHD Policy Section 3111.1 requires the Master Street Map (MSM) guide the right-of-way acquisition, collector street requirements, and specific roadway features required through development. This segment of Hamlin Avenue is designated in the MSM as a Commercial Collector with 2-lanes and on-street bike lanes, a 36-foot street section within 54 to 70-feet of right-of-way.

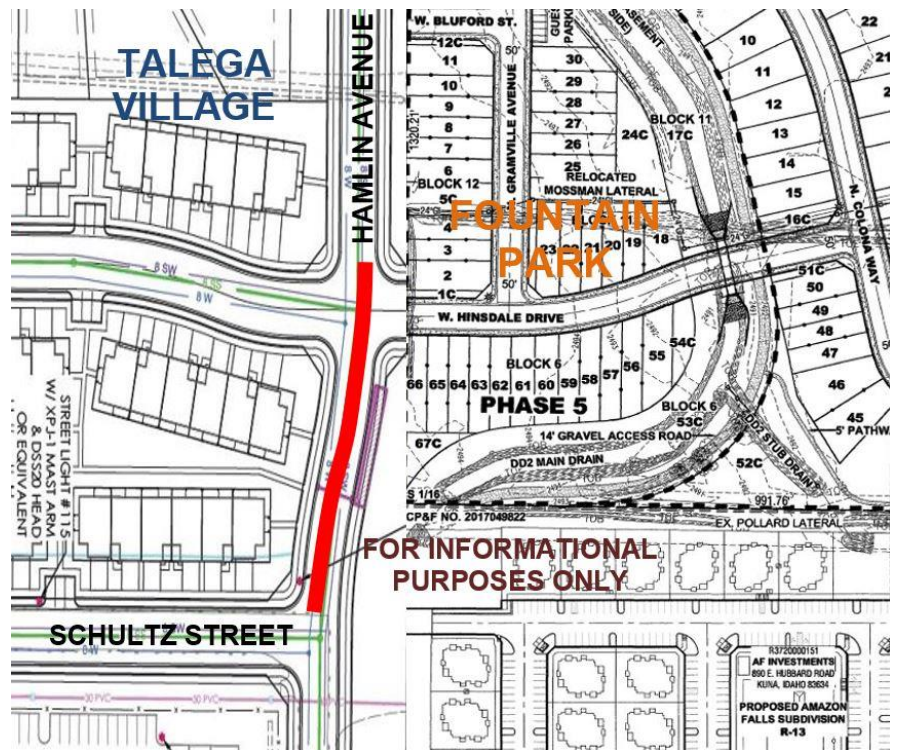
- c. **Applicant Proposal:** The applicant is proposing to complete the existing segment of Hamlin Avenue from SH-44 north 1,375-feet to the intersection of Shultz Street as a complete 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk on both sides of the roadway within 60-feet of right of way.

The applicant is proposing to extend Hamlin Avenue into the site from the intersection with Shultz Street north to stub to the site's north property line and in alignment with the stub street location approved as part of Cascade Springs located north of the site as a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk within 60-feet of right-of-way.

- d. **Staff Comments/Recommendations:** The applicant's proposal to complete the existing segment of Hamlin Avenue from SH-44 north to the intersection with Shultz Street as a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk on both sides of the roadway meets District policy, as the applicant has control of both sides of the roadway and should be approved.

The applicant's proposal to extend Hamlin Avenue into the site from the intersection with Shultz Street north to stub to the site's north property line and in alignment with the stub street location approved as part of Cascade Springs located north of the site as a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk meets District policy and should be approved, as proposed.

As part of the approval of the Fountain Park subdivision located on the east side of Hamlin Avenue across from the site, the applicant was required to construct Hamlin Avenue from the intersection with Schultz Street north to the proposed local street, Hinsdale Drive, with a minimum 30-feet of pavement and 3-foot wide gravel shoulders or 24-feet of pavement, 3-foot gravel shoulders and a minimum 6-foot wide detached asphalt/concrete pedestrian facilities, or as a complete 36-foot wide collector street section with vertical curb, gutter and 5-foot wide attached or 7-foot wide detached concrete sidewalk (shown in red).



If Hamlin Avenue has been constructed from the intersection with Shultz Street north to the proposed local street, Hinsdale Drive as part of the Fountain Park subdivision, then the applicant should be required to construct this segment of Hamlin Avenue as ½ of a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk. Or, if Hamlin Avenue has been constructed as a complete 36-foot wide collector street section with vertical curb, gutter and 5-foot wide attached or 7-foot wide detached concrete sidewalk, then the applicant should have no additional requirements for the segment of Hamlin Avenue shown in red.

The applicant should be required to provide an 8-foot wide planter strip abutting Hamlin Avenue if street trees are desired.

The applicant should dedicate right-of-way for Hamlin Avenue to 2-feet behind back of sidewalk, or for detached sidewalk the applicant may reduce the right-of-way to 2-feet behind back of curb and provide a permanent right-of-way easement from the right-of-way line to extend to 2-feet behind back of sidewalk abutting the site on both sides of the roadway. Sidewalk should be located wholly within the right-of-way of wholly within an easement.

7. Stub Streets

- a. **Existing Conditions:** As part of ACHD’s approval of Cascade Springs one collector Street, Hamlin Avenue, is proposed to stub to the site’s north property line.
- b. **Policy:**

Stub Street Policy: District policy 7206.2.4.3 states that stub streets will be required to provide circulation or to provide access to adjoining properties. Stub streets will conform with the requirements described in Section 7206.2.4, except a temporary cul-de-sac will not be required if the stub street has a length no greater than 150-feet. A sign shall be installed at the terminus of the stub street stating that, “THIS IS A DESIGNATED COLLECTOR ROADWAY. THIS STREET WILL BE EXTENDED AND WIDENED IN THE FUTURE.”

In addition, stub streets must meet the following conditions:

- A stub street shall be designed to slope towards the nearest street intersection within the proposed development and drain surface water towards that intersection; unless an alternative storm drain system is approved by the District.
- The District may require appropriate covenants guaranteeing that the stub street will remain free of obstructions.

Temporary Dead End Streets Policy: District policy 7206.2.4.4 requires that the design and construction for cul-de-sac streets shall apply to temporary dead end streets. The temporary cul-de-sac shall be paved and shall be the dimensional requirements of a standard cul-de-sac. The developer shall grant a temporary turnaround easement to the District for those portions of the cul-de-sac which extend beyond the dedicated street right-of-way. In the instance where a temporary easement extends onto a buildable lot, the entire lot shall be encumbered by the easement and identified on the plat as a non-buildable lot until the street is extended.

- c. **Applicant’s Proposal:** The applicant is proposing to construct a collector stub street to the north, Hamlin Avenue, in alignment with the approved stub street to the site’s north property line as part of ACHD’s approval of Cascade Springs.
- d. **Staff Comments/Recommendations:** The applicant’s proposal meets District policy and should be approved, as proposed.

If Hamlin Avenue has not been constructed as a stub street to the site’s north property line, as part of Cascade Springs, then the applicant should be required to install a sign at the terminus of the stub street stating, “THIS IS A DESIGNATED COLLECTOR ROADWAY. THIS STREET WILL BE EXTENDED AND WIDENED IN THE FUTURE.” A temporary turnaround is not required at the terminus of this stub street as it does not extend greater than 150-feet.

8. Driveways

8.1 Hamlin Avenue

- a. **Existing Conditions:** There is an existing unimproved driveway from the site onto the east side of Hamlin Avenue located 670-feet north of Amazon Drive (measured centerline-to-centerline).
- b. **Policy:**
Access Policy: District Policy 7205.4.1 states that all access points associated with development applications shall be determined in accordance with the policies in this section and Section 7202. Access points shall be reviewed only for a development application that is being considered by the lead land use agency. Approved access points may be relocated and/or restricted in the future if the land use intensifies, changes, or the property redevelops.

District Policy 7206.1 states that the primary function of a collector is to intercept traffic from the local street system and carry that traffic to the nearest arterial. A secondary function is to service adjacent property. Access will be limited or controlled. Collectors may also be designated at bicycle and bus routes.

Driveway Location Policy (Stop Controlled Intersection): District policy 7206.4.4 requires driveways located on collector roadways near a STOP controlled intersection to be located outside of the area of influence; OR a minimum of 150-feet from the intersection, whichever is greater. Dimensions shall be measured from the centerline of the intersection to the centerline of the driveway.

Successive Driveways: District policy 7206.4.5 Table 1, requires driveways located on collector roadways with a speed limit of 25 MPH or less and daily traffic volumes greater than 100 VTD to align or offset a minimum of 245-feet from any existing or proposed driveway.

Driveway Width Policy: District policy 7206.4.6 restricts high-volume driveways (100 VTD or more) to a maximum width of 36-feet and low-volume driveways (less than 100 VTD) to a maximum width of 30-feet. Curb return type driveways with 30-foot radii will be required for high-volume driveways with 100 VTD or more. Curb return type driveways with 15-foot radii will be required for low-volume driveways with less than 100 VTD.

Driveway Paving Policy: Graveled driveways abutting public streets create maintenance problems due to gravel being tracked onto the roadway. In accordance with District policy, 7206.4.6, the applicant should be required to pave the driveway its full width and at least 30-feet into the site beyond the edge of pavement of the roadway and install pavement tapers in accordance with Table 2 under District Policy 7206.4.6.

- c. **Applicant's Proposal:** The applicant is proposing to close the existing unimproved driveway onto the east side of Hamlin Avenue located 672-feet north of Amazon Drive with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.

The applicant is proposing to construct a curb return type driveway/private road onto Hamlin Avenue located 285-feet south of Shultz Street with two 20-foot wide travel lanes and two 10-foot wide center landscape islands.

- d. **Staff Comments/Recommendations:** The applicant's proposal to close the existing driveway on the east side of Hamlin Avenue meets District policy and should be approved, as proposed.

The applicant's proposal to construct a curb return type driveway onto Hamlin Avenue located 285-feet south of Shultz Street with two 20-foot wide travel lanes and two 10-foot wide center landscape islands meet District policy and should be approved. The applicant should be required to construct the driveway to a maximum width of 36-feet within the right-of-way. Once outside of the right-of-way the driveway/private road may be widened. The center landscape islands should be located outside of the right-of-way.

The following conditions apply if the City of Star does not approve private roads and public streets are constructed within the site.

9. Shultz Street/Shultz Court & Truman Place

- a. **Existing Conditions:** Shultz Street is improved with 2-travel lanes, 26-feet of pavement and no curb, gutter and sidewalk abutting the site. Shultz Street changes to Shultz Court and is improved as a temporary turnaround with 96-feet of pavement and no curb, gutter, or sidewalk abutting the site. There is 60-feet of right-of-way for Shultz Street with an additional 130-feet of right-of-way for the temporary turnaround.

Truman Place is improved with 2-travel lanes, 26-feet of pavement and no curb, gutter and sidewalk and terminates into a temporary turnaround that is improved with 98-feet of pavement and no curb, gutter and sidewalk abutting the site. There is 60-feet of right-of-way for Truman Place with an additional 116-feet of right-of-way for the cul-de-sac turnaround.

- b. **Policy:**

Local Roadway Policy: District Policy 7207.2.1 states that the developer is responsible for improving all local street frontages adjacent to the site regardless of whether or not access is taken to all of the adjacent streets.

Street Section and Right-of-Way Policy: District Policy 7207.5 states that right-of-way widths for all local streets shall generally not be less than 47-feet wide and that the standard street section shall be 33-feet (back-of-curb to back-of-curb).

Standard Urban Local Street—33-foot Street Section and Right-of-way Policy: District Policy 7207.5.2 states that the standard street section shall be 33-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section

shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 47-feet of right-of-way.

For the City of Kuna and City of Star: Unless otherwise approved by Kuna or Star, the standard street section shall be 36-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 50-feet of right-of-way.

Sidewalk Policy: District Policy 7207.5.7 states that five-foot wide concrete sidewalk is required on both sides of all local street, except those in rural developments with net densities of one dwelling unit per 1.0 acre or less, or in hillside conditions where there is no direct lot frontage, in which case a sidewalk shall be constructed along one side of the street. Some local jurisdictions may require wider sidewalks.

The sidewalk may be placed next to the back-of-curb. Where feasible, a parkway strip at least 8-feet wide between the back-of-curb and the street edge of the sidewalk is recommended to provide increased safety and protection of pedestrians and to allow for the planting of trees in accordance with the District's Tree Planting Policy. If no trees are to be planted in the parkway strip, the applicant may submit a request to the District, with justification, to reduce the width of the parkway strip.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

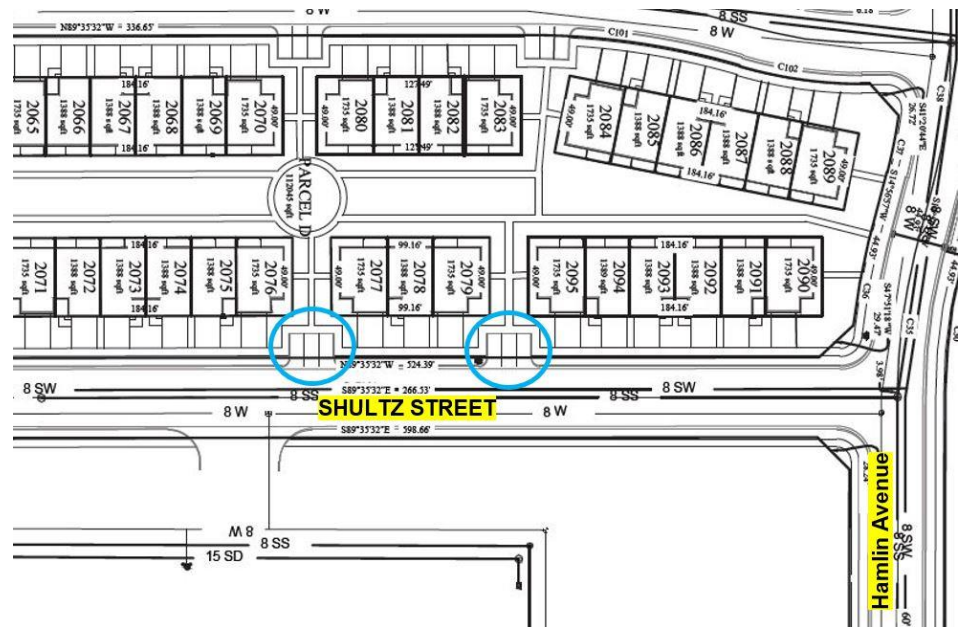
Cul-de-sac Streets Policy: District policy 7207.5.8 requires cul-de-sacs to be constructed to provide a minimum turning radius of 50-feet; in rural areas or for temporary cul-de-sacs the emergency service providers may require a greater radius. Landscape and parking islands may be constructed in turnarounds if a minimum 29-foot street section is constructed around the island. The pavement width shall be sufficient to allow the turning around of a standard AASHTO SU design vehicle without backing. The developer shall provide written approval from the appropriate fire department for this design element.

The District will consider alternatives to the standard cul-de-sac turnaround on a case-by-case basis. This will be based on turning area, drainage, maintenance considerations and the written approval of the agency providing emergency fire service for the area where the development is located.

- c. **Applicant's Proposal:** The applicant is proposing to construct Shultz Street from the intersection with Hamlin Avenue approximately 615-feet to the west as a 40-foot wide street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.

As noted above, the applicant is proposing to vacate a portion of the existing local streets, Shultz Street/Shultz Court and is proposing to vacate all of Truman Place (see image-page 9) abutting the site and incorporate those areas into the site as part of their development.

The applicant is proposing to construct 6 perpendicular parking stalls within a portion of the right-of-way of Shultz Street.



- d. **Staff Comments/Recommendations:** The applicant’s proposal to construct Shultz Street from the intersection with Hamlin Avenue approximately 615-feet to the west as a 40-foot wide street section exceeds District policy which requires the construction of a 36-foot wide local street section (measured back-of-curb to back-of-curb) and should not be approved as proposed. The applicant should be required to construct Shultz Street as a 36-foot wide local street section with curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk abutting the site.

The applicant’s proposal to incorporate a portion of Shultz Street/Shultz Court and Truman Place into the site as part of their development does not meet District policy as those roadways are public right-of-way and should not be approved, as proposed. The applicant should be required to either improve or vacate the right-of-way (See Findings 3 above) for Shultz Street/Shultz Court and Truman Place.

If the right-of-way is improved then, complete Shultz Street/Shultz Court and Truman Place as 36-foot wide local street sections with curb, gutter and 5-foot wide concrete sidewalk abutting the site. The cul-de-sac turnarounds at the terminus of Shultz Court and Truman Place should be constructed with curb, gutter and 5-foot wide concrete sidewalk and a minimum turning radius of 50-feet.

The applicant’s proposal to construct 6 perpendicular parking stalls within a portion of the right-of-way of Shultz Street is not approved, as ACHD does not allow parking stalls within the right-of-way and does not allow backing out onto a public street. If additional parking is needed to serve the site, then the applicant should redesign the site to add additional parking to the parking lots proposed to serve the site. If Shultz Street is not redesigned to meet District policy, then the applicant should apply to vacate/exchange the entire segment of Shultz Street abutting the site.

10. Internal Local Streets

- a. **Existing Conditions:** There are no local streets within the site.
- a. **Policy:**
 - Local Roadway Policy:** District Policy 7207.2.1 states that the developer is responsible for improving all local street frontages adjacent to the site regardless of whether or not access is taken to all of the adjacent streets.

Street Section and Right-of-Way Policy: District Policy 7207.5 states that right-of-way widths for all local streets shall generally not be less than 47-feet wide and that the standard street section shall be 33-feet (back-of-curb to back-of-curb).

Standard Urban Local Street—33-foot Street Section and Right-of-way Policy: District Policy 7207.5.2 states that the standard street section shall be 33-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 47-feet of right-of-way.

For the City of Kuna and City of Star: Unless otherwise approved by Kuna or Star, the standard street section shall be 36-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 50-feet of right-of-way.

Sidewalk Policy: District Policy 7207.5.7 states that five-foot wide concrete sidewalk is required on both sides of all local street, except those in rural developments with net densities of one dwelling unit per 1.0 acre or less, or in hillside conditions where there is no direct lot frontage, in which case a sidewalk shall be constructed along one side of the street. Some local jurisdictions may require wider sidewalks.

The sidewalk may be placed next to the back-of-curb. Where feasible, a parkway strip at least 8-foot wide between the back-of-curb and the street edge of the sidewalk is recommended to provide increased safety and protection of pedestrians and to allow for the planting of trees in accordance with the District's Tree Planting Policy. If no trees are to be planted in the parkway strip, the applicant may submit a request to the District, with justification, to reduce the width of the parkway strip.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

Landscape Medians Policy: District policy 7207.5.16 states that landscape medians are permissible where adequate pavement width is provided on each side of the median to accommodate the travel lanes and where the following is provided:

- The median is platted as right-of-way owned by ACHD.
- The width of an island near an intersection is 12-feet maximum for a minimum distance of 150-feet. Beyond the 150-feet, the island may increase to a maximum width of 30-feet.
- At an intersection that is signalized or is to be signalized in the future, the median width shall be reduced to accommodate the necessary turn lane storage and tapers.
- The Developer or Homeowners Association shall apply for a license agreement if landscaping is to be placed within these medians.
- The license agreement shall contain the District's requirements of the developer including, but not limited to, a "hold harmless" clause; requirements for maintenance by the developer; liability insurance requirements; and restrictions.
- Vertical curbs are required around the perimeter of any raised median. Gutters shall slope away from the curb preventing ponding.

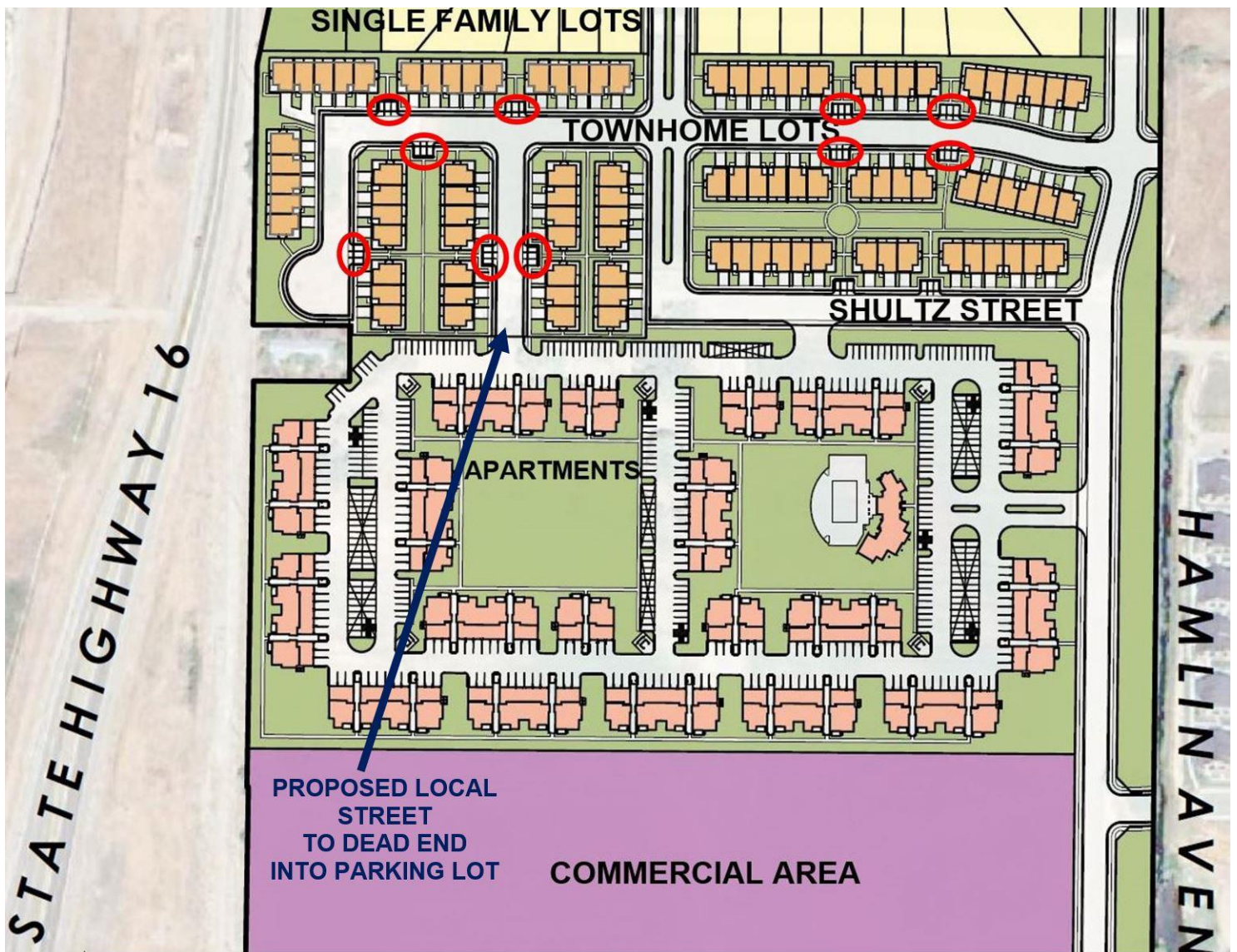
b. **Applicant's Proposal:** The applicant is proposing to construct a new local street that runs north/south from Shultz Street located 613-feet west of Hamlin Avenue (measured centerline-to-centerline) for approximately 485-feet with two 20-foot wide travel lanes, two 10-foot wide center landscape islands, vertical curb, gutter, a 6-foot wide planter strip within 60-feet of right-of-way and 5-foot wide detached concrete sidewalk located outside of the right-of-way.

The applicant is proposing to construct the other internal local streets as 40-foot wide street sections with vertical curb, gutter, a 6-foot wide planter strip within 50-feet of right-of-way and 5-foot wide detached concrete sidewalk located outside of the right-of-way.

The applicant is proposing to construct two cul-de-sac turnarounds within the site.

The applicant is proposing to construct a local street that dead-ends into a parking lot located 614-feet west of Hamlin Avenue to the apartment portion of the site shown below.

The applicant is proposing 30 perpendicular parking stalls within a portion of the right-of-way of the internal local streets. (See Findings 4 above regarding the parking stalls on Shultz Street.) The locations are shown below:



- c. **Staff Comments/Recommendations:** As noted above, staff recommends the construction of private streets internal to the site. If the City of Star does not approve the private roads, then the applicant should construct the roadways to meet District policy.

The applicant's proposal to construct a new local street that runs north/south from Shultz Street located 613-feet west of Hamlin Avenue (measured centerline-to-centerline) for approximately 485-feet with two 20-foot wide travel lanes, two 10-foot wide center landscape islands, vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk meets District policy and should be approved, as proposed.

The applicant's proposal to construct the other internal local streets as 40-foot wide local street sections with vertical curb, exceeds District policy which requires the construction of a 36-foot wide street section with rolled curb (measured back-of-curb to back-of-curb) and should not be approved, as proposed. The applicant should be required to construct the internal local streets as 36-foot wide street sections with rolled curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.

The applicant should be required to dedicate right-of-way to 2-feet behind back of sidewalk, or for detached sidewalk, the applicant may reduce the right-of-way to total 2-feet behind the back of curb and provide a permanent right-of-way easement that extends from the right-of-way line to 2-feet behind back of sidewalk. Sidewalk shall be located wholly within right-of-way or wholly within an easement.

The applicant should be required to construct both cul-de-sacs turnarounds with a minimum turning radius of 50-feet.

The applicant's proposal to construct a local street that dead-ends into a parking lot located 614-feet west of Hamlin Avenue to the apartment portion of the site does not meet District policy which does not allow dead end roadways. The applicant should be required to construct a permanent cul-de-sac turnaround with a minimum turning radius of 50-feet at the terminus of the proposed local street that dead ends into the apartment portion of the site.

The applicant's proposal to construct 30 perpendicular parking stalls within a portion of the right-of-way of the internal local streets is not approved, as ACHD does not allow parking stalls within the right-of-way and does not allow backing out onto a public street. If additional parking is needed to serve the site, then the applicant should redesign the site to add additional parking to the parking lots proposed to serve the site.

11. Roadway Offsets

- a. **Existing Conditions:** There are no existing roadways within the site.

b. **Policy:**

Collector Offset Policy: District policy 7206.4.5, states that the preferred spacing for a new local street intersecting a collector roadway to align or offset a minimum of 330-feet from any other street (measured centerline to centerline).

Local Offset Policy: District policy 7207.4.2, requires local roadways to align or provide a minimum offset of 125-feet from any other street (measured centerline to centerline).

- c. **Applicant's Proposal:** The applicant is proposing to construct three new local streets to intersect Hamlin Avenue, a collector roadway, located as follows:

- 245-feet north of Shultz Street and in alignment with Hinsdale Drive, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site

- 629-feet north of Shultz Street and in alignment with Bluford Street, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site
- 1,254-feet north of Shultz Street and 179-feet south of Whetstone Street, a proposed local street approved as part of Cascade Springs located north of the site.

The applicant is proposing to construct all other internal local streets to align or offset by a minimum of 125-feet.

d. Staff Comments/Recommendations: The applicant’s proposal to construct the two following local streets meets District policy and should be approved:

- 245-feet north of Shultz Street and in alignment with Hinsdale Drive, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site
- 629-feet north of Shultz Street and in alignment with Bluford Street, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site

The applicant’s proposal to construct a local street onto Hamlin Avenue located 1,254-feet north of Shultz Street and 179-feet south of Whetstone Street, does not meet District Collector Offset policy which requires a new local street intersecting a collector roadway to align or offset a minimum of 330-feet from any other street and should not be approved as proposed. As noted above, staff recommend this roadway be constructed as a private street, as it only provides access to 10 single family lots or be constructed to intersect Hamlin Avenue with a minimum offset of 330-feet from any other street.

12. Driveways

12.1 Shultz Court and Truman Place

a. Existing Conditions: There are two existing unimproved driveways from the site onto Shultz Court located as follows (measured centerline-to-centerline):

- 22-foot wide driveway located 238-feet west of Truman Place
- 18-foot wide driveway located at the terminus of the temporary turnaround

There are five existing unimproved driveways from the site onto Truman Place located as follows:

- 13-foot wide driveway located 50-feet south of Shultz Street
- 22-foot wide driveway located 285-feet south of Shultz Street
- 22-foot wide driveway located 358-feet south of Shultz Street
- 18-foot wide driveway located 476-feet south of Shultz Street
- 24-foot wide driveway located 484-feet south of Shultz Street

b. Policy:

Driveway Location Policy: District policy 7208.4.1 requires driveways near intersections to be located a minimum of 75-feet (measured centerline-to-centerline) from the nearest local street intersection, and 150-feet from the nearest collector/arterial or arterial street intersection.

Successive Driveways: District Policy 7208.4.1 states that successive driveways away from an intersection shall have no minimum spacing requirements for access points along a local street, but the District does encourage shared access points where appropriate.

Driveway Width Policy: District policy 7208.4.3 restricts commercial driveways to a maximum width of 40-feet. Most commercial driveways will be constructed as curb-cut type facilities.

Driveway Paving Policy: Graveled driveways abutting public streets create maintenance problems due to gravel being tracked onto the roadway. In accordance with District policy, 7208.4.3, the applicant should be required to pave the driveway its full width and at least 30-feet into the site beyond the edge of pavement of the roadway.

Driveway Design Requirements: District policy 7208.4.3 states if an access point is to be gated, the gate or keypad (whichever is closer) shall be located a minimum of 50-feet from the near edge of the intersection and a turnaround shall be provided.

- c. **Applicant's Proposal:** The applicant is proposing to close the two existing driveways onto Shultz Court and the five existing driveways onto Truman Place by incorporating the roadways into the site as part of the development.

The applicant is proposing to construct a 48-foot wide curb return type driveway onto Shultz Street located 410-feet west of Hamlin Avenue.

The applicant is proposing to construct a 38-foot wide driveway in alignment with the proposed local street located 613-feet west of Hamlin Avenue to provide access to the apartment area of the site.

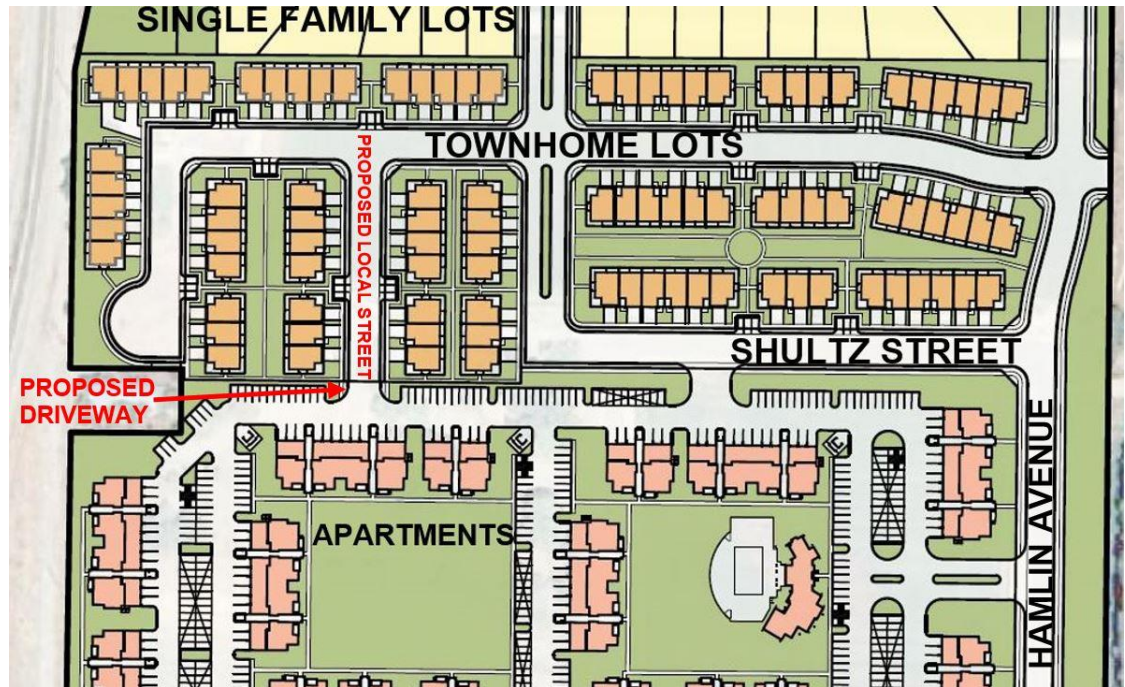
- d. **Staff Comments/Recommendations:** The applicant's proposal to close the two existing driveways onto Shultz Court and the five existing driveways onto Truman Place by incorporating the roadways into the site as part of the development does not meet District policy as the roadways are public right-of-way and under the jurisdiction of ACHD. See Findings C3b above regarding the vacation requirements for Shultz Street/Shultz Court and Truman Place.

If Shultz Street/Shultz Court and Truman Place are not vacated and are improved the applicant should be required to close the two existing driveways onto Shultz Court and the five existing driveways onto Truman Place with curb, gutter and 5-foot wide concrete sidewalk.

The applicant's proposal to construct a curb return type driveway onto Shultz Street located 410-feet west of Hamlin Avenue meets District policy and should be approved. The driveway will be restricted to a maximum width of 36-feet.

The applicant's proposal to construct a driveway in alignment with the proposed local street located 613-feet west of Hamlin Avenue meets District policy; however, the driveway should be

constructed as a curb return type driveway approach and be designed to look like a driveway and not an extension of the proposed local street. The driveway will be restricted to a maximum width of 36-feet.



13. Traffic Calming

a. Policy:

Speed Control and Traffic Calming Policy: District policy 7207.3.7 states that the design of local street systems should discourage excessive speeds by using passive design elements. If the design or layout of a development is anticipated to necessitate future traffic calming implementation by the District, then the District will require changes to the layout and/or the addition of passive design elements such as horizontal curves, bulb-outs, chokers, etc. The District will also consider texture changes to the roadway surface (i.e. stamped concrete) as a passive design element. These alternative methods may require maintenance and/or license agreement.

b. Staff Comments/Recommendations: The applicant is proposing to construct two roadways, a local street located at the site's north property line and a local street located 236-feet north of Shults Street which are greater in length than 750-feet and should be required to be redesigned to reduce the length or include passive design elements and submit a revised preliminary plat showing the redesigned roadway for review and approval prior to ACHD's signature on the first final plat.

Stop signs, speed humps/bumps and valley gutters will not be accepted as traffic calming.

14. Bridge for Lateral 12 and Middleton Mill Canal Crossing

The District will require that the applicant have ACHD approved plans for the crossing of the Lateral 12 (Amazon Drive) and the Middleton Mill (Hamlin Avenue) canal crossing prior to the pre-construction meeting and final plat approval. Note: Timing of project plan submittals should take into account review times, lead time for precast members and potential roadway closures. To ensure construction prior to irrigation season, approval of the project plans must be attained by January 15th. The District retains the right to modify road closure approvals on any project based on the needs of the District. Construction of projects approved after January 15th may be postponed until after irrigation season is over in October. It is recommended that bridge submittals be submitted before the end of the current irrigation season to ensure the best time frame for

construction is attained. Submittals will need to include the street section extending over the bridge to ensure the requirements of the roadway are met.

15. Tree Planters

Tree Planter Policy: Tree Planter Policy: The District's Tree Planter Policy prohibits all trees in planters less than 8-feet in width without the installation of root barriers. Class II trees may be allowed in planters with a minimum width of 8-feet, and Class I and Class III trees may be allowed in planters with a minimum width of 10-feet.

16. Landscaping

Landscaping Policy: A license agreement is required for all landscaping proposed within ACHD right-of-way or easement areas. Trees shall be located no closer than 10-feet from all public storm drain facilities. Landscaping should be designed to eliminate site obstructions in the vision triangle at intersections. District Policy 5104.3.1 requires a 40-foot vision triangle and a 3-foot height restriction on all landscaping located at an uncontrolled intersection and a 50-foot offset from stop signs. Landscape plans are required with the submittal of civil plans and must meet all District requirements prior to signature of the final plat and/or approval of the civil plans.

17. Other Access

Hamlin Avenue is classified as a collector roadway. Other than the access specifically approved with this application, direct lot access is prohibited to this roadway and should be noted on the final plat.

D. Site Specific Conditions of Approval

If Private Roads are constructed within the site, then the following conditions apply.

1. If the City of Star approves private roads, then construct the internal streets as private. See image on page 8 for location of recommended private streets and apply to vacate/exchange Shultz Street/Shultz Court and Truman Place abutting the site by submitting an application to the Right-of-Way department. A right-of-way vacation is a separate application with its own public hearing process. Until the right-of-way of Shultz Street/Shultz Court and Truman Place have been vacated it is public right-of-way under the jurisdiction of ACHD.
2. If the City of Star approves private roads, the applicant shall be required to pave the private roadways their full widths and at least 30-feet into the site beyond the edge of pavement.
3. Install street name and stop signs for the private road/drive aisle. The signs may be ordered through the District. Verification of the correct, approved name of the road is required.

The following conditions apply whether or not the internal roadways are public or private.

4. Construct Amazon Drive to intersect Hamlin Avenue with a minimum of 30-feet of pavement and 3-foot wide gravel shoulders within the existing 50-feet of right-of-way. The applicant may also fully construct Amazon Drive as a 36-foot wide commercial street section with vertical curb, gutter and 5-foot wide attached concrete sidewalk to match the existing Amazon Drive prior to ACHD's signature on the first final plat. Relocate irrigation facilities outside of the right-of-way.
5. Complete the existing segment of Hamlin Avenue from SH-44 north to the intersection with Shultz Street as a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk on both sides of the roadway, as proposed.

6. Extend Hamlin Avenue into the site from the intersection with Shultz Street north to stub to the site's north property line and in alignment with the stub street location approved as part of Cascade Springs located north of the site as a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk, as proposed.
7. If Hamlin Avenue has been constructed from the intersection with Shultz Street north to the proposed local street, Hinsdale Drive, as part of the Cascade Springs development (see image on page 10) with a minimum 30-feet of pavement and 3-foot wide gravel shoulders or 24-feet of pavement, 3-foot gravel shoulders and a minimum 6-foot wide detached asphalt/concrete pedestrian facilities as part of the Fountain Park subdivision, then construct this segment of Hamlin Avenue as ½ of a 36-foot wide collector street section with vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.
8. Dedicate right-of-way for Hamlin Avenue to 2-feet behind back of sidewalk, or for detached sidewalk the applicant may reduce the right-of-way to 2-feet behind back of curb and provide a permanent right-of-way easement from the right-of-way line to extend to 2-feet behind back of sidewalk abutting the site on both sides of the roadway. Sidewalk should be located wholly within the right-of-way of wholly within an easement. Provide an 8-foot wide planter strip if street trees are desired.
9. Construct a collector stub street to the north, Hamlin Avenue, located in alignment with the approved stub street to the site's north property line, as proposed. If Hamlin Avenue has not been constructed to the site's north property line, then install a sign at the terminus of the stub street stating, "THIS IS A DESIGNATED COLLECTOR ROADWAY. THIS STREET WILL BE EXTENDED AND WIDENED IN THE FUTURE."
10. Close the existing unimproved driveway onto the east side of Hamlin Avenue located 672-feet north of Amazon Drive with vertical curb, gutter, a planter strip and concrete sidewalk, as proposed.
11. Construct a 36-foot wide curb return type driveway onto Hamlin Avenue located 285-feet south of Shultz Street with two 20-foot wide travel lanes and two 10-foot wide center landscape. Once outside of the right-of-way the driveway/private road may be widened to two 20-foot wide travel lanes and two 10-foot wide center landscape islands. The center landscape islands should be located outside of the right-of-way.
12. Provide ACHD approved plans for the crossing of the Lateral 12 (Amazon Drive) and the Middleton Mill (Hamlin Avenue) canal crossing prior to the pre-construction meeting and final plat approval. Note: Timing of project plan submittals should take into account review times, lead time for precast members and potential roadway closures. To ensure construction prior to irrigation season, approval of the project plans must be attained by January 15th. The District retains the right to modify road closure approvals on any project based on the needs of the District. Construction of projects approved after January 15th may be postponed until after irrigation season is over in October. It is recommended that bridge submittals be submitted before the end of the current irrigation season to ensure the best time frame for construction is attained. Submittals will need to include the street section extending over the bridge to ensure the requirements of the roadway are met.

The following conditions apply if the City of Star does not approve private roads and public streets are constructed within the site.

13. Construct Shultz Street as a 36-foot wide local street section with curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk abutting the site.
14. Complete Shultz Street/Shultz Court and Truman Place as 36-foot wide local street sections with curb, gutter and 5-foot wide concrete sidewalk abutting the site. Construct the cul-de-sac turnarounds at the terminus of Shultz Court and Truman Place with curb, gutter and 5-foot wide concrete sidewalk and a minimum turning radius of 50-feet.

15. Revise the preliminary plat to remove the parking stalls on Shultz Street prior to ACHD's plan approval of the first final plat.
16. Construct the internal local streets as 36-foot wide street sections with curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.
17. Construct the proposed local street onto Hamlin Avenue located 1,254-feet north of Shultz Street and 179-feet south of Whetstone Street as a private road/driveway or construct the roadway to intersect Hamlin Avenue with a minimum offset of 330-feet from Whetstone Street.
18. Construct a new local street that runs north/south from Shultz Street located 613-feet west of Hamlin Avenue (measured centerline-to-centerline) for approximately 485-feet with two 20-foot wide travel lanes, two 10-foot wide center landscape islands, vertical curb, gutter, a 6-foot wide planter strip and 5-foot wide detached concrete sidewalk.
19. Construct a permanent cul-de-sac turnaround with a minimum turning radius of 50-feet at the terminus of the proposed local street located 614-feet west of Hamlin Avenue that dead ends into the apartment portion of the site.
20. Construct both proposed cul-de-sacs within the site with a minimum turning radius of 50-feet.
21. Revise the site plan prior to ACHD's plan approval of the first final plat to remove the parking stalls on the internal local streets.
22. Dedicate right-of-way to 2-feet behind back of sidewalk, or for detached sidewalk, the applicant may reduce the right-of-way to total 2-feet behind the back of curb and provide a permanent right-of-way easement that extends from the right-of-way line to 2-feet behind back of sidewalk. Sidewalk shall be located wholly within right-of-way or wholly within an easement. Provide an 8-foot wide planter strip if street trees are desired.
23. Construct the two proposed local streets in the following locations:
 - 245-feet north of Shultz Street and in alignment with Hinsdale Drive, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site
 - 629-feet north of Shultz Street and in alignment with Bluford Street, a proposed local street approved as part of Fountain Park subdivision located on the east side of Hamlin Avenue across from the site
24. Close the two existing driveways onto Shultz Court and the five existing driveways onto Truman Place with curb, gutter and 5-foot wide concrete sidewalk.
25. Construct a 36-foot wide curb return type driveway onto Shultz Street located 410-feet west of Hamlin Avenue.
26. Construct a 36-foot wide curb return type driveway in alignment with the proposed local street located 613-feet west of Hamlin Avenue designed to look like a driveway and not an extension of the proposed local street (see image on page 16).
27. Redesign the proposed roadway located at the site's north property line and the local street located 236-feet north of Shultz Street to reduce the length or include passive design elements and submit a revised preliminary plat showing the redesigned roadway for review and approval prior to ACHD's signature on the first final plat.

Stop signs, speed humps/bumps and valley gutters will not be accepted as traffic calming.

28. Other than the access specifically approved with this application, direct lot access is prohibited to Hamlin Avenue and should be noted on the final plat.

29. Submit civil plans to ACHD Development Services for review and approval. The impact fee assessment will not be released until the civil plans are approved by ACHD.
30. Payment of impact fees is due prior to issuance of a building permit.
31. Comply with all Standard Conditions of Approval.

E. Standard Conditions of Approval

1. All proposed irrigation facilities shall be located outside of the ACHD right-of-way (including all easements). Any existing irrigation facilities shall be relocated outside of the ACHD right-of-way (including all easements).
2. Private Utilities including sewer or water systems are prohibited from being located within the ACHD right-of-way.
3. In accordance with District policy, 7203.3, the applicant may be required to update any existing non-compliant pedestrian improvements abutting the site to meet current Americans with Disabilities Act (ADA) requirements. The applicant's engineer should provide documentation of ADA compliance to District Development Review staff for review.
4. Replace any existing damaged curb, gutter and sidewalk and any that may be damaged during the construction of the proposed development. Contact Construction Services at 387-6280 (with file number) for details.
5. A license agreement and compliance with the District's Tree Planter policy is required for all landscaping proposed within ACHD right-of-way or easement areas.
6. All utility relocation costs associated with improving street frontages abutting the site shall be borne by the developer.
7. It is the responsibility of the applicant to verify all existing utilities within the right-of-way. The applicant at no cost to ACHD shall repair existing utilities damaged by the applicant. The applicant shall be required to call DIGLINE (1-811-342-1585) at least two full business days prior to breaking ground within ACHD right-of-way. The applicant shall contact ACHD Traffic Operations 387-6190 in the event any ACHD conduits (spare or filled) are compromised during any phase of construction.
8. Utility street cuts in pavement less than five years old are not allowed unless approved in writing by the District. Contact the District's Utility Coordinator at 387-6258 (with file numbers) for details.
9. All design and construction shall be in accordance with the ACHD Policy Manual, ISWPC Standards and approved supplements, Construction Services procedures and all applicable ACHD Standards unless specifically waived herein. An engineer registered in the State of Idaho shall prepare and certify all improvement plans.
10. Construction, use and property development shall be in conformance with all applicable requirements of ACHD prior to District approval for occupancy.
11. No change in the terms and conditions of this approval shall be valid unless they are in writing and signed by the applicant or the applicant's authorized representative and an authorized representative of ACHD. The burden shall be upon the applicant to obtain written confirmation of any change from ACHD.
12. If the site plan or use should change in the future, ACHD Planning Review will review the site plan and may require additional improvements to the transportation system at that time. Any change in the planned use of the property which is the subject of this application, shall require the applicant to comply with ACHD Policy and Standard Conditions of Approval in place at that time unless a waiver/variance of the requirements or other legal relief is granted by the ACHD Commission.

F. Conclusions of Law

1. The proposed site plan is approved, if all of the Site Specific and Standard Conditions of Approval are satisfied.
2. ACHD requirements are intended to assure that the proposed use/development will not place an undue burden on the existing vehicular transportation system within the vicinity impacted by the proposed development.

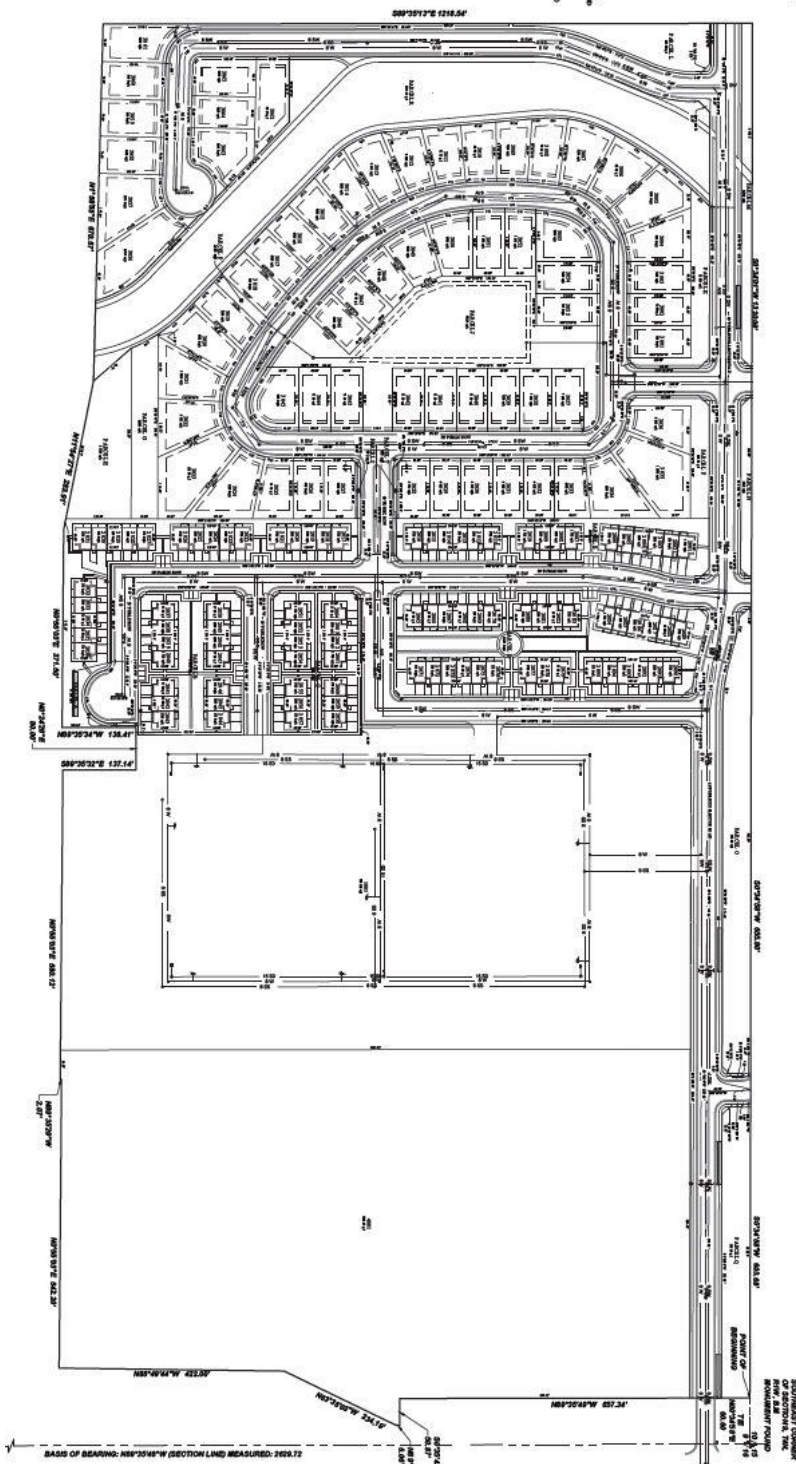
G. Attachments

1. Vicinity Map
2. Site Plan
3. TIS Executive Summary
4. Utility Coordinating Council
5. Development Process Checklist
6. Appeal Guidelines

VICINITY MAP



SITE PLANS



1.0 Executive Summary

1.1 DESCRIPTION OF PROJECT

This report presents the results of a traffic impact analysis for the Northern Star Development, located in Star, Idaho. The project site is located north of State Highway (SH) 44, east of State Highway 16 and west of Hamlin Avenue. Currently the proposed parcel of land consists of farmland with a few residential homes. Figure 1 illustrates the Vicinity Map and the location of this development related to the adjacent roadway network.

This proposed Northern Star Development will consist of:

- 55 single-family dwelling units
- 110 townhome units
- 310 apartment units
- 18 acres of commercial/office

Refer to Figure 2 for the site plan of this development and the location of the proposed accesses onto the surrounding roadways.

Coordinating with Ada County (ACHD) and Idaho Transportation Department (ITD), it was determined the study area for this traffic impact study would include the following intersections:

- Hamlin Avenue/SH 44 (existing)
- Short Road/SH 44 (existing)
- Amazon Drive/Short Lane (existing)
- Shultz Street/Hamlin Avenue (existing)
- Amazon Drive/Hamlin Avenue (future)

It is anticipated, at full build-out, the Northern Star Development will generate 4,529 average daily trips with 379 AM peak hour trips and 417 PM peak hour trips. With a mix of residential and commercial/office within the same development, it is anticipated there will be some internal trips between the two land uses. It is not anticipated a large reduction in trips due to internal capture, but using the ITE Trip Generation reduction, roughly 6 vehicles in the AM peak hour and 14 in the PM peak hour are anticipated to be shared between land uses.

It is anticipated the Northern Star Development will be constructed in three main phases. The first phase is planned for the 310 apartment units and will be fully occupied by the end of 2023. The second phase will consist of the 55 single-family units and the 110 townhomes and be constructed by the end of 2024. The third and final phase will consist of the 18 acres of commercial/office and is planned to be constructed by 2030. Therefore, the study years for this development are 2022 existing, 2023 background, 2024 background and 2030 background.

As part of the analysis for the Northern Star Development, projected future traffic volumes from surrounding developments were included in the Background traffic volumes. Currently the Amazon Falls Phase 1 development is under construction and is planned for full build-out by the end of this year. Therefore the 2023 Background traffic volumes include the full build-out traffic from the Amazon Falls Phase 1 development. The Amazon Falls Phase 2 development and the Fountain Park development are also planned developments in this area; however, they are planned for full build-out by 2025, therefore their projected traffic volumes are included in the 2030 Background traffic scenario. Recommendations from the traffic impact studies from these surrounding developments were implemented in the analysis for this Northern Star Development. Recommended improvements included:

- By 2023, SH 44 be widened to two lanes in each direction with separate right turn lanes at the Short Road intersection
- By 2025, the SH 44 and Short Road intersection be restricted to right-in/right-out with left turn (RIROLI) in movements only.

1.2 PRINCIPAL FINDINGS & RECOMMENDATIONS

The following is a summary of the principal findings and recommendations for the addition of the Northern Star Development.

2022 Existing Conditions

State Highway 44 and Hamlin Avenue

- Under the 2022 existing traffic conditions, each traffic movement at the SH 44 and Hamlin Avenue intersection currently functions at a Level of Service (LOS) "C" or better in the AM and PM peak hours. This intersection was recently constructed to only allow right-in and right-out movements. No additional improvements are needed.

Short Road and SH 44

- The northbound and southbound approaches of the SH 44 and Short Road, currently function at a LOS "F" on both the AM and PM peak hours. However, the volume to capacity ratio is acceptable, not higher than 1.0 for ACHD guidelines or 0.90 for ITD guidelines.

Amazon Drive and Short Road

- The Amazon Drive and Short Road intersection was recently constructed and currently functions with a LOS "A". Traffic volumes are fairly light at this intersection as the development in this area are under construction. No improvements are needed.

Shultz Court and Hamlin Avenue

- The Shultz Court and Hamlin Avenue currently consists of a northbound left turn and an eastbound right turn that accesses the residential home and farmland. This intersection functions with acceptable levels of service with very minimal traffic.

Roadway Segment LOS

Under the 2022 Existing conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2023 Background Traffic Conditions

Growth in traffic was applied using growth rates provided by COMPASS and also using the future build-out traffic volumes from the Amazon Phase 1 development to generate the 2023 Background traffic volumes. As outlined in the Idaho Transportation Invest Program (ITIP), SH 44 is planned to be widened to two lanes in each direction by 2023. Therefore, the 2023 Background traffic conditions illustrate SH 44 as two lanes in each direction at each of the study area intersections.

SH 44 and Hamlin Avenue

- With this intersection functioning and continuing to function as a right in/right out intersection, it is anticipated this intersection will continue to function at a LOS "C" or better under the background scenarios and no improvements are needed.

Short Road and SH 44

- With the proposed widening of SH 44, this intersection will continue to function with a LOS "F" in the northbound and southbound movements, and the v/c ratio will continue to function below the recommended threshold.

Amazon Drive and Short Road

- The traffic volumes for a fully built-out Amazon Falls 1 development were applied to this intersection to generate the 2023 Background traffic volumes. This intersection will continue to function with a LOS "A" in all movements and stop controlled movements along Short Road and free-flowing traffic along Amazon Drive.

Shultz Court and Hamlin Avenue

- In the 2023 Background conditions, this intersection will continue to function with minimal traffic that only accesses the single residents in this area and functions with acceptable levels of service.

Roadway Segment LOS

Under the 2023 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2023 Background with Project Traffic Conditions

By 2023, it is planned the Phase 1 of the Northern Star development will be at full buildout. This phase will consist of the 310 apartment units.

SH44 and Hamlin Avenue

- With the addition of the Northern Star Development's first phase, this intersection will continue to function with an acceptable LOS "C" or better and will continue to function as right-in/right-out.

Short Road and SH 44

- With the addition of the Northern Star Development's first phase, the Short Road and SH 44 intersection will continue to experience similar levels of service as it experiences without the proposed development. The northbound and southbound traffic movements will still experience a LOS "F". The v/c ratio for the southbound left turning movements will fall above the minimum required of 1.0 per Ada County standards.
- As has been proposed in the Amazon Falls Phase 2 traffic study, signaling this intersection will improve the LOS and v/c ratio, however, this location does not meet the signal spacing per Idaho Department of Transportation.

Short Road and Amazon Drive

- This intersection will continue to function with LOS "A" at each traffic movement with the addition of the Northern Star Development. No additional improvements are needed.

Hamlin Avenue and Shultz Court

- With the addition of Phase 1, the Shultz Court and Hamlin Avenue intersection will continue to function with acceptable levels of service.
- It is recommended Hamlin Avenue be constructed with one lane in each direction as a Collector Road, to provide access into the proposed development.

Hamlin Avenue and Amazon Drive

- With the addition of Phase 1, the Hamlin Avenue and Amazon Drive intersection will function with acceptable levels of service.
- Under the 2023 Background with Project scenario, the turning volumes at this intersection do not warrant separate left or right turn lanes. Therefore, each leg of the intersection should be constructed with one lane in each direction.

Hamlin Avenue and the Apartment Access

- This intersection will function with acceptable levels of service under the 2023 Background with Project scenario.
- It is recommended this intersection be constructed with one lane in each direction as the traffic volumes do not meet the warrants for separate left and right turn lanes.

Roadway Segment LOS

Under the 2023 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2024 Background Traffic Conditions

Hamlin Avenue and SH 44

- This intersection will continue to function with acceptable levels of service “C” or better under the 2024 Background traffic conditions. This intersection is proposed to continue to function as right-in/right-out. It is recommended SH 44 be widened to two lanes in each direction with a separate westbound right turn lane as planned with ITD.

Short Road and SH 44

- Under the 2024 Background traffic conditions, it is assumed the Amazon Falls Phase 1 development will be built-out. The traffic at this intersection will continue to function with a LOS “F” in the northbound and southbound directions.
- Amazon Falls 2 development is not planned for full build-out until 2025, however, this study does recommend this intersection follow the recommended access management strategies identified in the SH 44 corridor study. It was also recommended this intersection be restricted to a right-in/right-out with left-in.
- As outlined in the Amazon Falls Phase 2 traffic study, this intersection is planned to restrict left turn movements onto SH 44 as a right-in-right-out with left turn in movements. With this modification, the intersection will function with acceptable levels of service and also acceptable v/c ratios. It should be noted, by restricting turning movements at this intersection, it would be assumed vehicles from the Northern Star Development will not use this intersection to exit onto SH 44. With restrictions to left turn movements so vehicles can only exit to the west, most vehicles will just use the existing SH 44 and Hamlin Avenue intersection as it functions with the same controlled movements. With re-distribution of the traffic

from Phase 1, all intersections will function with acceptable levels of service and acceptable v/c ratios.

- It should also be noted if the Palmer Lane and SH 44 is signalized, which is planned, additional gaps in traffic along SH 44 may be present to reduce the average vehicle delay on Short Road which is not measured with the Synchro software.

Short Road and Amazon Drive

- In the 2024 Background scenario, the Short Road and Amazon Drive intersection will function with LOS "A" at each movement and v/c ratio's that are below 1.0.

Hamlin Avenue and Shultz Court

- This intersection will continue to function with minimal traffic under the 2024 Background scenario and the LOS and v/c ratios will be acceptable.

Roadway Segment LOS

Under the 2024 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2024 Background with Project Traffic Conditions

It is planned by 2024, Phase 2 of the Northern Star development will be constructed. This phase will consist of the townhomes and single-family homes located on the north end of the proposed project.

Hamlin Avenue and SH 44

- With the addition of phase 2 of the Northern Star development, the Hamlin Avenue and SH 44 will continue to function with right-in and right-out movements. SH 44 is planned to be widened to two lanes in the eastbound and westbound directions with a separate westbound right turn lane.

- This intersection will continue to function with acceptable LOS "C" or better and acceptable v/c ratios for each movement.

Short Road and SH 44

- Similar operations will continue to occur at the Short Road and SH 44 intersection. It is planned SH 44 will be widened to two lanes in each direction with separate right turn lanes in the eastbound and westbound directions. It is also planned the southbound approach of this intersection will consist of separate right/through and left turn lanes.
- With the addition of the phase 2 traffic from the Northern Star development, and the above-mentioned recommendations in the Background scenarios, this intersection will continue to function with LOS "F" in the southbound and northbound approaches and the southbound approach.
- If the Short Road and SH 44 intersection is modified to RIROLI movements, it is also assumed traffic from the Northern Star development will use Hamlin Avenue to access SH 44 and little to no traffic will use Short Road. With this assumption, all intersections will continue to function with acceptable levels of service and acceptable v/c ratios.

Short Road and Amazon Drive

- This intersection will continue to function with acceptable levels of service "A" and v/c ratios during both the AM and PM peak hours.
- This intersection will continue to function as a two-way stop-controlled intersection with the stop-control along Amazon Drive.

Hamlin Avenue and Shultz Court

- With the addition of Phase 2, this intersection will continue to function with one lane in each direction as turn lanes are not warranted with the projected traffic volumes.

- This intersection will function with acceptable LOS "A" and v/c ratios for all vehicular movements.

Hamlin Avenue and Amazon Drive

- This intersection also continues to function with acceptable LOS "A" and v/c ratios for all vehicular movements under the 2024 Background with Project traffic conditions.

Hamlin Avenue and Apartment Access

- This access to apartments will continue to function with a LOS "A" and v/c ratios for all traffic movements with the addition of phase 2.

Hamlin Avenue and Single-Family Housing Access

- This access will function with acceptable LOS "A" and v/c ratios for all traffic movements with the addition of Phase 2.
- It is recommended this intersection be constructed with one lane in each direction to service the development. Projected traffic volumes do not warrant the need for separate left or right turn lanes.

Roadway Segment LOS

Under the 2024 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2030 Background Traffic Conditions

Under the 2030 Background traffic conditions, it is planned multiple developments surrounding the proposed Northern Star Development will be fully built out and occupied. These developments include Amazon Falls Phase 2 (planned for full build-out by 2025), Fountain Park Subdivision (planned for full build-out by 2025).

Hamlin Avenue and SH 44

- This intersection will continue to function with acceptable LOS “D” or better under the AM and PM peak hours. This intersection is planned to continue to function with a right-in/right-out turning movements.

Short Road and SH 44

- This intersection will continue to function with unacceptable LOS and v/c ratios during the AM and PM peak hours for the northbound and southbound left turn movements. All other traffic movements will continue to function with acceptable LOS.
- If the recommendations from the Amazon Falls Phase 2 traffic study are implemented, this intersection would become a right-in/right-out with left in only movements. With these improvements, this intersection will function with acceptable LOS in all traffic movements. The v/c ratio will also be acceptable for each traffic movement. It should be noted, with future development that may occur to the east, Amazon Drive would extend to Palmer Lane and provide another access/connection of the roadways. It would be assumed with a connection along Amazon Drive to Palmer Lane, a large majority of the traffic making left turn movements at the Short Road and SH 44 intersection would use the Amazon Drive route to travel eastbound. However, since this connection of Amazon Drive will be driven by future developments, these developments are not planned so therefore this connection was not used in this study.

Short Road and Amazon Drive

- The Short Road and Amazon Drive intersection will continue to function with acceptable LOS “A” and v/c ratios during the AM and PM peak hour for each traffic movement.

Hamlin Avenue and Shultz Court

- It is assumed this intersection will continue to service the existing residents in this area under the 2030 Background conditions and will function with minimal delays, a LOS "A" and v/c ratios that all meet minimal requirements.

Roadway Segment LOS

Under the 2030 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2030 Background with Project Traffic Conditions

In 2030, it is planned the final Phase 3 will be constructed and fully built. This phase of the Northern Star Development will consist of roughly 18 acres of commercial/office space. For purposes of this study, 20% of the overall 18 acreage was determined to be occupied by the building and the land use for Office Space was used to calculate the project generated traffic for this phase.

Hamlin Avenue and SH 44

- The Hamlin Avenue and SH 44 intersection is planned to continue to function with right-in/right-out traffic movements.
- Under the AM peak hour this intersection is planned to continue to function with acceptable LOS "C" or better for each traffic movements and an acceptable v/c ratio.
- Under the PM peak hour, this intersection may function with a LOS "F", however the v/c ratio of 0.93 is acceptable per county guidelines but fall below the ITD guidelines of 0.90. However, since this intersection will not be signalized, and already functions with a right-in and right-out movements, no other improvements can be made.

Short Road and SH 44

- Similar to previous study years, this intersection will continue to function with unacceptable levels of service and v/c ratio for the northbound and southbound left turn movements. If this intersection is modified to RIROLI movements, the intersection will function with acceptable LOS and v/c ratios in the AM peak hour, however will fall below the threshold in the PM peak hour.
- If this intersection cannot be signalized, the connection of Amazon Drive to Palmer Lane will help provide an additional route for traffic to exit the development and travel eastbound along SH 44.

Short Road and Amazon Drive

- This intersection will continue to function with acceptable LOS "A" and v/c ratios under both the AM and PM peak hours. It is recommended this intersection be designed and constructed to meet city standards. It is also recommended adequate sight distance be accounted for in the design at this intersection with no obstructions within the required line of sight.

Hamlin Avenue and Amazon Drive

- With the addition of the Northern Star Phase 3, the west leg of this intersection will be added to this intersection. This intersection is recommended to be constructed with one lane in each direction as turn lane warrants are not met with the projected traffic volumes. This intersection will also continue to function with acceptable LOS "A" and v/c ratios for each traffic movements under the AM and PM peak hours.

Hamlin Avenue and Shultz Court

- Each turning movement at the Hamlin Avenue and Shultz Court intersection will continue to function with acceptable LOS "B" or better under the 2030

Background with Project traffic conditions and continue with acceptable v/c ratios.

Hamlin Avenue and Apartment Access

- Each traffic movement at this intersection will also continue to function with acceptable LOS and v/c ratio.

Hamlin Avenue and Single-Family Housing Access

- This intersection will also continue to function with acceptable LOS "A" and acceptable v/c ratio for each traffic movements.

Roadway Segment LOS

Under the 2030 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

Ada County Utility Coordinating Council

Developer/Local Improvement District Right of Way Improvements Guideline Request

Purpose: To develop the necessary avenue for proper notification to utilities of local highway and road improvements, to help the utilities in budgeting and to clarify the already existing process.

- 1) **Notification:** Within five (5) working days upon notification of required right of way improvements by Highway entities, developers shall provide written notification to the affected utility owners and the Ada County Utility Coordinating Council (UCC). Notification shall include but not be limited to, project limits, scope of roadway improvements/project, anticipated construction dates, and any portions critical to the right of way improvements and coordination of utilities.
- 2) **Plan Review:** The developer shall provide the highway entities and all utility owners with preliminary project plans and schedule a plan review conference. Depending on the scale of utility improvements, a plan review conference may not be necessary, as determined by the utility owners. Conference notification shall also be sent to the UCC. During the review meeting the developer shall notify utilities of the status of right of way/easement acquisition necessary for their project. At the plan review conference each company shall have the right to appeal, adjust and/or negotiate with the developer on its own behalf. Each utility shall provide the developer with a letter of review indicating the costs and time required for relocation of its facilities. Said letter of review is to be provided within thirty calendar days after the date of the plan review conference.
- 3) **Revisions:** The developer is responsible to provide utilities with any revisions to preliminary plans. Utilities may request an updated plan review meeting if revisions are made in the preliminary plans which affect the utility relocation requirements. Utilities shall have thirty days after receiving the revisions to review and comment thereon.
- 4) **Final Notification:** The developer will provide highway entities, utility owners and the UCC with final notification of its intent to proceed with right of way improvements and include the anticipated date work will commence. This notification shall indicate that the work to be performed shall be pursuant to final approved plans by the highway entity. The developer shall schedule a preconstruction meeting prior to right of way improvements. Utility relocation activity shall be completed within the times established during the preconstruction meeting, unless otherwise agreed upon.

Notification to the Ada County UCC can be sent to: 50 S. Cole Rd. Boise 83707, or Visit iducc.com for e-mail notification information.

Development Process Checklist

Items Completed to Date:

- Submit a development application to a City or to Ada County
- The City or the County will transmit the development application to ACHD
- The ACHD **Planning Review Section** will receive the development application to review
- The **Planning Review Section** will do one of the following:
 - Send a “**No Review**” letter to the applicant stating that there are no site specific conditions of approval at this time.
 - Write a **Staff Level** report analyzing the impacts of the development on the transportation system and evaluating the proposal for its conformance to District Policy.
 - Write a **Commission Level** report analyzing the impacts of the development on the transportation system and evaluating the proposal for its conformance to District Policy.

Items to be completed by Applicant:

- For **ALL** development applications, including those receiving a “**No Review**” letter:
 - The applicant should submit one set of engineered plans directly to ACHD for review by the **Development Review Section** for plan review and assessment of impact fees. (Note: if there are no site improvements required by ACHD, then architectural plans may be submitted for purposes of impact fee assessment.)
 - The applicant is required to get a permit from Construction Services (ACHD) for ANY work in the right-of-way, including, but not limited to, driveway approaches, street improvements and utility cuts.
- Pay Impact Fees prior to issuance of building permit. Impact fees cannot be paid prior to plan review approval.

DID YOU REMEMBER:

Construction (Non-Subdivisions)

Driveway or Property Approach(s)

- Submit a “Driveway Approach Request” form to ACHD Construction (for approval by Development Services & Traffic Services). There is a one week turnaround for this approval.

Working in the ACHD Right-of-Way

- Four business days prior to starting work have a bonded contractor submit a “Temporary Highway Use Permit Application” to ACHD Construction – Permits along with:
 - a) Traffic Control Plan
 - b) An Erosion & Sediment Control Narrative & Plat, done by a Certified Plan Designer, if trench is >50’ or you are placing >600 sf of concrete or asphalt.

Construction (Subdivisions)

Sediment & Erosion Submittal

- At least one week prior to setting up a Pre-Construction Meeting an Erosion & Sediment Control Narrative & Plan, done by a Certified Plan Designer, must be turned into ACHD Construction to be reviewed and approved by the ACHD Stormwater Section.

Idaho Power Company

- Vic Steelman at Idaho Power must have his IPCO approved set of subdivision utility plans prior to Pre-Con being scheduled.

- Final Approval from Development Services is required** prior to scheduling a Pre-Con.

Request for Appeal of Staff Decision

1. **Appeal of Staff Decision:** The Commission shall hear and decide appeals by an applicant of the final decision made by the Development Services Manager when it is alleged that the Development Services Manager did not properly apply this section 7101.6, did not consider all of the relevant facts presented, made an error of fact or law, abused discretion or acted arbitrarily and capriciously in the interpretation or enforcement of the ACHD Policy Manual.
 - a. **Filing Fee:** The Commission may, from time to time, set reasonable fees to be charged the applicant for the processing of appeals, to cover administrative costs.
 - b. **Initiation:** An appeal is initiated by the filing of a written notice of appeal with the Secretary and Clerk of the District, which must be filed within ten (10) working days from the date of the decision that is the subject of the appeal. The notice of appeal shall refer to the decision being appealed, identify the appellant by name, address and telephone number and state the grounds for the appeal. The grounds shall include a written summary of the provisions of the policy relevant to the appeal and/or the facts and law relied upon and shall include a written argument in support of the appeal. The Commission shall not consider a notice of appeal that does not comply with the provisions of this subsection.
 - c. **Time to Reply:** The Development Services Manager shall have ten (10) working days from the date of the filing of the notice of appeal to reply to the notice of the appeal, and may during such time meet with the appellant to discuss the matter, and may also consider and/or modify the decision that is being appealed. A copy of the reply and any modifications to the decision being appealed will be provided to the appellant prior to the Commission hearing on the appeal.
 - d. **Notice of Hearing:** Unless otherwise agreed to by the appellant, the hearing of the appeal will be noticed and scheduled on the Commission agenda at a regular meeting to be held within thirty (30) days following the delivery to the appellant of the Development Services Manager's reply to the notice of appeal. A copy of the decision being appealed, the notice of appeal and the reply shall be delivered to the Commission at least one (1) week prior to the hearing.
 - e. **Action by Commission:** Following the hearing, the Commission shall either affirm or reverse, in whole or part, or otherwise modify, amend or supplement the decision being appealed, as such action is adequately supported by the law and evidence presented at the hearing.



ADA COUNTY DEVELOPMENT SERVICES

200 W. FRONT STREET, BOISE, IDAHO 83702-7300
<https://adacounty.id.gov/developmentservices>

PHONE (208) 287-7900
FAX (208) 287-7909

BUILDING • COMMUNITY PLANNING • ENGINEERING & SURVEYING • PERMITTING

February 27, 2023

Shawn Nickel
City of Star Planning & Zoning
10769 W State St
Star, ID 83669

RE: AZ-22-11 / Northeast Corner of SH-16 and SH-44 / Talega Village Subdivision

Shawn,

The City of Star has requested feedback regarding the proposed annexation and preliminary plat for the Talega Village Subdivision, which will consist of 55 single-family homes, 98 Townhome units, 340 multi-family units, and 1 commercial lot on 65.7 acres located on the northeast corner of SH-16 and SH-44/ State Street (Parcels: R3720002880, R3720003030, R3720002500, R3720002480, R3720001505, R3720002412, & S0409417201). Ada County supports the application due to its compatibility with the Star Comprehensive Plan, as adopted by Ada County, which designates the site as a mixture of *Multiple Use 1*, and *Commercial*.

The proposal to include single-family and multi-family housing within the development is supported by *Multiple Use Policy 2*, which encourages diverse housing types and densities, and the proposed mix of residential and commercial development is compatible with *Multiple Use Policy 6* which encourages residential uses near commercial uses. The proposal to set aside over 34% (16.4 acres) as common area, which will include playgrounds, dog parks, and pedestrian pathways, is also compatible with *Residential Policy 3* of the Star Comprehensive Plan which encourages neighborhood parks and open spaces to be provided within residential areas.

It is suggested that a pedestrian pathway be considered along the Dry Creek Canal as encouraged by *Goal 1.2d* of the Ada County Comprehensive Plan, which supports the enhancement of manmade drainage ways as valuable resources for recreational pathways and potential pedestrian and bicycle routes.

Thank you for this opportunity to provide feedback.

Sincerely,

Stacey Yarrington

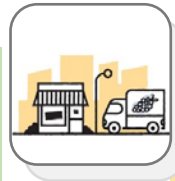
Stacey Yarrington
Community & Regional Planner
Ada County Development Services

Communities in Motion (CIM) Development Review Checklist

Development Name: Talega Village
 CIM Vision Category: Future Neighborhood
 Consistent with CIM Vision? YES
 New Households: 493 New Jobs: ±220



Safety
 How safe and comfortable is the nearest major road (minor arterial or above) for bicyclists and pedestrians? Analysis is limited to existing roadway conditions.
 State Highway 44 (West State Street)
 Pedestrian level of stress
 Bicycle level of stress



Economic Vitality
 To what extent does the project enable people, government, and businesses to prosper?
 Economic Activity Center Access
 Impact on Existing Surrounding Farmland
 Net Fiscal Impact



Convenience
 What services are available within 0.5 miles (green) or 1 mile (yellow) of the project?
 Nearest bus stop
 Nearest public school
 Nearest public park



Quality of Life
 Checked boxes indicate that additional information is attached.
 Active Transportation
 Automobile Transportation
 Public Transportation
 Roadway Projects

Improves performance Does not improve or reduce performance Reduces performance

Comments:
 When developing the site plan for Phase 4 consider including a public multiuse pathway along the southern boundary, as shown in the City of Star's [Pathways Master Plan](#). To support future transit along State Street consider installing sidewalks that are wide enough to allow for passenger and wheelchair loading and unloading (72-84 inches).

Who we are: The Community Planning Association of Southwest Idaho (COMPASS) is the metropolitan planning organization for Ada and Canyon Counties. This review evaluates whether land developments are consistent with [Communities in Motion](#), the regional long-range transportation plan for Ada and Canyon Counties. This checklist is not intended to be prescriptive, but rather a guidance document. Past checklists are available [online](#). See the [Development Review User Guide](#) for more information on the red, yellow, and green checklist thresholds.

Complete Network Appendix

Checkmarks (✓) below indicate suggested changes to a site plan, based on the [COMPASS Complete Network Policy \(No. 2022-01\)](#). Both the Complete Network Policy and site-specific suggestions are intended to better align land use with identified transportation uses in the corridor. Please see the Complete Network [map](#) for primary and secondary uses for roadways (minor arterial and above) in Ada and Canyon Counties.

Corridor Name: State Highway 44 (West State Street)

Primary Use: Public Transportation

Secondary Use: Freight

Land Use to Support Public Transportation

- ✓ Orient buildings toward potential transit corridors, with parking on the back side rather than the street side

The COMPASS-compiled catalog of Transit Oriented Developments in the [Communities in Motion Implementation Guidebook](#) provides examples of how higher-density development can integrate in existing neighborhoods.

Public Transportation Infrastructure

- ✓ Provide sidewalks and/or bike paths designed to meet the needs of all users (including elderly, children, and individuals with disabilities) to connect development to transit stops
- ✓ Include doors with 32 inches of clear passage space, and at least one zero-step entrance and accessible bathroom on the main floor to support those with limited mobility

Fiscal Impact Analysis

Below are the expected revenues and costs to local governments from this project. The purpose of this analysis is to help the public, stakeholders, and the decision-makers better manage growth.

Capital and operating expenditures are determined based on service and infrastructure needs, including persons per household, student generation rates, lot sizes, street frontages, vehicle trip and trip adjustment factors, average trip lengths, construction values, income, discretionary spending, and employment densities.

Net Fiscal Impact by Agency



City



County



Highway District



School District

Breakeven point across all agencies: 16 years

Additional Information:

- City of Star fiscal impact is estimated to be positive prior to phase 4.
- The largest estimated expense to City of Star is law enforcement (50% of total expenses).
- Highway District fiscal impact is estimated to be positive in stabilization year (on-going impact), however capital costs to state highway system result in breakeven point beyond 20 years.

Disclaimer: This tool only looks out 20 years and does not include replacement costs for infrastructure, public utilities, or unfunded transportation needs in the project area. More information about the COMPASS Fiscal Impact Tool is available at:

www.compassidaho.org/prodserv/fiscalimpact.htm

Long-Term Funded and Unfunded Capital Projects

CIM Priority Corridor:

State Highway 44 (West State Street)

Widening State Highway 44 (West State Street) is a short-term funded project in *Communities in Motion 2050* (Key# 20266 in the FY23-29 Transportation Improvement Program).

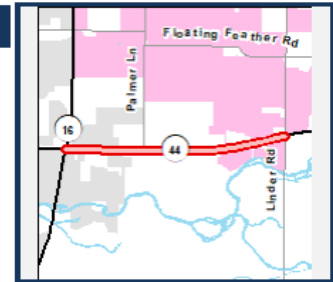
More information on transportation needs and projects based on forecasted future growth is available at: <https://compassidaho.maps.arcgis.com/apps/instant/portfolio/index.html?appid=6c1eebca233d49c4935825136f338fac>

Short-Term Funded Capital Projects

SH-44 (State Street), SH-16 to Linder Road, Ada County

Regionally Significant: Inflated **TIP Achievement:**
 Key #: 20266 System Performance
 Requesting Agency: ITD NHS-LOTTR
 Project Year: 2023 Safety
 Total Previous Allocations: \$654
 Total Programmed Budget: \$7,017
 Total Cost (Prev. + Prog.): \$7,671

Project Description



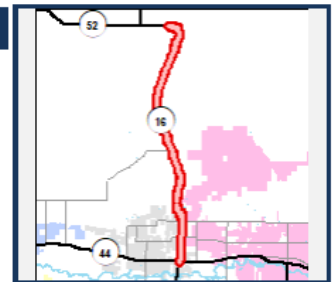
Add an additional westbound and eastbound lane to improve congestion and reduce crashes along State Highway 44 (State Street), from State Highway 16 to Linder Road near the City of Eagle.

Funding Source			Program					Local Match	
HB132 and HB312			State Hwy - Safety & Capacity (Capacity)					100.00%	
Cost Year*	Preliminary Engineering	Preliminary Engineering Consulting	Right-of-Way	Utilities	Construction Engineering	Construction	Total	Federal Share	Local Share
2023	0	0	0	0	1,145	5,872	7,017	0	7,017
Fund Totals:	\$0	\$0	\$0	\$0	\$1,145	\$5,872	\$7,017	\$0	\$7,017

Study, SH-16, SH-44 to Junction SH-52, Environmental Reevaluation

Regionally Significant: Inflated **TIP Achievement:**
 Key #: 23175 Support
 Requesting Agency: ITD
 Project Year: 2023
 Total Previous Allocations: \$0
 Total Programmed Budget: \$3,000
 Total Cost (Prev. + Prog.): \$3,000

Project Description



Reevaluate the environmental assessment regarding proposed improvements to State Highway 16 from State Highway 44 in Ada County to the junction of State Highway 52 in the City of Emmett to reaffirm the Idaho Transportation Department's proposed improvements on the corridor.

Funding Source			Program					Local Match	
STBG-State			State Hwy - Early Development					7.34%	
Cost Year*	Preliminary Engineering	Preliminary Engineering Consulting	Right-of-Way	Utilities	Construction Engineering	Construction	Total	Federal Share	Local Share
2023	50	2,950	0	0	0	0	3,000	2,780	220
Fund Totals:	\$50	\$2,950	\$0	\$0	\$0	\$0	\$3,000	\$2,780	\$220

Source: *The COMPASS Transportation Improvement Program (TIP). The TIP is a short-range (seven-year) budget of transportation projects for which federal funds are anticipated, along with non-federally funded projects that are regionally significant and is available at:*

https://www.compassidaho.org/documents/prodserv/trans/FY22/FY23_29TIPdoc.pdf



West Ada

SCHOOL DISTRICT

March 29, 2023

RE: Talega Village Subdivision
PP-22-17, CU-22-05

Dear Planners:

West Ada School District has experienced sustained growth in student enrollment during the last ten years. Based on current enrollment data specific to new development (within the last 5 years) in proximity to this proposed development, we estimate this development consisting of 55 single-family lots, 98 townhomes and 340 multifamily units could house approximately **109 school aged children**. Approval of this application will affect enrollments at the following schools in West Ada School District based on attendance areas for the 2022-23 school year. For your information, included in this data is the number of approved lots and multi-family units approved by this and other agencies.

	<u>Enrollment</u>	<u>Capacity</u>	<u>Approved lots per attendance area</u>	<u>Approved MF units per attendance area</u>	<u>Projected Students from Approved Dev.</u>
Eagle Elementary	342	500	2841	60	259
Star Middle School	906	1000	9938	622	913
Eagle High School	1787	1800	6499	357	859
<u>School of Choice Options</u>					
Galileo STEM Academy	744	775	N/A	N/A	

West Ada School District supports economic growth. Based on future enrollment forecasts, the middle and high schools are projected to be operating above building capacity upon the completion of the previously approved lots. Future developments will continue to have an impact on the district's capacity.

To meet the need for additional school capacity in this area one or more of the following may need to be accomplished:

- Transporting students to an alternate school with available classrooms.
- Attendance area adjustments if there is availability in a nearby school.
- Portable classrooms placed on the property.
- Passage of a bond or plant facilities levy to build new schools to fit the enrollment needs.

Please encourage the developer to provide safe walkways, bike paths and pedestrian access for our students.

Sincerely,

Marci Horner
Planning and Development Administrator



Your Safety • Your Mobility
Your Economic Opportunity

IDAHO TRANSPORTATION DEPARTMENT

P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

March 21, 2023

City of Star
Shawn Nickels, P&Z Administrator
10769 W State St
Star, ID 83669
snickel@staridaho.org

Re: Talega Village Subdivision, File #s: AZ-22-11, RZ-22-03, DA-22-12, CU-22-05, PP-22-17, PR-22-08

Dear Mr. Nickels,

Idaho Transportation Department (ITD) appreciates this opportunity to provide comments regarding Talega Village Subdivision located near milepost 100.2, on the east side of SH-16 and north of SH-44, Star, Idaho. Please see the below comments:

1. This project abuts State Highway 16 (SH-16).
2. No direct access to the State Highway system has been requested with this application and none is approved.
3. N Hamlin Avenue is currently designed as a right-in right-out. It is possible that Hamlin will eventually be a right-in only. The location of N Hamlin Avenue and SH-44 is the beginning of the taper for the widening of Chinden to three (3) more lanes to its west. The development to the east of Hamlin is supposed to eventually have its interior road connected to Hamlin at which point a right-out can happen there.
4. Traffic generation numbers were not provided with this application. ITD needs more information on the trip generations to determine what mitigations if any, the applicant may be required to construct on the State Highway system. If the new development generates 100 or more new trips in the peak hour or 1,000 new trips in a day, a Traffic Impact Study (TIS) is required. Mitigations identified by the Traffic Impact Study shall be the responsibility of the applicant to install.
5. Idaho Code 40-1910 does not allow advertising within the right-of-way of any State highway.
6. The Idaho Administrative Procedures Act (IDAPA) 39.03.60 governs advertising along the State highway system. The applicant may contact Justin Pond, Program Manager for ITD's Headquarters Right-of-Way Section at (208) 334-8832 for more information.

The City is reminded the SH-20/26 corridor is already congested. This project will increase the number of vehicle trips in the corridor. As the City continues to add additional trips to the corridor through development, the congestion will worsen until the roadway system is ultimately overloaded and fails.

ITD reserves the right to make further comments upon review of the submitted TIS and any other documentation.

Sincerely,

Wendy I. Howell, Development Services Coordinator



Ada County Transmittal
Division of Community and Environmental Health

Return to:

- ACZ
- Boise
- Eagle
- Garden City
- Meridian
- Kuna
- Star

Rezone/OTD # _____

Conditional/Accessory Use # _____

Preliminary / Final / Short Plat PP-22-17

Development Name/Section Talega Village

- 1. We have No Objections to this Proposal.
- 2. We recommend Denial of this Proposal.
- 3. Specific knowledge as to the exact type of use must be provided before we can comment on this Proposal.
- 4. Before we can comment concerning individual sewage disposal, we will require more data concerning the depth of:
 - high seasonal ground water
 - waste flow characteristics
 - bedrock from original grade
 - other _____
- 5. This office may require a study to assess the impact of nutrients and pathogens to receiving ground waters and surface waters.
- 6. After written approvals from appropriate entities are submitted, we can approve this proposal for:
 - central sewage
 - community sewage system
 - interim sewage
 - central water
 - individual sewage
 - individual water
 - community water well
- 7. The following plan(s) must be submitted to and approved by the Idaho Department of Environmental Quality:
 - central sewage
 - community sewage system
 - sewage dry lines
 - central water
 - community water
- 8. Infiltration beds for storm water disposal are considered shallow injection wells. If they are not in the City of Boise or ACHD right-of-way, an application and fee per well, vicinity map and construction plans must be submitted to CDH.
- 9. If restroom or plumbing facilities are to be installed, then a sewage system MUST be installed to meet Idaho State Sewage Regulations.
- 10. An accessory use application, fee, detailed site plan and floor plans must be submitted to CDH for review.
- 11. Land development application, fee per lot, test holes and full engineering report is required.
- 12. CDH makes no guarantee a septic permit will be issued on the split off lot. A speculative site evaluation is recommended.
- 13. We will require plans be submitted for a plan review for any:
 - food establishment
 - swimming pools or spas
 - beverage establishment
 - grocery store
 - child care center

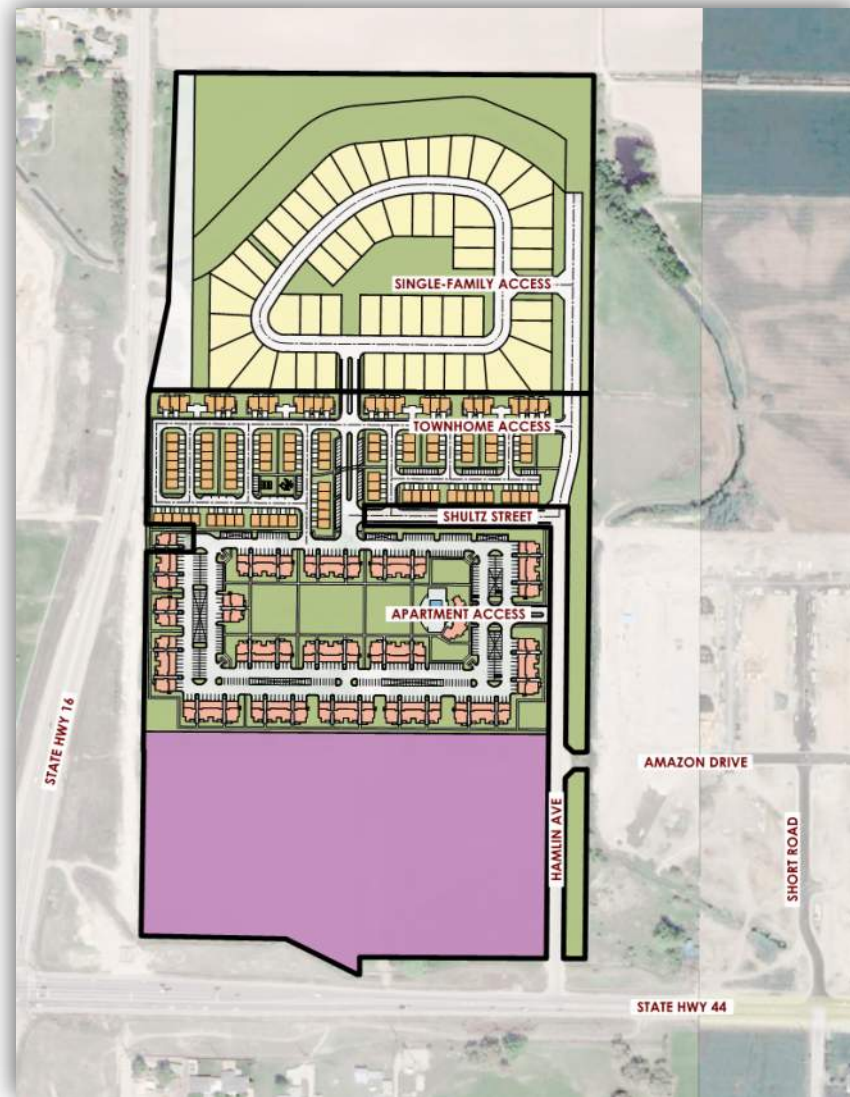
14. _____

Reviewed By: [Signature] Date: 3/3/23

NORTHERN STAR DEVELOPMENT

TRAFFIC IMPACT STUDY

STAR, IDAHO



August, 2022

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1.0 Executive Summary

1.1 DESCRIPTION OF PROJECT

This report presents the results of a traffic impact analysis for the Northern Star Development, located in Star, Idaho. The project site is located north of State Highway (SH) 44, east of State Highway 16 and west of Hamlin Avenue. Currently the proposed parcel of land consists of farmland with a few residential homes. Figure 1 illustrates the Vicinity Map and the location of this development related to the adjacent roadway network.

This proposed Northern Star Development will consist of:

- 55 single-family dwelling units
- 110 townhome units
- 310 apartment units
- 18 acres of commercial/office

Refer to Figure 2 for the site plan of this development and the location of the proposed accesses onto the surrounding roadways.

Coordinating with Ada County (ACHD) and Idaho Transportation Department (ITD), it was determined the study area for this traffic impact study would include the following intersections:

- Hamlin Avenue/SH 44 (existing)
- Short Road/SH 44 (existing)
- Amazon Drive/Short Lane (existing)
- Shultz Street/Hamlin Avenue (existing)
- Amazon Drive/Hamlin Avenue (future)

It is anticipated, at full build-out, the Northern Star Development will generate 4,529 average daily trips with 379 AM peak hour trips and 417 PM peak hour trips. With a mix of residential and commercial/office within the same development, it is anticipated there will be some internal trips between the two land uses. It is not anticipated a large reduction in trips due to internal capture, but using the ITE Trip Generation reduction, roughly 6 vehicles in the AM peak hour and 14 in the PM peak hour are anticipated to be shared between land uses.

It is anticipated the Northern Star Development will be constructed in three main phases. The first phase is planned for the 310 apartment units and will be fully occupied by the end of 2023. The second phase will consist of the 55 single-family units and the 110 townhomes and be constructed by the end of 2024. The third and final phase will consist of the 18 acres of commercial/office and is planned to be constructed by 2030. Therefore, the study years for this development are 2022 existing, 2023 background, 2024 background and 2030 background.

As part of the analysis for the Northern Star Development, projected future traffic volumes from surrounding developments were included in the Background traffic volumes. Currently the Amazon Falls Phase 1 development is under construction and is planned for full build-out by the end of this year. Therefore the 2023 Background traffic volumes include the full build-out traffic from the Amazon Falls Phase 1 development. The Amazon Falls Phase 2 development and the Fountain Park development are also planned developments in this area; however, they are planned for full build-out by 2025, therefore their projected traffic volumes are included in the 2030 Background traffic scenario. Recommendations from the traffic impact studies from these surrounding developments were implemented in the analysis for this Northern Star Development. Recommended improvements included:

- By 2023, SH 44 be widened to two lanes in each direction with separate right turn lanes at the Short Road intersection
- By 2025, the SH 44 and Short Road intersection be restricted to right-in/right-out with left turn (RIROLI) in movements only.

1.2 PRINCIPAL FINDINGS & RECOMMENDATIONS

The following is a summary of the principal findings and recommendations for the addition of the Northern Star Development.

2022 Existing Conditions

State Highway 44 and Hamlin Avenue

- Under the 2022 existing traffic conditions, each traffic movement at the SH 44 and Hamlin Avenue intersection currently functions at a Level of Service (LOS) "C" or better in the AM and PM peak hours. This intersection was recently constructed to only allow right-in and right-out movements. No additional improvements are needed.

Short Road and SH 44

- The northbound and southbound approaches of the SH 44 and Short Road, currently function at a LOS "F" on both the AM and PM peak hours. However, the volume to capacity ratio is acceptable, not higher than 1.0 for ACHD guidelines or 0.90 for ITD guidelines.

Amazon Drive and Short Road

- The Amazon Drive and Short Road intersection was recently constructed and currently functions with a LOS "A". Traffic volumes are fairly light at this intersection as the development in this area are under construction. No improvements are needed.

Shultz Court and Hamlin Avenue

- The Shultz Court and Hamlin Avenue currently consists of a northbound left turn and an eastbound right turn that accesses the residential home and farmland. This intersection functions with acceptable levels of service with very minimal traffic.

Roadway Segment LOS

Under the 2022 Existing conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2023 Background Traffic Conditions

Growth in traffic was applied using growth rates provided by COMPASS and also using the future build-out traffic volumes from the Amazon Phase 1 development to generate the 2023 Background traffic volumes. As outlined in the Idaho Transportation Invest Program (ITIP), SH 44 is planned to be widened to two lanes in each direction by 2023. Therefore, the 2023 Background traffic conditions illustrate SH 44 as two lanes in each direction at each of the study area intersections.

SH 44 and Hamlin Avenue

- With this intersection functioning and continuing to function as a right in/right out intersection, it is anticipated this intersection will continue to function at a LOS "C" or better under the background scenarios and no improvements are needed.

Short Road and SH 44

- With the proposed widening of SH 44, this intersection will continue to function with a LOS "F" in the northbound and southbound movements, and the v/c ratio will continue to function below the recommended threshold.

Amazon Drive and Short Road

- The traffic volumes for a fully built-out Amazon Falls 1 development were applied to this intersection to generate the 2023 Background traffic volumes. This intersection will continue to function with a LOS "A" in all movements and stop controlled movements along Short Road and free-flowing traffic along Amazon Drive.

Shultz Court and Hamlin Avenue

- In the 2023 Background conditions, this intersection will continue to function with minimal traffic that only accesses the single residents in this area and functions with acceptable levels of service.

Roadway Segment LOS

Under the 2023 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2023 Background with Project Traffic Conditions

By 2023, it is planned the Phase 1 of the Northern Star development will be at full buildout. This phase will consist of the 310 apartment units.

SH44 and Hamlin Avenue

- With the addition of the Northern Star Development's first phase, this intersection will continue to function with an acceptable LOS "C" or better and will continue to function as right-in/right-out.

Short Road and SH 44

- With the addition of the Northern Star Development's first phase, the Short Road and SH 44 intersection will continue to experience similar levels of service as it experiences without the proposed development. The northbound and southbound traffic movements will still experience a LOS "F". The v/c ratio for the southbound left turning movements will fall above the minimum required of 1.0 per Ada County standards.
- As has been proposed in the Amazon Falls Phase 2 traffic study, signaling this intersection will improve the LOS and v/c ratio, however, this location does not meet the signal spacing per Idaho Department of Transportation.

Short Road and Amazon Drive

- This intersection will continue to function with LOS "A" at each traffic movement with the addition of the Northern Star Development. No additional improvements are needed.

Hamlin Avenue and Shultz Court

- With the addition of Phase 1, the Shultz Court and Hamlin Avenue intersection will continue to function with acceptable levels of service.
- It is recommended Hamlin Avenue be constructed with one lane in each direction as a Collector Road, to provide access into the proposed development.

Hamlin Avenue and Amazon Drive

- With the addition of Phase 1, the Hamlin Avenue and Amazon Drive intersection will function with acceptable levels of service.
- Under the 2023 Background with Project scenario, the turning volumes at this intersection do not warrant separate left or right turn lanes. Therefore, each leg of the intersection should be constructed with one lane in each direction.

Hamlin Avenue and the Apartment Access

- This intersection will function with acceptable levels of service under the 2023 Background with Project scenario.
- It is recommended this intersection be constructed with one lane in each direction as the traffic volumes do not meet the warrants for separate left and right turn lanes.

Roadway Segment LOS

Under the 2023 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2024 Background Traffic Conditions

Hamlin Avenue and SH 44

- This intersection will continue to function with acceptable levels of service “C” or better under the 2024 Background traffic conditions. This intersection is proposed to continue to function as right-in/right-out. It is recommended SH 44 be widened to two lanes in each direction with a separate westbound right turn lane as planned with ITD.

Short Road and SH 44

- Under the 2024 Background traffic conditions, it is assumed the Amazon Falls Phase 1 development will be built-out. The traffic at this intersection will continue to function with a LOS “F” in the northbound and southbound directions.
- Amazon Falls 2 development is not planned for full build-out until 2025, however, this study does recommend this intersection follow the recommended access management strategies identified in the SH 44 corridor study. It was also recommended this intersection be restricted to a right-in/right-out with left-in.
- As outlined in the Amazon Falls Phase 2 traffic study, this intersection is planned to restrict left turn movements onto SH 44 as a right-in-right-out with left turn in movements. With this modification, the intersection will function with acceptable levels of service and also acceptable v/c ratios. It should be noted, by restricting turning movements at this intersection, it would be assumed vehicles from the Northern Star Development will not use this intersection to exit onto SH 44. With restrictions to left turn movements so vehicles can only exit to the west, most vehicles will just use the existing SH 44 and Hamlin Avenue intersection as it functions with the same controlled movements. With re-distribution of the traffic

from Phase 1, all intersections will function with acceptable levels of service and acceptable v/c ratios.

- It should also be noted if the Palmer Lane and SH 44 is signalized, which is planned, additional gaps in traffic along SH 44 may be present to reduce the average vehicle delay on Short Road which is not measured with the Synchro software.

Short Road and Amazon Drive

- In the 2024 Background scenario, the Short Road and Amazon Drive intersection will function with LOS "A" at each movement and v/c ratio's that are below 1.0.

Hamlin Avenue and Shultz Court

- This intersection will continue to function with minimal traffic under the 2024 Background scenario and the LOS and v/c ratios will be acceptable.

Roadway Segment LOS

Under the 2024 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2024 Background with Project Traffic Conditions

It is planned by 2024, Phase 2 of the Northern Star development will be constructed. This phase will consist of the townhomes and single-family homes located on the north end of the proposed project.

Hamlin Avenue and SH 44

- With the addition of phase 2 of the Northern Star development, the Hamlin Avenue and SH 44 will continue to function with right-in and right-out movements. SH 44 is planned to be widened to two lanes in the eastbound and westbound directions with a separate westbound right turn lane.

- This intersection will continue to function with acceptable LOS "C" or better and acceptable v/c ratios for each movement.

Short Road and SH 44

- Similar operations will continue to occur at the Short Road and SH 44 intersection. It is planned SH 44 will be widened to two lanes in each direction with separate right turn lanes in the eastbound and westbound directions. It is also planned the southbound approach of this intersection will consist of separate right/through and left turn lanes.
- With the addition of the phase 2 traffic from the Northern Star development, and the above-mentioned recommendations in the Background scenarios, this intersection will continue to function with LOS "F" in the southbound and northbound approaches and the southbound approach.
- If the Short Road and SH 44 intersection is modified to RIROLI movements, it is also assumed traffic from the Northern Star development will use Hamlin Avenue to access SH 44 and little to no traffic will use Short Road. With this assumption, all intersections will continue to function with acceptable levels of service and acceptable v/c ratios.

Short Road and Amazon Drive

- This intersection will continue to function with acceptable levels of service "A" and v/c ratios during both the AM and PM peak hours.
- This intersection will continue to function as a two-way stop-controlled intersection with the stop-control along Amazon Drive.

Hamlin Avenue and Shultz Court

- With the addition of Phase 2, this intersection will continue to function with one lane in each direction as turn lanes are not warranted with the projected traffic volumes.

- This intersection will function with acceptable LOS "A" and v/c ratios for all vehicular movements.

Hamlin Avenue and Amazon Drive

- This intersection also continues to function with acceptable LOS "A" and v/c ratios for all vehicular movements under the 2024 Background with Project traffic conditions.

Hamlin Avenue and Apartment Access

- This access to apartments will continue to function with a LOS "A" and v/c ratios for all traffic movements with the addition of phase 2.

Hamlin Avenue and Single-Family Housing Access

- This access will function with acceptable LOS "A" and v/c ratios for all traffic movements with the addition of Phase 2.
- It is recommended this intersection be constructed with one lane in each direction to service the development. Projected traffic volumes do not warrant the need for separate left or right turn lanes.

Roadway Segment LOS

Under the 2024 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2030 Background Traffic Conditions

Under the 2030 Background traffic conditions, it is planned multiple developments surrounding the proposed Northern Star Development will be fully built out and occupied. These developments include Amazon Falls Phase 2 (planned for full build-out by 2025), Fountain Park Subdivision (planned for full build-out by 2025).

Hamlin Avenue and SH 44

- This intersection will continue to function with acceptable LOS “D” or better under the AM and PM peak hours. This intersection is planned to continue to function with a right-in/right-out turning movements.

Short Road and SH 44

- This intersection will continue to function with unacceptable LOS and v/c ratios during the AM and PM peak hours for the northbound and southbound left turn movements. All other traffic movements will continue to function with acceptable LOS.
- If the recommendations from the Amazon Falls Phase 2 traffic study are implemented, this intersection would become a right-in/right-out with left in only movements. With these improvements, this intersection will function with acceptable LOS in all traffic movements. The v/c ratio will also be acceptable for each traffic movement. It should be noted, with future development that may occur to the east, Amazon Drive would extend to Palmer Lane and provide another access/connection of the roadways. It would be assumed with a connection along Amazon Drive to Palmer Lane, a large majority of the traffic making left turn movements at the Short Road and SH 44 intersection would use the Amazon Drive route to travel eastbound. However, since this connection of Amazon Drive will be driven by future developments, these developments are not planned so therefore this connection was not used in this study.

Short Road and Amazon Drive

- The Short Road and Amazon Drive intersection will continue to function with acceptable LOS “A” and v/c ratios during the AM and PM peak hour for each traffic movement.

Hamlin Avenue and Shultz Court

- It is assumed this intersection will continue to service the existing residents in this area under the 2030 Background conditions and will function with minimal delays, a LOS "A" and v/c ratios that all meet minimal requirements.

Roadway Segment LOS

Under the 2030 Background conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2030 Background with Project Traffic Conditions

In 2030, it is planned the final Phase 3 will be constructed and fully built. This phase of the Northern Star Development will consist of roughly 18 acres of commercial/office space. For purposes of this study, 20% of the overall 18 acreage was determined to be occupied by the building and the land use for Office Space was used to calculate the project generated traffic for this phase.

Hamlin Avenue and SH 44

- The Hamlin Avenue and SH 44 intersection is planned to continue to function with right-in/right-out traffic movements.
- Under the AM peak hour this intersection is planned to continue to function with acceptable LOS "C" or better for each traffic movements and an acceptable v/c ratio.
- Under the PM peak hour, this intersection may function with a LOS "F", however the v/c ratio of 0.93 is acceptable per county guidelines but fall below the ITD guidelines of 0.90. However, since this intersection will not be signalized, and already functions with a right-in and right-out movements, no other improvements can be made.

Short Road and SH 44

- Similar to previous study years, this intersection will continue to function with unacceptable levels of service and v/c ratio for the northbound and southbound left turn movements. If this intersection is modified to RIROLI movements, the intersection will function with acceptable LOS and v/c ratios in the AM peak hour, however will fall below the threshold in the PM peak hour.
- If this intersection cannot be signalized, the connection of Amazon Drive to Palmer Lane will help provide an additional route for traffic to exit the development and travel eastbound along SH 44.

Short Road and Amazon Drive

- This intersection will continue to function with acceptable LOS "A" and v/c ratios under both the AM and PM peak hours. It is recommended this intersection be designed and constructed to meet city standards. It is also recommended adequate sight distance be accounted for in the design at this intersection with no obstructions within the required line of sight.

Hamlin Avenue and Amazon Drive

- With the addition of the Northern Star Phase 3, the west leg of this intersection will be added to this intersection. This intersection is recommended to be constructed with one lane in each direction as turn lane warrants are not met with the projected traffic volumes. This intersection will also continue to function with acceptable LOS "A" and v/c ratios for each traffic movements under the AM and PM peak hours.

Hamlin Avenue and Shultz Court

- Each turning movement at the Hamlin Avenue and Shultz Court intersection will continue to function with acceptable LOS "B" or better under the 2030

Background with Project traffic conditions and continue with acceptable v/c ratios.

Hamlin Avenue and Apartment Access

- Each traffic movement at this intersection will also continue to function with acceptable LOS and v/c ratio.

Hamlin Avenue and Single-Family Housing Access

- This intersection will also continue to function with acceptable LOS "A" and acceptable v/c ratio for each traffic movements.

Roadway Segment LOS

Under the 2030 Background with Project conditions, Hamlin Avenue, Short Road and Amazon Drive all meet the planning level of service threshold for roadway segments within the study area.

2.0 Introduction

2.1 DEVELOPMENT DESCRIPTION

The proposed Northern Star Development is situated on roughly 63 acres of vacant land within the City of Star. Refer to the Vicinity Map and Site Plan in Figures 1 and 2, respectively. The proposed site will consist of:

- 55 single-family dwelling units
- 110 townhome units
- 310 apartment units
- 18 acres of commercial

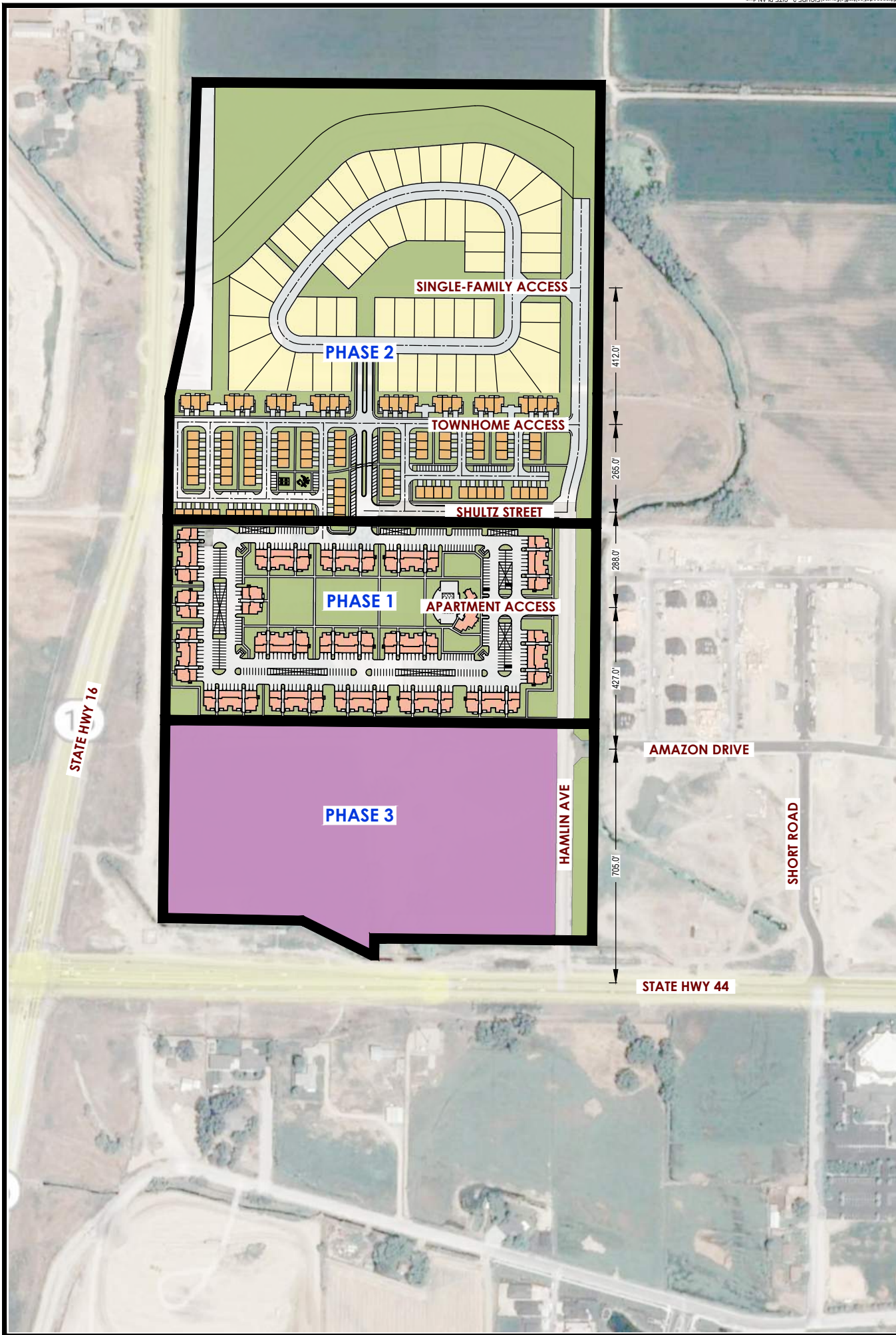
Full build-out of this development is anticipated for 2030. Phase 1 will consist of the apartments units and is planned to be constructed by 2023. The second phase will consist of the single-family and townhome units and is planned to be constructed by 2024. The third phase will finish with the commercial/office parcel by 2030.

The proposed development is surrounded by SH 16 to the west, SH 44 to the south and Hamlin Avenue to the east. To the north is farmland.

Northern Star is anticipated to generate 4,529 average daily trips with 379 AM peak hour trips and 417 PM peak hour trips.



NORTHERN STAR DEVELOPMENT
FIGURE 1 - VICINITY MAP



NORTHERN STAR DEVELOPMENT
 FIGURE 2 - SITE PLAN

3.0 Existing Conditions

3.1 ROADWAYS

State Highway 44 is a major roadway through this study area and extends east and west through Star's city limits. SH 44 currently consists of one lane in each direction with a center two-way left turn lane. SH 44 is planned to be widened and will consist of two lanes in each direction with the center two-way left turn lane by the end of 2023. Future improvements of SH 44 and SH 16 will consist of a full freeway interchange. The posted speed limit is 55 mph.

Short Road is a two-lane roadway that connects SH 44 and Moon Valley Road. Recently Short Road was constructed to the north of SH 44 to provide access to the Amazon Falls Phase 1 development. Phase 2 of Amazon Falls is also planned and will access off Short Road. Short Road consists of one lane in each direction with separate left and right turn lanes at the intersection with SH 44. The posted speed limit along Short Road is 25 mph.

Hamlin Avenue is a two-lane roadway that runs between SH 44 and Shultz Court. Hamlin Ave primarily serves the existing homes on the proposed property. Hamlin will be improved to add a two-way left turn lane to provide safe turning movements onto the cross streets. The Hamlin Avenue and SH 44 intersection was recently improved to only allow right turn movements on and off Hamlin Avenue. The posted speed limit is 25 mph.

Amazon Drive is planned as a Collector roadway that currently runs within the Amazon Falls development. Amazon Drive consists of one lane in each direction. Currently Amazon Drive terminates prior to Hamlin Avenue and just east of Short Road. With the addition of the Northern Star Development, Amazon Drive will connect to Hamlin Avenue. As future developments occur in this area, Amazon Drive will extend east, eventually tying into Palmer Lane. However, the timeframe for this connection is unknown and will be based on future development in this area and therefore was not anticipated for the analysis and traffic distribution in this study.

3.2 EXISTING TRAFFIC VOLUMES

Coordinating with Ada County and ITD at the beginning of this traffic study, it was determined the following intersections would be analyzed within the study area:

- Hamlin Avenue/SH-44 (existing)
- Short Road/SH-44 (existing)
- Amazon Drive/Short Road (existing)

Existing traffic counts were collected on January 20, 2022 at the study area intersection. Existing AM and PM peak hour traffic volumes were collected between the peak hours of 7 AM to 9 AM and 4 PM to 6 PM. From the existing counts that were collected, it was determined the peak hours at the study area intersections are from 7:15 AM to 8:15 AM and from 4:45 PM to 5:45 PM. These volumes are illustrated in Figure 3.

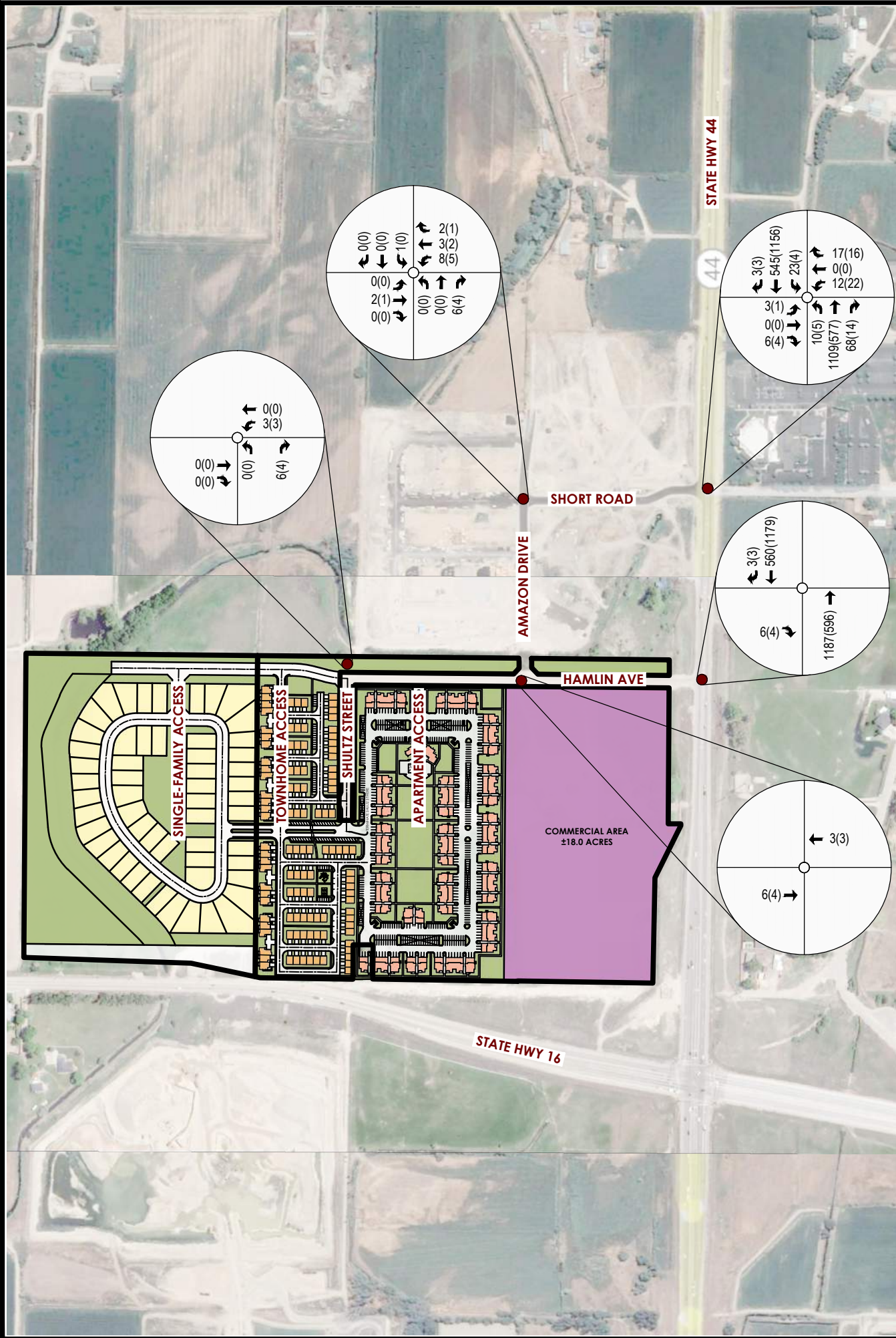
3.3 ROADWAY SEGMENT PLANNING LEVEL OF SERVICE

Roadway segments within the study area consisting of Hamlin Avenue, Amazon Drive and Short Lane were analyzed using the guidelines outlined with ACHD for planning level of service. Using the existing lane configuration, traffic volumes and projected ADT volumes from the Amazon 1 traffic study, the following table illustrates that each roadway segment meets the level of service planning threshold.

Table 1 – Roadway Segment LOS – 2022 Existing Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	28	Local Road (2)	None	N/A	6(SB)	4(SB)	Yes ADT < 1,000
Amazon Drive	Hamlin Ave to Short Ln	774	Collector (2)	None	425	8(WB)	5(WB)	Yes
Short Road	Amazon Dr to SH 44	1347	Collector (2)	None	425	13(NB)	8(NB)	Yes

* = Direction of higher volume shown in ()



NORTHERN STAR DEVELOPMENT
FIGURE 3 - 2022 EXISTING TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

4.0 Background Year Traffic Volumes

In coordinating with Ada County, COMPASS and ITD, it was determined the Background Year and build-out of the Northern Star development phases would be 2023, 2024, and 2030. Population projections along SH 44 were provided by COMPASS and were used to project the future traffic volumes within this study. A projected growth in traffic of 9.9% along SH 44 is planned until 2025. After 2025 the growth rate is anticipated to adjust to 4.9%. These growth rates were applied to the existing traffic volumes to establish the 2023, 2024 and 2030 Background traffic scenarios.

It should also be noted, surrounding developments are planned in this area. To the east are the Amazon Falls Phase 1 and 2 developments. Phase 1 is currently under construction and is planned for full build-out by this year, 2022. Therefore, the projected traffic volumes from the Amazon Falls Phase 1 traffic impact study were incorporated into the 2023 Background traffic volumes and are illustrated in Figure 4.

The 2024 Background Year traffic volumes are illustrated in Figure 5 and represent growth in traffic along SH 44, however very minor growth, if any, will occur along Short Road and Hamlin Avenue due to no new development occurring by the year 2024.

The 2030 Background traffic volumes are illustrated in Figure 6, and include the projected traffic volumes from the Amazon Falls Phase 2 development and also the Fountain Park development. Both these proposed developments are planned to be constructed and full build-out by 2025 and were therefore included in the 2030 Background traffic conditions.

All these volumes are the anticipated traffic volumes on the existing roadway network whether the proposed Northern Star development is constructed or not.

4.1 ROADWAY SEGMENT PLANNING LEVEL OF SERVICE

Using the 2023 Background, 2024 Background and 2030 Background traffic volumes, the roadway segments within the study area were analyzed for level of service following the

guidelines outline by ACHD. The following tables outline the levels of service and if the roadways meet the thresholds. As can be seen, under the background scenarios, all roadways will meet the planning level thresholds for roadway classifications.

Table 2 – Roadway Segment LOS – 2023 Background Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	28	Local Road (2)	None	N/A	7(SB)	4(SB)	Yes ADT < 1,000
Amazon Drive	Hamlin Ave to Short Ln	774	Collector (2)	None	425	33(EB)	33(WB)	Yes
Short Lane	Amazon Dr to SH 44	1347	Collector (2)	None	425	67(SB)	67(NB)	Yes

* = Direction of higher volume shown in ()

The Average Daily Traffic (ADT) volumes were taken from the Amazon Falls 1 traffic impact study, which by 2023 will be the only development fully built out in this study area and is represented by the traffic volumes in Figure 4.

Table 3 – Roadway Segment LOS – 2024 Background Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	28	Local Road (2)	None	N/A	7(SB)	5(SB)	Yes ADT < 1,000
Amazon Drive	Hamlin Ave to Short Ln	774	Collector (2)	None	425	33(EB)	33(WB)	Yes
Short Lane	Amazon Dr to SH 44	1347	Collector (2)	None	425	67(SB)	67(NB)	Yes

* = Direction of higher volume shown in ()

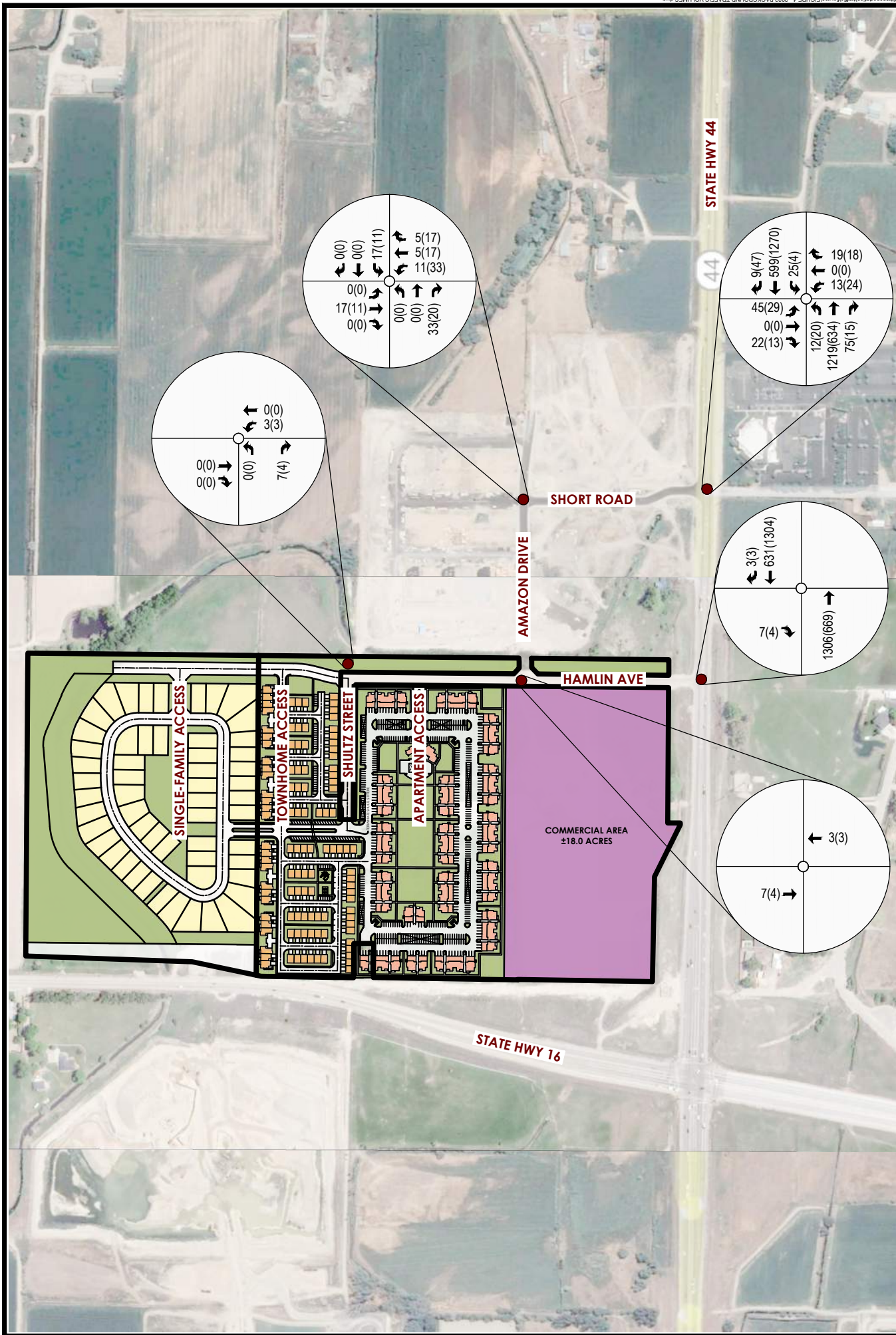
As outlined in the Amazon Falls 1 and Amazon Falls 2 traffic impact studies, by 2024, the Amazon Falls 1 development will be fully built out. Therefore, the ADT represented in Table 3 illustrates the traffic from that development, similar to the traffic volumes in Figure 5.

Table 4 – Roadway Segment LOS – 2030 Background Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	311	Local Road (2)	None	N/A	42(SB)	27(SB)	Yes ADT < 1,000
Amazon Drive	Hamlin Ave to Short Ln	774	Collector (2)	None	425	39(EB)	33(WB)	Yes
Short Lane	Amazon Dr to SH 44	7467	Collector (2)	None	425	189(SB)	297(NB)	Yes

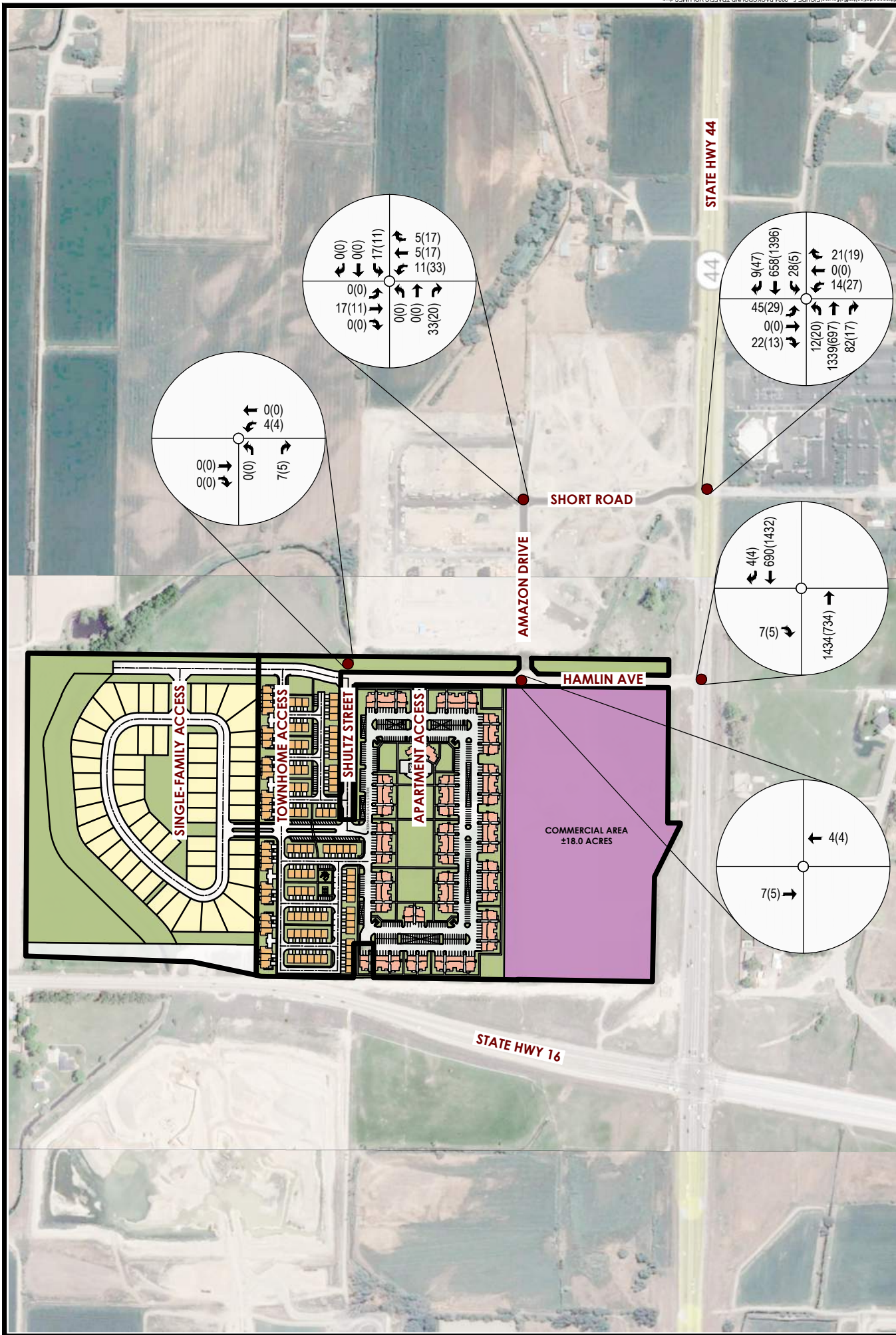
* = Direction of higher volume shown in ()

As outlined in the Amazon Falls 2 and the Fountain Park traffic impact studies, by 2030, this development will be built out and generate the traffic within this study area. Therefore, the ADT represented in Table 4 illustrates the traffic from these development along these roadways, similar to the traffic volumes in Figure 6.



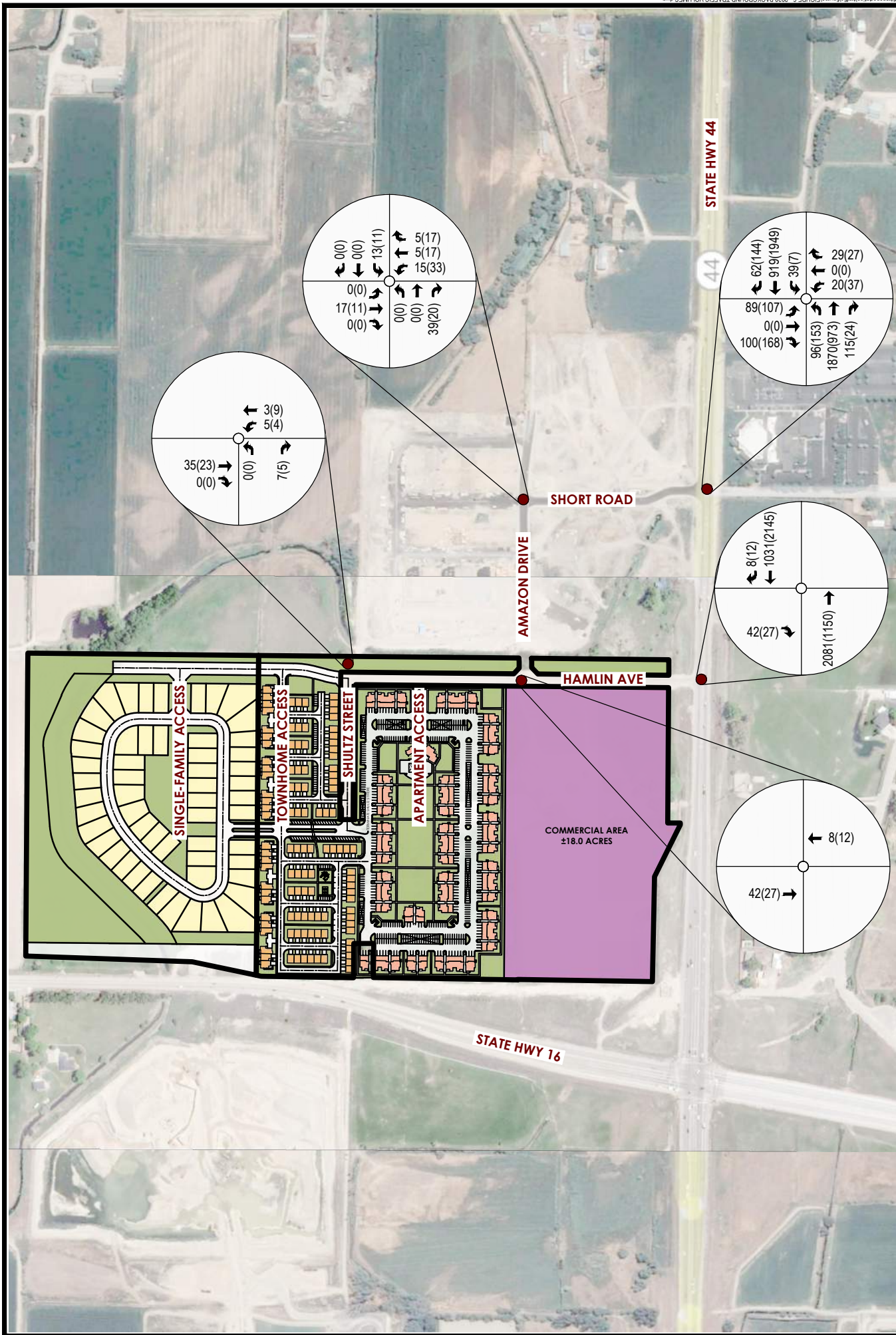
NORTHERN STAR DEVELOPMENT
FIGURE 4 - 2023 BACKGROUND TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



NORTHERN STAR DEVELOPMENT
FIGURE 5 - 2024 BACKGROUND TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



NORTHERN STAR DEVELOPMENT
FIGURE 6 - 2030 BACKGROUND TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

5.0 Trip Generation and Trip Distribution

5.1 TRIP GENERATION

For purposes of this study, the trip generation was performed for each phase of the development. It is planned the first phase will consist of the 310 apartment units in 2023. In 2024, the second phase will be constructed that will consist of the 110 townhomes and the 55 single-family homes. The third phase will be constructed by 2030 and will consist of the 18 acres of the commercial/office space. The third phase is still undetermined with the specific land use, but is planned for office buildings. To generate the anticipated number of vehicles entering and exiting the proposed site during a typical weekday a.m. and p.m. peak hour, the *Institute of Transportation Engineer's (ITE) Trip Generation Manual* is used. For single-family residential lots, the land use codes 210 – Single-Family Detached Housing, 220 – Multifamily Housing (Low-Rise), and 221 – Multifamily Housing (Mid-Rise) were used to generate the number of trips entering and exiting the development. The Mid-Rise land use was used for the apartments as they are planned for three story apartment buildings. Since the specific land use for the 18 acres of commercial is unknown at this time, land use code 710 for General Office Building was used. It was assumed 20% of the overall acreage would be used as the actual building size. Using these assumptions, roughly 156,000 square foot office building was used to calculate the trip generation.

Trips generated by the proposed development, which will occur during the peak hours of the proposed development, were used for the analysis. For purposes of this study, the Peak Hour of Adjacent Street Traffic rates are used to generate the AM and PM Peak Hour Volumes. The trips generated from the proposed development are presented in Table 1.

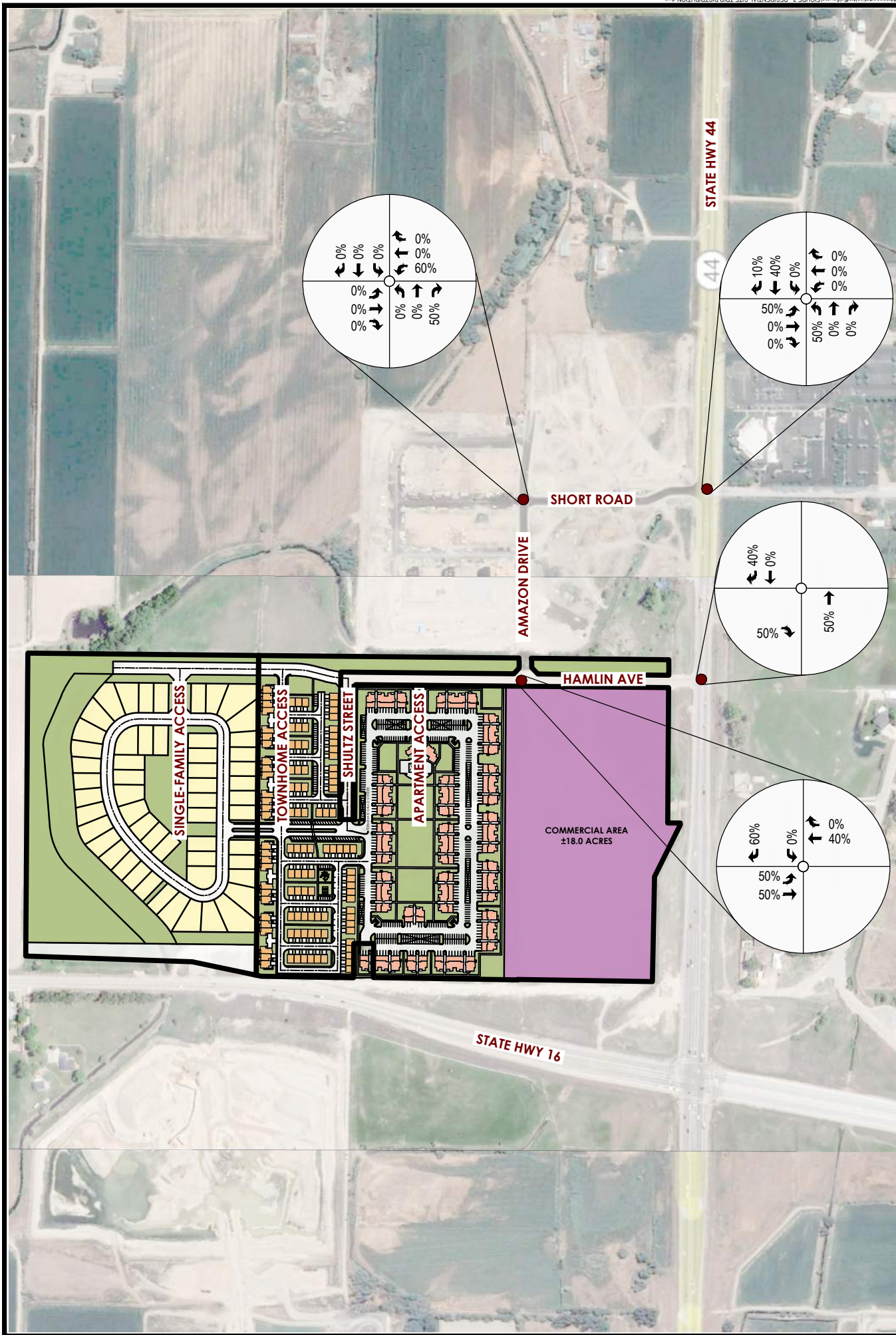
Table 5 - Trip Generation – Average Weekday Driveway Volumes

ITE Land Use Code	Land Use Description	Size	Daily (AADT)	Trip Generation (AM)		Trip Generation (PM)	
				Enter	Exit	Enter	Exit
210	Single-Family	55 DU	519	10	31	34	20
220	Low-Rise	110 DU	805	12	39	39	23
221	Mid-Rise	310 DU	1686	29	83	83	53
710	Gen Office	156 TGFA	1519	156	25	29	150

As can be seen in Table 1, the Northern Star Development will generate approximately 4,529 daily trips, with 385 trips occurring in the AM peak hour (207 entering, 178 exiting) and 431 trips occurring in the PM peak hour (185 entering, 246 exiting). It is assumed with the combination of residential and office within the development, there is potential for internal capture trips. With the internal capture trips, this development will generate 379 total AM peak hour trips (204 entering, 175 exiting) and 417 PM peak hour trips (178 entering, 239 exiting).

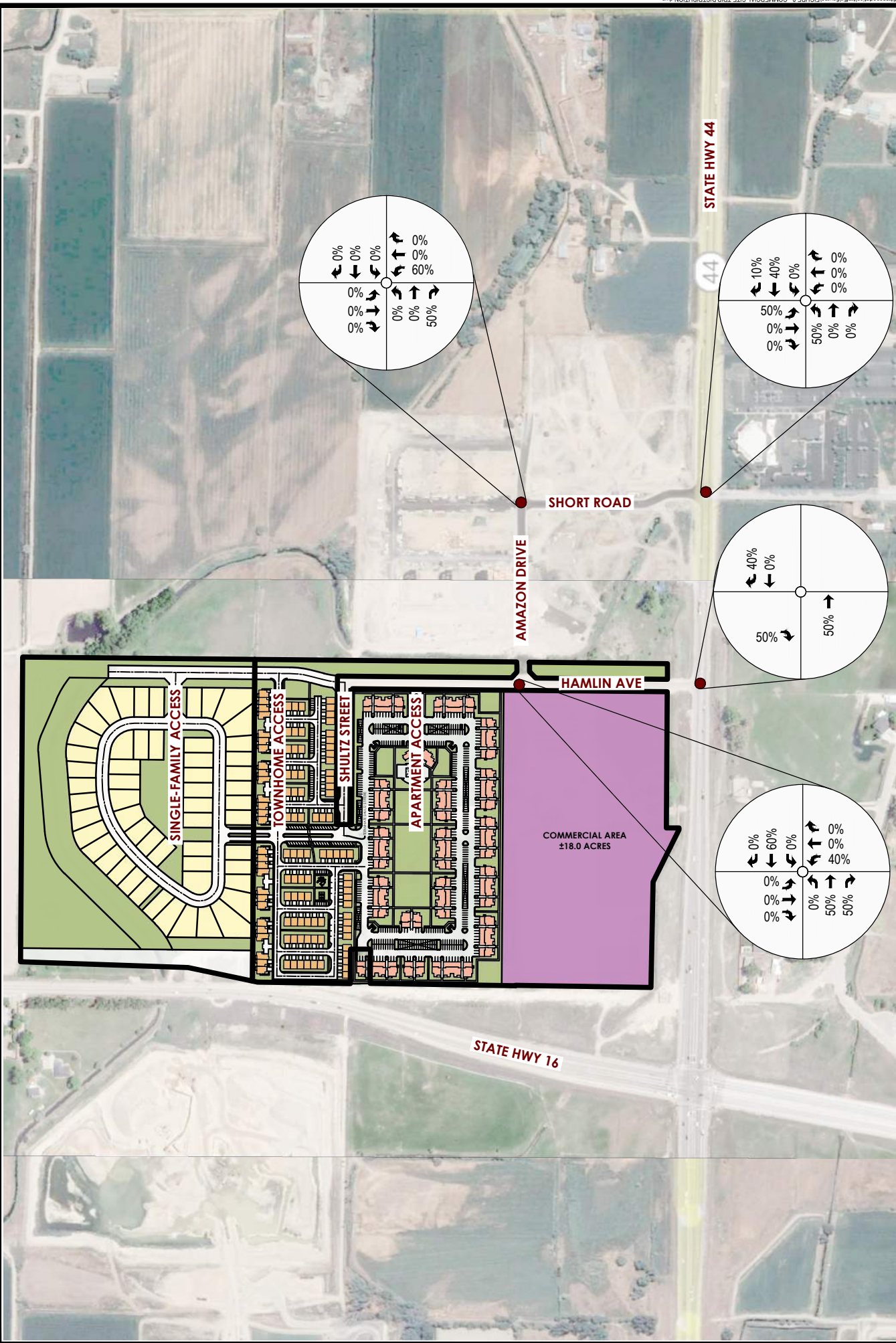
5.2 SITE TRAFFIC DISTRIBUTION & GENERATION

The project trip distribution onto the existing and proposed roadways at each project site access is based on the area of impact model runs by COMPASS, review of the roadway system by ACHD and ITD, as well as knowledge of travel patterns in this study area. Based on the land use types for this development, the distribution will vary between residential and office space. In order to illustrate this, Figure 7 illustrates the trip distribution for the residential portions of this development. Figure 8 illustrates the proposed distribution percentages for the commercial/office land use. Using these distribution percentages combined with the trip generation volumes from Table 1, the project generated traffic volumes for the apartments are illustrated in Figure 9. Figure 10 illustrates the traffic volumes generated by the apartments combined with the townhomes and single-family units. Figure 11 illustrates the project generated traffic volumes for the full build-out of all phases of the Northern Star development and their distribution onto the surrounding roadways within the study area.

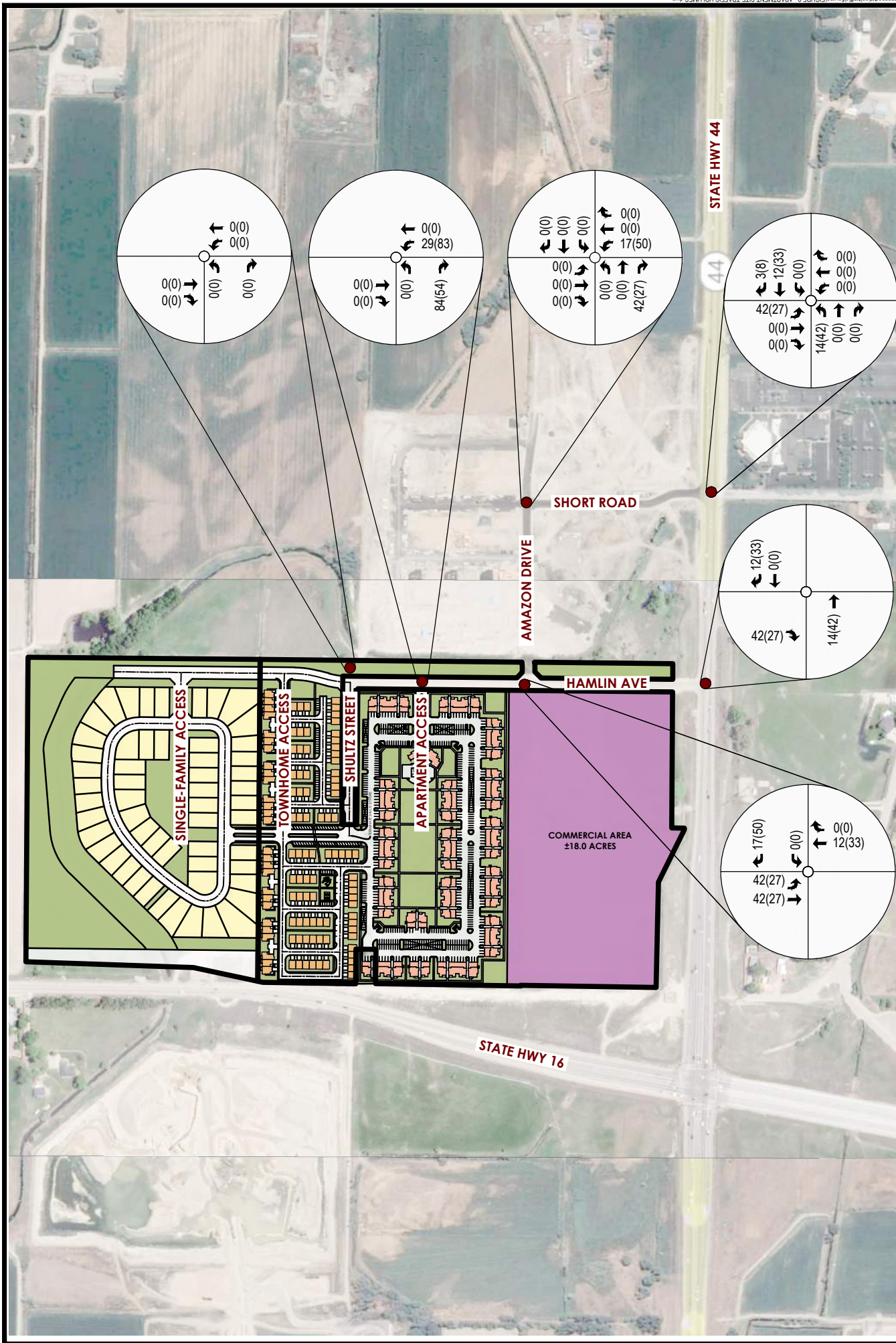


NORTHERN STAR DEVELOPMENT
FIGURE 7 - RESIDENTIAL TRIP DISTRIBUTION PERCENTAGES

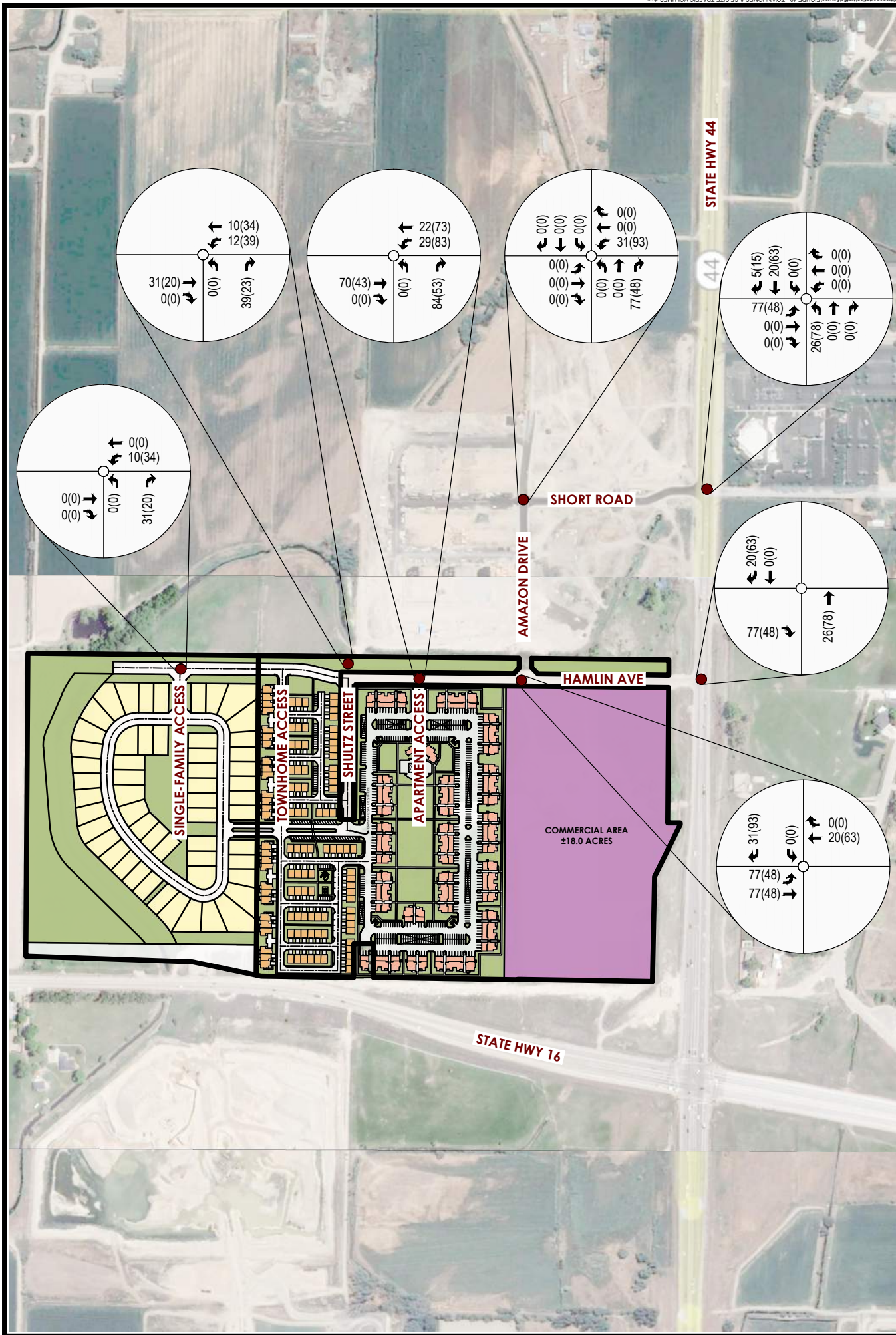
XX% = DISTRIBUTION PERCENTAGES



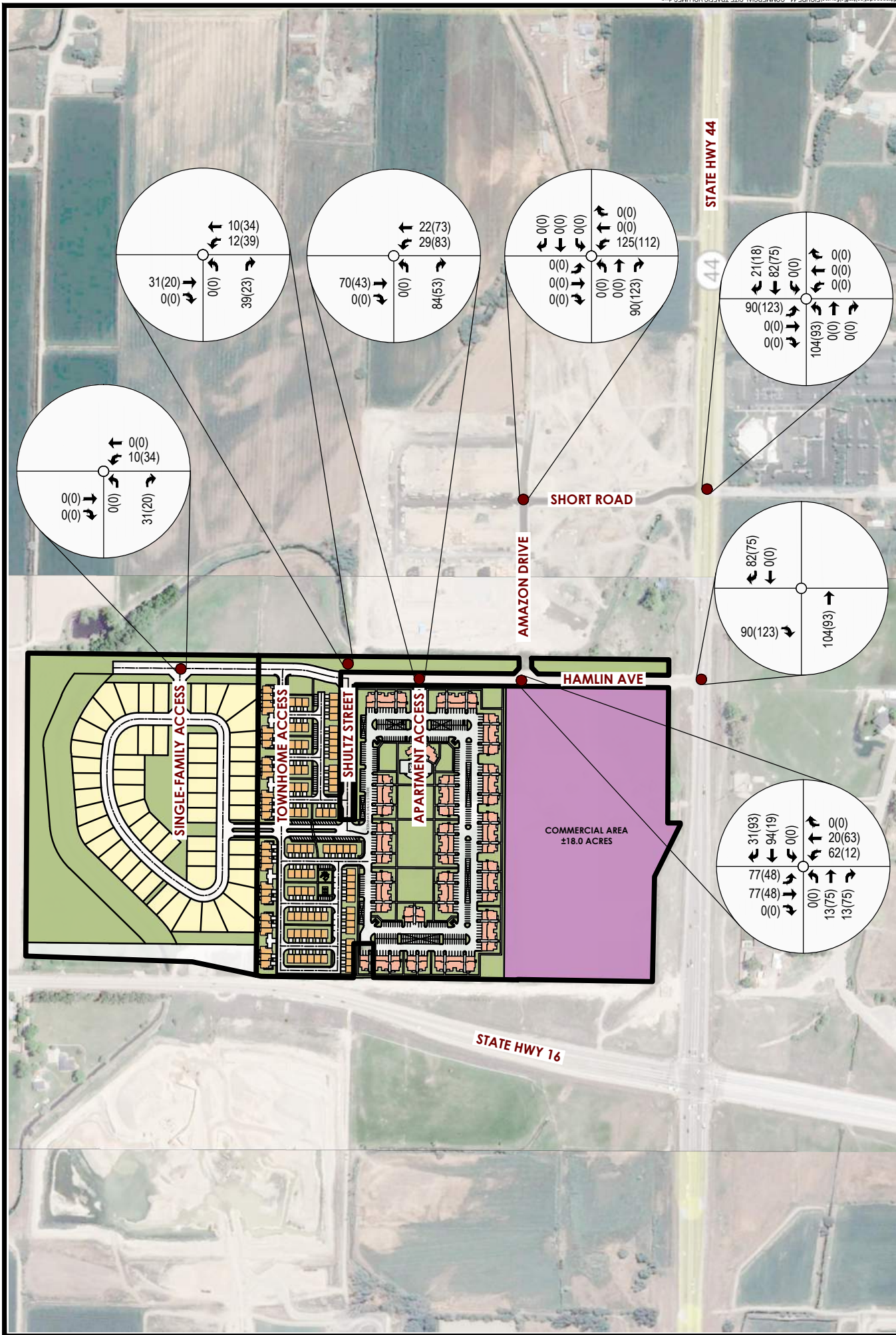
NORTHERN STAR DEVELOPMENT
FIGURE 8 - COMMERCIAL/OFFICE TRIP DISTRIBUTION PERCENTAGES
 XX% = DISTRIBUTION PERCENTAGES



NORTHERN STAR DEVELOPMENT
FIGURE 9 - 2023 PROJECT GENERATED TRAFFIC VOLUMES
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



NORTHERN STAR DEVELOPMENT
FIGURE 10 - 2024 PROJECT GENERATED TRAFFIC VOLUMES
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



NORTHERN STAR DEVELOPMENT
FIGURE 11 - 2030 PROJECT GENERATED TRAFFIC VOLUMES
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

6.0 Background Year with Project Traffic Conditions

The Background Year with Project traffic volumes represent the traffic that will be added to the study area with the addition of the proposed Northern Star development. Using the 2023 Background Year traffic volumes (Figure 4) and the site generated traffic volumes (Figure 9), the 2023 Background Year with Project traffic volumes are generated. Per the developer's schedule, it is anticipated Phase 1 will be built out in 2023. The 2023 Background Year with Project traffic volumes, which illustrate the full build-out of Phase 1, are illustrated in Figure 12. Combining the 2024 Background Year traffic volumes (Figure 5) and the site generated traffic volumes (Figure 9), Figure 13 represents the 2024 Background Year with Project traffic volumes. The 2030 Background Year with Project traffic volumes, which combine the 2030 Background Year traffic volumes (Figure 6) with the full build-out project generated traffic volumes (Figure 11), are illustrated in Figure 14.

6.1 ROADWAY SEGMENT PLANNING LEVEL OF SERVICE

With the addition of the Northern Star development, the roadway segments within the study area were analyzed for roadway classification. Using the traffic volumes in the 2023 Background with Project, 2024 Background with Project and 2030 Background with Project scenarios, the roadway segments within the study area were analyzed for level of service following the guidelines outlined by ACHD. The following tables outline the roadway segment planning levels of service and if the roadways meet the thresholds. With the addition of the Northern Star development, it is planned Hamlin Avenue will become a Collector Roadway with two lanes and no left turn lanes. As can be seen, under the background scenarios, all roadways will meet the planning level thresholds for roadway classifications.

In this table the Average Daily Traffic volumes are also illustrated. These ADT volumes are generated from taking the trip generation ADT volumes for the different phases of this development and combining them with the ADT volumes from the Background conditions found in Section 4 of this report.

Table 6 – Roadway Segment LOS – 2023 Background w/ Project Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	788	Collector (2)	None	425	49(SB)	36(NB)	Yes
Amazon Drive	Hamlin Ave to Short Ln	1702	Collector (2)	None	425	75(EB)	83(WB)	Yes
Short Lane	Amazon Dr to SH 44	2275	Collector (2)	None	425	109(SB)	117(NB)	Yes

* = Direction of higher volume shown in ()

Table 7 – Roadway Segment LOS – 2024 Background w/ Project Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	1384	Collector (2)	None	425	77(SB)	63(NB)	Yes
Amazon Drive	Hamlin Ave to Short Ln	2430	Collector (2)	None	425	110(EB)	126(WB)	Yes
Short Lane	Amazon Dr to SH 44	3003	Collector (2)	None	425	144(SB)	160(NB)	Yes

* = Direction of higher volume shown in ()

Table 8 – Roadway Segment LOS – 2030 Background w/ Project Traffic

Roadway	Segment	ADT	Functional Classification (No. of Lanes)	Left-Turn Lane Type	ACHD Planning Threshold (vph)	Peak Hour Directional Volumes (vph)*		Meets LOS Planning Threshold?
						AM Peak	PM Peak	
Hamlin Avenue	Shultz Ct. to SH 44	2351	Collector (2)	None	425	125(SB)	146(SB)	Yes
Amazon Drive	Hamlin Ave to Short Ln	3266	Collector (2)	None	425	140(WB)	145(WB)	Yes
Short Lane	Amazon Dr to SH 44	9959	Collector (2)	None	425	283(NB)	408(NB)	Yes

* = Direction of higher volume shown in ()

6.2 SITE TRAFFIC CONTRIBUTION PERCENTAGE

The following tables illustrate the site traffic contribution as a percentage of the 2023 Background with Project total traffic, 2024 Background with Project total traffic, and the 2030 Background with Project total traffic volumes entering the intersection.

Table 9 – Site Traffic Percentage of 2023 Total Traffic

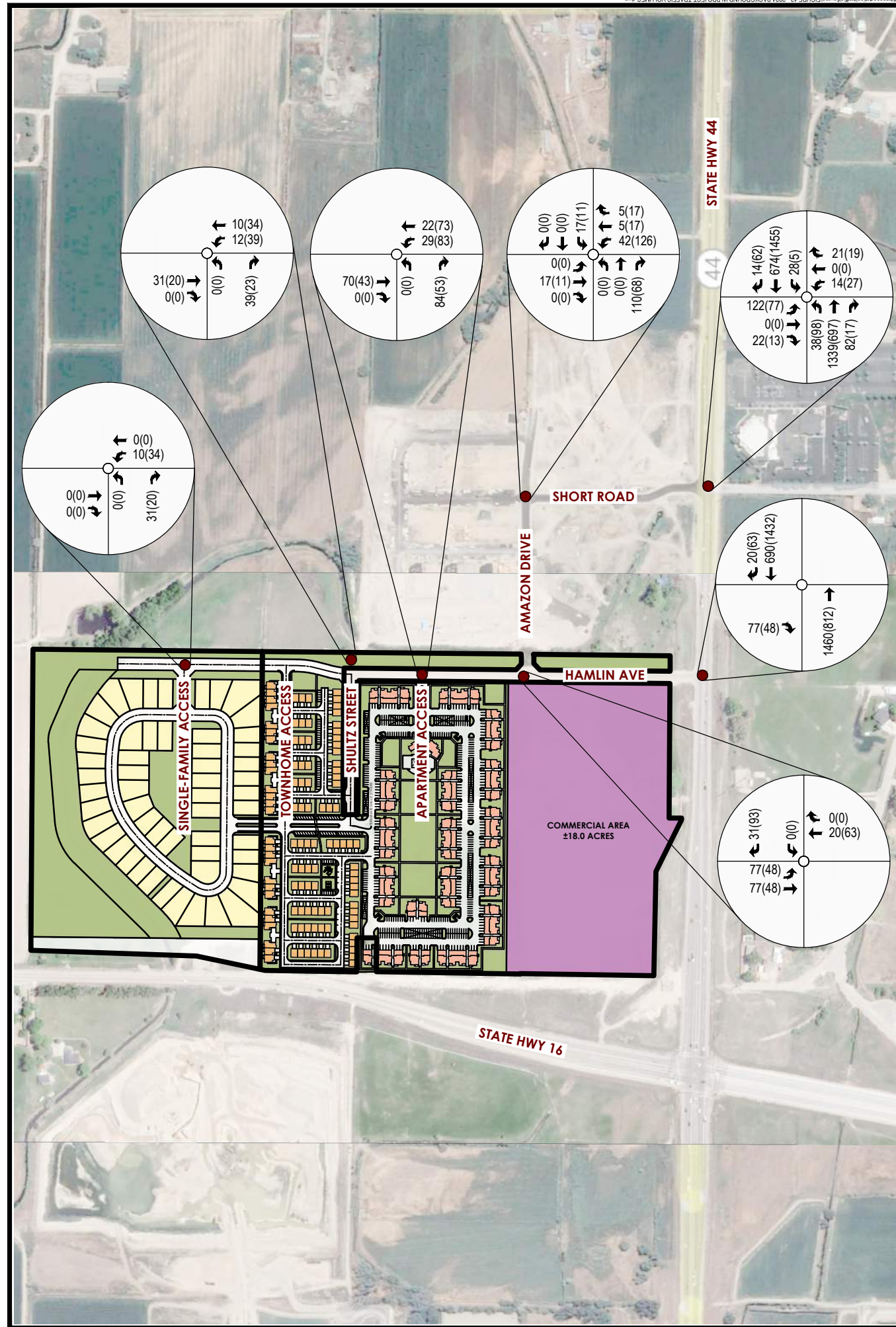
Intersection		% Site Traffic of 2023 Total Traffic		
		AM Peak	PM Peak	Average
1	Hamlin Ave & SH 44	3.4%	4.9%	4.2%
2	Short Rd & SH 44	3.4%	5.0%	4.2%

Table 10 – Site Traffic Percentage of 2024 Total Traffic

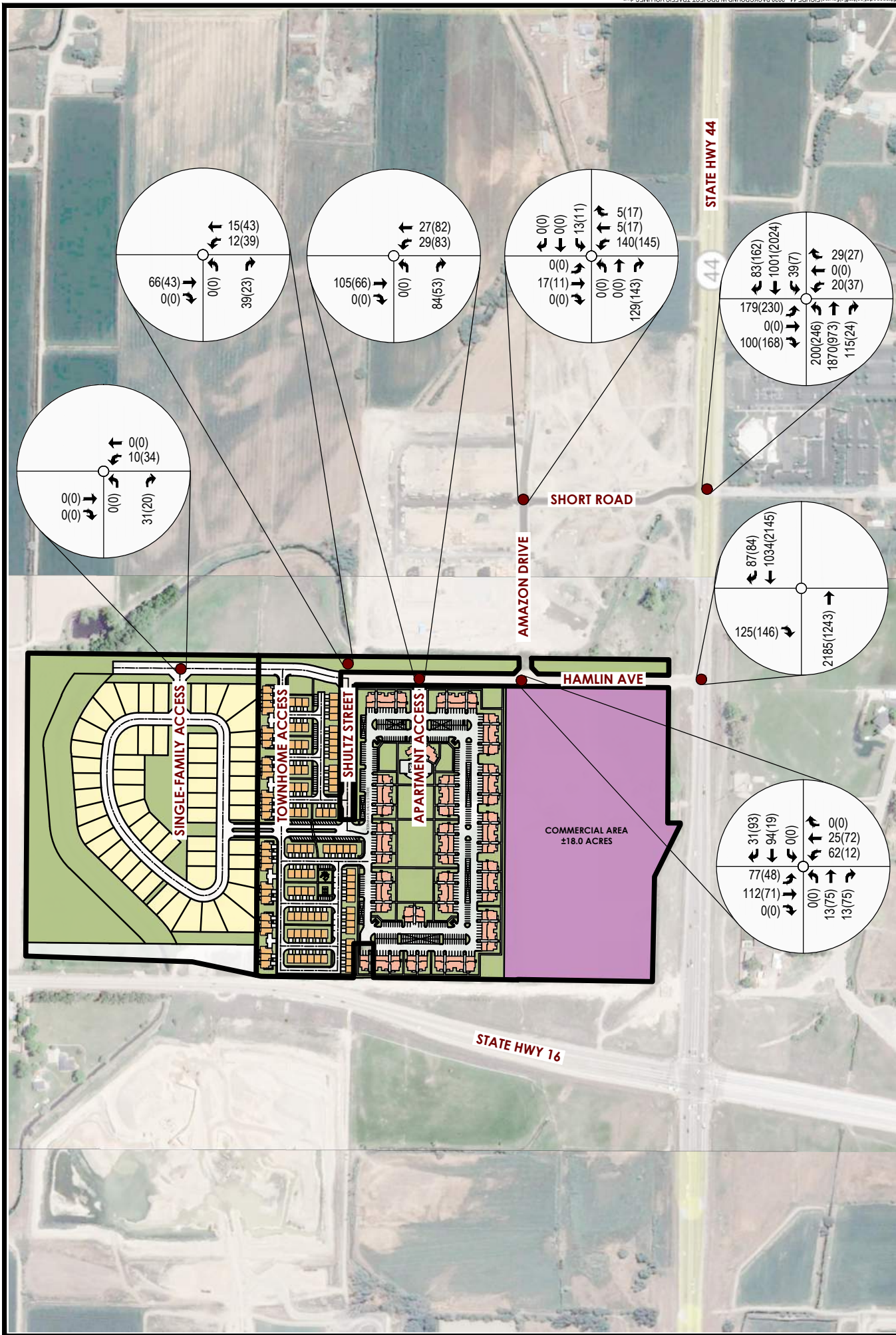
Intersection		% Site Traffic of 2024 Total Traffic		
		AM Peak	PM Peak	Average
1	Hamlin Ave & SH 44	5.5%	8.0%	6.8%
2	Short Rd & SH 44	5.4%	8.3%	6.9%

Table 11 – Site Traffic Percentage of 2030 Total Traffic

Intersection		% Site Traffic of 2030 Total Traffic		
		AM Peak	PM Peak	Average
1	Hamlin Ave & SH 44	8.0%	8.0%	8.0%
2	Short Rd & SH 44	8.2%	7.9%	8.1%



NORTHERN STAR DEVELOPMENT
FIGURE 13 - 2024 BACKGROUND W/ PROJECT TRAFFIC VOLUMES
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



NORTHERN STAR DEVELOPMENT
FIGURE 14 - 2030 BACKGROUND W/ PROJECT TRAFFIC VOLUMES
 XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

7.0 Capacity Analysis

Intersection capacity analysis was performed at the study area intersections. Synchro[®] Version 11 was used to analyze the study intersection for the proposed trip conditions according to methods put forth by the Transportation Research Board's *Highway Capacity Manual (HCM) 6th Edition*.

The Level of Service (LOS) of an intersection range from A to F where LOS A has a low vehicular delay indicating smooth free-flowing traffic. LOS F has a high vehicular delay and indicates the worst-case scenario with high congestion and a complete breakdown of traffic flow. Although LOS A through C are the desired levels, LOS D is considered acceptable in urban conditions. Traffic conditions with LOS of E or F are generally deemed unacceptable and represent significant travel delay, increased accident potential, and inefficient motor vehicle operation. Table 2 shows the relation between LOS and vehicular delay for signalized and unsignalized intersections.

Table 12 - Signalized and Unsignalized intersection LOS and Delay Parameters

Level of Service (LOS)	Vehicular Delay (seconds/vehicle)	
	Signalized Intersection	Stop Controlled Approach
A	$0.0 \leq 10.0$	$0.0 < 10.0$
B	$> 10.0 \leq 20.0$	$> 10.0 < 15.0$
C	$> 20.0 \leq 35.0$	$> 15.0 < 25.0$
D	$> 35.0 \leq 55.0$	$> 25.0 < 35.0$
E	$> 55.0 \leq 80.0$	$> 35.0 < 50.0$
F	> 80.0	> 50.0

Using guidelines for operational threshold from both ACHD and ITD, each of the study area intersections were analyzed on both the level of service and also the volume to capacity ratio. ACHD minimum threshold for level of service is D with a v/c ratio of 0.90 for overall intersection and 1.00 for lane movement. ITD minimum threshold is level of service D with a v/c ratio of 0.90 for overall intersection and lane movements.

The 2022 Existing, 2023 Background Year, 2024 Background Year, and 2030 Background Year traffic volumes at each of the study area intersections were input into the Synchro Software. The levels of service and v/c ratio at each of the turning movements can be seen in the following tables.

Table 13 – 2022 Existing Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	12.5	0.03	C	22.1	0.06
2 Short Rd & SH 44	NBL	F	116.7	0.37	F	174.2	0.70
	NBTR	C	23.8	0.12	B	13.3	0.06
	EBL	A	8.7	0.01	B	11.2	0.01
	EBTR	-	-	-	-	-	-
	WBL	B	11.9	0.05	A	8.9	<0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	101.3	0.18	F	81.9	0.07
SBTR	B	12.3	0.03	C	21.7	0.06	
3 Short Rd & Amazon Dr	NB	-	-	-	A	8.7	0.01
	EB	A	0	-	A	0	-
	WB	A	7.2	<0.01	A	0	-
	SB	-	-	-	A	9.1	<0.01
4 Hamlin Ave & Shultz Ct	NB	A	8.6	<0.01	A	8.5	<0.01
	EB	A	0	-	A	0	-
	SB	-	-	-	-	-	-

Under the 2022 Existing conditions, all movements at the SH 44 and Hamlin Ave intersection currently function with acceptable LOS and v/c ratio. The Short Road and Amazon Drive intersection also functions with acceptable LOS and v/c ratio. Hamlin Avenue and Shultz Court intersection also functions with acceptable LOS and v/c ratios. All traffic movements at the Short Road and SH 44 intersection function with acceptable levels of service and v/c ratios except the northbound and southbound left turning

movements. The northbound and southbound left turn movements functions with an unacceptable LOS, but the v/c ratio is acceptable.

Table 14 – 2023 Background Year Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	10.7	0.01	B	14.9	0.01
2 Short Rd & SH 44	NBL	F	109.5	0.30	F	67.7	0.32
	NBTR	B	14.2	0.05	B	10.8	0.03
	EBL	A	9	0.01	B	13.3	0.05
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	B	13.2	0.06	A	9.1	<0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	93.5	0.58	F	186.8	0.70
	SBTR	B	10.6	0.04	B	14.9	0.04
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.3	0.01	A	7.3	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	8.6	<0.01	A	8.5	<0.01
	EB	A	0	-	A	0	-
	SB	-	-	-	-	-	-

All intersections and movements will continue to function with acceptable levels of service and v/c ratios at the Hamlin Ave and SH44 intersection, Short Rd and Amazon Dr intersection and the Hamlin Ave and Shultz Ct intersection. With the proposed widening and improvements to SH 44 to 5-lanes by 2023, the v/c ratios at the Short Rd and SH 44 intersection will continue to be acceptable levels, however the LOS will still remain an “F” for the northbound and southbound left turn movements.

Table 15 – 2024 Background Year Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	11.0	0.01	C	16.1	0.02
2 Short Rd & SH 44	NBL	F	173.1	0.44	F	103.4	0.47
	NBTR	C	15.8	0.07	B	11.1	0.04
	EBL	A	9.2	0.02	B	14.4	0.06
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	B	14.4	0.08	A	9.3	0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	151.9	0.76	F	327.8	0.98
	SBTR	B	10.9	0.04	C	16.1	0.04
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.3	0.01	A	7.3	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	8.6	<0.01	A	8.6	<0.01
	EB	A	0	-	A	0	-
	SB	-	-	-	-	-	-

Under the 2024 Background Year conditions all movements at the SH 44 and Hamlin Ave, Short Rd and Amazon Dr intersection, as well as the Hamlin Ave and Shultz Ct intersection will continue to function at an acceptable LOS “C” or better. SH 44 and Short Road will continue to function with an unacceptable LOS “F” for the northbound and southbound movements, and the v/c ration for the southbound left turn movement will fall to an unacceptable lever by ITD requirements.

Table 16 – 2030 Background Year Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	13.7	0.1	D	29.3	0.17
2 Short Rd & SH 44	NBL	F	\$	5.56	F	\$	41.11
	NBTR	C	23.5	0.14	B	12.9	0.06
	EBL	B	11.8	0.17	F	69.2	0.81
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	C	23.8	0.18	B	10.8	0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	\$	8.24	F	\$	59.44
	SBTR	B	14.1	0.22	F	80.3	0.88
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.3	0.01	A	7.3	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	7.3	<0.01	A	7.3	<0.01
	EB	A	8.5	0.01	A	8.4	<0.01
	SB	-	-	-	-	-	-

Under the 2030 Background Year conditions all movements at the SH 44 and Hamlin Ave intersection, the Short Rd and Amazon DR intersection and the Hamlin Ave and Shultz Ct intersection will continue to function at an acceptable LOS “C” or better and acceptable v/c ratios. SH 44 and Short Road will continue to function with an unacceptable LOS “F” and experience a significant increase in delay time for the northbound and southbound movements. The v/c ratios in both the northbound and southbound directions will fall to unacceptable levels under these conditions.

With the addition of the Northern Star Development, the following tables illustrate the anticipated levels of service and v/c ratios at each of the study area intersections.

Table 17 – 2023 Background Year w/ Project Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	11.2	0.09	C	16.2	0.1
2 Short Rd & SH 44	NBL	F	122.6	0.33	F	101.2	0.43
	NBTR	B	14.6	0.05	B	10.8	0.03
	EBL	A	9.1	0.03	B	14.7	0.16
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	B	13.2	0.06	A	9.1	<0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	274.2	1.24	F	677.0	1.89
SB	B	10.7	0.04	B	15.2	0.04	
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.4	0.01	A	7.3	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	8.6	<0.01	A	8.5	<0.01
	EB	A	0	-	A	0	-
	SB	-	-	-	-	-	-
5 Hamlin Ave & Amazon Dr	NB	-	-	-	-	-	-
	WBL	A	0	-	A	0	-
	WBR	A	8.5	0.02	A	8.7	0.05
	SB	A	7.3	0.03	A	7.3	0.02
6 Hamlin Ave & Apartment Access	NBL	A	7.3	0.02	A	7.4	0.06
	NBT	A	0	-	-	-	-
	EB	A	8.7	0.09	A	8.5	0.05
	SB	-	-	-	-	-	-

Under the 2023 Background Year with Project conditions, all movements at the study area intersection will continue with acceptable LOS and v/c ratios, except for the northbound LOS and the southbound LOS and v/c at SH 44 and Short Road.

With the proposed mitigations as outlined in the Amazon Falls 2 traffic impact study to restrict Short Road to right-in right-out movements, the following table illustrates the levels of service and v/c ratios at the Hamlin Ave and Short Road intersections with SH 44.

Table 18 – 2023 Background Year w/ Project w/ Mitigations Level of Service

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	B	11.9	0.16	C	17.4	0.18
2	Short Rd & SH 44	NBR	C	15.0	0.09	B	11.0	0.07
		EBL	A	9.1	0.03	B	14.7	0.16
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	13.2	0.06	A	9.1	<0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	11.2	0.11	C	16.2	0.13

The Hamlin Ave and SH 44 intersection will continue to function with acceptable LOS and v/c ratios. The Short Road and SH 44 intersection will improve to acceptable LOS “C” or better and v/c ratios at each turning movements with right and left turning movements in along SH 44 and right-out movements along Short Road.

Table 19 – 2024 Background Year w/ Project Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	B	11.9	0.14	C	18.8	0.17
2 Short Rd & SH 44	NBL	F	206.0	0.50	F	264.7	0.83
	NBTR	C	15.8	0.07	B	11.1	0.04
	EBL	A	9.5	0.05	C	18.5	0.29
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	B	14.4	0.08	A	9.4	0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	803.9	2.42	F	5	5.03
SB	B	11.0	0.04	C	16.7	0.05	
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.5	0.01	A	7.4	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	7.3	0.01	A	7.3	0.03
	EB	A	8.6	0.04	A	8.5	0.02
	SB	A	0	-	A	0	-
5 Hamlin Ave & Amazon Dr	NB	-	-	-	-	-	-
	WBL	A	0	-	A	0	-
	WBR	A	8.5	0.03	A	9	0.10
	SB	A	7.4	0.05	A	7.4	0.04
6 Hamlin Ave & Apartment Access	NBL	A	7.4	0.02	A	7.5	0.06
	NBT	-	-	-	-	-	-
	EB	A	9.0	0.1	A	8.7	0.06
	SB	-	-	-	-	-	-
7 Hamlin Ave & SF Housing Access	NBL	A	7.2	0.01	A	7.3	0.02
	NBT	-	-	-	-	-	-
	EB	A	8.4	0.03	A	8.4	0.02
	SB	-	-	-	-	-	-

Under the 2024 Background Year with Project conditions, and assuming Short Rd and Hamlin Ave are full traffic movements, all movements will continue to function with acceptable LOS and v/c ratios except the northbound and southbound left turn movements at Short Road and SH 44. The northbound left turn will have acceptable v/c ratios, but the level of service will fail.

With the proposed improvements as outlined in the Amazon Falls 2 traffic impact study to restrict left turning movements out of Short Road onto SH 44, the following table illustrates the LOS and v/c ratios at the Hamlin Ave and Short Road intersections with SH 44 as traffic would be redistributed to all use the Hamlin Ave connection.

Table 20 – 2024 Background Year w/ Project w/ Mitigations Level of Service

Intersection		Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	B	13.6	0.29	C	22.4	0.34
2	Short Rd & SH 44	NBR	C	16.3	0.11	B	11.4	0.08
		EBL	A	9.5	0.05	C	18.5	0.29
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	B	14.4	0.08	A	9.4	<0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	B	11.6	0.12	C	18.0	0.14

With the recommended improvements under the Amazon Falls 2 traffic impact study, these two intersections will continue to function with acceptable LOS and v/c ratios.

Table 21 – 2030 Background Year w/ Project Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio
1 Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
	WBTR	-	-	-	-	-	-
	SBR	C	17.4	0.32	F	117.4	0.97
2 Short Rd & SH 44	NBL	F	\$	11.11	F	\$	\$
	NBTR	C	23.5	0.14	B	12.9	0.06
	EBL	C	15.2	0.39	F	264.3	1.42
	EBT	-	-	-	-	-	-
	EBR	-	-	-	-	-	-
	WBL	C	23.8	0.18	B	10.8	0.01
	WBT	-	-	-	-	-	-
	WBR	-	-	-	-	-	-
	SBL	F	\$	33.15	F	\$	\$
SB	B	14.9	0.23	F	97.6	0.94	
3 Short Rd & Amazon Dr	NB	-	-	-	-	-	-
	EB	A	0	-	A	0	-
	WB	A	7.5	0.01	A	7.6	0.01
	SB	-	-	-	-	-	-
4 Hamlin Ave & Shultz Ct	NB	A	7.4	0.01	A	7.4	0.03
	EB	A	8.8	0.04	A	8.6	0.03
	SB	-	-	-	A	0	-
5 Hamlin Ave & Amazon Dr	NBL	A	7.6	0.05	A	7.4	0.01
	NBTR	-	-	-	-	-	-
	EBL	A	0	-	A	0	-
	EBTR	B	11.3	0.05	B	11.3	0.23
	WBL	A	0	-	A	0	-
	WBTR	B	14.4	0.27	A	9.8	0.14
	SBL	A	7.4	0.05	A	7.5	0.04
SBTR	-	-	-	-	-	-	
6 Hamlin Ave & Apartment Access	NBL	A	7.5	0.02	A	7.5	0.06
	NBT	-	-	-	-	-	-
	EB	A	9.3	0.1	A	8.9	0.06
	SB	-	-	-	-	-	-

7	Hamlin Ave & SF Housing Access	NBL	A	7.2	0.01	A	7.3	0.02
		NBT	-	-	-	-	-	-
		EB	A	8.4	0.03	A	8.4	0.02
		SB	-	-	-	-	-	-

§ = values from analysis exceed capacity

Under the 2030 Background Year with Project conditions, all movements at the Amazon Dr and Short Road intersection, the Hamlin Dr and Shultz Ct intersection and the Amazon Dr and Hamlin Ave intersection will continue to function at an acceptable LOS "B" or better. The Hamlin Ave and access to the apartments will also continue to function with acceptable levels of service. The Hamlin Ave and access to the single-family housing will continue to function at acceptable levels of service. The northbound and southbound movements at the SH 44 and Hamlin Avenue intersection will function with a LOS "F", and the v/c ratio will be unacceptable.

With the improvements as outlined in the Amazon Falls 2 traffic impact study to make the intersection of Short Road and SH 44 a right-in, left-in and right-out, the following table outlines the projected LOS and v/c ratios as the traffic patterns will change.

Table 22 – 2030 Background Year w/ Project w/ Mitigations Level of Service

Intersection	Lane Group	AM Peak Hour			PM Peak Hour			
		LOS	Delay (s/veh)	v/c ratio	LOS	Delay (s/veh)	v/c ratio	
1	Hamlin Ave & SH 44	EBT	-	-	-	-	-	-
		WBTR	-	-	-	-	-	-
		SBR	D	30.0	0.64	F	532.1	2.02
2	Short Rd & SH 44	NBR	D	25.8	0.24	B	13.7	0.15
		EBL	C	15.2	0.39	F	264.3	1.42
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	C	23.8	0.18	B	10.8	0.01
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		SBR	C	18.4	0.44	F	307.9	1.54

8.0 Traffic Signal Warrant Analysis

As part of the traffic impact study, the SH 44 and Short Road intersection will experience some heavy delays in the northbound direction with the increase of traffic along SH 44 and the level of service will drop to an unacceptable level. In order to improve the intersection, we analyzed the need for a traffic signal at the intersection. In order to analyze the need for a traffic signal, the 2009 Edition of the *Manual on Traffic Control Devices (MUTCD)*, Part 4 is used. As per the *MUTCD* there are nine signal warrants and even if one warrant is met, a signal may be installed at the study intersection. The warrants are:

Warrant 1 - Eight Hour Vehicular Volume

Warrant 2 - Four Hour Vehicular Volume

Warrant 3 - Peak Hour

Warrant 4 - Pedestrian Volume

Warrant 5 - School Crossing

Warrant 6 - Coordinated Signal System

Warrant 7 - Crash Experience

Warrant 8 - Roadway Network

Warrant 9 - Intersection near a Grade Crossing

Based on the study location, traffic patterns and information we have available at this time, only Warrant 3 - Peak Hour was able to be analyzed with the projected peak hour traffic volumes under the 2023 Background, 2024 Background and 2030 Background Years. The following paragraphs provide the details of the signal warrant analysis. It should be noted that this Peak Hour Warrant Analysis was performed using the projected traffic volumes. It is strongly recommended the intersection be monitored when actual traffic volumes are present and the signal warrant analysis be performed.

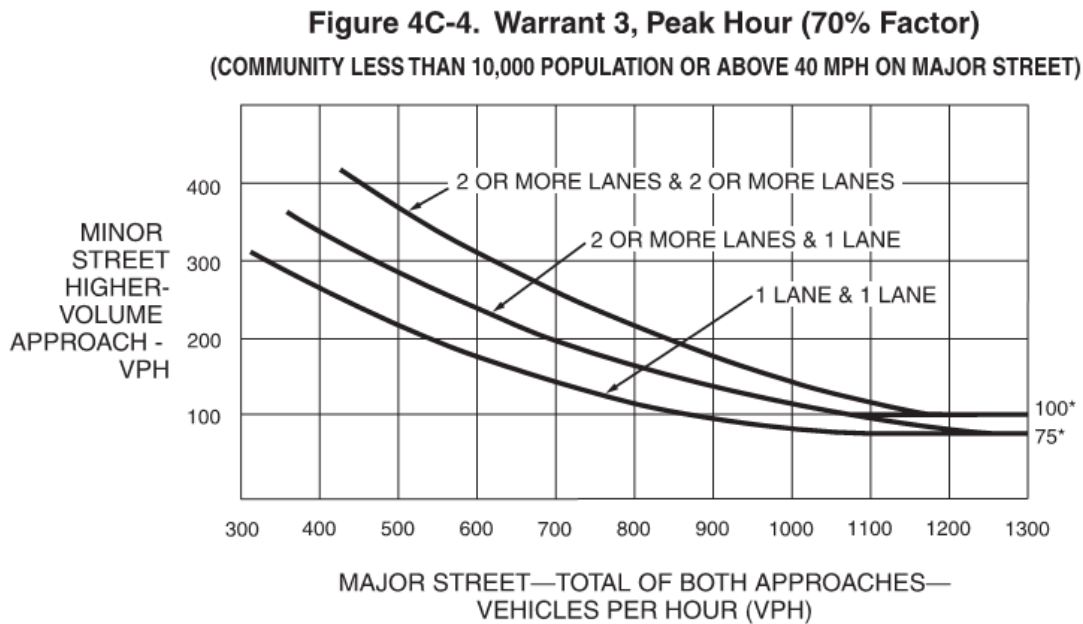
Note that in all scenarios that were analyzed for a traffic signal warrant, the Major Street totals for both directions does not include the vehicles making a right turn from the Major Street. Right turning vehicles when in a separate right turn lane from the Major Streets are not often counted in a Traffic Signal Warrant Analysis as they do not impede the Minor Street traffic from making their appropriate movement.

Warrant 3 (Peak Hour)

This traffic signal warrant analysis was performed at the SH 44 and Short Road intersection. The graph from the MUTCD that is used to analyze the need for a signal. SH 44 is considered the Major Street for this analysis with Short Road as the Minor Street. It is anticipated that for the future years used in this analysis, SH 44 will be two lanes in each direction with separate left turn lanes and right turn lanes at the intersections. Short Road is only one lane in each direction. The speed limit along the Major Street (SH 44) is above 40 mph, therefore the 70% Factor graph is used in this analysis per the MUTCD.

Figure 15 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2023 Background Year scenario. The Major Street (SH 44) will see 1,854 vph in the AM peak hour, and 1,923 vph in the PM peak hour. The Minor Street (Short Road) will have 32 vph in the AM peak hour and 42 vph in the PM peak hour.

Figure 15 – SH 44 and Short Road 2023 Background Signal Warrant



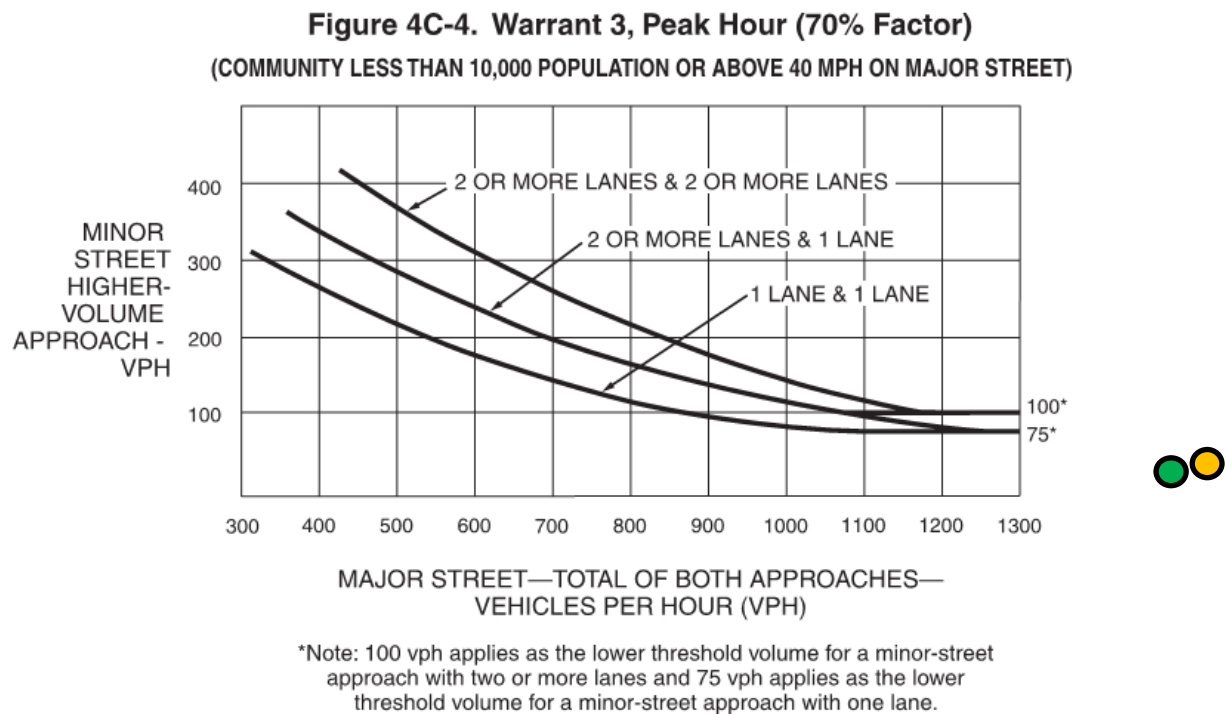
*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

- = 2023 Background Year Traffic Volumes. (AM Peak Hour)
- = 2023 Background Year Traffic Volumes. (PM Peak Hour)

As seen in Figure 15, the plotted points of these volumes fall well below the applicable curve and therefore do not warrant a traffic signal at this time. Since the projected traffic volumes do not warrant a traffic signal under the 2023 Background scenario, it is recommended the city monitor this intersection for when actual traffic volumes are present since the intersection experience an unacceptable level of service.

Figure 16 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2024 Background Year scenario. The Major Street (SH 44) will see 2,037 vph in the AM peak hour, and 2,104 vph in the PM peak hour. The Minor Street (Short Road) will have 35 vph in the AM peak hour and 46 vph in the PM peak hour.

Figure 16 – SH 44 and Short Road 2024 Background Signal Warrant



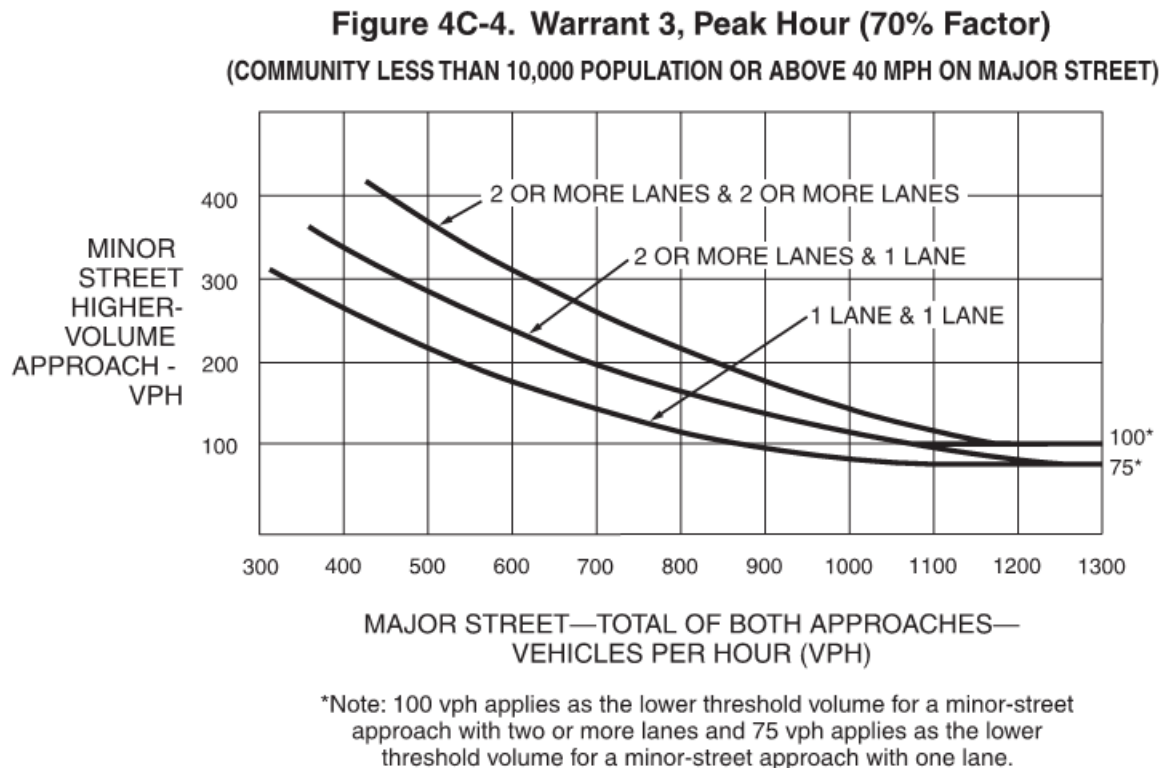
● = 2024 Background Year Traffic Volumes. (AM Peak Hour)

● = 2024 Background Year Traffic Volumes. (PM Peak Hour)

As seen in Figure 16, the plotted points of these volumes fall well below the applicable curve and therefore do not warrant a traffic signal at this time. It is recommended the city monitor this intersection for when actual traffic volumes are present.

Figure 17 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2030 Background Year scenario. The Major Street (SH 44) will see 2,845 vph in the AM peak hour, and 2,937 vph in the PM peak hour. The Minor Street (Short Road) will have 49 vph in the AM peak hour and 64 vph in the PM peak hour.

Figure 17 – SH 44 and Short Road 2030 Background Signal Warrant



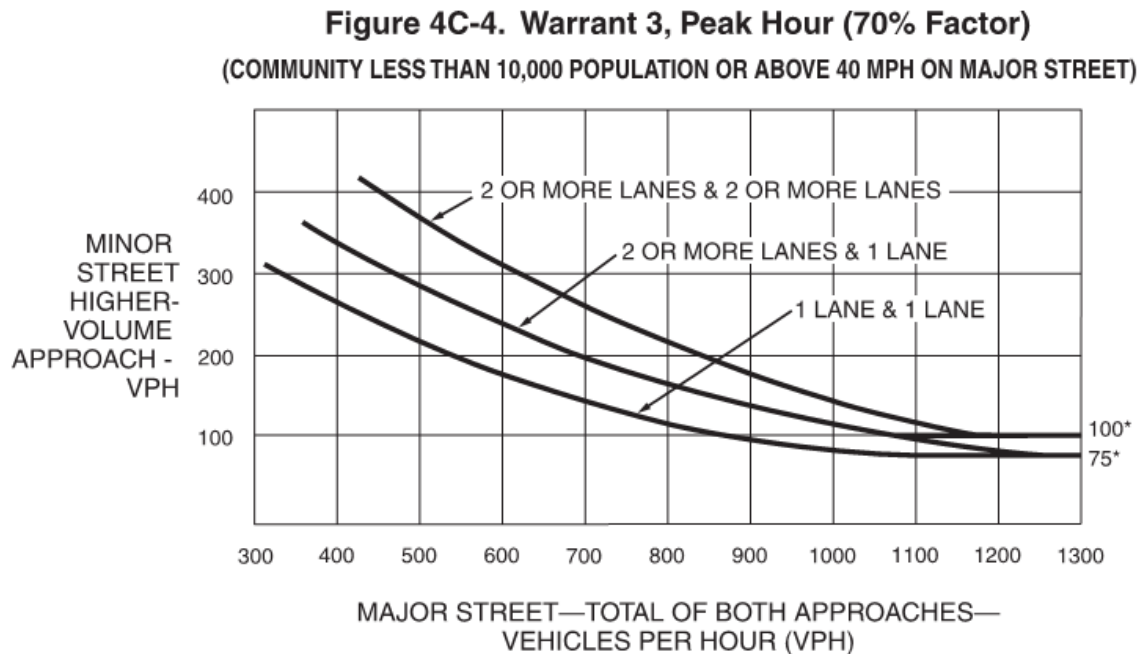
- = 2030 Background Year Traffic Volumes. (AM Peak Hour)
- = 2030 Background Year Traffic Volumes. (PM Peak Hour)

As seen in Figure 17, the plotted points of these volumes fall well below the applicable curve and therefore do not warrant a traffic signal at this time. It is recommended the city monitor this intersection for when actual traffic volumes are present.

With the addition of the Northern Start Development, we also analyzed the SH 44 and Short Road intersection for a traffic signal warrant. Figure 18 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2023 Background Year with Project scenario. The Major Street (SH 44) will see 1,880 vph in the AM peak hour, and

1,988 vph in the PM peak hour. The Minor Street (Short Road) will have 52 vph in the AM peak hour and 42 vph in the PM peak hour.

Figure 18 – SH 44 and Short Road 2023 Background w/ Project Signal Warrant

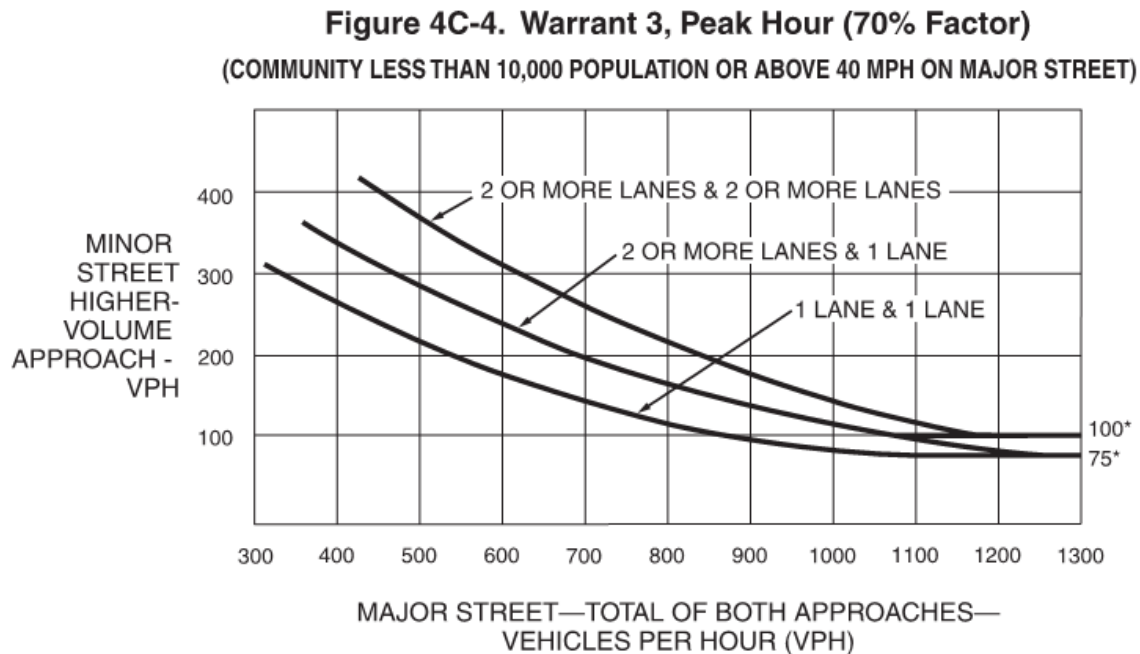


- = 2023 Background Year with Project Traffic Volumes. (AM Peak Hour)
- = 2023 Background Year with Project Traffic Volumes. (PM Peak Hour)

As seen in Figure 18, the plotted points of these volumes fall below the applicable curve and therefore do not warrant a traffic signal at this time.

Figure 19 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2024 Background Year with Project scenario. The Major Street (SH 44) will see 2,083 vph in the AM peak hour, and 2,245 vph in the PM peak hour. The Minor Street (Short Road) will run with 88 vph in the AM peak hour and 46 vph in the PM peak hour.

Figure 19 – SH 44 and Short Road 2024 Background w/ Project Signal Warrant



● = 2024 Background Year with Project Traffic Volumes. (AM Peak Hour)

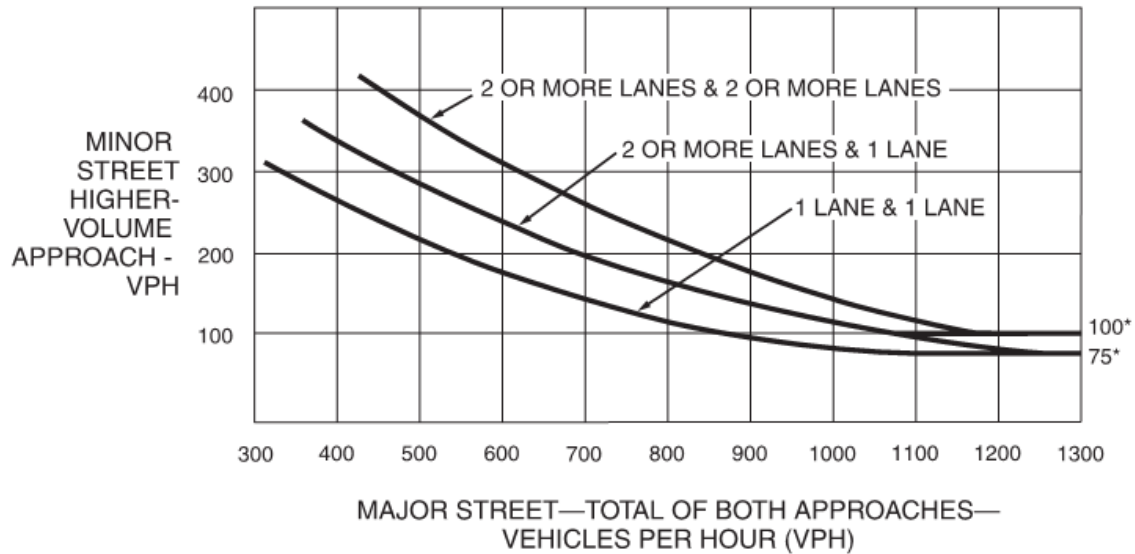
● = 2024 Background Year with Project Traffic Volumes. (PM Peak Hour)

As seen in Figure 19, the plotted points of these volumes fall below the applicable curve and therefore do not warrant a traffic signal at this time.

Figure 20 illustrates the signal warrant analysis for the AM and PM peak hour traffic volumes under the 2030 Background Year with Project scenario. The Major Street (SH 44) will see 3,031 vph in the AM peak hour, and 3,105 vph in the PM peak hour. The Minor Street (Short Road) will run with 105 vph in the AM peak hour and 132 vph in the PM peak hour.

Figure 20 – SH 44 and Short Road 2030 Background w/ Project Signal Warrant

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

- = 2030 Background Year with Project Traffic Volumes. (AM Peak Hour)
- = 2030 Background Year with Project Traffic Volumes. (PM Peak Hour)

As seen in Figure 20, the plotted points of these volumes will warrant a traffic signal as the plotted points fall above the applicable curve. It is recommended since these traffic volumes are projected volumes for the 2030 year, and this intersection will function with unacceptable levels of service well before 2030, this intersection continue to be monitored.

9.0 Turn Lane Warrant Analysis

Following the District Policy as outlined in 7106.4.4, the proposed intersections along Hamlin Avenue with the addition of the Northern Star Development were analyzed for turn lane warrants. For major roads at an intersection, District Policy per NCHRP Reports 279 and 457 were used applying Figure 1 for Left-Turn Guidelines for Two-Lane Roads less than or equal to 40 mph. For minor roads, the evaluation of a second lane per NCHRP Report 457 was followed. Within this study area, Hamlin Ave would follow the major roadway analysis, where the site accesses would fall under the minor roadway analysis. The following Advancing Volumes and Opposing Volumes under the different scenarios were used. Refer to the appendix of this report for the graphs from the NCHRP Reports and District Policy.

Hamlin Avenue and Amazon Drive:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

AM Northbound Advancing Volume = 87 vph (71% left turns)

AM Southbound Opposing Volumes = 112 vph

PM Northbound Advancing Volumes = 84 vph (15% left turns)

PM Southbound Opposing Volumes = 71 vph

2030 Background with Project Southbound Left Turn Lane: **Does Not Warrant**

AM Southbound Advancing Volumes = 189 vph (41% left turns)

AM Northbound Opposing Volumes = 25 vph

PM Southbound Advancing Volumes = 119 vph (40% left turns)

PM Northbound Opposing Volumes = 72 vph

2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as “0” vehicles are planned to make this movement**

2030 Background with Project Eastbound Left Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

2030 Background with Project Northbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

The following analysis was performed using the NCHRP Report 457 for evaluation of a second lane for minor roads.

2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 26 vph

AM Major Road Volume = 276 vph

PM Eastbound Minor Road Volume = 150 vph

PM Major Road Volume = 203 vph

2030 Background Westbound Right Turn Lane: **Does Not Warrant**

AM Westbound Minor Road Volumes = 125 vph

AM Major Road Volumes = 276 vph

PM Westbound Right Turn Volumes = 112 vph

PM Major Road Volumes = 203 vph

Hamlin Avenue and Apartment Access:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

AM Northbound Advancing Volume = 56 vph (52% left turns)

AM Southbound Opposing Volumes = 105 vph

PM Northbound Advancing Volumes = 165 vph (50% left turns)

PM Southbound Opposing Volumes = 66 vph

2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as "0" vehicles are planned to make this movement**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as "0" vehicles are proposed to make this turning moment.**

The following analysis was performed using the NCHRP Report 457 for evaluation of a second lane for minor roads.

2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 84 vph

AM Major Road Volume = 161 vph

PM Eastbound Minor Road Volume = 53 vph

PM Major Road Volume = 231 vph

Hamlin Avenue and Shultz Court:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

AM Northbound Advancing Volume = 27 vph (44% left turns)

AM Southbound Opposing Volumes = 66 vph

PM Northbound Advancing Volumes = 82 vph (48% left turns)

PM Southbound Opposing Volumes = 43 vph

2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as "0" vehicles are planned to make this movement**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as "0" vehicles are proposed to make this turning moment.**

The following analysis was performed using the NCHRP Report 457 for evaluation of a second lane for minor roads.

2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 39 vph

AM Major Road Volume = 93 vph

PM Eastbound Minor Road Volume = 23 vph

PM Major Road Volume = 125 vph

Hamlin Avenue and Single-Family Access:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

AM Northbound Advancing Volume = 10 vph (100% left turns)

AM Southbound Opposing Volumes = 0 vph

PM Northbound Advancing Volumes = 34 vph (100% left turns)

PM Southbound Opposing Volumes = 0 vph

2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as "0" vehicles are planned to make this movement**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as "0" vehicles are proposed to make this turning moment.**

The following analysis was performed using the NCHRP Report 457 for evaluation of a second lane for minor roads.

2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 31 vph

AM Major Road Volume = 10 vph

PM Eastbound Minor Road Volume = 20 vph

PM Major Road Volume = 34 vph

Based on the above analysis for the needs of right and left turn lanes along Hamlin Avenue and the roadway intersecting from the Northern Star Development, no turn lanes are warranted.

10.0 Queuing Analysis

Sim Traffic Queueing Analysis

Using the 95th percentile queue lengths from Sim Traffic for the study scenarios, the following table illustrates the existing measured queue lengths, the calculated queue length from Sim Traffic and the rounded recommended queue lengths at the study area intersections. Note the queue lengths for proposed intersections along Hamlin Ave are not recorded as no separate left or right turn lanes are necessary under the turn lane warrant analysis.

Table 23 – 2023 Background w Project Sim Traffic Queuing Analysis Summary

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		Existing Storage Length	Sim Traffic 95th % Queue	Rec Queue	Sim Traffic 95th % Queue	Rec Queue	
1	Hamlin Ave & SH 44	SBR	Single Lane	50	100	50	100
2	Short Rd & SH 44	EBL	TWLTL - 750	34	100	54	100
		EBR	150	6	100	-	-
		WBL	TWLTL - 1920	34	100	12	100
		WBR	375			8	100
		NBL	100	33	100	53	100
		SBL	Single Lane	125	125	118	120

Table 24 – 2024 Background w Project Sim Traffic Queuing Analysis Summary

Intersection	Lane Group	AM Peak Hour			PM Peak Hour		
		Existing Storage Length	Sim Traffic 95th % Queue	Rec Queue	Sim Traffic 95th % Queue	Rec Queue	
1	Hamlin Ave & SH 44	SBR	Single Lane	55	100	54	100
2	Short Rd & SH 44	EBL	TWLTL - 750	37	100	80	100
		EBR	150	5	100	3	-
		WBL	TWLTL - 1920	40	100	15	100
		WBR	375			9	100
		NBL	100	33	100	112	115
		SBL	Single Lane	251	255	241	245

Table 25 – 2030 Background w Project Sim Traffic Queuing Analysis Summary

Intersection		Lane Group	AM Peak Hour			PM Peak Hour	
			Existing Storage Length	Sim Traffic 95th % Queue	Rec Queue	Sim Traffic 95th % Queue	Rec Queue
1	Hamlin Ave & SH 44	SBR	Single Lane	85	100	120	120
2	Short Rd & SH 44	EBL	TWLTL - 750	107	150	266	270
		EBR	150	14	100	-	-
		WBL	TWLTL - 1920	70	150	16	150
		WBR	375	16	100	15	100
		NBL	100	237	240	232	240
		SBL	Single Lane	205	205	195	200

The following table illustrates the queue lengths under the 2030 Background with Project scenario with the proposed mitigations as outlined above to make the northbound and southbound movements along Short Road a RIROLI intersection.

Table 26 – 2030 Background w Project -Mit Sim Traffic Queuing Analysis Summary

Intersection		Lane Group	AM Peak Hour			PM Peak Hour	
			Existing Storage Length	Sim Traffic 95th % Queue	Rec Queue	Sim Traffic 95th % Queue	Rec Queue
1	Hamlin Ave & SH 44	SBR	Single Lane	75	100	273	275
2	Short Rd & SH 44	EBL	TWLTL - 750	100	150	209	210
		EBR	150	9	100	3	100
		WBL	TWLTL - 1920	72	150	21	100
		WBR	375	11	100	23	100
		NBR	-	56	100	61	100
		SBR	-	119	120	515	515
		EB		55	100	49	100
		SB		-	-	-	-

In the above table, at the Hamlin Ave and SH 44 intersection, the southbound leg of this intersection is a right turn only. This lane is a single lane that extends north to the next

intersection which is 700 feet. Therefore, there is plenty of distance between SH 44 and Amazon Drive to hold the queuing distance for the southbound right turn movement.

The Short Road and SH 44 eastbound leg is planned for a two way left turn lane. Therefore, there is roughly 750 feet between Short Road and Hamlin Ave to the west, which provides adequate queuing for the eastbound left and right turn lanes. The westbound approach is similar as there is planned to be constructed a two way left turn lane and there is over 1900 feet to Palmer Lane, which is the next intersection to the east. Therefore, there is adequate distance for the westbound left and right turn lane at this intersection. The northbound approach is currently striped with roughly 100 feet of storage. This leg of the intersection does not consist of a two way left turn lane. Therefore, this storage length would need to be lengthened to 240 feet in order to meet the demands of the future growth in this area. Since there are no trips associated to this turning movements from the Northern Star Development, this storage length would need to be extended even without this development and is recommended to occur under the 2030 Background Year conditions. The southbound left turn movement at this intersection at the time of this study, was not striped. However, it has been required that a southbound left turn lane be constructed according to the Amazon Falls 2 requirements from ACHD. This storage length is planned to be constructed with a two way left turn lane that will extend to the next intersection to the north, which is over 300 feet. Therefore, the recommended storage length from this report of 205 feet should be adequate.

Synchro Queuing Analysis

Using the 95th percentile queue lengths provided in the Synchro Reports in the appendix of this study, the following tables reflect the queue lengths per Synchro under the different study scenarios. Note, Synchro provides a 95th percentile queue in number of vehicles. In order to convert this value to a queuing distance, the value was multiplied by 25 ft which represents the average length of a vehicle.

Note, since left and right turn lanes along Hamlin Avenue and at the proposed project accesses are not warranted, these intersections were not included in these tables.

Table 27 – 2023 Background w/ Project Synchro Queuing Analysis Summary

Intersection	Lane Group	Exist Storage Length	AM Peak Hour			PM Peak Hour			
			Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	
1	Hamlin Ave & SH 44	SBR	Single Lane	0.3	7.5	100	0.3	7.5	100
2	Short Rd & SH 44	EBL	TWLTL - 750	0.1	2.5	100	0.6	15	100
		EBR	150	0	0	150	0	0	150
		WBL	TWLTL - 1920	0.2	5	100	0	0	100
		WBR	375	0	0	375	0	0	375
		NBL	100	1.1	27.5	100	1.6	40	100
		SBL	Single Lane	7.3	182.5	185	7	175	175

Table 28 – 2024 Background w/ Project Synchro Queuing Analysis Summary

Intersection	Lane Group	Exist Storage Length	AM Peak Hour			PM Peak Hour			
			Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	
1	Hamlin Ave & SH 44	SBR	Single Lane	0.5	12.5	100	0.6	15	100
2	Short Rd & SH 44	EBL	TWLTL - 750	0.2	5	100	1.2	30	100
		EBR	150	0	0	150	0	0	150
		WBL	TWLTL - 1920	0.2	5	100	0	0	100
		WBR	375	0	0	375	0	0	375
		NBL	100	1.6	40	100	3	75	100
		SBL	Single Lane	13.7	342.5	345	11.4	285	285

Table 29 – 2030 Background w/ Project Synchro Queuing Analysis Summary

Intersection		Lane Group	Exist Storage Length	AM Peak Hour			PM Peak Hour		
				Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue
1	Hamlin Ave & SH 44	SBR	Single Lane	1.4	35	100	7.5	187.5	190
2	Short Rd & SH 44	EBL	TWLTL - 750	1.8	45	100	16.4	410	410
		EBR	150	0	0	150	0	0	150
		WBL	TWLTL - 1920	0.7	17.5	100	0	0	100
		WBR	375	0	0	375	0	0	375
		NBL	100	4.4	110	110	0	0	100
		SBL	Single Lane	26.9	672.5	675	0	0	100

The following table illustrates the Synchro queuing recommendations with the proposed mitigations.

Table 30 – 2030 Background w/ Project - Mit Synchro Queuing Analysis Summary

Intersection		Lane Group	Exist Storage Length	AM Peak Hour			PM Peak Hour		
				Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue	Synchro 95th % Queue (VEH)	Calc Queue	Rec Queue
1	Hamlin Ave & SH 44	SBR	Single Lane	4.2	105	105	23.6	590	590
2	Short Rd & SH 44	EBL	TWLTL - 750	1.8	45	100	16.4	410	410
		EBR	150	0	0	150	0	0	150
		WBL	TWLTL - 1920	0.7	17.5	100	0	0	100
		WBR	375	0	0	375	0	0	375
		NBR	100	0.9	22.5	100	0.5	12.5	100
		SBR	Single Lane	2.2	55	100	19.3	482.5	485

All lane configurations with no recommended queue length are proposed to share left, through and right turn lanes and therefore no additional queuing analysis was performed on the intersections presented in these tables.

Comparing the two different methods, the Sim Traffic calculations illustrate less queuing is likely to occur at the intersections. In particular the southbound left turning lane at Short Road and SH 44. This is likely caused because Sim Traffic runs different simulations of the traffic and the average over those runs is used in this analysis. We ran 5 different simulations to compile the average. The Synchro analysis is based on a specific number. Using the Sim Traffic method, the intersection of Short Road and SH 44 illustrates no significant queuing will occur if the intersection were to remain with full left and right turning movements and the need to convert this intersection to a RIROLI would not be necessary. Converting this intersection to RIROLI, the southbound queuing under the 2030 Background with Project scenario will experience heavy queuing in the PM peak hour. The queuing reports for both Synchro and Sim Traffic can be found in the appendix of this report.

11.0 Recommendations

Based on the information and findings presented in this report, the following recommendations are to improve the overall flow of traffic.

- The Hamlin Avenue and SH 44 intersection will remain a right in/right out intersection as per Idaho Department of Transportation. With the addition of a full interchange at SH 16 and SH 44, the close proximity of Hamlin Ave will require this roadway to remain right in and right out.
- SH 44 is planned to be widened to two lanes in each direction and a center two-way left turn lane by the end of 2023.
- As outlined in the Amazon Phase 2 traffic impact study, the recommendations to reconstruct the Short Road and SH 44 intersection to a right-in/right-out with left-in movements is planned to occur by 2025.
- The intersection of Short Road and SH 44 does not meet the intersection spacing for a traffic signal as outlined in the ITIP. However, a signal at this intersection would sufficiently improve the flow of traffic and allow vehicles entering and exiting onto SH 44 from the multiple developments planned for this area a safe connection.
- It should also be noted that as future developments occur to the east, there should be planned connections to allow vehicles to access Palmer and other surrounding roadways a way to travel east along SH 44.
- With the addition of the Northern Star Development, the intersection of Hamlin Avenue and Amazon Drive will be constructed. It is recommended this intersection be constructed with to meet city standards with one lane in each direction. Adequate sight distance at this intersection will be required as per District Policy 5104.3. It is recommended at a speed limit of 35 mph; 390 feet of sight distance should be accounted for in the design of this intersection. No

obstructions within the sight distance triangles as outlined in Figure 2 of the District Policy 5104.3.

- It is recommended Hamlin Avenue be widened to meet the city standards for a Collector roadway with one lane in each direction at each access to the Northern Star Development.
- Shultz Street and Hamlin Ave should also be constructed to meet city standards. If Shultz Street is planned to remain as a city owned and maintained roadway. The roadway will need to terminate with a cul-de-sac prior to connecting to a private road. Shultz Street should be constructed with one lane in each direction as the projected volumes do not warrant the need for additional turn lanes. Shultz Street will be stop controlled with free-flowing traffic along Hamlin Ave.
- The single-family access and Hamlin Ave intersection should be constructed with one lane in each direction as the projected traffic volumes do not meet the turn lane warrants. The single-family access will be stop controlled with free-flowing traffic along Hamlin Ave.
- The townhomes access and Hamlin Ave intersection should be constructed with one lane in each direction as the projected traffic volumes do not meet the turn lane warrants. The townhomes access will be stop controlled with free-flowing traffic along Hamlin Ave.
- The apartment access and Hamlin Ave intersection should be constructed with one lane in each direction as the projected traffic volumes do not meet the turn lane warrants. The apartment access will be stop controlled with free-flowing traffic along Hamlin Ave.
- Hamlin Avenue and Amazon Drive should be constructed with one lane in each direction and stop controlled along Amazon Drive.

12.0 Appendix

Scoping Memo

MEMORANDUM - REVISED

Date: January 20, 2022
To: Paige Bankhead – Ada County Highway District (ACHD)
From: Jason Watson, PE, PTOE
Project: Northern Star Development – Star City, Idaho
Subject: Proposed Scope of Work for the Transportation Impact Analysis

FOCUS Engineering and Surveying, LLC (FOCUS) has been retained to complete a Traffic Impact Study for the proposed Northern Star Development. This memorandum summarizes the assumptions and discussions that have been held between FOCUS, ACHD, Community Planning Association (COMPASS) and Idaho Transportation Department (ITD) to determine the overall scope for this study. The Northern Star Development is located north of SH 44 and east of SH 16 within Star City. Figure 1 illustrates the vicinity map and project area.

Conversations that were held with ACHD, COMPASS and ITD staff, along with the project Developer and Star City staff developed the outline for this project and the needs for the traffic impact study. This memorandum addresses the following items:

- Project Description
- Estimated Trip Generation and Distribution
- Analysis Scenarios and Study Assumptions
- Analysis Tools

PROJECT DESCRIPTION

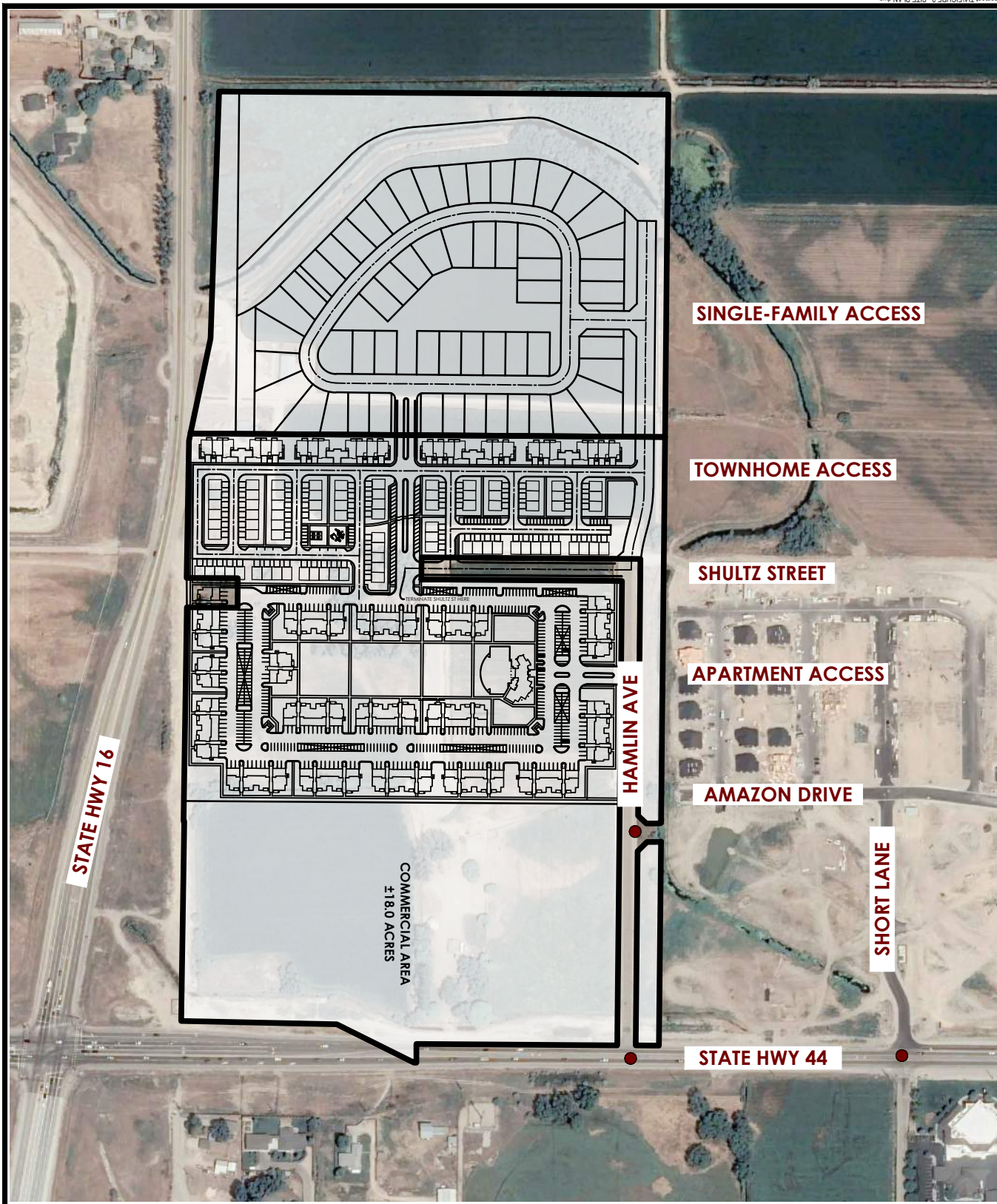
The Northern Star Development is located along SH 44, between SH 16 and Hamlin Avenue. The proposed site is currently vacant land used for agricultural purposes. The proposed development will consist of 55 single-family lots, 110 townhome lots, 310 apartment units and roughly 18 acres of commercial land that could consist of office space, retail shops, etc. Figure 2 illustrates the proposed Northern Star Development site plan.

Access to the Northern Star Development will be provided from the following intersections:

- State Highway 44 & Hamlin Avenue – Right-in & Right-out
 - Existing Access
- Hamlin Avenue & Amazon Drive
 - Approximately 725 feet from SH 44
- Hamlin Avenue & Apartment Access
 - Approximately 250 north of Amazon Drive
- Hamlin Avenue & Shultz Street
 - Approximately 525 feet north of Amazon Drive
- Hamlin Avenue & Private Road Access to Townhomes
 - Approximately 300 feet north of Shultz
- Hamlin Avenue & Single-Family Access
 - Approximately 300 feet north of Townhomes Access



NORTHERN STAR DEVELOPMENT
FIGURE 1 - VICINITY MAP



NORTHERN STAR DEVELOPMENT
 FIGURE 2 - SITE PLAN

ESTIMATED TRIP GENERATION AND DISTRIBUTION

Trip Generation

To generate the anticipated number of vehicles entering and exiting the proposed site during a typical weekday a.m. and p.m. peak hour, the *Institute of Transportation Engineer's (ITE) Trip Generation Manual* is used. For single-family residential lots, the land use codes 210 – Single-Family Detached Housing, 220 – Multifamily Housing (Low-Rise), and 221 – Multifamily Housing (Mid-Rise) were used to generate the number of trips entering and exiting the development. The Mid-Rise land use was used for the apartments as they are planned for three story apartment buildings. Since the specific land use for the 18 acres of commercial is unknown at this time, land use code 710 for General Office Building was used. It was assumed 20% of the overall acreage would be used as the actual building size. Using these assumptions, roughly 156,000 square foot office building was used to calculate the trip generation. Table 1 illustrates the number of trips the Northern Star Development is anticipated to generate based on the adjacent street traffic.

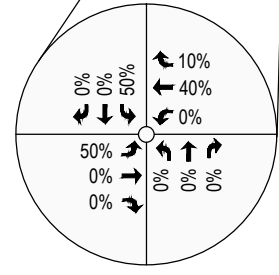
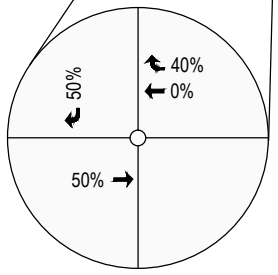
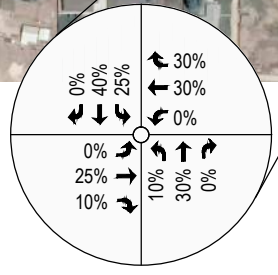
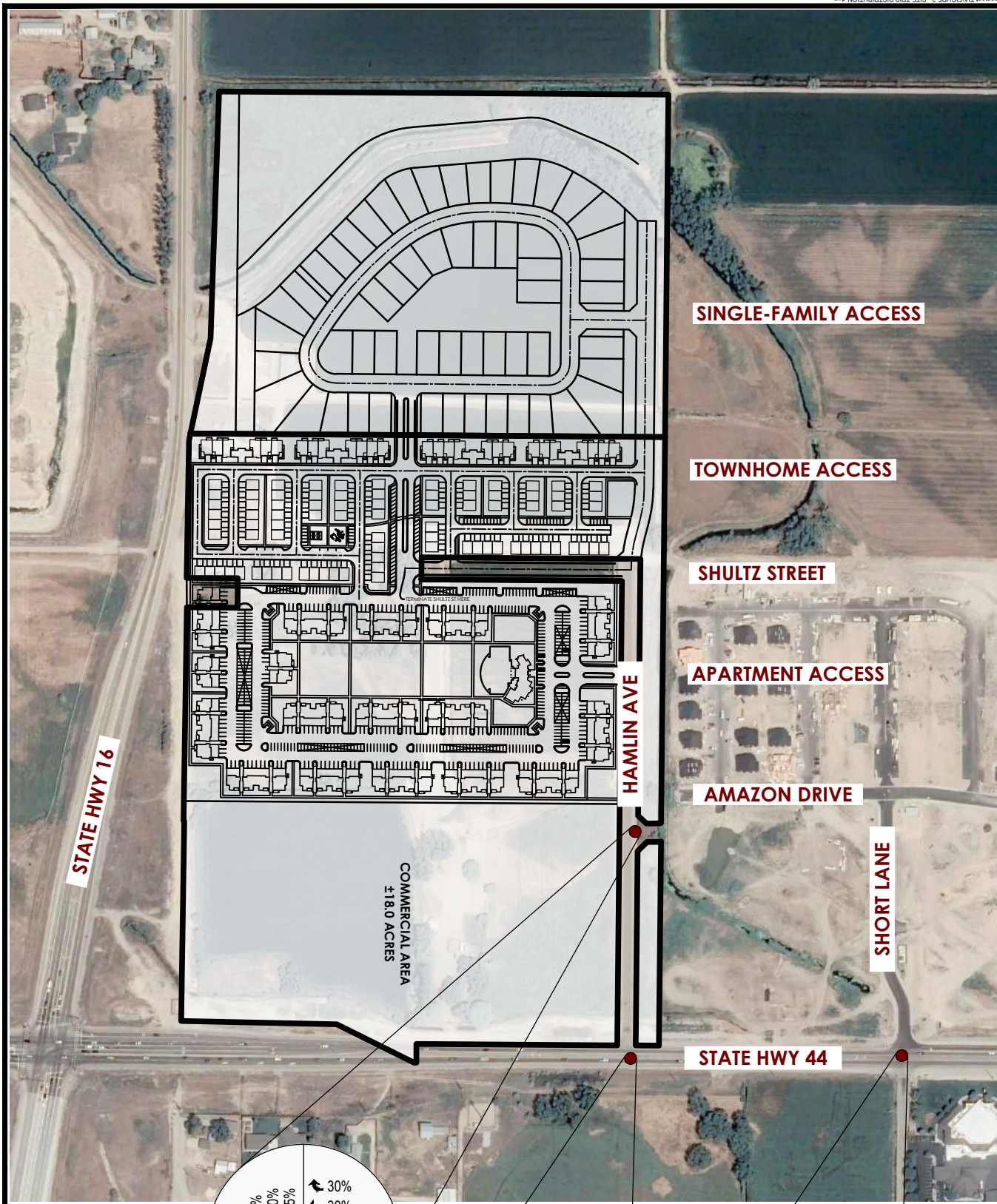
Table 1 – Trip Generation for Northern Star

ITE Land Use Code	Land Use Description	Size	Daily (AADT)	Trip Generation (AM)		Trip Generation (PM)	
				Enter	Exit	Enter	Exit
210	Single-Family	55 DU	519	10	31	34	20
220	Low-Rise	110 DU	805	12	39	39	23
221	Mid-Rise	310 DU	1686	29	83	83	53
710	Gen Office	1,000 GFA	1519	156	25	29	150

As can be seen in Table 1, the Northern Star Development will generate approximately 4,529 daily trips, with 385 trips occurring in the AM peak hour (207 entering, 178 exiting) and 431 trips occurring in the PM peak hour (185 entering, 246 exiting). It is assumed with the combination of residential and office within the development, there is potential for internal capture trips. With the internal capture trips, this development will generate 379 total AM peak hour trips (204 entering, 175 exiting) and 417 PM peak hour trips (178 entering, 239 exiting).

Trip Distribution

The project trip distribution onto the existing and proposed roadways at each project site access is based on the area of impact model runs by COMPASS, review of the roadway system by ACHD and ITD, as well as knowledge of travel patterns in this study area. The proposed distribution percentages are illustrated in Figure 3.



NORTHERN STAR DEVELOPMENT
FIGURE 3 - PROJECT TRIP DISTRIBUTION PERCENTAGES
 XX% = DISTRIBUTION PERCENTAGES

ANALYSIS SCENARIOS & STUDY ASSUMPTIONS

The proposed traffic impact analysis assumptions are as follows:

- Study Years:
 - Existing traffic conditions (2022)
 - Buildout year background traffic conditions (2023). Includes growth and in-process developments without the proposed Northern Star Development.
 - Buildout year total traffic conditions (2023). Included background traffic plus the build-out of the first phase (310 apartment units).
 - Buildout year background traffic conditions (2024). Includes growth and in-process developments without the remaining phases of the proposed development.
 - Buildout year total traffic conditions (2024). Includes background traffic plus the build-out of the second phase (110 townhome units and 55 single-family units).
 - Buildout year background traffic conditions (2030). Includes growth and in-process developments without the remaining phases of the proposed development.
 - Buildout year total traffic conditions (2030). Includes background traffic plus the build-out of the third phase (commercial).
- Time Periods:
 - Weekday AM peak hour (7-9 AM)
 - Weekday PM peak hour (4-6 PM)
- Study Intersections:
 - Amazon Drive/Hamlin Avenue
 - Amazon Drive/Short Lane
 - Shultz Street/Hamlin Avenue
 - Hamlin Avenue/SH-44
 - Short Lane/SH-44
- Roadway Segments:
 - Hamlin Avenue – from Schultz Street to SH-44
 - Amazon Drive – from Hamlin Avenue to Short Lane
 - Short Lane
- Data Collection:
 - Turning movement counts will be collected during the typical midweek (Tuesday -Thursday) AM peak period (7:00 AM to 9:00 AM) and also the PM peak period (4:00 PM to 6:00 PM).
- Background Growth Rate and In-Process Developments:
 - Growth rates obtained from COMPASS illustrate a 9.9% growth along SH 44 until 2025. After 2025 the growth rate is anticipated to adjust to 4.9%.

- Trip Assignment from recently approved development within this study are will also be included in the background scenarios of this study. We will work with ACHD to obtain the studies on these developments. These developments include:
 - Amazon Falls 2
 - Fountain Park
- Access Spacing & Needs:
 - Access locations will be evaluated with respect to ACHD policy and spacing requirements.
 - The need for traffic control and turn lanes will also be evaluated at each site access.
- Planned Transportation Improvements:
 - Planned widening of SH 44 between SH 16 and Linder Road from 3 lanes to 5 lanes by 2023.
 - Planned future improvements to SH 44 and Palmer Lane call for a signalized intersection by FY 2027.
 - Hamlin Avenue is also planned to extend north to connect Floating Feather Road and SH 44.
 - All of these planned improvements are based on future developments to construct these improvements. The analysis shown in this study will account for these improvements to be completed in the background years of this study.

ANALYSIS TOOLS AND OPERATING STANDARDS

The study area intersections operational analysis will be evaluated using the *Highway Capacity Manual (HCM) 6th Edition* analysis procedures. The intersections will be evaluated with the appropriate calculation of level of service using Synchro 11 and SimTraffic software. Signalized intersections within the study area will be evaluated using the HCM 6th Edition procedure as provided in the Synchro Software to provide the overall intersection control delay and level of service along with each individual approaches delay in seconds per vehicle and level of service. Unsignalized intersections will be evaluated using the HCM 6th Edition procedures and will provide the individual approach delay in seconds per vehicle as well as approach level of service.

Traffic Impact Analysis will be performed in accordance with methodologies outlined in Section 7106.6 of the *ACHD Policy Manual*. Queue lengths, needs for left and right turn lanes will be included in the analysis. Intersection and roadway segments analysis will be determined using the ACHD thresholds outlined in the Policy Manual.

ACHD requires signalized intersections operate at a minimum LOS E for Principal Arterials and Minor Arterials and a LOS D for Collectors. All unsignalized intersections that have a projected LOS D or worse, shall perform a traffic signal warrant analysis or roundabout analysis. The acceptable volume -to-capacity ratio for signalized intersection is 0.90 for the overall intersection and 1.00 for each lane group. The acceptable volume-to-capacity ratio is 0.90 for the critical lane group at unsignalized intersections.

NEXT STEPS

FOCUS asks ACHD to review this scope of work for the traffic impact analysis for the Northern Star Development. We ask for any comments or response to the assumptions we have made in this scoping document so we may move forward with the traffic impact study. Please feel free to reach out to Jason Watson (801) 352-0075 or email at jwatson@focusutah.com with any questions or comments on the information we have presented in this scoping document.

Existing Traffic Counts

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: Short Rd / SH-44
City, State: Canyon County, Idaho
Control: Stop Sign

File Name : SH-44 (State St) & Short Rd - revised
Site Code : 00000000
Start Date : 1/20/2022
Page No : 1

Groups Printed- General Traffic

Start Time	Short Road From North					SH-44 From East					Short Road From South					SH-44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	1	0	1	0	113	6	0	119	2	0	3	0	5	10	268	1	0	279	404
07:15 AM	1	0	2	0	3	0	134	2	0	136	8	0	2	0	10	17	289	2	0	308	457
07:30 AM	5	0	1	0	6	0	148	5	0	153	3	0	1	0	4	13	256	4	0	273	436
07:45 AM	0	0	0	0	0	3	133	7	0	143	4	0	7	0	11	22	296	1	0	319	473
Total	6	0	4	0	10	3	528	20	0	551	17	0	13	0	30	62	1109	8	0	1179	1770
08:00 AM	0	0	0	0	0	0	130	9	0	139	2	0	2	0	4	16	268	3	0	287	430
08:15 AM	0	0	1	0	1	1	144	9	0	154	4	0	3	0	7	18	263	4	0	285	447
08:30 AM	1	0	2	0	3	0	105	6	0	111	6	0	5	0	11	8	297	3	0	308	433
08:45 AM	2	0	6	0	8	2	119	4	0	125	2	0	3	0	5	11	251	1	0	263	401
Total	3	0	9	0	12	3	498	28	0	529	14	0	13	0	27	53	1079	11	0	1143	1711

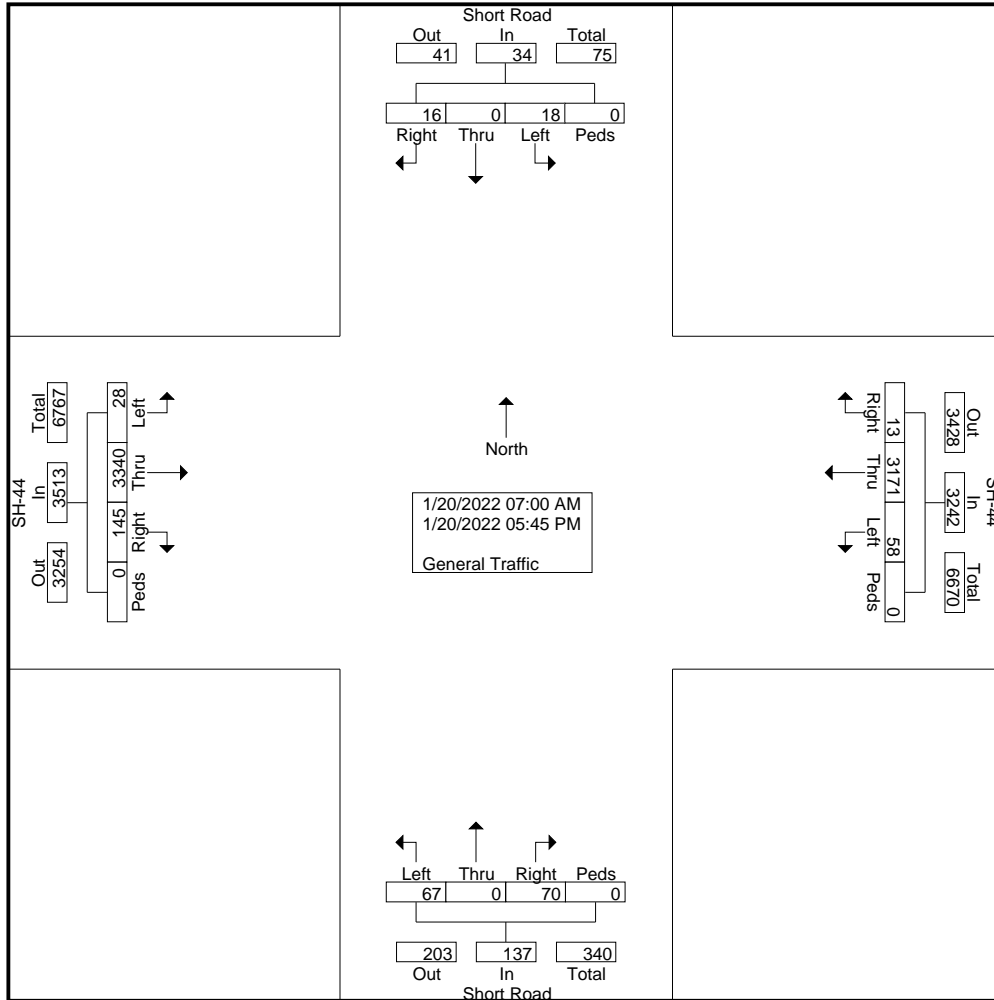
04:00 PM	1	0	2	0	3	0	243	2	0	245	10	0	5	0	15	5	187	0	0	192	455
04:15 PM	0	0	1	0	1	1	258	0	0	259	4	0	6	0	10	2	120	1	0	123	393
04:30 PM	1	0	0	0	1	2	255	4	0	261	4	0	7	0	11	4	134	1	0	139	412
04:45 PM	4	0	0	0	4	0	293	0	0	293	7	0	2	0	9	4	142	0	0	146	452
Total	6	0	3	0	9	3	1049	6	0	1058	25	0	20	0	45	15	583	2	0	600	1712
05:00 PM	0	0	1	0	1	1	279	1	0	281	1	0	7	0	8	5	132	3	0	140	430
05:15 PM	0	0	0	0	0	0	289	1	0	290	5	0	10	0	15	2	136	2	0	140	445
05:30 PM	0	0	0	0	0	2	295	2	0	299	3	0	3	0	6	3	167	0	0	170	475
05:45 PM	1	0	1	0	2	1	233	0	0	234	5	0	1	0	6	5	134	2	0	141	383
Total	1	0	2	0	3	4	1096	4	0	1104	14	0	21	0	35	15	569	7	0	591	1733
Grand Total	16	0	18	0	34	13	3171	58	0	3242	70	0	67	0	137	145	3340	28	0	3513	6926
Apprch %	47.1	0	52.9	0		0.4	97.8	1.8	0		51.1	0	48.9	0		4.1	95.1	0.8	0		
Total %	0.2	0	0.3	0	0.5	0.2	45.8	0.8	0	46.8	1	0	1	0	2	2.1	48.2	0.4	0	50.7	

L2 Data Collection

L2DataCollection.com
 Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
 Intersection: Short Rd / SH-44
 City, State: Canyon County, Idaho
 Control: Stop Sign

File Name : SH-44 (State St) & Short Rd - revised
 Site Code : 00000000
 Start Date : 1/20/2022
 Page No : 2



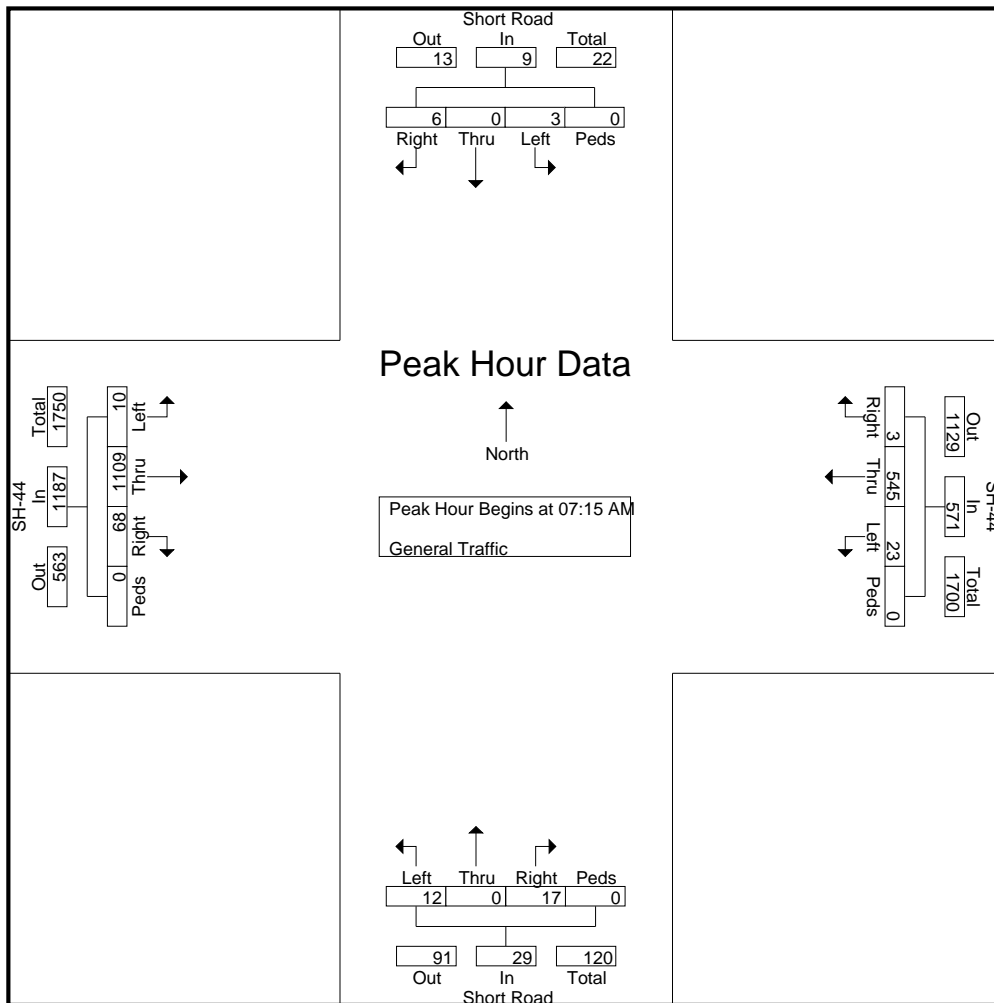
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Study: FOCU0006
Intersection: Short Rd / SH-44
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Control: Stop Sign

File Name : SH-44 (State St) & Short Rd - revised
Site Code : 00000000
Start Date : 1/20/2022
Page No : 3

Start Time	Short Road From North					SH-44 From East					Short Road From South					SH-44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	0	2	0	3	0	134	2	0	136	8	0	2	0	10	17	289	2	0	308	457
07:30 AM	5	0	1	0	6	0	148	5	0	153	3	0	1	0	4	13	256	4	0	273	436
07:45 AM	0	0	0	0	0	3	133	7	0	143	4	0	7	0	11	22	296	1	0	319	473
08:00 AM	0	0	0	0	0	0	130	9	0	139	2	0	2	0	4	16	268	3	0	287	430
Total Volume	6	0	3	0	9	3	545	23	0	571	17	0	12	0	29	68	1109	10	0	1187	1796
% App. Total	66.7	0	33.3	0		0.5	95.4	4	0		58.6	0	41.4	0		5.7	93.4	0.8	0		
PHF	.300	.000	.375	.000	.375	.250	.921	.639	.000	.933	.531	.000	.429	.000	.659	.773	.937	.625	.000	.930	.949



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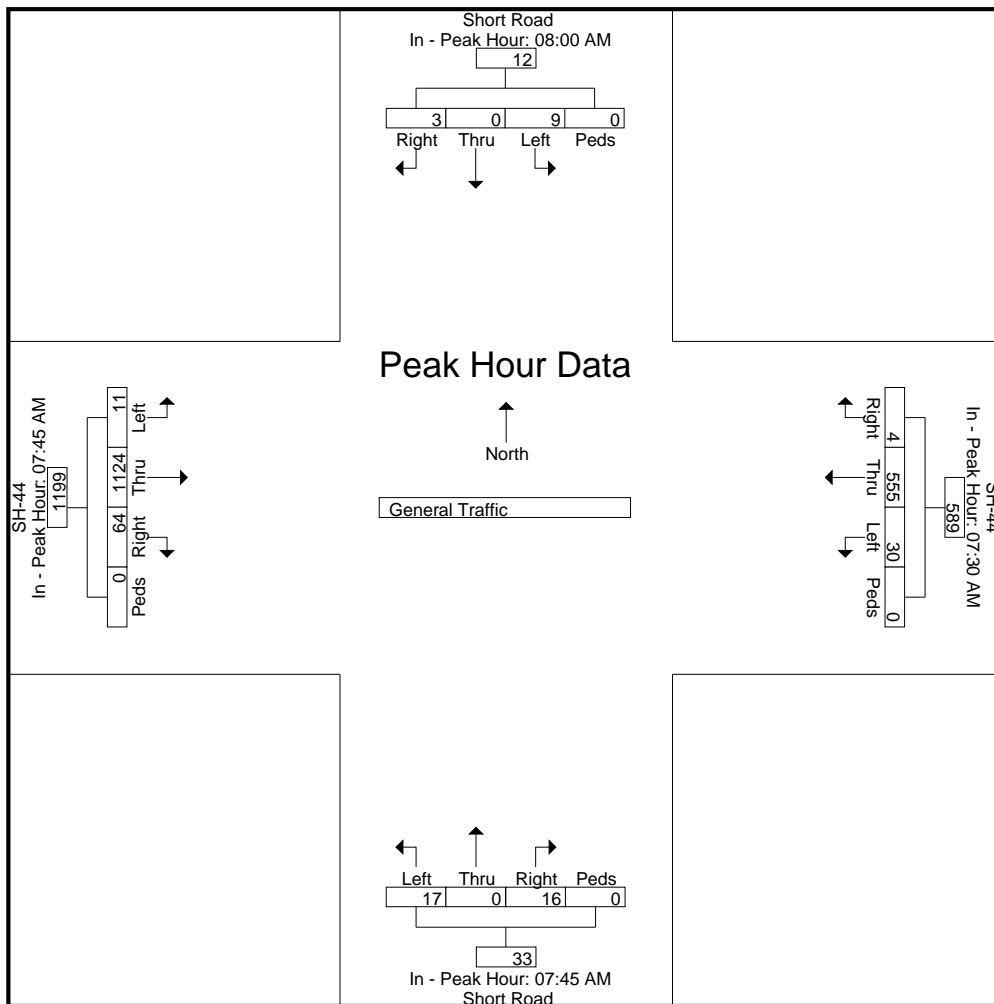
File Name : SH-44 (State St) & Short Rd - revised
Site Code : 00000000
Start Date : 1/20/2022
Page No : 4

Start Time	Short Road From North					SH-44 From East					Short Road From South					SH-44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM					07:30 AM					07:45 AM					07:45 AM				
+0 mins.	0	0	0	0	0	0	148	5	0	153	4	0	7	0	11	22	296	1	0	319
+15 mins.	0	0	1	0	1	3	133	7	0	143	2	0	2	0	4	16	268	3	0	287
+30 mins.	1	0	2	0	3	0	130	9	0	139	4	0	3	0	7	18	263	4	0	285
+45 mins.	2	0	6	0	8	1	144	9	0	154	6	0	5	0	11	8	297	3	0	308
Total Volume	3	0	9	0	12	4	555	30	0	589	16	0	17	0	33	64	1124	11	0	1199
% App. Total	25	0	75	0		0.7	94.2	5.1	0		48.5	0	51.5	0		5.3	93.7	0.9	0	
PHF	.375	.000	.375	.000	.375	.333	.938	.833	.000	.956	.667	.000	.607	.000	.750	.727	.946	.688	.000	.940



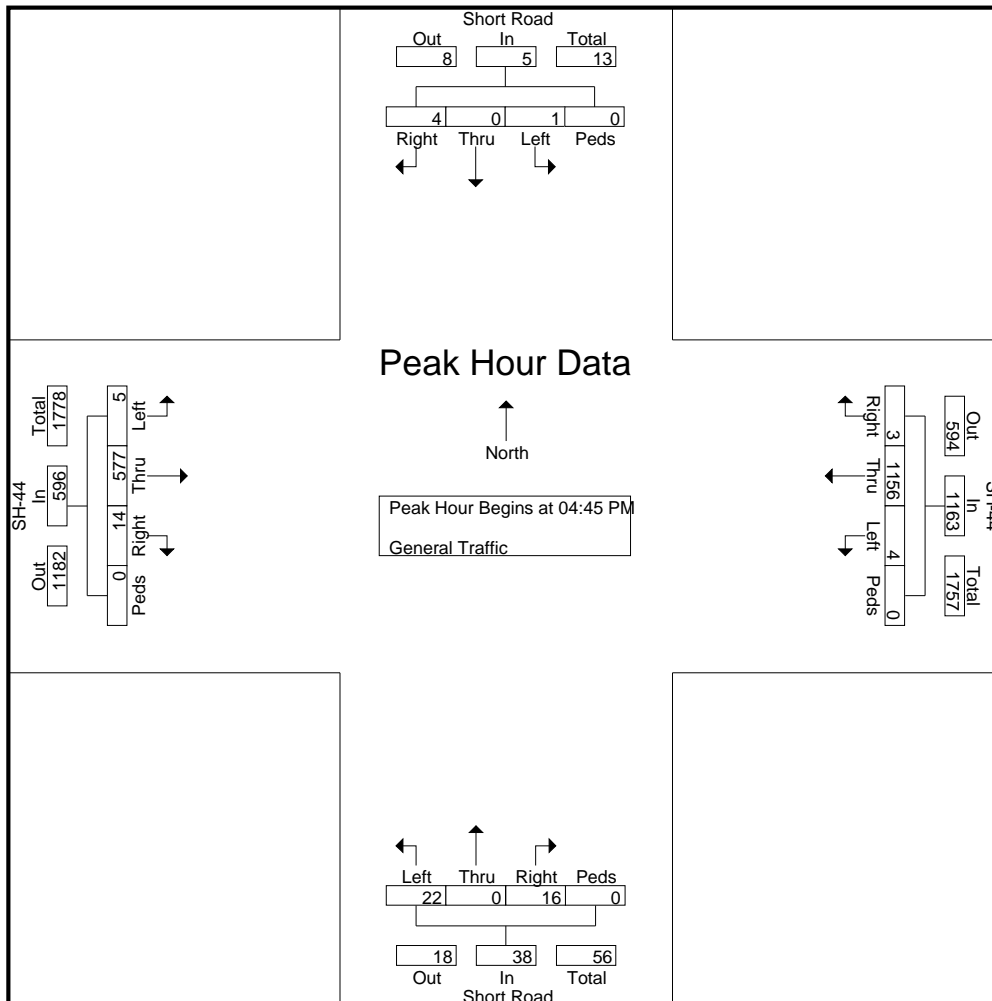
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Study: FOCU0006
 Intersection: Short Rd / SH-44
 City, State: Canyon County, Idaho
 Control: Stop Sign

File Name : SH-44 (State St) & Short Rd - revised
 Site Code : 00000000
 Start Date : 1/20/2022
 Page No : 5

Start Time	Short Road From North					SH-44 From East					Short Road From South					SH-44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	4	0	0	0	4	0	293	0	0	293	7	0	2	0	9	4	142	0	0	146	452
05:00 PM	0	0	1	0	1	1	279	1	0	281	1	0	7	0	8	5	132	3	0	140	430
05:15 PM	0	0	0	0	0	0	289	1	0	290	5	0	10	0	15	2	136	2	0	140	445
05:30 PM	0	0	0	0	0	2	295	2	0	299	3	0	3	0	6	3	167	0	0	170	475
Total Volume	4	0	1	0	5	3	1156	4	0	1163	16	0	22	0	38	14	577	5	0	596	1802
% App. Total	80	0	20	0		0.3	99.4	0.3	0		42.1	0	57.9	0		2.3	96.8	0.8	0		
PHF	.250	.000	.250	.000	.313	.375	.980	.500	.000	.972	.571	.000	.550	.000	.633	.700	.864	.417	.000	.876	.948



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: Short Rd / SH-44
City, State: Canyon County, Idaho
Control: Stop Sign

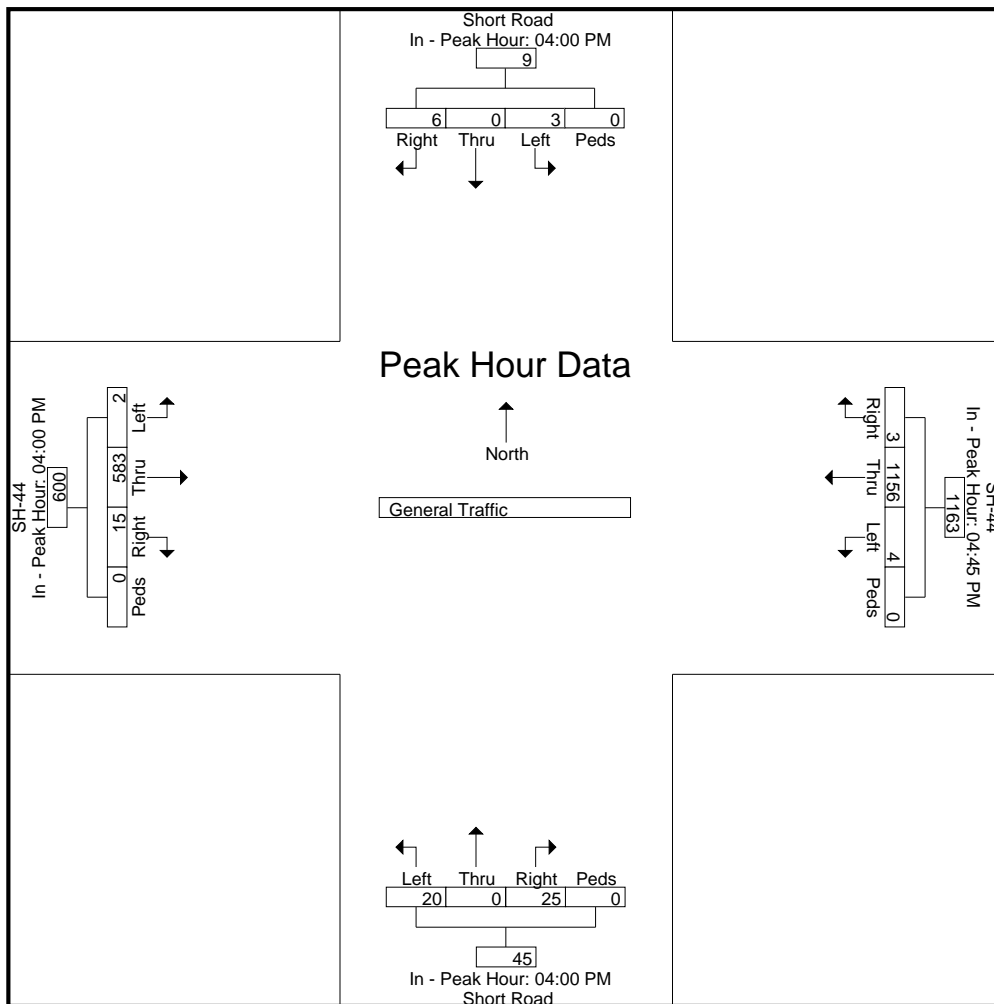
File Name : SH-44 (State St) & Short Rd - revised
Site Code : 00000000
Start Date : 1/20/2022
Page No : 6

Start Time	Short Road From North					SH-44 From East					Short Road From South					SH-44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM					04:45 PM					04:00 PM					04:00 PM				
+0 mins.	1	0	2	0	3	0	293	0	0	293	10	0	5	0	15	5	187	0	0	192
+15 mins.	0	0	1	0	1	1	279	1	0	281	4	0	6	0	10	2	120	1	0	123
+30 mins.	1	0	0	0	1	0	289	1	0	290	4	0	7	0	11	4	134	1	0	139
+45 mins.	4	0	0	0	4	2	295	2	0	299	7	0	2	0	9	4	142	0	0	146
Total Volume	6	0	3	0	9	3	1156	4	0	1163	25	0	20	0	45	15	583	2	0	600
% App. Total	66.7	0	33.3	0		0.3	99.4	0.3	0		55.6	0	44.4	0		2.5	97.2	0.3	0	
PHF	.375	.000	.375	.000	.563	.375	.980	.500	.000	.972	.625	.000	.714	.000	.750	.750	.779	.500	.000	.781



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: Short Rd / SH-44
City, State: Canyon County, Idaho
Control: Stop Sign

File Name : SH-44 (State St) & Short Rd - revised
Site Code : 00000000
Start Date : 1/20/2022
Page No : 7

Image 1



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: SH-44 / Hamblin Road
City, State: Canyon, County, Idaho
Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
Site Code : TURNS
Start Date : 1/20/2022
Page No : 1

Groups Printed- General Traffic

Start Time	Hamblin Road From North				SH-44 (State Street) From East				SH-44 (State Street) From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
07:00 AM	0	1	0	1	0	113	0	113	268	1	0	269	383
07:15 AM	1	2	0	3	0	134	0	134	289	2	0	291	428
07:30 AM	5	1	0	6	0	148	0	148	256	4	0	260	414
07:45 AM	0	0	0	0	3	133	0	136	296	1	0	297	433
Total	6	4	0	10	3	528	0	531	1109	8	0	1117	1658
08:00 AM	0	0	0	0	0	130	0	130	268	3	0	271	401
08:15 AM	0	1	0	1	1	144	0	145	263	4	0	267	413
08:30 AM	1	2	0	3	0	105	0	105	297	3	0	300	408
08:45 AM	2	6	0	8	2	119	0	121	251	1	0	252	381
Total	3	9	0	12	3	498	0	501	1079	11	0	1090	1603

04:00 PM	1	2	0	3	0	243	0	243	187	0	0	187	433
04:15 PM	0	1	0	1	1	258	0	259	120	1	0	121	381
04:30 PM	1	0	0	1	2	255	0	257	134	1	0	135	393
04:45 PM	4	0	0	4	0	293	0	293	142	0	0	142	439
Total	6	3	0	9	3	1049	0	1052	583	2	0	585	1646
05:00 PM	0	1	0	1	1	279	0	280	132	3	0	135	416
05:15 PM	0	0	0	0	0	289	0	289	136	2	0	138	427
05:30 PM	0	0	0	0	2	295	0	297	167	0	0	167	464
05:45 PM	1	1	0	2	1	233	0	234	134	2	0	136	372
Total	1	2	0	3	4	1096	0	1100	569	7	0	576	1679
Grand Total	16	18	0	34	13	3171	0	3184	3340	28	0	3368	6586
Apprch %	47.1	52.9	0		0.4	99.6	0		99.2	0.8	0		
Total %	0.2	0.3	0	0.5	0.2	48.1	0	48.3	50.7	0.4	0	51.1	

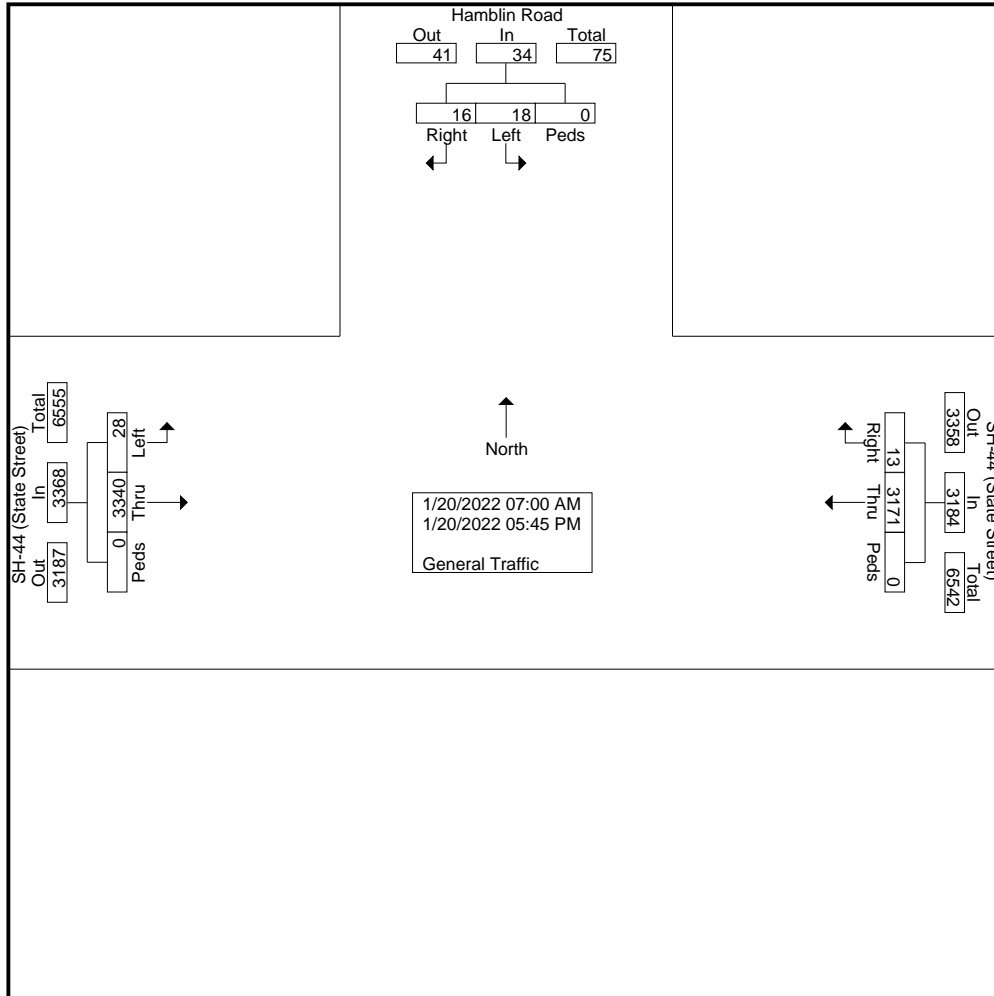
L2 Data Collection

L2DataCollection.com

Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: SH-44 / Hamblin Road
City, State: Canyon, County, Idaho
Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
Site Code : TURNS
Start Date : 1/20/2022
Page No : 2



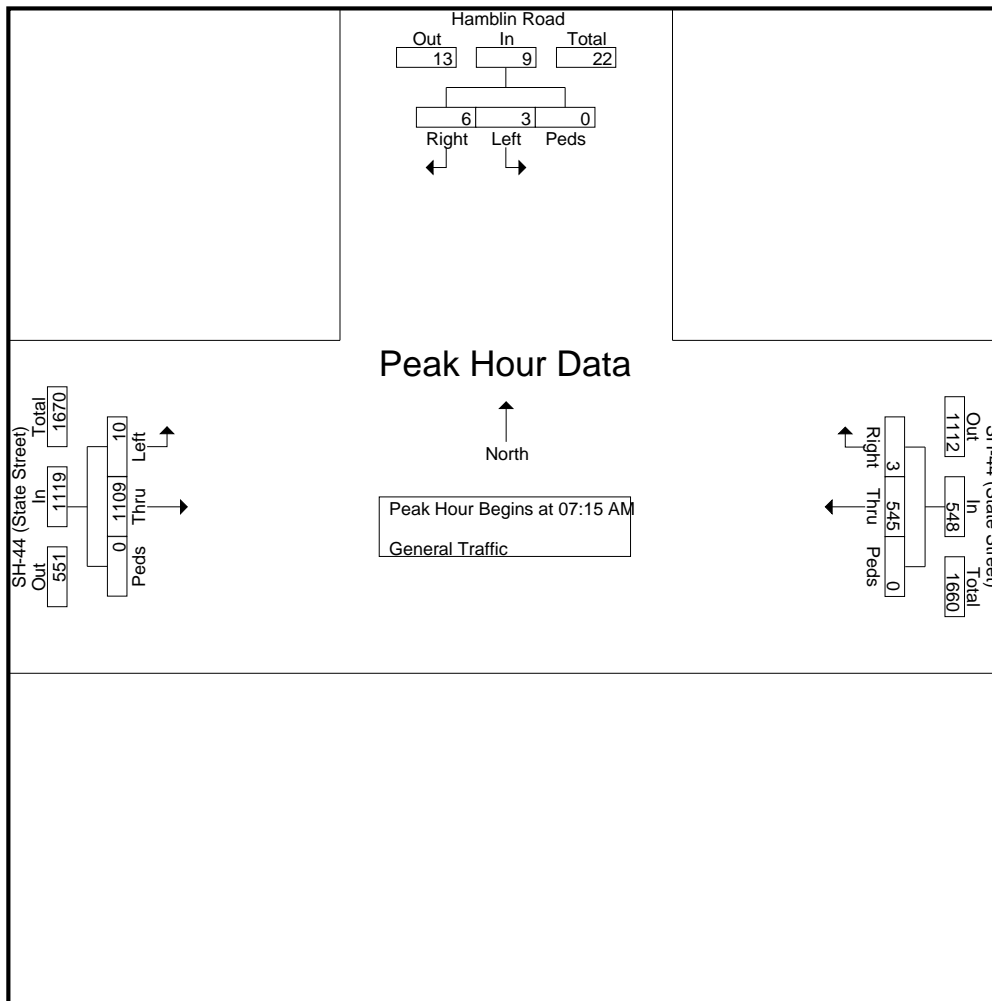
L2 Data Collection

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 Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
 Intersection: SH-44 / Hamblin Road
 City, State: Canyon, County, Idaho
 Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
 Site Code : TURNS
 Start Date : 1/20/2022
 Page No : 3

Start Time	Hamblin Road From North				SH-44 (State Street) From East				SH-44 (State Street) From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	1	2	0	3	0	134	0	134	289	2	0	291	428
07:30 AM	5	1	0	6	0	148	0	148	256	4	0	260	414
07:45 AM	0	0	0	0	3	133	0	136	296	1	0	297	433
08:00 AM	0	0	0	0	0	130	0	130	268	3	0	271	401
Total Volume	6	3	0	9	3	545	0	548	1109	10	0	1119	1676
% App. Total	66.7	33.3	0		0.5	99.5	0		99.1	0.9	0		
PHF	.300	.375	.000	.375	.250	.921	.000	.926	.937	.625	.000	.942	.968



L2 Data Collection

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Study: FOCU0006
 Intersection: SH-44 / Hamblin Road
 City, State: Canyon, County, Idaho
 Control: Stop Sign

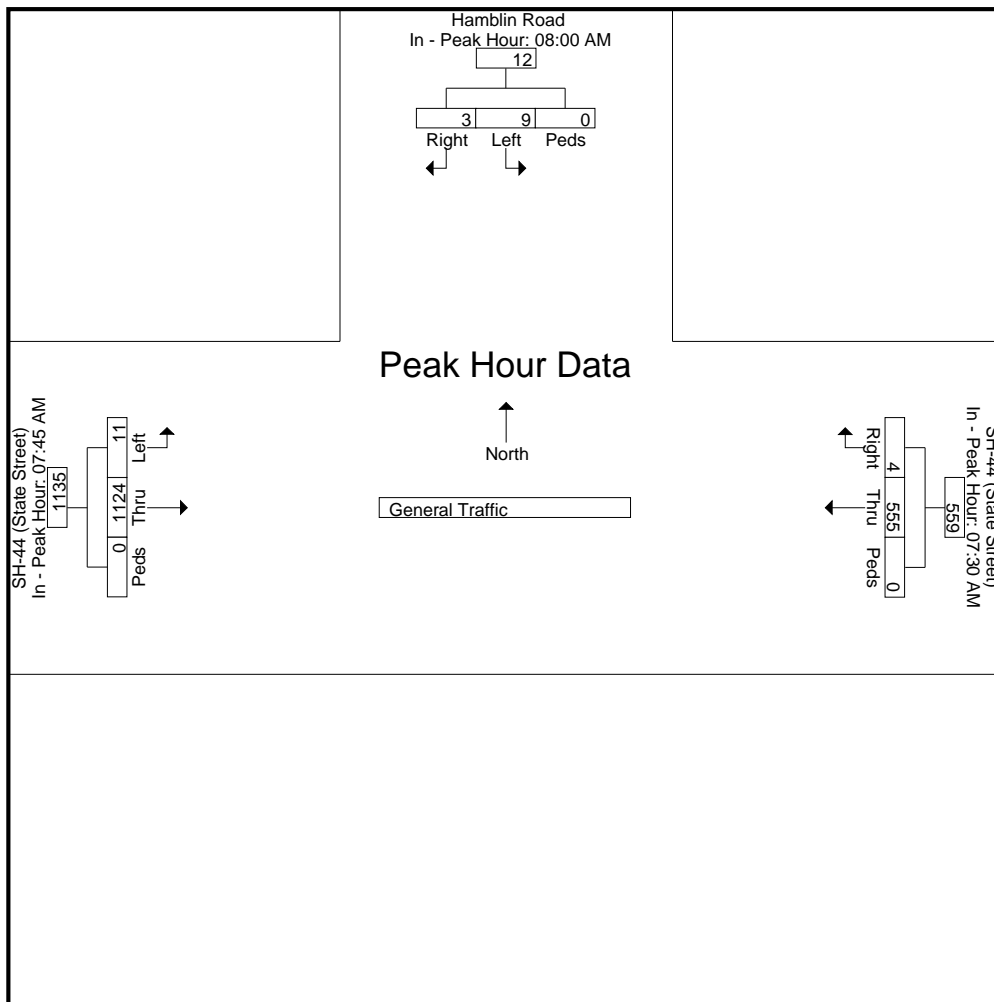
File Name : SH-44 (State St) & Hamblin Rd
 Site Code : TURNS
 Start Date : 1/20/2022
 Page No : 4

Start Time	Hamblin Road From North				SH-44 (State Street) From East				SH-44 (State Street) From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				07:45 AM			
+0 mins.	0	0	0	0	0	148	0	148	296	1	0	297
+15 mins.	0	1	0	1	3	133	0	136	268	3	0	271
+30 mins.	1	2	0	3	0	130	0	130	263	4	0	267
+45 mins.	2	6	0	8	1	144	0	145	297	3	0	300
Total Volume	3	9	0	12	4	555	0	559	1124	11	0	1135
% App. Total	25	75	0		0.7	99.3	0		99	1	0	
PHF	.375	.375	.000	.375	.333	.938	.000	.944	.946	.688	.000	.946



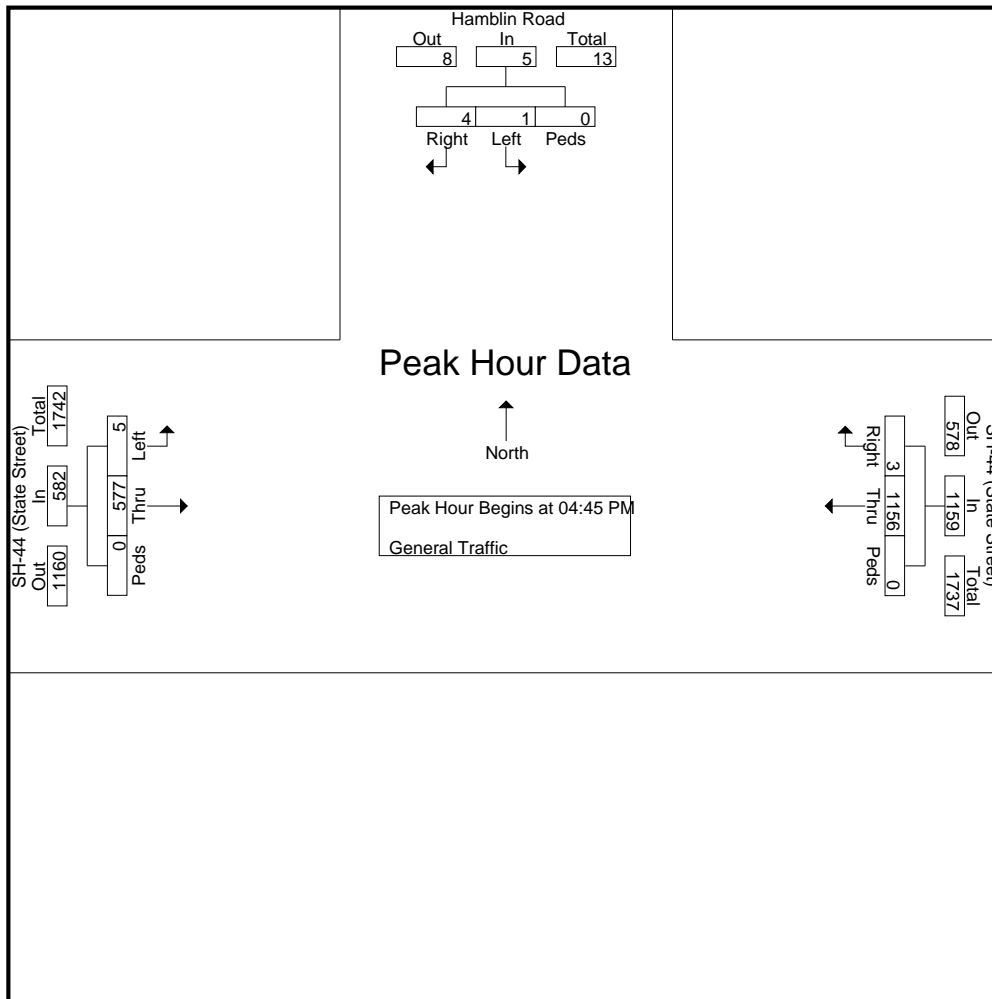
L2 Data Collection

L2DataCollection.com
 Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
 Intersection: SH-44 / Hamblin Road
 City, State: Canyon, County, Idaho
 Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
 Site Code : TURNS
 Start Date : 1/20/2022
 Page No : 5

Start Time	Hamblin Road From North				SH-44 (State Street) From East				SH-44 (State Street) From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	4	0	0	4	0	293	0	293	142	0	0	142	439
05:00 PM	0	1	0	1	1	279	0	280	132	3	0	135	416
05:15 PM	0	0	0	0	0	289	0	289	136	2	0	138	427
05:30 PM	0	0	0	0	2	295	0	297	167	0	0	167	464
Total Volume	4	1	0	5	3	1156	0	1159	577	5	0	582	1746
% App. Total	80	20	0		0.3	99.7	0		99.1	0.9	0		
PHF	.250	.250	.000	.313	.375	.980	.000	.976	.864	.417	.000	.871	.941



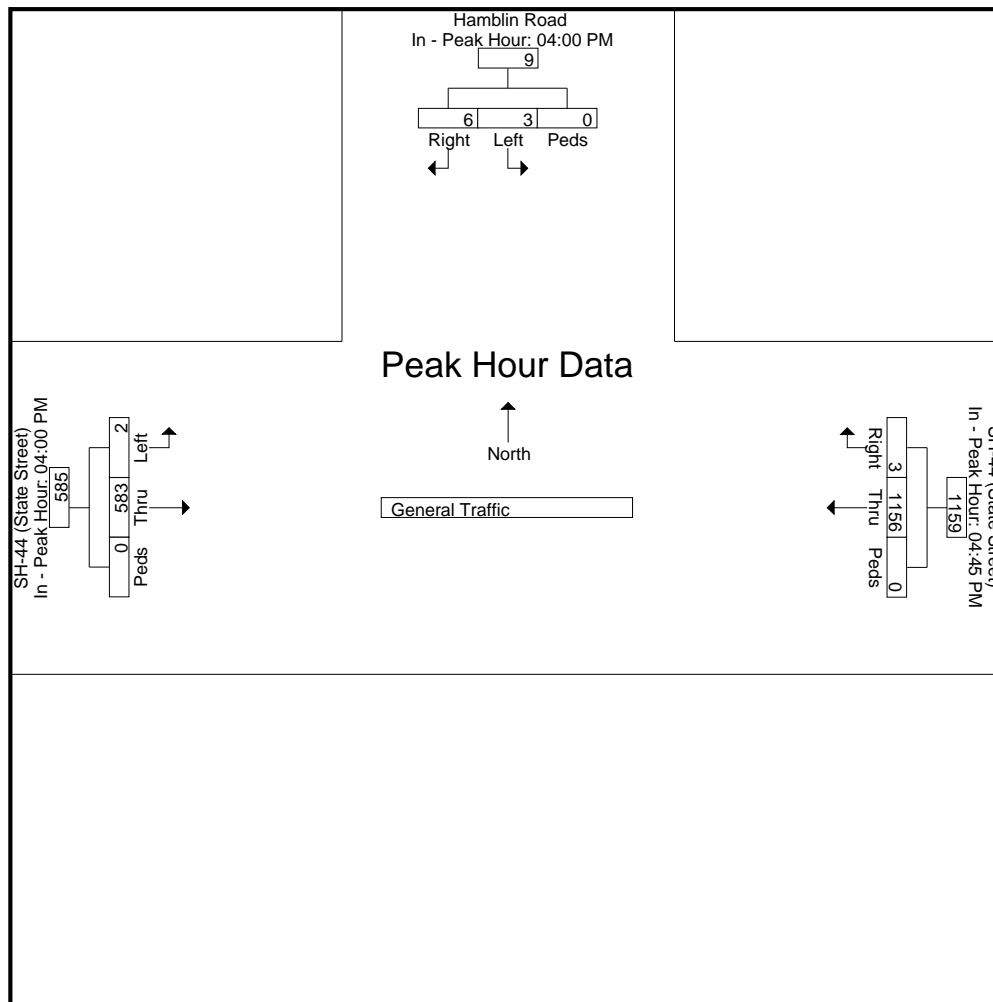
L2 Data Collection

L2DataCollection.com
 Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
 Intersection: SH-44 / Hamblin Road
 City, State: Canyon, County, Idaho
 Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
 Site Code : TURNS
 Start Date : 1/20/2022
 Page No : 6

Start Time	Hamblin Road From North				SH-44 (State Street) From East				SH-44 (State Street) From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:00 PM				04:45 PM				04:00 PM				
+0 mins.	1	2	0	3	0	293	0	293	187	0	0	187	
+15 mins.	0	1	0	1	1	279	0	280	120	1	0	121	
+30 mins.	1	0	0	1	0	289	0	289	134	1	0	135	
+45 mins.	4	0	0	4	2	295	0	297	142	0	0	142	
Total Volume	6	3	0	9	3	1156	0	1159	583	2	0	585	
% App. Total	66.7	33.3	0		0.3	99.7	0		77.9	0.3	0		
PHF	.375	.375	.000	.563	.375	.980	.000	.976	.779	.500	.000	.782	



L2 Data Collection

L2DataCollection.com

Idaho (208) 860-7554 Utah (801) 413-2993

Study: FOCU0006
Intersection: SH-44 / Hamblin Road
City, State: Canyon, County, Idaho
Control: Stop Sign

File Name : SH-44 (State St) & Hamblin Rd
Site Code : TURNS
Start Date : 1/20/2022
Page No : 7

Image 1



Trip Generation Report

Trip Generation Summary

Alternative: Alternative 1

Phase:

Open Date: 1/14/2022

Project: Northern Star

Analysis Date: 1/14/2022

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic		
		* Enter	Exit	Total	* Enter	Exit	Total	* Enter	Exit	Total
210	SFHOUSE 1 55 Dwelling Units	260	259	519	10	31	41	34	20	54
220	LOW-RISE 1 110 Dwelling Units	403	402	805	12	39	51	39	23	62
221	MID-RISE 1 310 Dwelling Units	843	843	1686	29	83	112	83	53	136
710	OFFICEGENERAL 1 156 1000 Sq. Ft. GFA	760	759	1519	156	25	181	29	150	179
Unadjusted Volume		2266	2263	4529	207	178	385	185	246	431
Internal Capture Trips		0	0	0	3	3	6	7	7	14
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		2266	2263	4529	204	175	379	178	239	417

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 2 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 3 Percent

* - Custom rate used for selected time period.

Build-out Year Traffic Volumes from Surrounding Developments

Figure 5 – Site Traffic Distribution Patterns

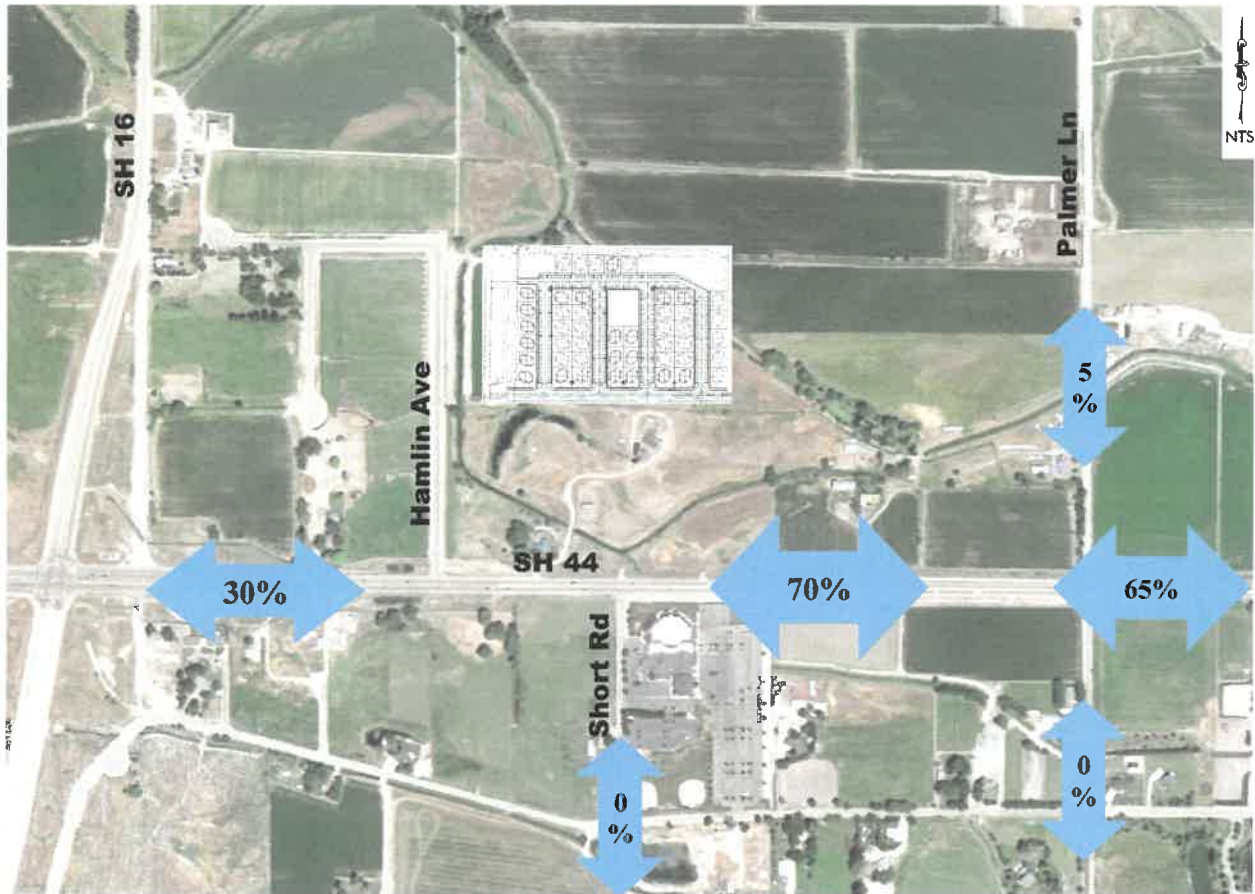


Figure 6 – AM Peak Hour Site Traffic

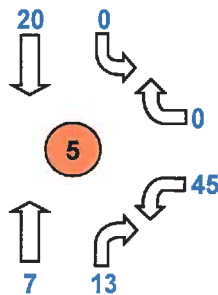
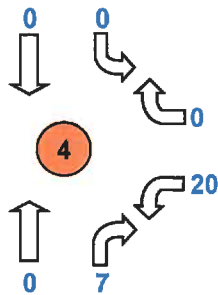
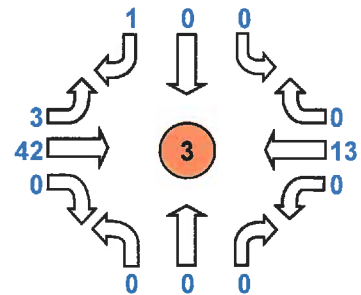
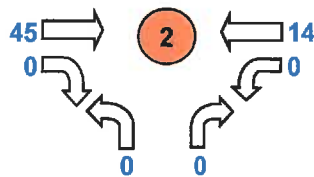
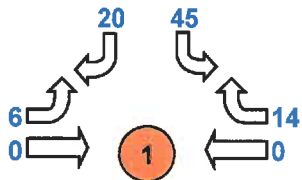


Figure 7 – PM Peak Hour Site Traffic

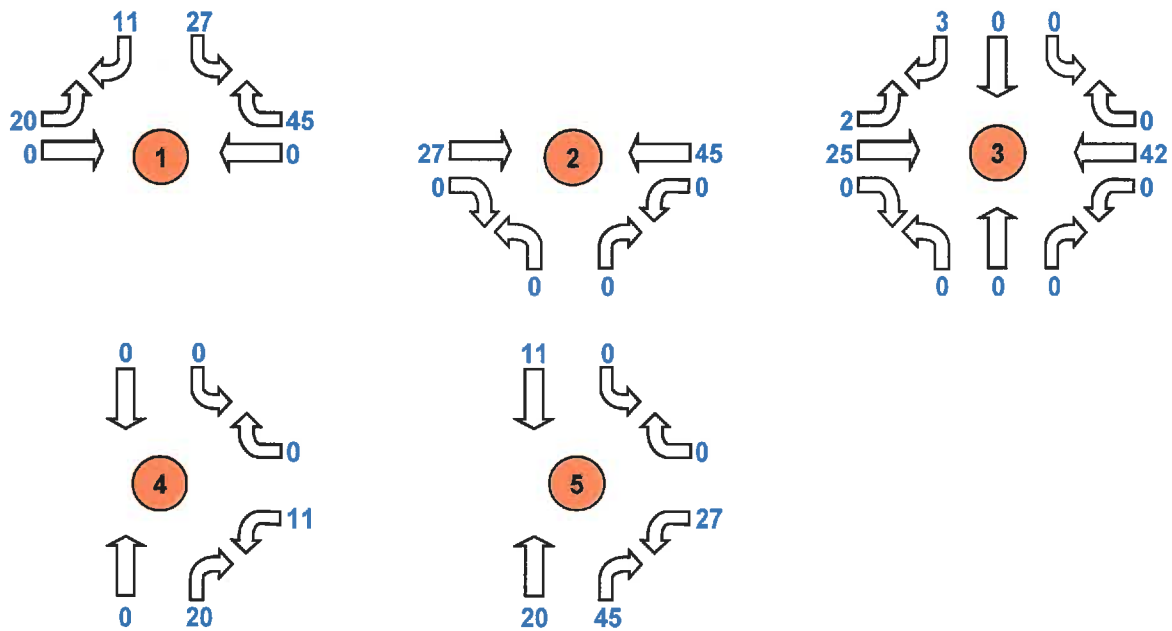


Figure 8 – 2022 AM Peak Hour Total Traffic

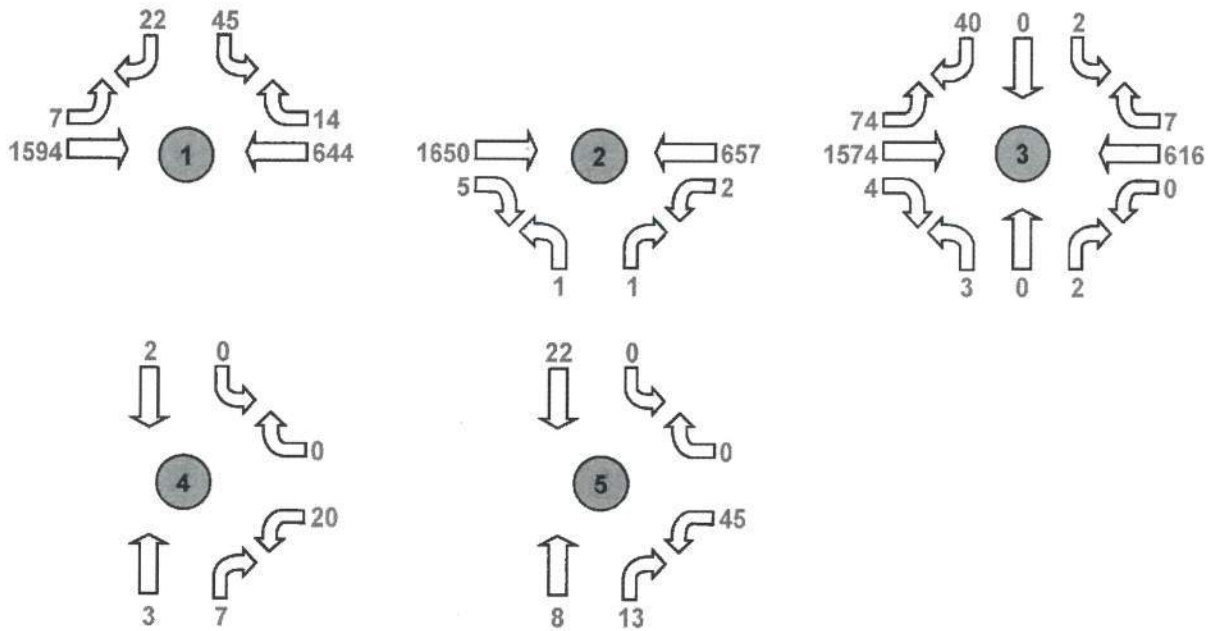
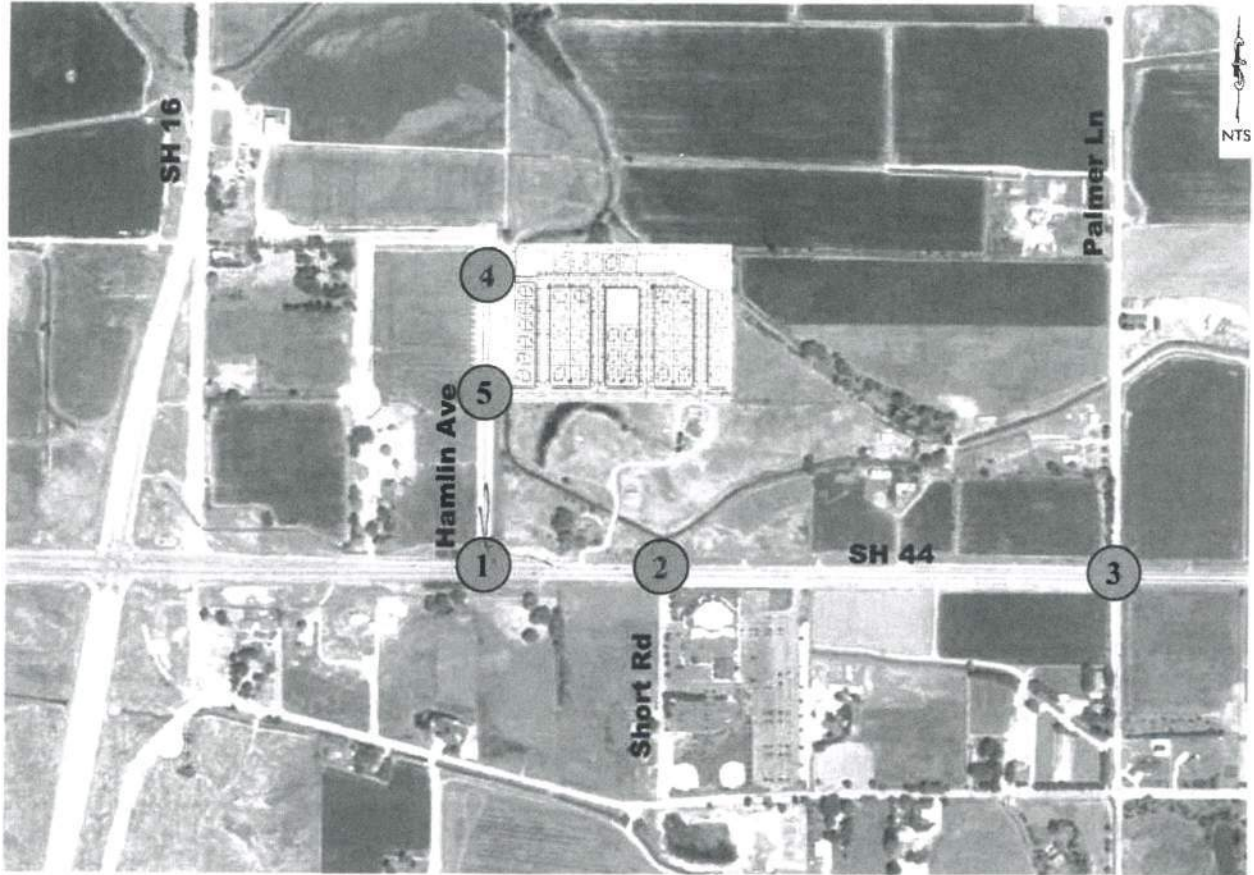


Figure 9 – 2022 PM Peak Hour Total Traffic

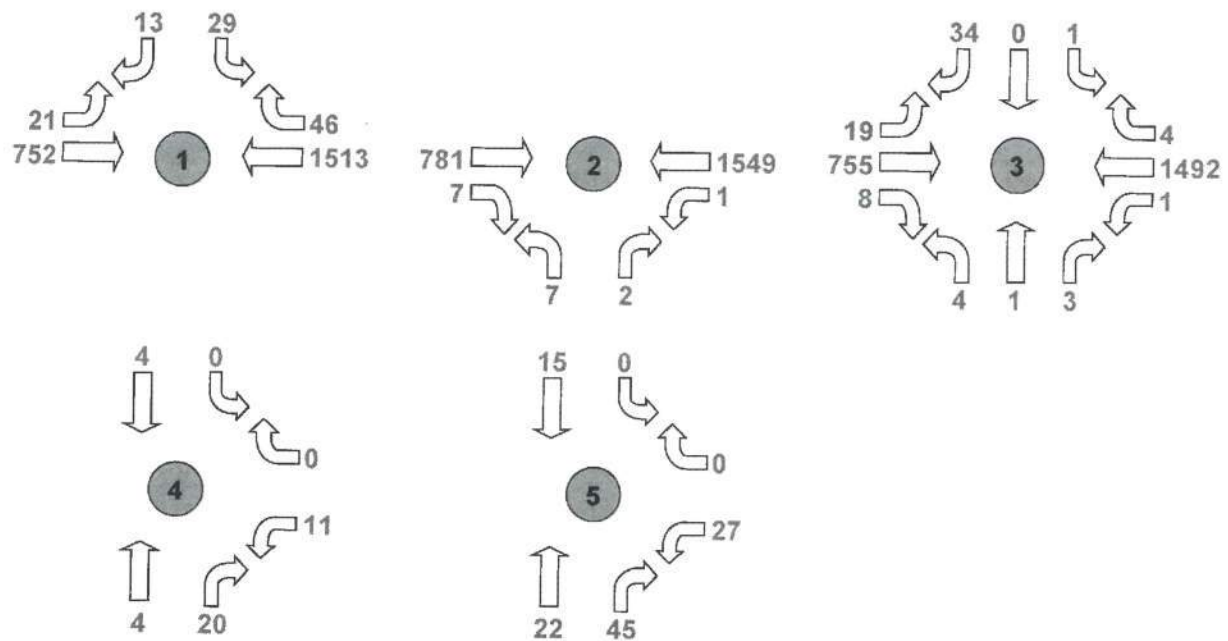
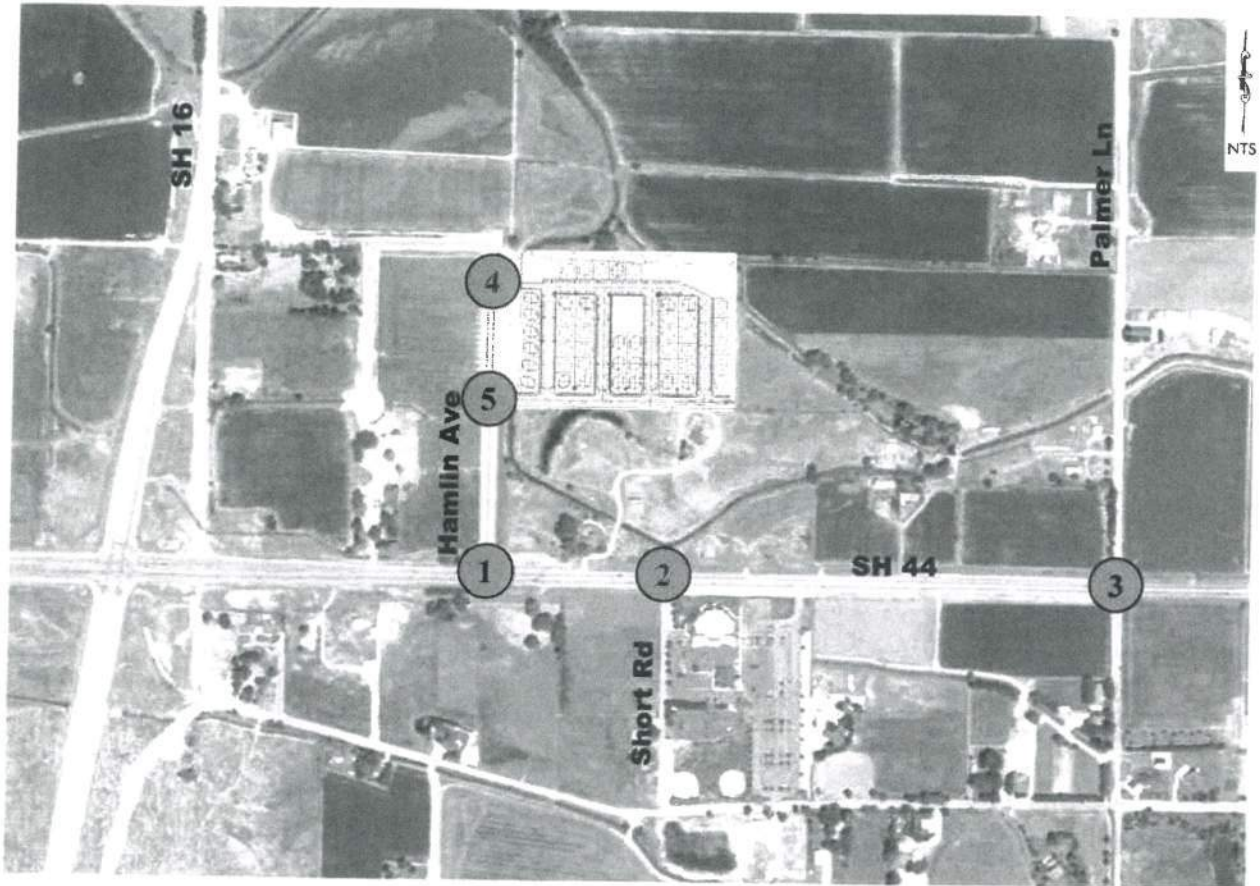


Figure 4.1 – Estimated Site Traffic Distribution Patterns

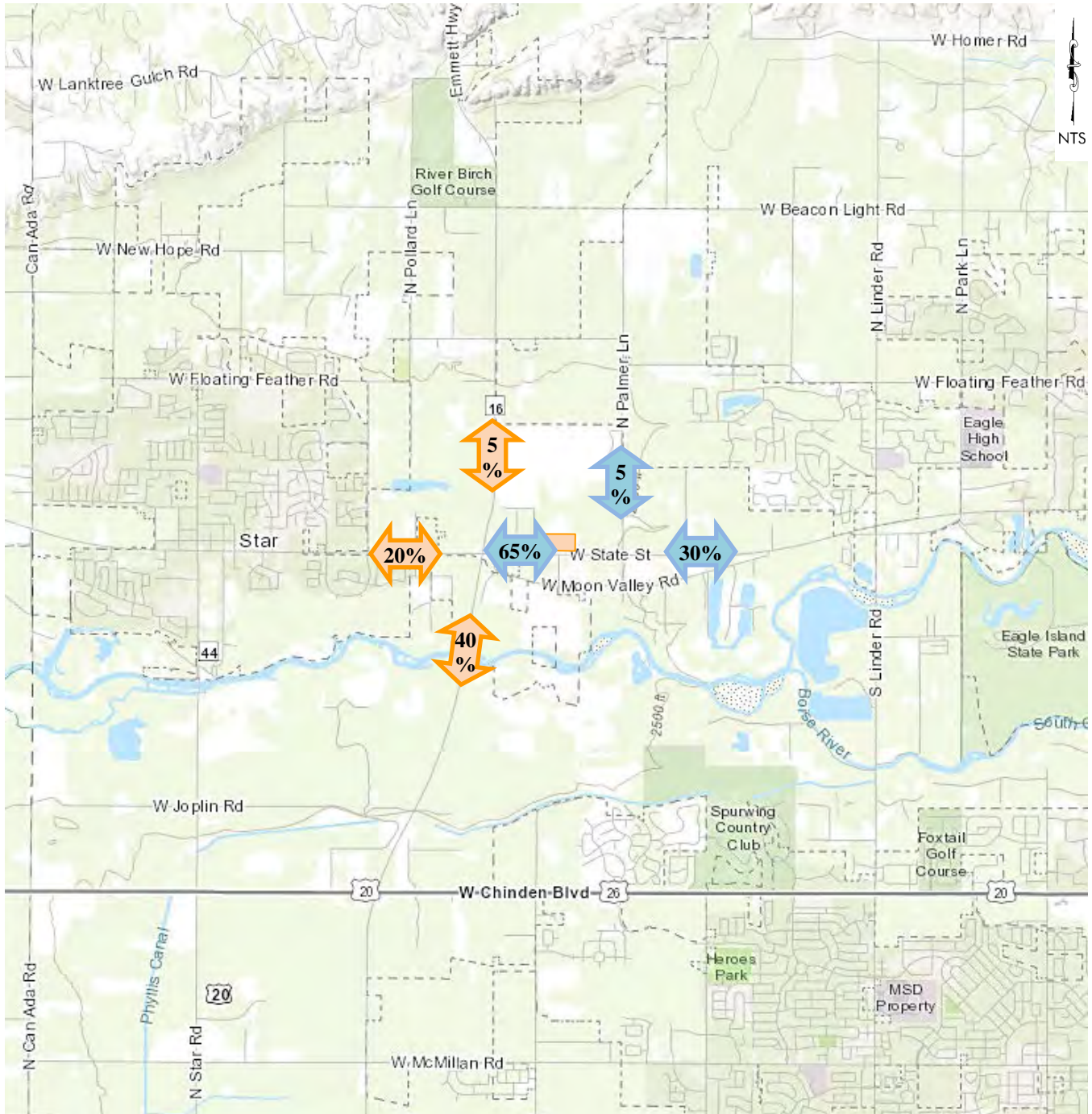


Figure 4.2 – Build-Out Year AM Peak Hour Site Traffic

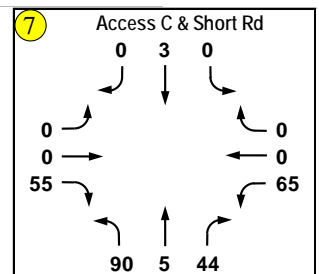
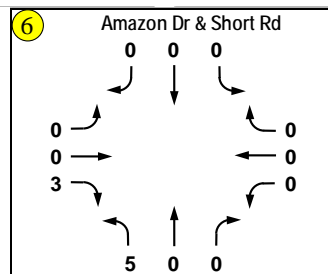
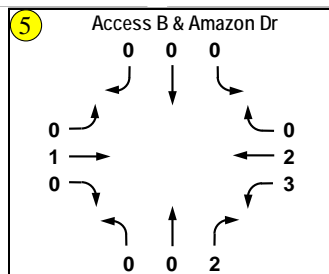
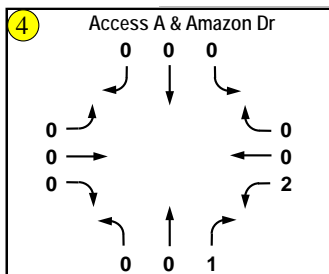
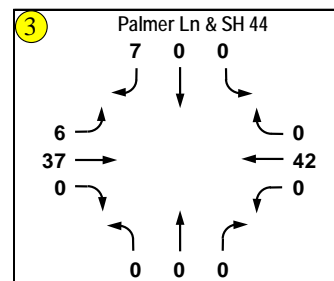
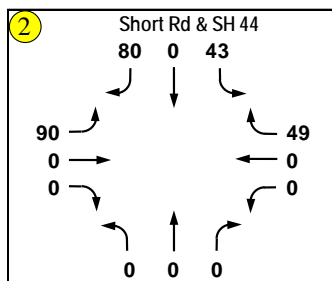
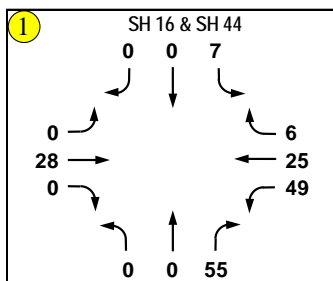
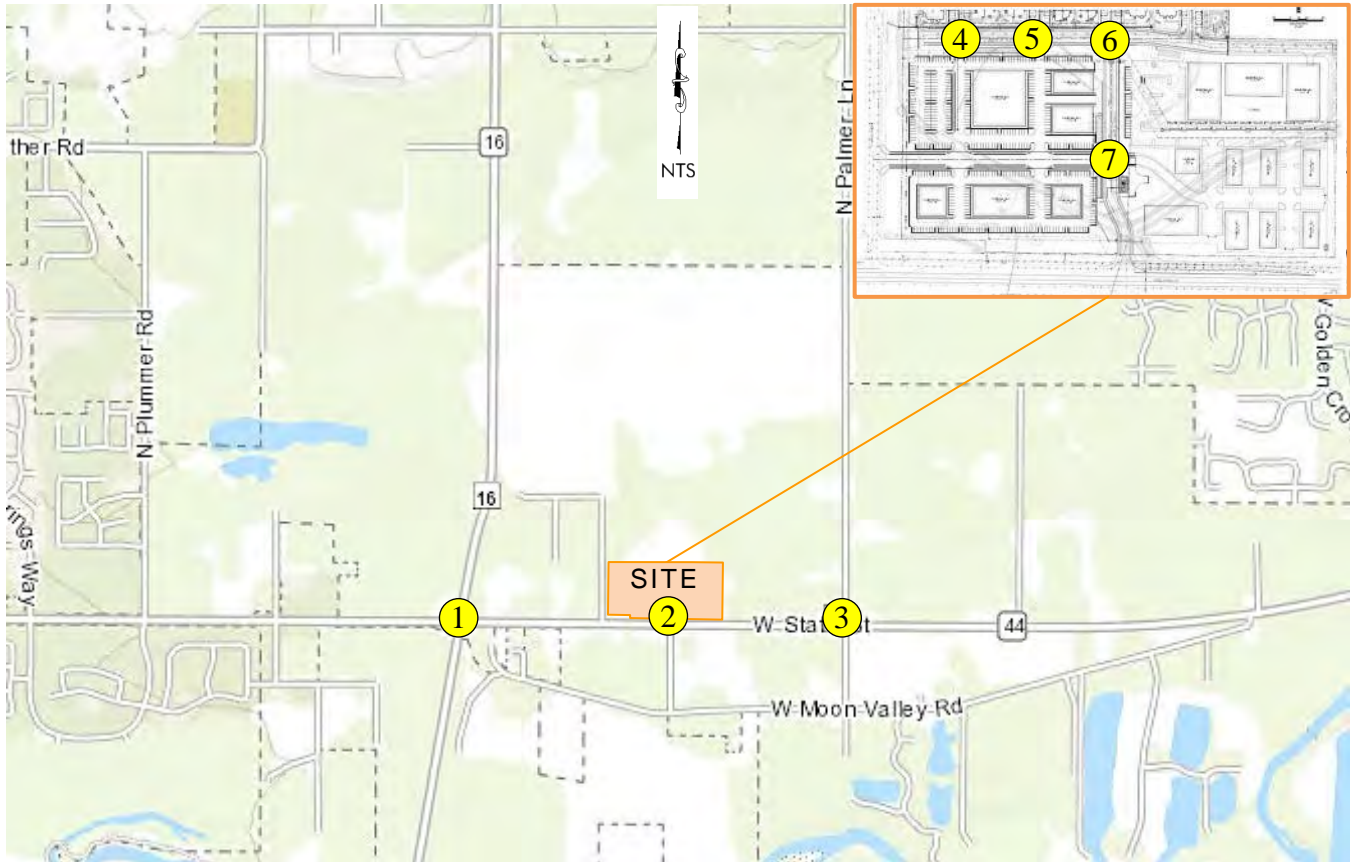
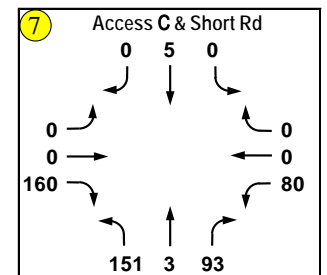
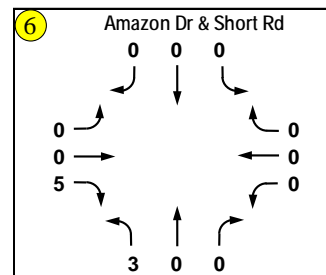
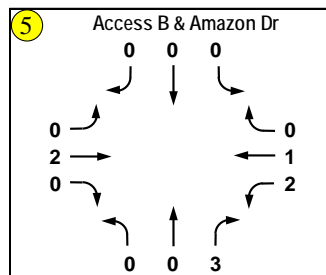
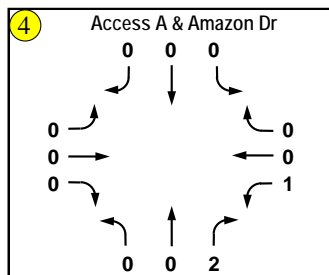
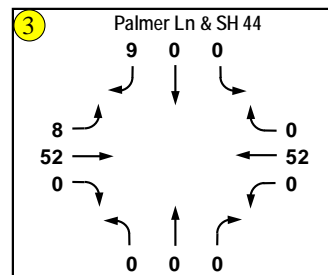
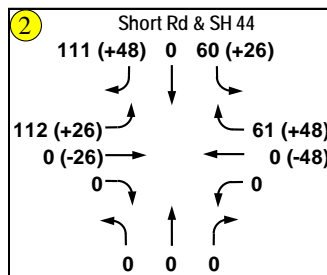
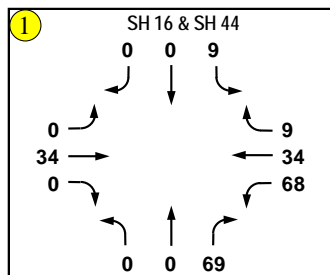
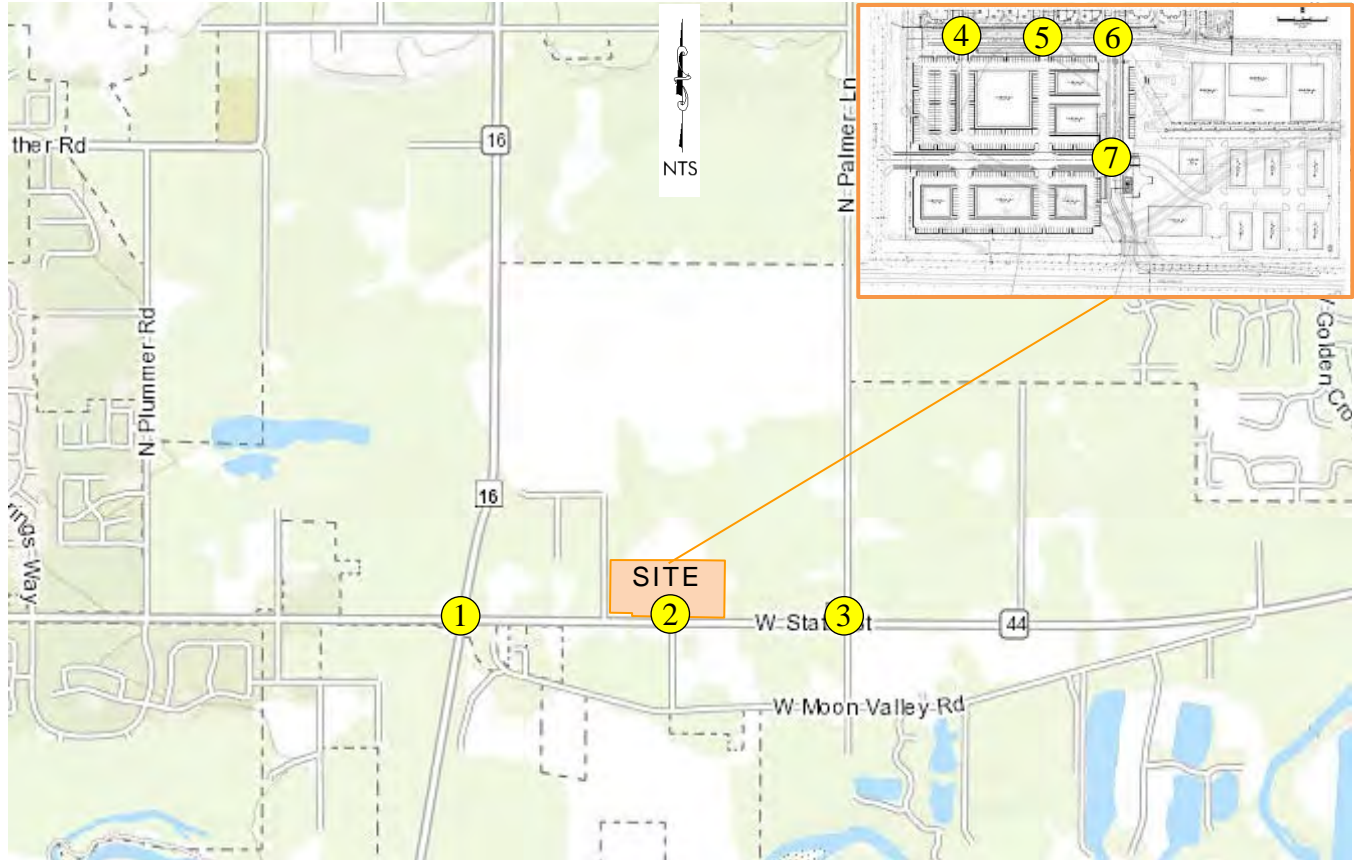


Figure 4.3 – Build-Out Year PM Peak Hour Site Traffic



Note: Numbers in parentheses are pass-by trips

Figure 4.4 – 2025 Build-Out Year AM Peak Hour Total Traffic

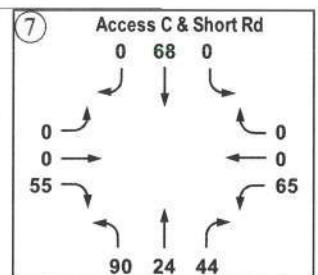
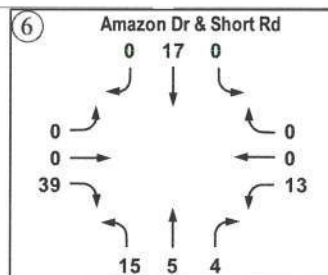
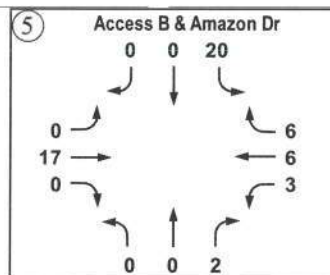
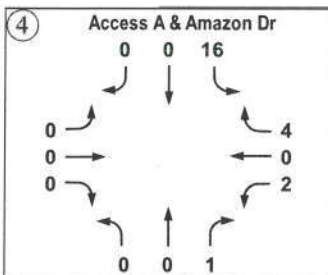
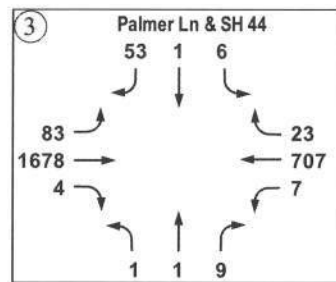
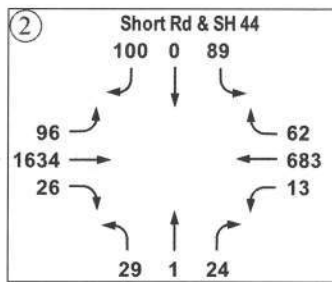
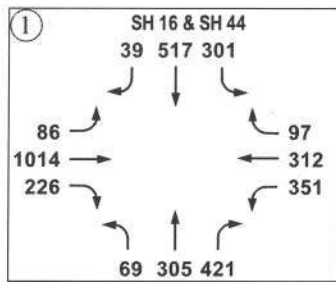


Figure 4.5 – 2025 Build-Out Year PM Peak Hour Total Traffic

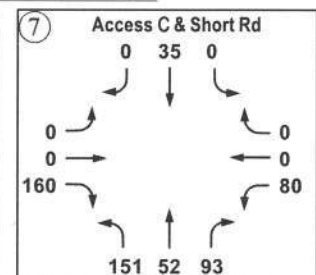
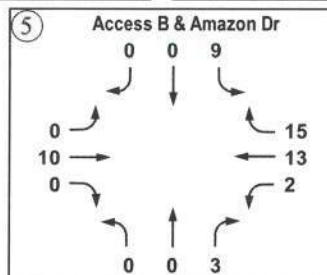
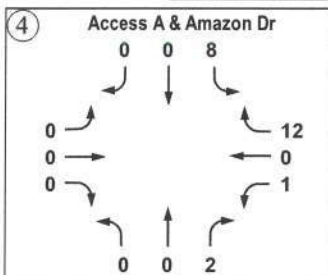
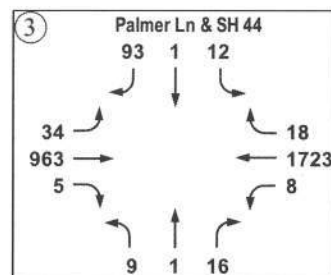
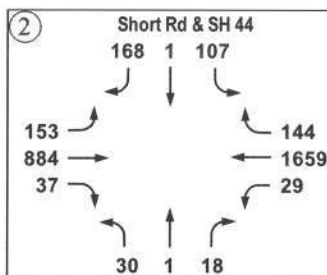
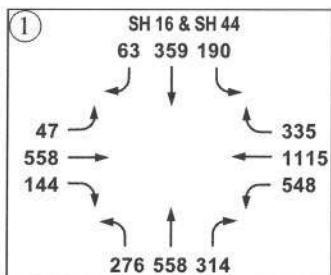


Figure 4.1 – Estimated Site Traffic Distribution Patterns

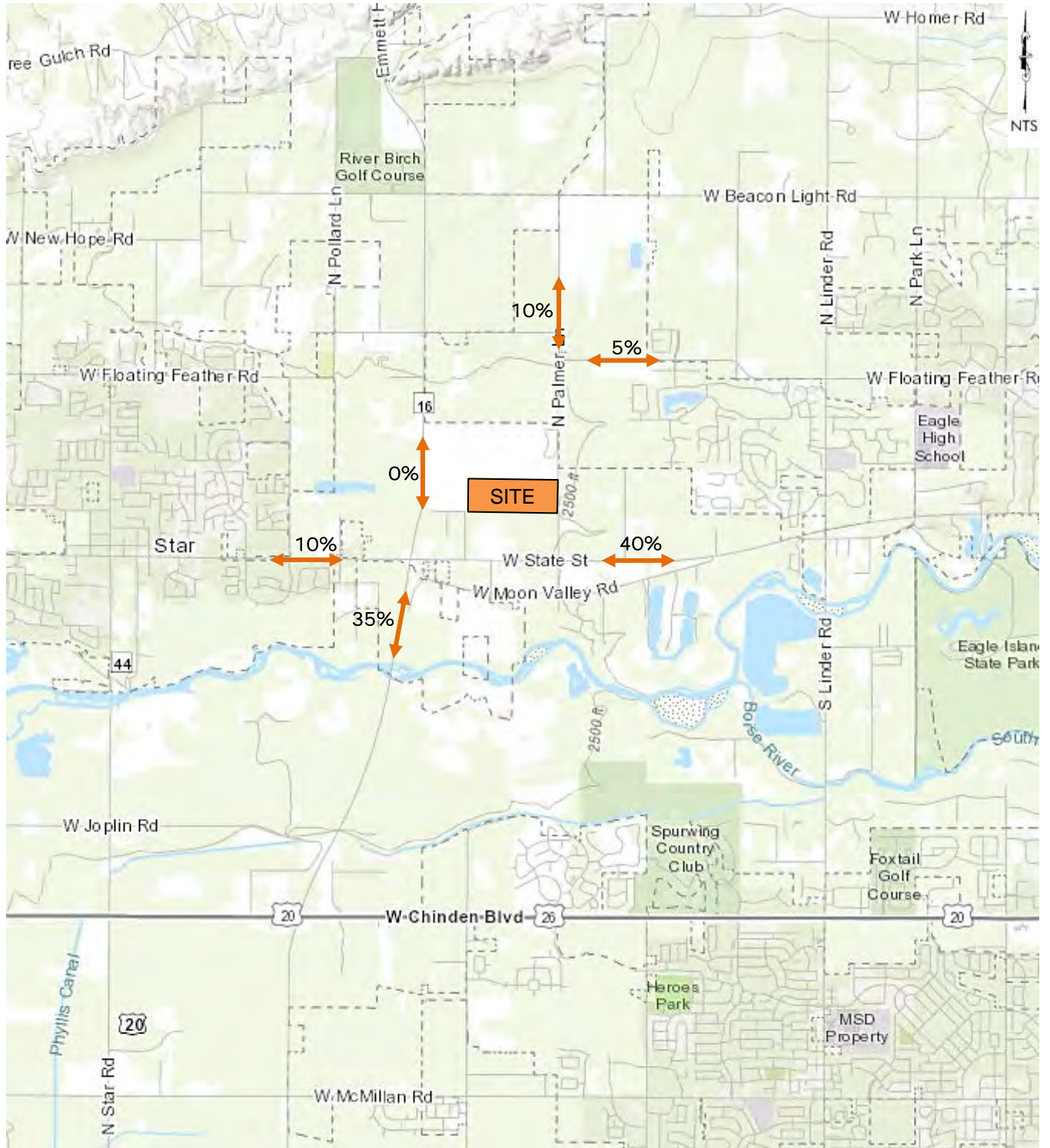


Figure 4.2 – Build-Out Year AM Peak Hour Site Traffic

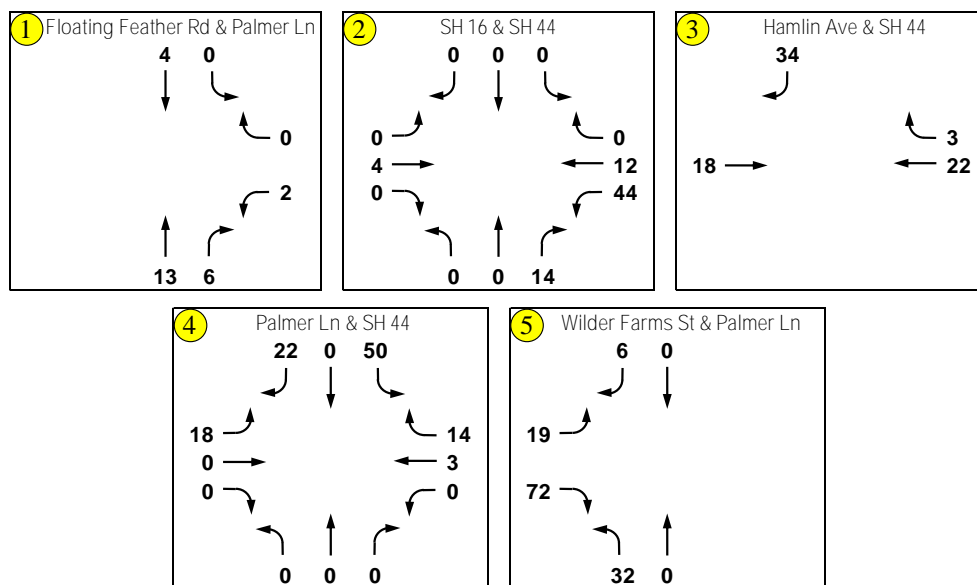


Figure 4.3 – Build-Out Year PM Peak Hour Site Traffic

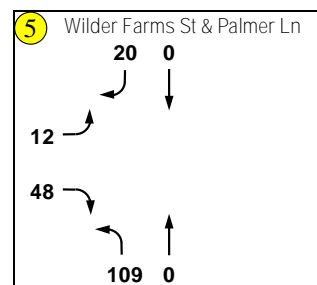
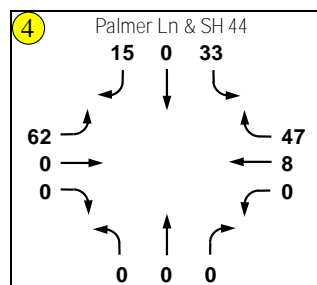
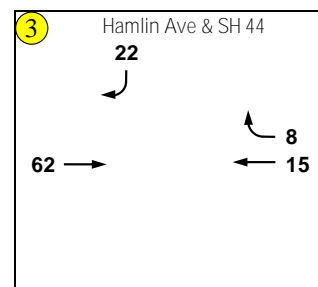
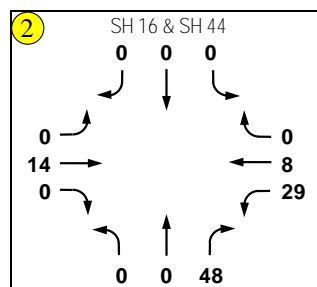
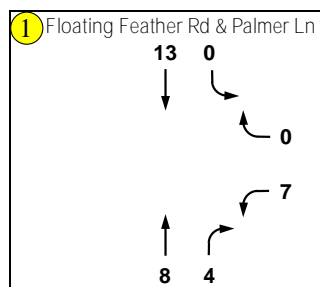
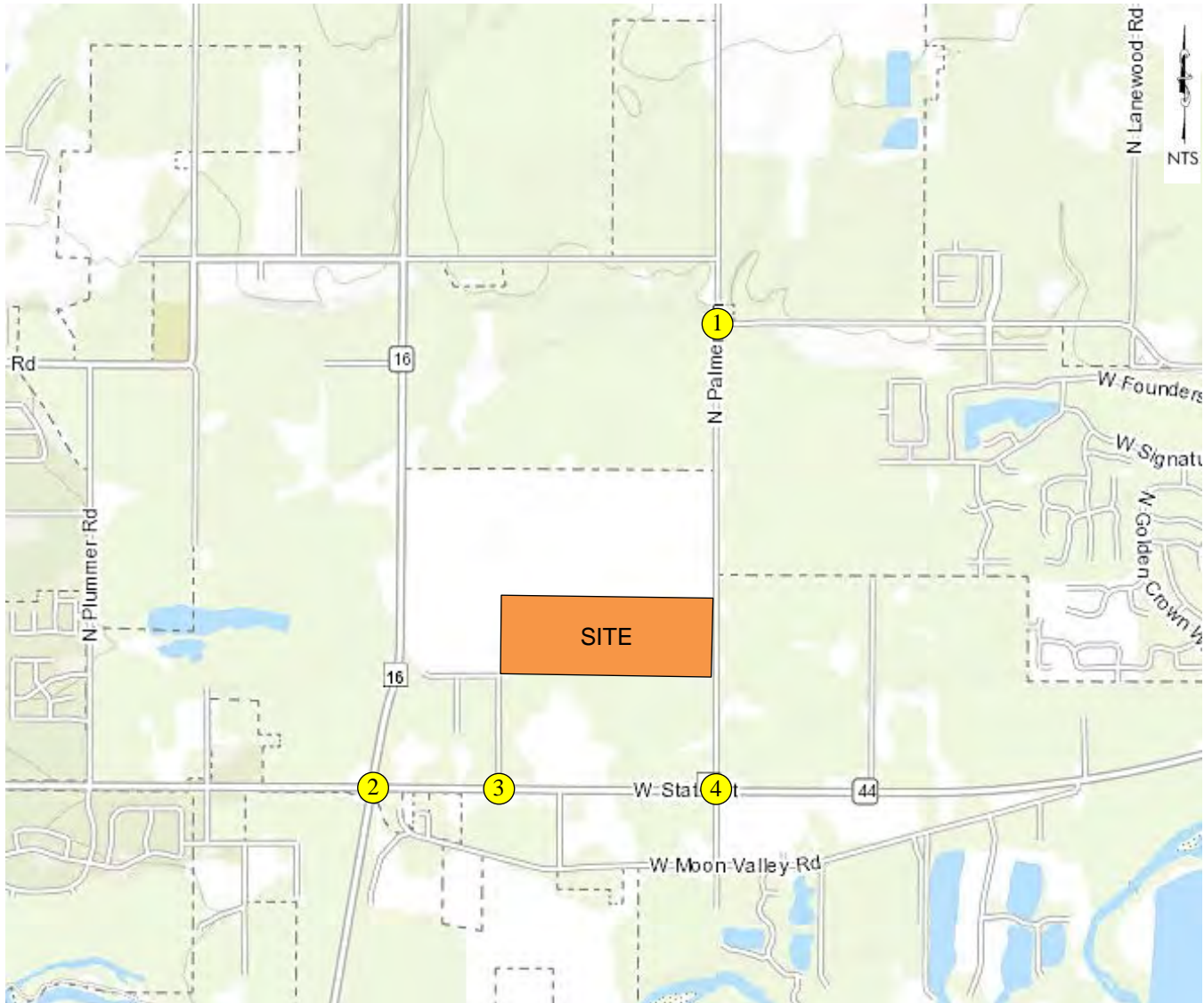


Figure 4.4 – 2025 Build-Out Year AM Peak Hour Total Traffic

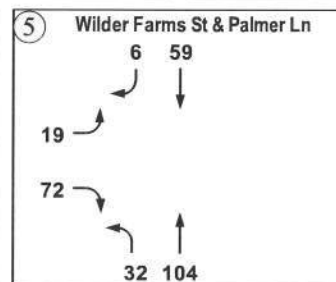
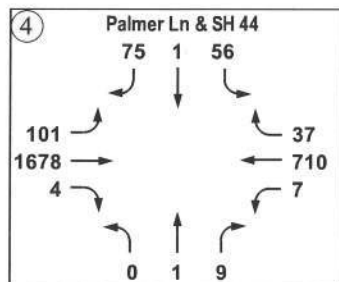
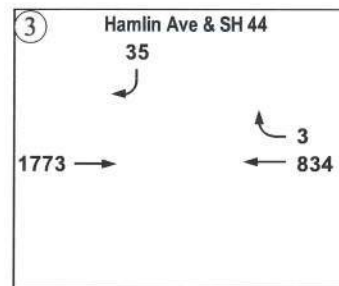
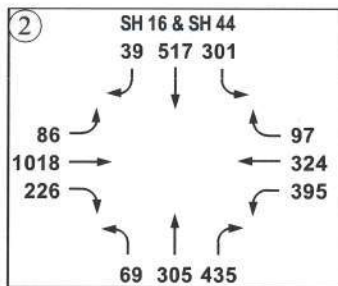
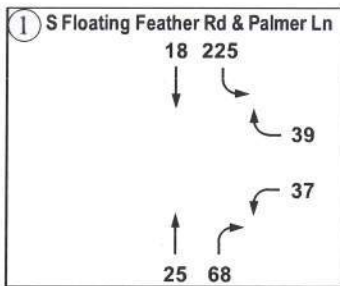
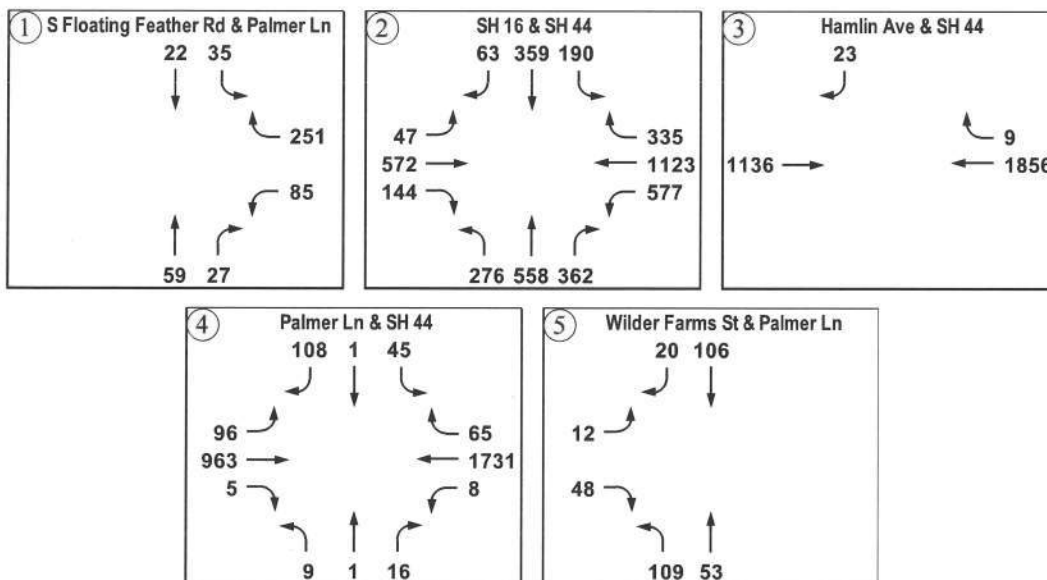


Figure 4.5 – 2025 Build-Out Year PM Peak Hour Total Traffic



COMPASS Population Growth Rates

Northern Star Proposed Development

The following summarizes the results of an area of influence model run for a proposed development located northeast of SH-16 and SH-44. The proposed development shown in Figure 1 will consist of 55 single family units, 81 townhomes, 320 apartment units, and 10.34 acres for possible commercial use with an anticipated build out by 2024. Year 2025 was used for this analysis.

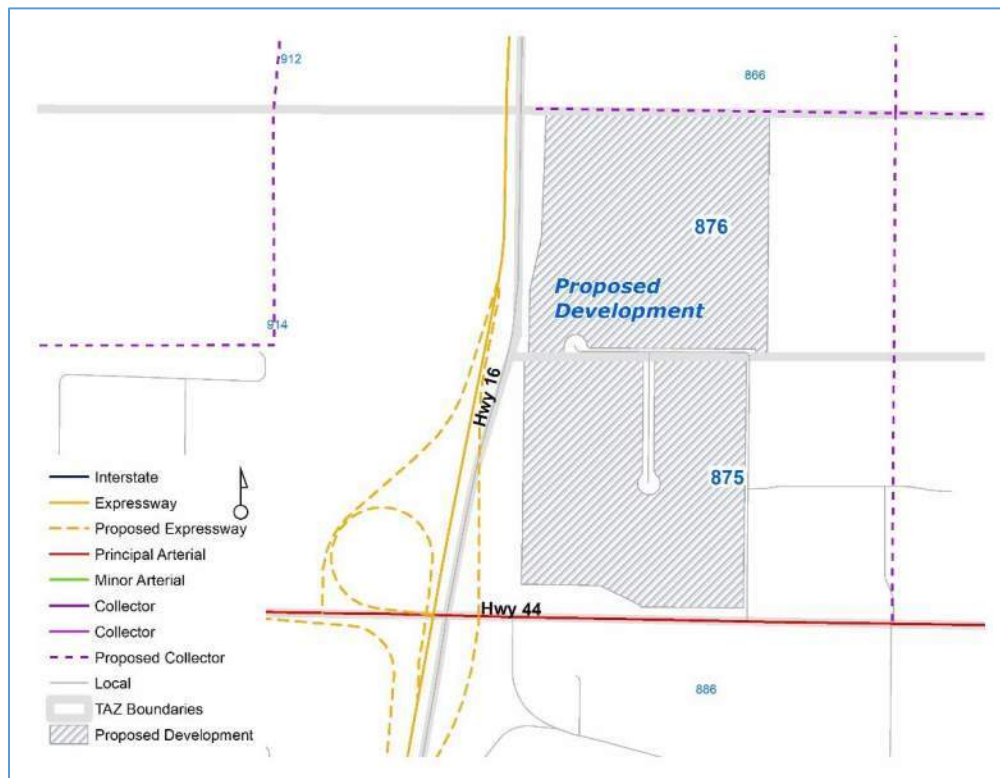


Figure 1

Table 1 provides the existing demographics for TAZs 875 and 876 and the proposed development's demographics used for the area of influence model run. Temporary TAZs were used to isolate the impact of this development.

Table 1

	2021		2025 (Proposed)		2050	
	HH	Jobs	HH	Jobs	HH	Jobs
TAZs 875 and 876	6	70	98	337	417	1,175
<i>Temp TAZs 1552, 1553 and 1554</i>	0	0	456	185	0	0
<i>Surrounding TAZs</i>	185	207	319	606	1,018	1,270
Total	191	277	873	1,128	1,435	2,445

Figure 2: Area of Influence (percent contribution to the total peak hour demand)

Figure 3: Peak Hour Demand with Proposed Development

Figure 4: Peak Hour Demand without Proposed Development

Figure 5: Surrounding Area TAZs

Figure 6, Figure 7, Figure 8, Figure 9, Figure 10, and Figure 11: Compounded Annual Growth Rates

Note to Reviewers: The primary purpose of this report is to help agencies determine the scope of a Traffic Impact Study (TIS) and to assist TIS preparers in establishing trip distributions. New demand forecasted by the regional model for a proposed development may not match ITE Trip Generation estimates and they are not intended to replace the trip generation process of the TIS.

Disclaimer Regarding Updated Model: The results documented in this report are based on the latest regional model, maintained by COMPASS, released in October of 2021, and based on the COMPASS 2050 Vision adopted in August 2021. Due to changes in demographics, TAZs, model network and model parameters, results should not be compared to those provided prior to October of 2021.

Figure 4: Peak Hour Demand without Proposed Development

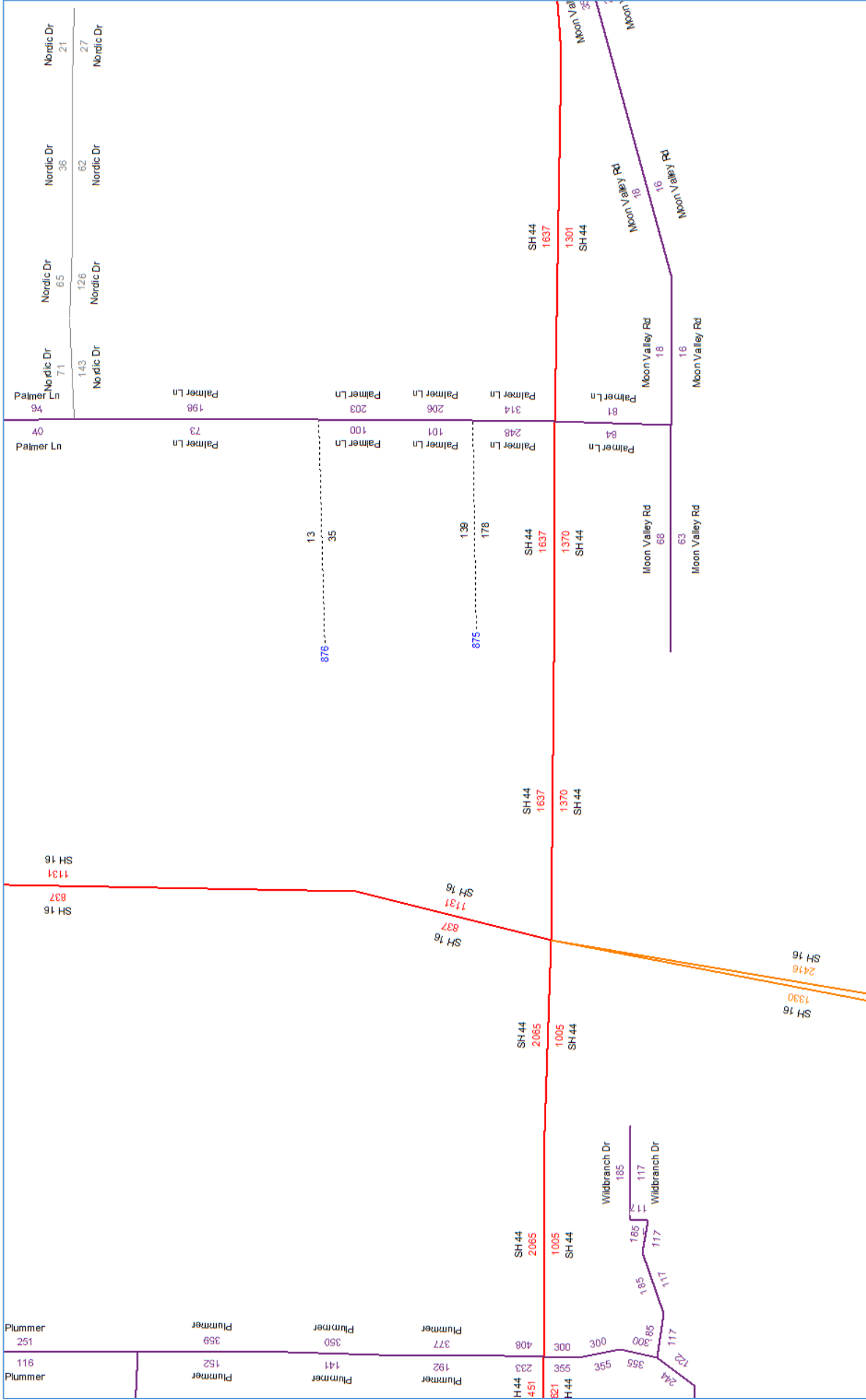
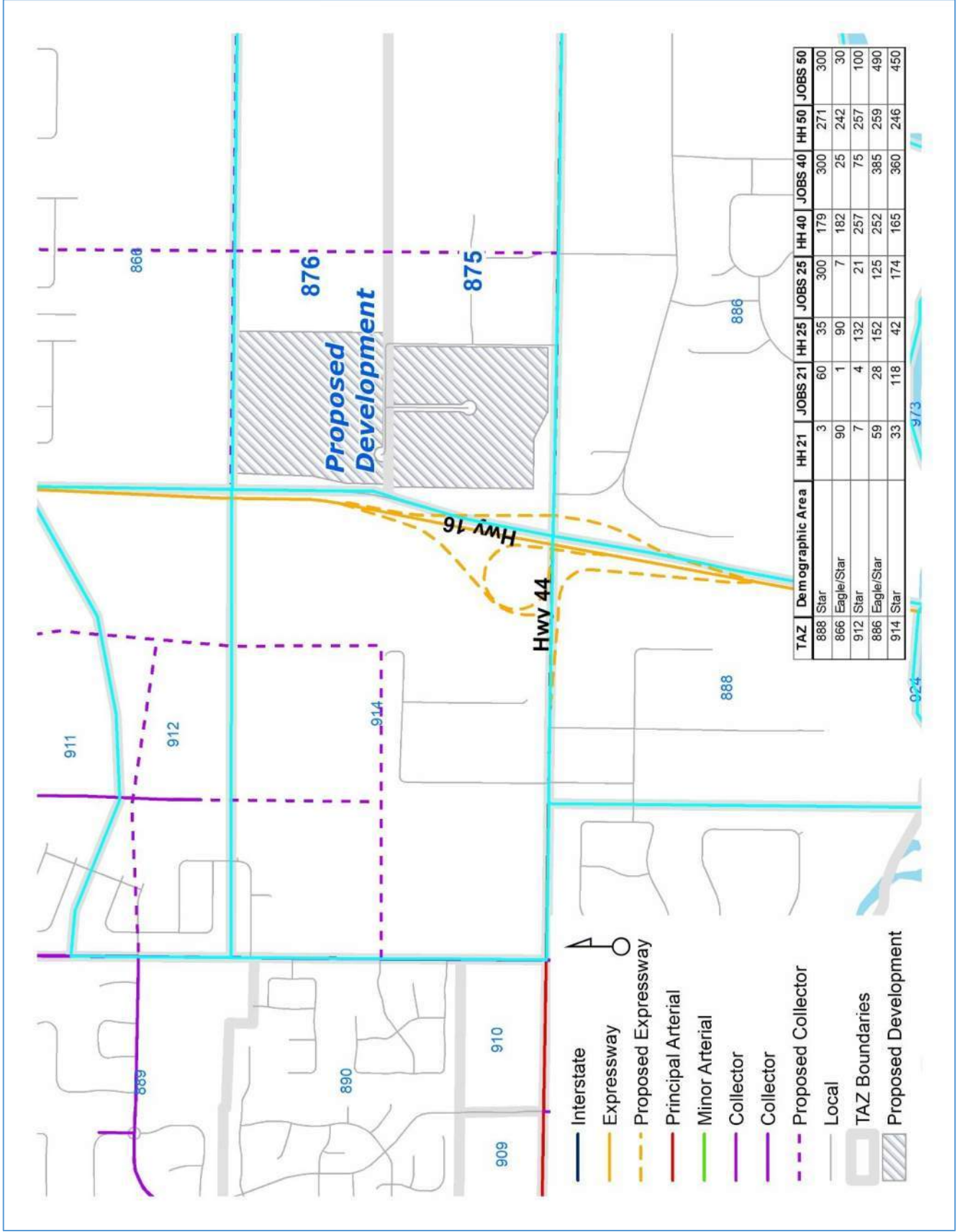


Figure 5: Surrounding Area TAZs



9/7/3

024

Figure 6: 2021 to 2025 Compounded Annual Growth Rates

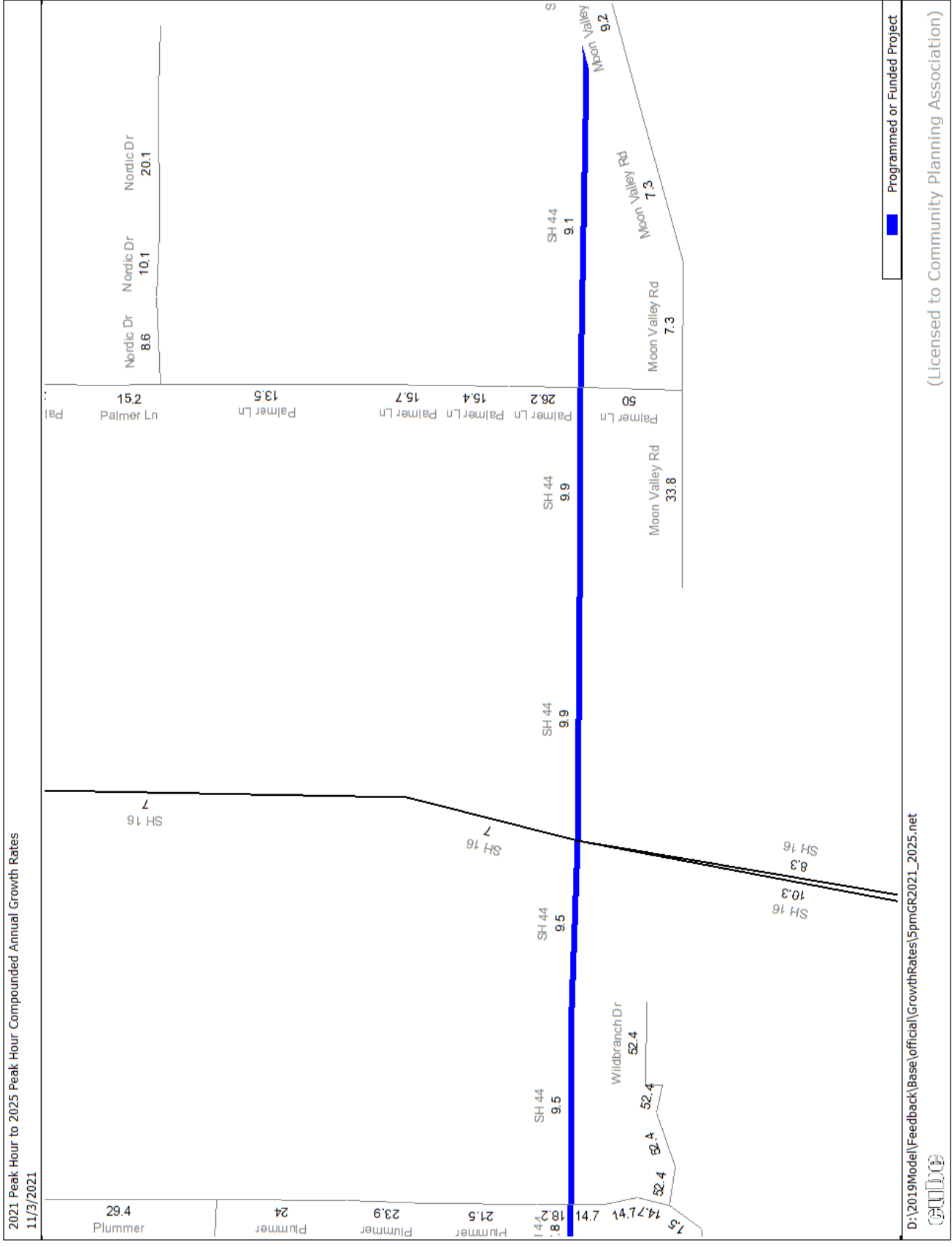
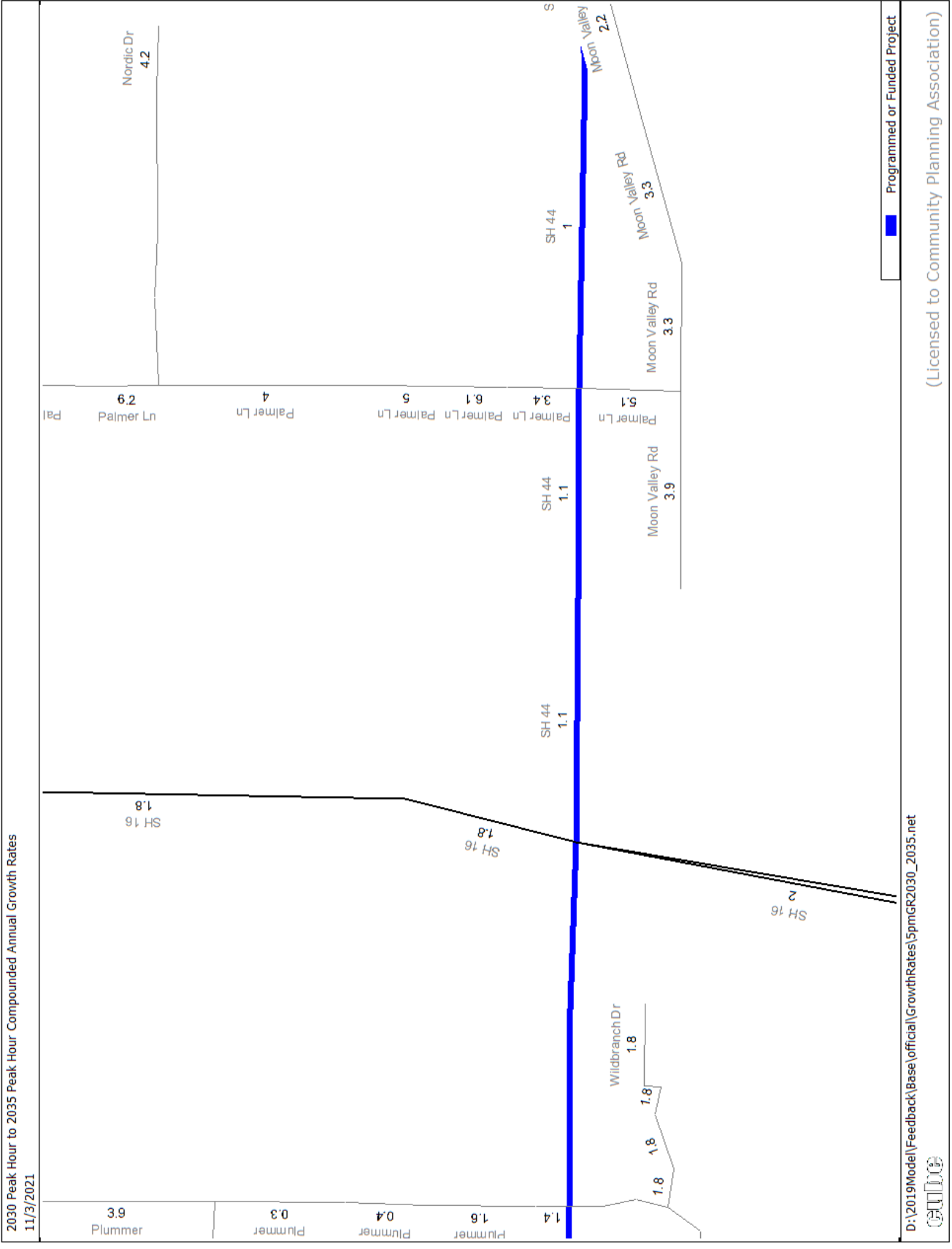


Figure 8: 2030 to 2035 Compounded Annual Growth Rates



Traffic Analysis Reports

2022 Existing Traffic Analysis

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	1187	560	3	0	6
Future Vol, veh/h	0	1187	560	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	93	93	38	38
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1263	602	3	0	16

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.318
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	498
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	498
HCM Lane V/C Ratio	-	-	-	0.032
HCM Control Delay (s)	-	-	-	12.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Traffic Vol, veh/h	10	1109	68	23	545	3	12	0	17	3	0	6
Future Vol, veh/h	10	1109	68	23	545	3	12	0	17	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	66	66	66	38	38	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1192	73	25	586	3	18	0	26	8	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	589	0	0	1265	0	0	1897	1890	1229	1900	1923	586
Stage 1	-	-	-	-	-	-	1251	1251	-	636	636	-
Stage 2	-	-	-	-	-	-	646	639	-	1264	1287	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	986	-	-	549	-	-	53	70	217	53	67	510
Stage 1	-	-	-	-	-	-	211	244	-	466	472	-
Stage 2	-	-	-	-	-	-	460	470	-	208	235	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	986	-	-	549	-	-	49	66	217	45	63	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	66	-	45	63	-
Stage 1	-	-	-	-	-	-	209	241	-	461	450	-
Stage 2	-	-	-	-	-	-	425	448	-	181	232	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.5			62.2			42		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	49	217	986	-	-	549	-	-	45	510
HCM Lane V/C Ratio	0.371	0.119	0.011	-	-	0.045	-	-	0.175	0.031
HCM Control Delay (s)	116.7	23.8	8.7	-	-	11.9	-	-	101.3	12.3
HCM Lane LOS	F	C	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.3	0.4	0	-	-	0.1	-	-	0.6	0.1

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	6	1	0	0	8	3	2	0	2	0
Future Vol, veh/h	0	0	6	1	0	0	8	3	2	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	1	0	0	9	3	2	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	7	0	0	7	6	4	8	9	0
Stage 1	-	-	-	-	-	-	4	4	-	2	2	-
Stage 2	-	-	-	-	-	-	3	2	-	6	7	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1614	-	-	1013	889	1080	1011	886	-
Stage 1	-	-	-	-	-	-	1018	892	-	1021	894	-
Stage 2	-	-	-	-	-	-	1020	894	-	1016	890	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1614	-	-	-	888	1080	1005	885	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	888	-	1005	885	-
Stage 1	-	-	-	-	-	-	1018	892	-	1021	893	-
Stage 2	-	-	-	-	-	-	1016	893	-	1010	890	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1614	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.001	-	-	-
HCM Control Delay (s)	-	0	-	-	7.2	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	6	0	0	3	0
Future Vol, veh/h	0	6	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	0	3	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	7	0	5
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1614	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1614	-	1017
Mov Cap-2 Maneuver	-	-	-	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1017	-	-	1614	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	596	1179	3	0	4
Future Vol, veh/h	0	596	1179	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	98	98	31	31
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	685	1203	3	0	13

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1205
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.318
Pot Cap-1 Maneuver	0	-	- 0 224
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 224
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	224
HCM Lane V/C Ratio	-	-	-	0.058
HCM Control Delay (s)	-	-	-	22.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Traffic Vol, veh/h	5	577	14	4	1156	3	22	0	16	1	0	4
Future Vol, veh/h	5	577	14	4	1156	3	22	0	16	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	97	97	97	63	63	63	31	31	31
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	656	16	4	1192	3	35	0	25	3	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1195	0	0	672	0	0	1884	1879	664	1889	1884	1192
Stage 1	-	-	-	-	-	-	676	676	-	1200	1200	-
Stage 2	-	-	-	-	-	-	1208	1203	-	689	684	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	584	-	-	919	-	-	54	71	461	53	71	228
Stage 1	-	-	-	-	-	-	443	453	-	226	258	-
Stage 2	-	-	-	-	-	-	224	257	-	436	449	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	584	-	-	919	-	-	50	70	461	50	70	228
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	70	-	50	70	-
Stage 1	-	-	-	-	-	-	439	448	-	224	257	-
Stage 2	-	-	-	-	-	-	210	256	-	408	445	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			106.5			33.7		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	50	461	584	-	-	919	-	-	50	228
HCM Lane V/C Ratio	0.698	0.055	0.01	-	-	0.004	-	-	0.065	0.057
HCM Control Delay (s)	174.2	13.3	11.2	-	-	8.9	-	-	81.9	21.7
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	2.8	0.2	0	-	-	0	-	-	0.2	0.2

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	4	0	0	0	5	2	1	0	1	0
Future Vol, veh/h	0	0	4	0	0	0	5	2	1	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	0	0	0	5	2	1	0	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	4	0	0	4	3	2	5	5	1
Stage 1	-	-	-	-	-	-	2	2	-	1	1	-
Stage 2	-	-	-	-	-	-	2	1	-	4	4	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1618	-	-	1017	893	1082	1016	890	1084
Stage 1	-	-	-	-	-	-	1021	894	-	1022	895	-
Stage 2	-	-	-	-	-	-	1021	895	-	1018	892	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1618	-	-	1016	893	1082	1013	890	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1016	893	-	1013	890	-
Stage 1	-	-	-	-	-	-	1021	894	-	1022	895	-
Stage 2	-	-	-	-	-	-	1020	895	-	1015	892	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			8.7			9.1		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	989	1622	-	-	1618	-	-	890
HCM Lane V/C Ratio	0.009	-	-	-	-	-	-	0.001
HCM Control Delay (s)	8.7	0	-	-	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	4	0	0	3	0
Future Vol, veh/h	0	4	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	0	3	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	4	0	3
Stage 1	-	-	-	-	2
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1618	-	1019
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1618	-	1019
Mov Cap-2 Maneuver	-	-	-	-	1019
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1019	-	-	1618	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

2023 Background Year Traffic Analysis

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1306	631	3	0	7
Future Vol, veh/h	0	1306	631	3	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1451	701	3	0	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	644
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	10.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↙	↗		↙	↗	
Traffic Vol, veh/h	12	1219	75	25	599	9	13	0	19	45	0	22
Future Vol, veh/h	12	1219	75	25	599	9	13	0	19	45	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1354	83	28	666	10	14	0	21	50	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	676	0	0	1437	0	0	1769	2112	677	1425	2185	333
Stage 1	-	-	-	-	-	-	1380	1380	-	722	722	-
Stage 2	-	-	-	-	-	-	389	732	-	703	1463	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	911	-	-	468	-	-	53	50	395	96	45	663
Stage 1	-	-	-	-	-	-	152	210	-	384	429	-
Stage 2	-	-	-	-	-	-	606	425	-	394	191	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	911	-	-	468	-	-	48	46	395	86	42	663
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	46	-	86	42	-
Stage 1	-	-	-	-	-	-	150	207	-	379	403	-
Stage 2	-	-	-	-	-	-	549	400	-	368	188	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.5			53.2			66.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	48	395	911	-	-	468	-	-	86	663
HCM Lane V/C Ratio	0.301	0.053	0.015	-	-	0.059	-	-	0.581	0.037
HCM Control Delay (s)	109.5	14.6	9	-	-	13.2	-	-	93.5	10.6
HCM Lane LOS	F	B	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1	0.2	0	-	-	0.2	-	-	2.6	0.1

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	33	17	0	0	11	5	5	0	17	0
Future Vol, veh/h	0	0	33	17	0	0	11	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	37	19	0	0	12	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	37	0	0	67	57	19	63	75	0
Stage 1	-	-	-	-	-	-	19	19	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	25	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1574	-	-	926	834	1059	932	815	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	993	864	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1574	-	-	-	824	1059	914	805	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	824	-	914	805	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	853	-
Stage 2	-	-	-	-	-	-	932	853	-	982	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1574	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	3	0
Future Vol, veh/h	0	7	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	3	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	8	0	5	4
Stage 1	-	-	-	-	4	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1612	-	1017	1080
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	1017	1080
Mov Cap-2 Maneuver	-	-	-	-	1017	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1022	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.6			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1017	-	-	1612	-	
HCM Lane V/C Ratio	0.003	-	-	-	-	
HCM Control Delay (s)	8.6	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	669	1304	3	0	4
Future Vol, veh/h	0	669	1304	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	743	1449	3	0	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	367
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	14.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Vol, veh/h	20	634	15	4	1270	47	24	0	18	29	0	13
Future Vol, veh/h	20	634	15	4	1270	47	24	0	18	29	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	704	17	4	1411	52	27	0	20	32	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1463	0	0	721	0	0	1462	2219	352	1815	2184	706
Stage 1	-	-	-	-	-	-	748	748	-	1419	1419	-
Stage 2	-	-	-	-	-	-	714	1471	-	396	765	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	458	-	-	877	-	-	90	43	644	49	45	378
Stage 1	-	-	-	-	-	-	371	418	-	144	201	-
Stage 2	-	-	-	-	-	-	388	190	-	601	410	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	458	-	-	877	-	-	83	41	644	46	43	378
Mov Cap-2 Maneuver	-	-	-	-	-	-	83	41	-	46	43	-
Stage 1	-	-	-	-	-	-	353	398	-	137	200	-
Stage 2	-	-	-	-	-	-	371	189	-	554	390	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			43.3			133.6		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	83	644	458	-	-	877	-	-	46	378
HCM Lane V/C Ratio	0.321	0.031	0.049	-	-	0.005	-	-	0.7	0.038
HCM Control Delay (s)	67.7	10.8	13.3	-	-	9.1	-	-	186.8	14.9
HCM Lane LOS	F	B	B	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.2	0.1	0.2	-	-	0	-	-	2.7	0.1

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	37	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	4	0	0	3	0
Future Vol, veh/h	0	4	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	0	3	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	4	0	3	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1618	-	1019	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1618	-	1019	1082
Mov Cap-2 Maneuver	-	-	-	-	1019	-
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1022	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.5			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1019	-	-	1618	-	
HCM Lane V/C Ratio	0.003	-	-	-	-	
HCM Control Delay (s)	8.5	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

2024 Background Year Traffic Analysis

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1434	690	4	0	7
Future Vol, veh/h	0	1434	690	4	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1593	767	4	0	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	612
HCM Lane V/C Ratio	-	-	-	0.013
HCM Control Delay (s)	-	-	-	11
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↙	↗		↙	↗	
Traffic Vol, veh/h	12	1339	82	28	658	9	14	0	21	45	0	22
Future Vol, veh/h	12	1339	82	28	658	9	14	0	21	45	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1488	91	31	731	10	16	0	23	50	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	741	0	0	1579	0	0	1942	2317	744	1563	2398	366
Stage 1	-	-	-	-	-	-	1514	1514	-	793	793	-
Stage 2	-	-	-	-	-	-	428	803	-	770	1605	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	862	-	-	413	-	-	39	37	357	76	33	631
Stage 1	-	-	-	-	-	-	125	181	-	348	398	-
Stage 2	-	-	-	-	-	-	575	394	-	359	163	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	862	-	-	413	-	-	35	34	357	66	30	631
Mov Cap-2 Maneuver	-	-	-	-	-	-	35	34	-	66	30	-
Stage 1	-	-	-	-	-	-	123	178	-	343	368	-
Stage 2	-	-	-	-	-	-	511	364	-	330	161	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			78.7			105.6		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	35	357	862	-	-	413	-	-	66	631
HCM Lane V/C Ratio	0.444	0.065	0.015	-	-	0.075	-	-	0.758	0.039
HCM Control Delay (s)	173.1	15.8	9.2	-	-	14.4	-	-	151.9	10.9
HCM Lane LOS	F	C	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.5	0.2	0	-	-	0.2	-	-	3.4	0.1

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	33	17	0	0	11	5	5	0	17	0
Future Vol, veh/h	0	0	33	17	0	0	11	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	37	19	0	0	12	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	37	0	0	67	57	19	63	75	0
Stage 1	-	-	-	-	-	-	19	19	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	25	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1574	-	-	926	834	1059	932	815	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	993	864	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1574	-	-	-	824	1059	914	805	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	824	-	914	805	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	853	-
Stage 2	-	-	-	-	-	-	932	853	-	982	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1574	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	4	0
Future Vol, veh/h	0	7	0	0	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	4	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	8	0	5
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1612	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	1017
Mov Cap-2 Maneuver	-	-	-	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1017	-	-	1612	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	734	1432	4	0	5
Future Vol, veh/h	0	734	1432	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	816	1591	4	0	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	329
HCM Lane V/C Ratio	-	-	-	0.017
HCM Control Delay (s)	-	-	-	16.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖	↖	↖	↖	↖	↖	↖	↖
Traffic Vol, veh/h	20	697	17	5	1396	47	27	0	19	29	0	13
Future Vol, veh/h	20	697	17	5	1396	47	27	0	19	29	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	774	19	6	1551	52	30	0	21	32	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1603	0	0	793	0	0	1606	2433	387	1994	2400	776
Stage 1	-	-	-	-	-	-	818	818	-	1563	1563	-
Stage 2	-	-	-	-	-	-	788	1615	-	431	837	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	404	-	-	824	-	-	70	31	611	36	33	340
Stage 1	-	-	-	-	-	-	336	388	-	117	171	-
Stage 2	-	-	-	-	-	-	350	161	-	573	380	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	404	-	-	824	-	-	64	29	611	33	31	340
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	29	-	33	31	-
Stage 1	-	-	-	-	-	-	318	367	-	111	170	-
Stage 2	-	-	-	-	-	-	333	160	-	523	359	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			65.3			231.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	64	611	404	-	-	824	-	-	33	340
HCM Lane V/C Ratio	0.469	0.035	0.055	-	-	0.007	-	-	0.976	0.042
HCM Control Delay (s)	103.4	11.1	14.4	-	-	9.4	-	-	327.8	16.1
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	1.8	0.1	0.2	-	-	0	-	-	3.4	0.1

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	37	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	5	0	0	4	0
Future Vol, veh/h	0	5	0	0	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	0	0	4	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	6	0	4	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1615	-	1018	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1615	-	1018	1081
Mov Cap-2 Maneuver	-	-	-	-	1018	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1022	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.6			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1018	-	-	1615	-	
HCM Lane V/C Ratio	0.004	-	-	-	-	
HCM Control Delay (s)	8.6	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

2030 Background Year Traffic Analysis

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	2081	1031	8	0	42
Future Vol, veh/h	0	2081	1031	8	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2312	1146	9	0	47

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	459
HCM Lane V/C Ratio	-	-	-	0.102
HCM Control Delay (s)	-	-	-	13.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection												
Int Delay, s/veh	126.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Vol, veh/h	96	1870	115	39	919	62	20	0	29	89	0	100
Future Vol, veh/h	96	1870	115	39	919	62	20	0	29	89	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	107	2078	128	43	1021	69	22	0	32	99	0	111

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1090	0	0	2206	0	0	2889	3468	1039	2360	3527	511
Stage 1	-	-	-	-	-	-	2292	2292	-	1107	1107	-
Stage 2	-	-	-	-	-	-	597	1176	-	1253	2420	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	636	-	-	235	-	-	~7	7	227	~19	6	508
Stage 1	-	-	-	-	-	-	40	73	-	224	284	-
Stage 2	-	-	-	-	-	-	456	263	-	182	63	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	636	-	-	235	-	-	~4	5	227	~12	4	508
Mov Cap-2 Maneuver	-	-	-	-	-	-	~4	5	-	~12	4	-
Stage 1	-	-	-	-	-	-	33	61	-	186	232	-
Stage 2	-	-	-	-	-	-	291	215	-	130	52	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.9			\$ 1543.2			\$ 1832.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	227	636	-	-	235	-	-	12	508
HCM Lane V/C Ratio	5.556	0.142	0.168	-	-	0.184	-	-	8.241	0.219
HCM Control Delay (s)	\$ 3746.8	23.5	11.8	-	-	23.8	-	-	\$ 3875	14.1
HCM Lane LOS	F	C	B	-	-	C	-	-	F	B
HCM 95th %tile Q(veh)	4.2	0.5	0.6	-	-	0.7	-	-	13.6	0.8

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	39	13	0	0	15	5	5	0	17	0
Future Vol, veh/h	0	0	39	13	0	0	15	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	43	14	0	0	17	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	43	0	0	60	50	22	56	71	0
Stage 1	-	-	-	-	-	-	22	22	-	28	28	-
Stage 2	-	-	-	-	-	-	38	28	-	28	43	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1566	-	-	936	841	1055	941	819	-
Stage 1	-	-	-	-	-	-	996	877	-	989	872	-
Stage 2	-	-	-	-	-	-	977	872	-	989	859	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1566	-	-	-	833	1055	925	812	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	833	-	925	812	-
Stage 1	-	-	-	-	-	-	996	877	-	989	864	-
Stage 2	-	-	-	-	-	-	947	864	-	978	859	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1566	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	5	3	35	0
Future Vol, veh/h	0	7	5	3	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	6	3	39	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	54	39	39	0	0
Stage 1	39	-	-	-	-
Stage 2	15	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	954	1033	1571	-	-
Stage 1	983	-	-	-	-
Stage 2	1008	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	950	1033	1571	-	-
Mov Cap-2 Maneuver	885	-	-	-	-
Stage 1	979	-	-	-	-
Stage 2	1008	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1571	-	1033	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1150	2145	12	0	27
Future Vol, veh/h	0	1150	2145	12	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1278	2383	13	0	30

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1198
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- 0 178
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 178
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	29.3
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	178
HCM Lane V/C Ratio	-	-	-	0.169
HCM Control Delay (s)	-	-	-	29.3
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection												
Int Delay, s/veh	1151.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Vol, veh/h	153	973	24	7	1949	144	37	0	27	107	0	168
Future Vol, veh/h	153	973	24	7	1949	144	37	0	27	107	0	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	1081	27	8	2166	160	41	0	30	119	0	187

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2326	0	0	1108	0	0	2520	3763	541	3063	3630	1083
Stage 1	-	-	-	-	-	-	1421	1421	-	2182	2182	-
Stage 2	-	-	-	-	-	-	1099	2342	-	881	1448	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	210	-	-	626	-	-	~ 14	4	485	~ 5	5	213
Stage 1	-	-	-	-	-	-	143	201	-	~ 47	83	-
Stage 2	-	-	-	-	-	-	227	69	-	308	195	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	210	-	-	626	-	-	~ 1	1	485	~ 2	1	213
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	1	-	~ 2	1	-
Stage 1	-	-	-	-	-	-	~ 27	38	-	~ 9	82	-
Stage 2	-	-	-	-	-	-	~ 28	68	-	~ 55	37	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	\$ 14341.6	\$ 11653.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1	485	210	-	-	626	-	-	2	213
HCM Lane V/C Ratio	41.111	0.062	0.81	-	-	0.012	-	-	59.444	0.876
HCM Control Delay (s)	\$ 24797.6	12.9	69.2	-	-	10.8	-	-	\$ 29823.5	80.3
HCM Lane LOS	F	B	F	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	7.2	0.2	5.9	-	-	0	-	-	17.2	6.9

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	37	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	3	9	23	0
Future Vol, veh/h	0	4	3	9	23	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	3	10	26	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	42	26	26	0	0	
Stage 1	26	-	-	-	-	
Stage 2	16	-	-	-	-	
Critical Hdwy	6.42	6.22	4.12	-	-	
Critical Hdwy Stg 1	5.42	-	-	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	
Follow-up Hdwy	3.518	3.318	2.218	-	-	
Pot Cap-1 Maneuver	969	1050	1588	-	-	
Stage 1	997	-	-	-	-	
Stage 2	1007	-	-	-	-	
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	967	1050	1588	-	-	
Mov Cap-2 Maneuver	898	-	-	-	-	
Stage 1	995	-	-	-	-	
Stage 2	1007	-	-	-	-	
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	1.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1588	-	1050	-	-	
HCM Lane V/C Ratio	0.002	-	0.004	-	-	
HCM Control Delay (s)	7.3	-	8.4	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

2030 Background Year Traffic Analysis - Mitigations

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	2081	1100	8	0	42
Future Vol, veh/h	0	2081	1100	8	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2312	1222	9	0	47

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	616
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	433
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	433
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	433
HCM Lane V/C Ratio	-	-	-	0.108
HCM Control Delay (s)	-	-	-	14.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↗	↘	↗↗	↗				↗		↗
Traffic Vol, veh/h	96	1870	115	39	919	62	0	0	49	0	0	189
Future Vol, veh/h	96	1870	115	39	919	62	0	0	49	0	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	107	2078	128	43	1021	69	0	0	54	0	0	210

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1090	0	0	2206	0	0	-	-	1039	-	-	511
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	636	-	-	235	-	-	0	0	227	0	0	508
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	636	-	-	235	-	-	-	-	227	-	-	508
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.9			25.8			17		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	636	-	-	235	-	-	508
HCM Lane V/C Ratio	0.24	0.168	-	-	0.184	-	-	0.413
HCM Control Delay (s)	25.8	11.8	-	-	23.8	-	-	17
HCM Lane LOS	D	B	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.9	0.6	-	-	0.7	-	-	2

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	39	13	0	0	15	5	5	0	17	0
Future Vol, veh/h	0	0	39	13	0	0	15	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	43	14	0	0	17	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	43	0	0	60	50	22	56	71	0
Stage 1	-	-	-	-	-	-	22	22	-	28	28	-
Stage 2	-	-	-	-	-	-	38	28	-	28	43	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1566	-	-	936	841	1055	941	819	-
Stage 1	-	-	-	-	-	-	996	877	-	989	872	-
Stage 2	-	-	-	-	-	-	977	872	-	989	859	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1566	-	-	-	833	1055	925	812	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	833	-	925	812	-
Stage 1	-	-	-	-	-	-	996	877	-	989	864	-
Stage 2	-	-	-	-	-	-	947	864	-	978	859	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1566	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	5	3	35	0
Future Vol, veh/h	0	7	5	3	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	6	3	39	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	54	39	39	0	0
Stage 1	39	-	-	-	-
Stage 2	15	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	954	1033	1571	-	-
Stage 1	983	-	-	-	-
Stage 2	1008	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	950	1033	1571	-	-
Mov Cap-2 Maneuver	885	-	-	-	-
Stage 1	979	-	-	-	-
Stage 2	1008	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1571	-	1033	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1150	2212	12	0	27
Future Vol, veh/h	0	1150	2212	12	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1278	2458	13	0	30

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1236
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- 0 168
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 168
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	31
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	168
HCM Lane V/C Ratio	-	-	-	0.179
HCM Control Delay (s)	-	-	-	31
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection												
Int Delay, s/veh	23.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗				↗		↗
Traffic Vol, veh/h	153	973	24	7	1949	144	0	0	64	0	0	275
Future Vol, veh/h	153	973	24	7	1949	144	0	0	64	0	0	275
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	1081	27	8	2166	160	0	0	71	0	0	306

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2326	0	0	1108	0	0	-	-	541	-	-	1083
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	210	-	-	626	-	-	0	0	485	0	0	~ 213
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	210	-	-	626	-	-	-	-	485	-	-	~ 213
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	13.7	262.7
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	210	-	-	626	-	-	213
HCM Lane V/C Ratio	0.147	0.81	-	-	0.012	-	-	1.435
HCM Control Delay (s)	13.7	69.2	-	-	10.8	-	-	262.7
HCM Lane LOS	B	F	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.5	5.9	-	-	0	-	-	18

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	33	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	37	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	3	9	23	0
Future Vol, veh/h	0	4	3	9	23	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	3	10	26	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	42	26	26	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	969	1050	1588	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	967	1050	1588	-	-	-
Mov Cap-2 Maneuver	898	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	1050	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2023 Background Year with Project Traffic Analysis

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1320	631	15	0	49
Future Vol, veh/h	0	1320	631	15	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1467	701	17	0	54

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	638
HCM Lane V/C Ratio	-	-	-	0.085
HCM Control Delay (s)	-	-	-	11.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection												
Int Delay, s/veh	12.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↗		↘	↗	
Traffic Vol, veh/h	26	1219	75	25	611	12	13	0	19	87	0	22
Future Vol, veh/h	26	1219	75	25	611	12	13	0	19	87	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	1354	83	28	679	13	14	0	21	97	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	692	0	0	1437	0	0	1808	2160	677	1470	2230	340
Stage 1	-	-	-	-	-	-	1412	1412	-	735	735	-
Stage 2	-	-	-	-	-	-	396	748	-	735	1495	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	899	-	-	468	-	-	49	47	395	~ 89	42	656
Stage 1	-	-	-	-	-	-	145	203	-	377	424	-
Stage 2	-	-	-	-	-	-	601	418	-	377	185	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	899	-	-	468	-	-	44	43	395	~ 78	38	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	43	-	~ 78	38	-
Stage 1	-	-	-	-	-	-	140	197	-	365	399	-
Stage 2	-	-	-	-	-	-	544	393	-	345	179	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			58.5			221		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	44	395	899	-	-	468	-	-	78	656
HCM Lane V/C Ratio	0.328	0.053	0.032	-	-	0.059	-	-	1.239	0.037
HCM Control Delay (s)	122.6	14.6	9.1	-	-	13.2	-	-	274.2	10.7
HCM Lane LOS	F	B	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.1	0.2	0.1	-	-	0.2	-	-	7.3	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	75	17	0	0	28	5	5	0	17	0
Future Vol, veh/h	0	0	75	17	0	0	28	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	83	19	0	0	31	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	83	0	0	90	80	42	86	121	0
Stage 1	-	-	-	-	-	-	42	42	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	48	83	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1514	-	-	895	810	1029	900	769	-
Stage 1	-	-	-	-	-	-	972	860	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	965	826	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1514	-	-	-	799	1029	882	759	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	799	-	882	759	-
Stage 1	-	-	-	-	-	-	972	860	-	977	852	-
Stage 2	-	-	-	-	-	-	931	852	-	954	826	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.4		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1514	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	-	0	-	-	7.4	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	3	0
Future Vol, veh/h	0	7	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	3	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	8	0	5
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1612	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	1017
Mov Cap-2 Maneuver	-	-	-	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1017	-	-	1612	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	15	0	42	49
Future Vol, veh/h	0	17	15	0	42	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	17	0	47	54

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	165	17	0	0	17	0
Stage 1	17	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	826	1062	-	-	1600	-
Stage 1	1006	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	801	1062	-	-	1600	-
Mov Cap-2 Maneuver	801	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	854	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1062	1600
HCM Lane V/C Ratio	-	-	0.018	0.029
HCM Control Delay (s)	-	-	8.5	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	29	3	7	0
Future Vol, veh/h	0	84	29	3	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	3	8	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	75	8	8	0	0
Stage 1	8	-	-	-	-
Stage 2	67	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	928	1074	1612	-	-
Stage 1	1015	-	-	-	-
Stage 2	956	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	909	1074	1612	-	-
Mov Cap-2 Maneuver	909	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	956	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	6.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1612	-	1074	-	-
HCM Lane V/C Ratio	0.02	-	0.087	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	711	1304	36	0	31
Future Vol, veh/h	0	711	1304	36	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	790	1449	40	0	34

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	357
HCM Lane V/C Ratio	-	-	-	0.096
HCM Control Delay (s)	-	-	-	16.2
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection												
Int Delay, s/veh	19.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↗		↘	↗	
Traffic Vol, veh/h	62	634	15	4	1303	55	24	0	18	56	0	13
Future Vol, veh/h	62	634	15	4	1303	55	24	0	18	56	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	704	17	4	1448	61	27	0	20	62	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1509	0	0	721	0	0	1574	2359	352	1946	2315	724
Stage 1	-	-	-	-	-	-	842	842	-	1456	1456	-
Stage 2	-	-	-	-	-	-	732	1517	-	490	859	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	439	-	-	877	-	-	74	35	644	~ 39	37	368
Stage 1	-	-	-	-	-	-	325	378	-	136	193	-
Stage 2	-	-	-	-	-	-	379	180	-	529	371	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	439	-	-	877	-	-	62	29	644	~ 33	31	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	29	-	~ 33	31	-
Stage 1	-	-	-	-	-	-	274	319	-	115	192	-
Stage 2	-	-	-	-	-	-	362	179	-	432	313	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0			62.5			\$ 552.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	62	644	439	-	-	877	-	-	33	368
HCM Lane V/C Ratio	0.43	0.031	0.157	-	-	0.005	-	-	1.886	0.039
HCM Control Delay (s)	101.2	10.8	14.7	-	-	9.1	-	-	\$ 677	15.2
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	1.6	0.1	0.6	-	-	0	-	-	7	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	47	11	0	0	83	17	17	0	11	0
Future Vol, veh/h	0	0	47	11	0	0	83	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	52	12	0	0	92	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	52	0	0	56	50	26	69	76	0
Stage 1	-	-	-	-	-	-	26	26	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	45	52	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1554	-	-	941	841	1050	923	814	-
Stage 1	-	-	-	-	-	-	992	874	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	969	852	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1554	-	-	-	834	1050	885	807	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	834	-	885	807	-
Stage 1	-	-	-	-	-	-	992	874	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	931	852	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.3								
HCM LOS							-			-		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1554	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	4	0	0	3	0
Future Vol, veh/h	0	4	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	0	3	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	4	0	3
Stage 1	-	-	-	-	2
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1618	-	1019
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1618	-	1019
Mov Cap-2 Maneuver	-	-	-	-	1019
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1019	-	-	1618	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	50	36	0	27	31
Future Vol, veh/h	0	50	36	0	27	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	56	40	0	30	34

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	134	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	860	1031	-	-	1570	-
Stage 1	982	-	-	-	-	-
Stage 2	930	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	844	1031	-	-	1570	-
Mov Cap-2 Maneuver	844	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	912	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1031	1570
HCM Lane V/C Ratio	-	-	0.054	0.019
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection						
Int Delay, s/veh	7.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	54	83	3	4	0
Future Vol, veh/h	0	54	83	3	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	60	92	3	4	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	191	4	4	0	0
Stage 1	4	-	-	-	-
Stage 2	187	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	798	1080	1618	-	-
Stage 1	1019	-	-	-	-
Stage 2	845	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	753	1080	1618	-	-
Mov Cap-2 Maneuver	753	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	845	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1618	-	1080	-	-
HCM Lane V/C Ratio	0.057	-	0.056	-	-
HCM Control Delay (s)	7.4	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

2023 Background Year with Project Traffic Analysis - Mitigations

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1320	663	15	0	91
Future Vol, veh/h	0	1320	663	15	0	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1467	737	17	0	101

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 377
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- 0 621
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 621
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	621
HCM Lane V/C Ratio	-	-	-	0.163
HCM Control Delay (s)	-	-	-	11.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗			↗			↗
Traffic Vol, veh/h	26	1219	75	25	611	12	0	0	32	0	0	67
Future Vol, veh/h	26	1219	75	25	611	12	0	0	32	0	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	1354	83	28	679	13	0	0	36	0	0	74

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	692	0	0	1437	0	0	-	-	677	-	-	340
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	899	-	-	468	-	-	0	0	395	0	0	656
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	899	-	-	468	-	-	-	-	395	-	-	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			15			11.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	395	899	-	-	468	-	-	656
HCM Lane V/C Ratio	0.09	0.032	-	-	0.059	-	-	0.113
HCM Control Delay (s)	15	9.1	-	-	13.2	-	-	11.2
HCM Lane LOS	C	A	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.2	-	-	0.4

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	33	17	0	0	28	5	5	0	17	0
Future Vol, veh/h	0	0	33	17	0	0	28	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	37	19	0	0	31	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	37	0	0	67	57	19	63	75	0
Stage 1	-	-	-	-	-	-	19	19	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	25	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1574	-	-	926	834	1059	932	815	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	993	864	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1574	-	-	-	824	1059	914	805	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	824	-	914	805	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	853	-
Stage 2	-	-	-	-	-	-	932	853	-	982	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1574	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	3	0
Future Vol, veh/h	0	7	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	3	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	8	0	5
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1612	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	1017
Mov Cap-2 Maneuver	-	-	-	-	1017
Stage 1	-	-	-	-	1019
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1017	-	-	1612	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T			T
Traffic Vol, veh/h	0	17	15	0	0	91
Future Vol, veh/h	0	17	15	0	0	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	17	0	0	101

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	118	17	0	0	17	0
Stage 1	17	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	878	1062	-	-	1600	-
Stage 1	1006	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	878	1062	-	-	1600	-
Mov Cap-2 Maneuver	878	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	923	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1062	1600
HCM Lane V/C Ratio	-	-	0.018	-
HCM Control Delay (s)	-	-	8.5	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	29	3	7	0
Future Vol, veh/h	0	84	29	3	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	3	8	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	75	8	8	0	0
Stage 1	8	-	-	-	-
Stage 2	67	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	928	1074	1612	-	-
Stage 1	1015	-	-	-	-
Stage 2	956	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	909	1074	1612	-	-
Mov Cap-2 Maneuver	909	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	956	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	6.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1612	-	1074	-	-
HCM Lane V/C Ratio	0.02	-	0.087	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	711	1309	36	0	58
Future Vol, veh/h	0	711	1309	36	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	790	1454	40	0	64

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	747
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0 355
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	355
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	355
HCM Lane V/C Ratio	-	-	-	0.182
HCM Control Delay (s)	-	-	-	17.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.7

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘			↘			↘
Traffic Vol, veh/h	62	634	15	4	1303	55	0	0	42	0	0	42
Future Vol, veh/h	62	634	15	4	1303	55	0	0	42	0	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	704	17	4	1448	61	0	0	47	0	0	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1509	0	0	721	0	0	-	-	352	-	-	724
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	439	-	-	877	-	-	0	0	644	0	0	368
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	439	-	-	877	-	-	-	-	644	-	-	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0			11			16.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	644	439	-	-	877	-	-	368
HCM Lane V/C Ratio	0.072	0.157	-	-	0.005	-	-	0.127
HCM Control Delay (s)	11	14.7	-	-	9.1	-	-	16.2
HCM Lane LOS	B	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.6	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	83	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	83	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	92	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	4	0	0	3	0
Future Vol, veh/h	0	4	0	0	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	0	3	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	4	0	3	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1618	-	1019	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1618	-	1019	1082
Mov Cap-2 Maneuver	-	-	-	-	1019	-
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1022	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.5			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1019	-	-	1618	-	
HCM Lane V/C Ratio	0.003	-	-	-	-	
HCM Control Delay (s)	8.5	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	50	36	0	0	58
Future Vol, veh/h	0	50	36	0	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	56	40	0	0	64

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	104	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	894	1031	-	-	1570	-
Stage 1	982	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	894	1031	-	-	1570	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 1031	1570	-
HCM Lane V/C Ratio	-	- 0.054	-	-
HCM Control Delay (s)	-	- 8.7	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Intersection						
Int Delay, s/veh	7.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	54	83	3	4	0
Future Vol, veh/h	0	54	83	3	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	60	92	3	4	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	191	4	4	0	0
Stage 1	4	-	-	-	-
Stage 2	187	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	798	1080	1618	-	-
Stage 1	1019	-	-	-	-
Stage 2	845	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	753	1080	1618	-	-
Mov Cap-2 Maneuver	753	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	845	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1618	-	1080	-	-
HCM Lane V/C Ratio	0.057	-	0.056	-	-
HCM Control Delay (s)	7.4	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

2024 Background Year with Project Traffic Analysis

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1460	690	20	0	77
Future Vol, veh/h	0	1460	690	20	0	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1622	767	22	0	86

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	395
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	604
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	604
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	604
HCM Lane V/C Ratio	-	-	-	0.142
HCM Control Delay (s)	-	-	-	11.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection												
Int Delay, s/veh	43.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Vol, veh/h	38	1339	82	28	674	14	14	0	21	122	0	22
Future Vol, veh/h	38	1339	82	28	674	14	14	0	21	122	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1488	91	31	749	16	16	0	23	136	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	765	0	0	1579	0	0	2009	2399	744	1639	2474	375
Stage 1	-	-	-	-	-	-	1572	1572	-	811	811	-
Stage 2	-	-	-	-	-	-	437	827	-	828	1663	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	844	-	-	413	-	-	35	33	357	~66	29	623
Stage 1	-	-	-	-	-	-	115	169	-	339	391	-
Stage 2	-	-	-	-	-	-	568	384	-	332	152	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	844	-	-	413	-	-	31	29	357	~56	25	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	29	-	~56	25	-
Stage 1	-	-	-	-	-	-	109	161	-	322	362	-
Stage 2	-	-	-	-	-	-	505	355	-	295	144	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.6			91.9			\$ 682.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	31	357	844	-	-	413	-	-	56	623
HCM Lane V/C Ratio	0.502	0.065	0.05	-	-	0.075	-	-	2.421	0.039
HCM Control Delay (s)	206	15.8	9.5	-	-	14.4	-	-	\$ 803.9	11
HCM Lane LOS	F	C	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.6	0.2	0.2	-	-	0.2	-	-	13.7	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	110	17	0	0	42	5	5	0	17	0
Future Vol, veh/h	0	0	110	17	0	0	42	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	122	19	0	0	47	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	122	0	0	109	99	61	105	160	0
Stage 1	-	-	-	-	-	-	61	61	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	67	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1465	-	-	870	791	1004	875	732	-
Stage 1	-	-	-	-	-	-	950	844	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	943	795	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1465	-	-	781	1004	857	722	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	781	-	857	722	-	-
Stage 1	-	-	-	-	-	-	950	844	-	977	852	-
Stage 2	-	-	-	-	-	-	931	852	-	932	795	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1465	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.013	-	-	-
HCM Control Delay (s)	-	0	-	-	7.5	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	39	12	10	31	0
Future Vol, veh/h	0	39	12	10	31	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	13	11	34	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	71	34	34	0	0
Stage 1	34	-	-	-	-
Stage 2	37	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	933	1039	1578	-	-
Stage 1	988	-	-	-	-
Stage 2	985	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	926	1039	1578	-	-
Mov Cap-2 Maneuver	926	-	-	-	-
Stage 1	980	-	-	-	-
Stage 2	985	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	1039	-	-
HCM Lane V/C Ratio	0.008	-	0.042	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	31	20	0	77	77
Future Vol, veh/h	0	31	20	0	77	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	22	0	86	86

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	280	22	0	0	22	0
Stage 1	22	-	-	-	-	-
Stage 2	258	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	710	1055	-	-	1593	-
Stage 1	1001	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	670	1055	-	-	1593	-
Mov Cap-2 Maneuver	670	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1055	1593
HCM Lane V/C Ratio	-	-	0.033	0.054
HCM Control Delay (s)	-	-	8.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.2

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	29	22	70	0
Future Vol, veh/h	0	84	29	22	70	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	24	78	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	166	78	78	0	0
Stage 1	78	-	-	-	-
Stage 2	88	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	824	983	1520	-	-
Stage 1	945	-	-	-	-
Stage 2	935	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	807	983	1520	-	-
Mov Cap-2 Maneuver	807	-	-	-	-
Stage 1	925	-	-	-	-
Stage 2	935	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	4.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	983	-	-
HCM Lane V/C Ratio	0.021	-	0.095	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	31	10	0	0	0
Future Vol, veh/h	0	31	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	11	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	23	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	22	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	993	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	1001	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-
Mov Cap-2 Maneuver	986	-	-	-	-
Stage 1	1015	-	-	-	-
Stage 2	1001	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.007	-	0.032	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	812	1432	63	0	48
Future Vol, veh/h	0	812	1432	63	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	902	1591	70	0	53

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 831
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- 0 313
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 313
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	313
HCM Lane V/C Ratio	-	-	-	0.17
HCM Control Delay (s)	-	-	-	18.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection												
Int Delay, s/veh	74.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Vol, veh/h	98	697	17	5	1455	62	27	0	19	77	0	13
Future Vol, veh/h	98	697	17	5	1455	62	27	0	19	77	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	774	19	6	1617	69	30	0	21	86	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1686	0	0	793	0	0	1813	2690	387	2234	2640	809
Stage 1	-	-	-	-	-	-	992	992	-	1629	1629	-
Stage 2	-	-	-	-	-	-	821	1698	-	605	1011	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	375	-	-	824	-	-	49	21	611	~23	23	323
Stage 1	-	-	-	-	-	-	264	322	-	106	159	-
Stage 2	-	-	-	-	-	-	335	146	-	451	315	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	375	-	-	824	-	-	36	15	611	~17	16	323
Mov Cap-2 Maneuver	-	-	-	-	-	-	36	15	-	~17	16	-
Stage 1	-	-	-	-	-	-	187	228	-	~75	158	-
Stage 2	-	-	-	-	-	-	318	145	-	309	223	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0			160			\$ 1940.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	36	611	375	-	-	824	-	-	17	323
HCM Lane V/C Ratio	0.833	0.035	0.29	-	-	0.007	-	-	5.033	0.045
HCM Control Delay (s)	264.7	11.1	18.5	-	-	9.4	-	-	\$ 2265.6	16.7
HCM Lane LOS	F	B	C	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	3	0.1	1.2	-	-	0	-	-	11.4	0.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	68	11	0	0	126	17	17	0	11	0
Future Vol, veh/h	0	0	68	11	0	0	126	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	76	12	0	0	140	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	76	0	0	68	62	38	81	100	0
Stage 1	-	-	-	-	-	-	38	38	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	57	76	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1523	-	-	925	829	1034	907	790	-
Stage 1	-	-	-	-	-	-	977	863	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	955	832	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1523	-	-	-	822	1034	870	784	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	822	-	870	784	-
Stage 1	-	-	-	-	-	-	977	863	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	917	832	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.4		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1523	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.4	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	23	39	34	20	0
Future Vol, veh/h	0	23	39	34	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	43	38	22	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	146	22	22	0	0
Stage 1	22	-	-	-	-
Stage 2	124	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	846	1055	1593	-	-
Stage 1	1001	-	-	-	-
Stage 2	902	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	822	1055	1593	-	-
Mov Cap-2 Maneuver	822	-	-	-	-
Stage 1	973	-	-	-	-
Stage 2	902	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1593	-	1055	-	-
HCM Lane V/C Ratio	0.027	-	0.024	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	93	63	0	48	48
Future Vol, veh/h	0	93	63	0	48	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	70	0	53	53

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	229	70	0	0	70	0
Stage 1	70	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	759	993	-	-	1531	-
Stage 1	953	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	732	993	-	-	1531	-
Mov Cap-2 Maneuver	732	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	993	1531
HCM Lane V/C Ratio	-	-	0.104	0.035
HCM Control Delay (s)	-	-	9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	53	83	73	43	0
Future Vol, veh/h	0	53	83	73	43	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	59	92	81	48	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	313	48	48	0	0
Stage 1	48	-	-	-	-
Stage 2	265	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	680	1021	1559	-	-
Stage 1	974	-	-	-	-
Stage 2	779	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	638	1021	1559	-	-
Mov Cap-2 Maneuver	638	-	-	-	-
Stage 1	914	-	-	-	-
Stage 2	779	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1021	-	-
HCM Lane V/C Ratio	0.059	-	0.058	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	20	34	0	0	0
Future Vol, veh/h	0	20	34	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	38	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	77	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	76	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	926	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	947	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	905	1084	1622	-	-
Mov Cap-2 Maneuver	905	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	947	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.023	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

2024 Background Year with Project Traffic Analysis - Mitigations

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1460	721	20	0	154
Future Vol, veh/h	0	1460	721	20	0	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1622	801	22	0	171

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	589
HCM Lane V/C Ratio	-	-	-	0.291
HCM Control Delay (s)	-	-	-	13.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	1.2

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↘			↘			↘
Traffic Vol, veh/h	38	1339	82	28	674	14	0	0	35	0	0	67
Future Vol, veh/h	38	1339	82	28	674	14	0	0	35	0	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1488	91	31	749	16	0	0	39	0	0	74

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	765	0	0	1579	0	0	-	-	744	-	-	375
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	844	-	-	413	-	-	0	0	357	0	0	623
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	844	-	-	413	-	-	-	-	357	-	-	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.6			16.3			11.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	844	-	-	413	-	-	623
HCM Lane V/C Ratio	0.109	0.05	-	-	0.075	-	-	0.119
HCM Control Delay (s)	16.3	9.5	-	-	14.4	-	-	11.6
HCM Lane LOS	C	A	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.2	-	-	0.4

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	33	17	0	0	42	5	5	0	17	0
Future Vol, veh/h	0	0	33	17	0	0	42	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	37	19	0	0	47	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	37	0	0	67	57	19	63	75	0
Stage 1	-	-	-	-	-	-	19	19	-	38	38	-
Stage 2	-	-	-	-	-	-	48	38	-	25	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1574	-	-	926	834	1059	932	815	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	863	-
Stage 2	-	-	-	-	-	-	965	863	-	993	864	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1574	-	-	-	824	1059	914	805	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	824	-	914	805	-
Stage 1	-	-	-	-	-	-	1000	880	-	977	853	-
Stage 2	-	-	-	-	-	-	932	853	-	982	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1574	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	12	10	31	0
Future Vol, veh/h	0	39	12	10	31	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	13	11	34	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	71	34	34	0	0
Stage 1	34	-	-	-	-
Stage 2	37	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	933	1039	1578	-	-
Stage 1	988	-	-	-	-
Stage 2	985	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	926	1039	1578	-	-
Mov Cap-2 Maneuver	926	-	-	-	-
Stage 1	980	-	-	-	-
Stage 2	985	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	1039	-	-
HCM Lane V/C Ratio	0.008	-	0.042	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	31	20	0	0	154
Future Vol, veh/h	0	31	20	0	0	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	22	0	0	171

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	193	22	0	0	22	0
Stage 1	22	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	796	1055	-	-	1593	-
Stage 1	1001	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	796	1055	-	-	1593	-
Mov Cap-2 Maneuver	796	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	859	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1055	1593
HCM Lane V/C Ratio	-	-	0.033	-
HCM Control Delay (s)	-	-	8.5	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	29	22	70	0
Future Vol, veh/h	0	84	29	22	70	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	24	78	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	166	78	78	0	0
Stage 1	78	-	-	-	-
Stage 2	88	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	824	983	1520	-	-
Stage 1	945	-	-	-	-
Stage 2	935	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	807	983	1520	-	-
Mov Cap-2 Maneuver	807	-	-	-	-
Stage 1	925	-	-	-	-
Stage 2	935	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	4.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	983	-	-
HCM Lane V/C Ratio	0.021	-	0.095	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	31	10	0	0	0
Future Vol, veh/h	0	31	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	11	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	23	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	22	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	993	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	1001	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-
Mov Cap-2 Maneuver	986	-	-	-	-
Stage 1	1015	-	-	-	-
Stage 2	1001	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.007	-	0.032	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	812	1434	63	0	96
Future Vol, veh/h	0	812	1434	63	0	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	902	1593	70	0	107

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	312
HCM Lane V/C Ratio	-	-	-	0.342
HCM Control Delay (s)	-	-	-	22.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.5

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗			↗			↗
Traffic Vol, veh/h	98	697	17	5	1455	62	0	0	46	0	0	42
Future Vol, veh/h	98	697	17	5	1455	62	0	0	46	0	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	774	19	6	1617	69	0	0	51	0	0	47

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	1686	0	0	793	0	0	-	-	387	-	-	809
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	375	-	-	824	-	-	0	0	611	0	0	323
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	375	-	-	824	-	-	-	-	611	-	-	323
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0	11.4	18
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	611	375	-	-	824	-	-	323
HCM Lane V/C Ratio	0.084	0.29	-	-	0.007	-	-	0.144
HCM Control Delay (s)	11.4	18.5	-	-	9.4	-	-	18
HCM Lane LOS	B	C	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	1.2	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	20	11	0	0	126	17	17	0	11	0
Future Vol, veh/h	0	0	20	11	0	0	126	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	12	0	0	140	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	22	0	0	41	35	11	54	46	0
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	30	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1593	-	-	963	857	1070	944	846	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	987	877	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1593	-	-	-	850	1070	906	839	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	850	-	906	839	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	949	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.3	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	23	39	34	20	0
Future Vol, veh/h	0	23	39	34	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	43	38	22	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	146	22	22	0	0
Stage 1	22	-	-	-	-
Stage 2	124	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	846	1055	1593	-	-
Stage 1	1001	-	-	-	-
Stage 2	902	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	822	1055	1593	-	-
Mov Cap-2 Maneuver	798	-	-	-	-
Stage 1	973	-	-	-	-
Stage 2	902	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1593	-	1055	-	-
HCM Lane V/C Ratio	0.027	-	0.024	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	93	63	0	0	96
Future Vol, veh/h	0	93	63	0	0	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	70	0	0	107

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	177	70	0	0	70	0
Stage 1	70	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	813	993	-	-	1531	-
Stage 1	953	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	813	993	-	-	1531	-
Mov Cap-2 Maneuver	813	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	993	1531
HCM Lane V/C Ratio	-	-	0.104	-
HCM Control Delay (s)	-	-	9	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	53	83	73	43	0
Future Vol, veh/h	0	53	83	73	43	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	59	92	81	48	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	313	48	48	0	0
Stage 1	48	-	-	-	-
Stage 2	265	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	680	1021	1559	-	-
Stage 1	974	-	-	-	-
Stage 2	779	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	638	1021	1559	-	-
Mov Cap-2 Maneuver	638	-	-	-	-
Stage 1	914	-	-	-	-
Stage 2	779	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1021	-	-
HCM Lane V/C Ratio	0.059	-	0.058	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	34	0	0	0
Future Vol, veh/h	0	20	34	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	38	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	77	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	76	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	926	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	947	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	905	1084	1622	-	-
Mov Cap-2 Maneuver	852	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	947	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.023	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

2030 Background Year with Project Traffic Analysis

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	2185	1034	87	0	125
Future Vol, veh/h	0	2185	1034	87	0	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2428	1149	97	0	139

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	623
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	429
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	429
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	429
HCM Lane V/C Ratio	-	-	-	0.324
HCM Control Delay (s)	-	-	-	17.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.4

Intersection												
Int Delay, s/veh	816.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↗		↖	↗	
Traffic Vol, veh/h	200	1870	115	39	1001	83	20	0	29	179	0	100
Future Vol, veh/h	200	1870	115	39	1001	83	20	0	29	179	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	222	2078	128	43	1112	92	22	0	32	199	0	111

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1204	0	0	2206	0	0	3164	3812	1039	2681	3848	556
Stage 1	-	-	-	-	-	-	2522	2522	-	1198	1198	-
Stage 2	-	-	-	-	-	-	642	1290	-	1483	2650	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	575	-	-	235	-	-	~4	4	227	~11	4	475
Stage 1	-	-	-	-	-	-	28	55	-	~197	257	-
Stage 2	-	-	-	-	-	-	429	232	-	~131	47	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	575	-	-	235	-	-	~2	2	227	~6	2	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	~2	2	-	~6	2	-
Stage 1	-	-	-	-	-	-	~17	34	-	~121	210	-
Stage 2	-	-	-	-	-	-	269	190	-	~69	29	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.8			\$ 3216			\$ 10056.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	2	227	575	-	-	235	-	-	6	475
HCM Lane V/C Ratio	11.111	0.142	0.386	-	-	0.184	-	-	33.148	0.234
HCM Control Delay (s)	\$ 7845.1	23.5	15.2	-	-	23.8	-	-	\$ 15665.9	14.9
HCM Lane LOS	F	C	C	-	-	C	-	-	F	B
HCM 95th %tile Q(veh)	4.4	0.5	1.8	-	-	0.7	-	-	26.9	0.9

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	129	13	0	0	140	5	5	0	17	0
Future Vol, veh/h	0	0	129	13	0	0	140	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	143	14	0	0	156	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	143	0	0	110	100	72	106	171	0
Stage 1	-	-	-	-	-	-	72	72	-	28	28	-
Stage 2	-	-	-	-	-	-	38	28	-	78	143	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1440	-	-	868	790	990	873	722	-
Stage 1	-	-	-	-	-	-	938	835	-	989	872	-
Stage 2	-	-	-	-	-	-	977	872	-	931	779	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1440	-	-	-	782	990	856	715	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	782	-	856	715	-
Stage 1	-	-	-	-	-	-	938	835	-	989	863	-
Stage 2	-	-	-	-	-	-	946	863	-	920	779	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.5								
HCM LOS							-			-		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1440	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.01	-	-	-
HCM Control Delay (s)	-	0	-	-	7.5	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	12	15	66	0
Future Vol, veh/h	0	39	12	15	66	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	13	17	73	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	116	73	73	0	-	0
Stage 1	73	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	880	989	1527	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	872	989	1527	-	-	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	989	-	-
HCM Lane V/C Ratio	0.009	-	0.044	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	13	0	94	31	62	25	0	77	112	0
Future Vol, veh/h	0	13	13	0	94	31	62	25	0	77	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	14	0	104	34	69	28	0	86	124	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	531	462	124	476	462	28	124	0	0	28	0	0
Stage 1	296	296	-	166	166	-	-	-	-	-	-	-
Stage 2	235	166	-	310	296	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	459	497	927	499	497	1047	1463	-	-	1585	-	-
Stage 1	712	668	-	836	761	-	-	-	-	-	-	-
Stage 2	768	761	-	700	668	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	336	446	927	442	446	1047	1463	-	-	1585	-	-
Mov Cap-2 Maneuver	336	446	-	442	446	-	-	-	-	-	-	-
Stage 1	678	629	-	796	724	-	-	-	-	-	-	-
Stage 2	605	724	-	634	629	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.3		14.4		5.4		3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	602	520	1585	-	-
HCM Lane V/C Ratio	0.047	-	-	0.048	0.267	0.054	-	-
HCM Control Delay (s)	7.6	0	-	11.3	14.4	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.1	0.2	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	84	29	27	105	0
Future Vol, veh/h	0	84	29	27	105	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	30	117	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	211	117	117	0	0
Stage 1	117	-	-	-	-
Stage 2	94	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	777	935	1471	-	-
Stage 1	908	-	-	-	-
Stage 2	930	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	760	935	1471	-	-
Mov Cap-2 Maneuver	760	-	-	-	-
Stage 1	888	-	-	-	-
Stage 2	930	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1471	-	935	-	-
HCM Lane V/C Ratio	0.022	-	0.1	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	31	10	0	0	0
Future Vol, veh/h	0	31	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	11	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	23	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	22	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	993	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	1001	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-
Mov Cap-2 Maneuver	986	-	-	-	-
Stage 1	1015	-	-	-	-
Stage 2	1001	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.007	-	0.032	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1243	2145	84	0	146
Future Vol, veh/h	0	1243	2145	84	0	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1381	2383	93	0	162

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1238
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- 0 167
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 167
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	117.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	167
HCM Lane V/C Ratio	-	-	-	0.971
HCM Control Delay (s)	-	-	-	117.4
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	7.5

Intersection												
Int Delay, s/veh	16.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↗		↖	↗	
Traffic Vol, veh/h	246	973	24	7	2024	162	37	0	27	230	0	168
Future Vol, veh/h	246	973	24	7	2024	162	37	0	27	230	0	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	273	1081	27	8	2249	180	41	0	30	256	0	187

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2429	0	0	1108	0	0	2768	4072	541	3352	3919	1125
Stage 1	-	-	-	-	-	-	1627	1627	-	2265	2265	-
Stage 2	-	-	-	-	-	-	1141	2445	-	1087	1654	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	~ 192	-	-	626	-	-	~ 9	3	485	~ 3	3	199
Stage 1	-	-	-	-	-	-	106	159	-	~ 42	75	-
Stage 2	-	-	-	-	-	-	214	61	-	~ 231	154	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 192	-	-	626	-	-	-	0	485	-	0	199
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	106	0	-	~ 42	74	-
Stage 2	-	-	-	-	-	-	~ 13	60	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.3	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	485	~ 192	-	-	626	-	-	-	199
HCM Lane V/C Ratio	-	0.062	1.424	-	-	0.012	-	-	-	0.938
HCM Control Delay (s)	-	12.9	264.3	-	-	10.8	-	-	-	97.6
HCM Lane LOS	-	B	F	-	-	B	-	-	-	F
HCM 95th %tile Q(veh)	-	0.2	16.4	-	-	0	-	-	-	7.6

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	143	11	0	0	145	17	17	0	11	0
Future Vol, veh/h	0	0	143	11	0	0	145	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	159	12	0	0	161	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	159	0	0	110	104	80	123	183	0
Stage 1	-	-	-	-	-	-	80	80	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	99	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1420	-	-	868	786	980	852	711	-
Stage 1	-	-	-	-	-	-	929	828	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	907	766	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1420	-	-	-	780	980	815	705	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	780	-	815	705	-
Stage 1	-	-	-	-	-	-	929	828	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	869	766	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.6								
HCM LOS							-			-		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1420	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-	-	-
HCM Control Delay (s)	-	0	-	-	7.6	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	23	39	43	43	0
Future Vol, veh/h	0	23	39	43	43	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	43	48	48	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	182	48	48	0	0
Stage 1	48	-	-	-	-
Stage 2	134	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	807	1021	1559	-	-
Stage 1	974	-	-	-	-
Stage 2	892	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	784	1021	1559	-	-
Mov Cap-2 Maneuver	784	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	892	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	3.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1021	-	-
HCM Lane V/C Ratio	0.028	-	0.025	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	75	75	0	19	93	12	72	0	48	71	0
Future Vol, veh/h	0	75	75	0	19	93	12	72	0	48	71	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	83	83	0	21	103	13	80	0	53	79	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	353	291	79	374	291	80	79	0	0	80	0	0
Stage 1	185	185	-	106	106	-	-	-	-	-	-	-
Stage 2	168	106	-	268	185	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	602	619	981	583	619	980	1519	-	-	1518	-	-
Stage 1	817	747	-	900	807	-	-	-	-	-	-	-
Stage 2	834	807	-	738	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	506	591	981	459	591	980	1519	-	-	1518	-	-
Mov Cap-2 Maneuver	506	591	-	459	591	-	-	-	-	-	-	-
Stage 1	810	719	-	892	800	-	-	-	-	-	-	-
Stage 2	720	800	-	575	719	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.3		9.8		1.1		3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1519	-	-	738	882	1518	-
HCM Lane V/C Ratio	0.009	-	-	0.226	0.141	0.035	-
HCM Control Delay (s)	7.4	0	-	11.3	9.8	7.5	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.9	0.5	0.1	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	53	83	82	66	0
Future Vol, veh/h	0	53	83	82	66	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	59	92	91	73	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	348	73	73	0	0
Stage 1	73	-	-	-	-
Stage 2	275	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	649	989	1527	-	-
Stage 1	950	-	-	-	-
Stage 2	771	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	608	989	1527	-	-
Mov Cap-2 Maneuver	608	-	-	-	-
Stage 1	890	-	-	-	-
Stage 2	771	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	989	-	-
HCM Lane V/C Ratio	0.06	-	0.06	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	34	0	0	0
Future Vol, veh/h	0	20	34	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	38	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	77	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	76	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	926	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	947	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	905	1084	1622	-	-
Mov Cap-2 Maneuver	905	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	947	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.023	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

2030 Background Year with Project Traffic Analysis - Mitigations

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	2185	1193	87	0	215
Future Vol, veh/h	0	2185	1193	87	0	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2428	1326	97	0	239

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 712
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.32
Pot Cap-1 Maneuver	0	-	-	-	0 375
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 375
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	375
HCM Lane V/C Ratio	-	-	-	0.637
HCM Control Delay (s)	-	-	-	30
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	4.2

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘			↘			↘
Traffic Vol, veh/h	200	1870	115	39	1001	83	0	0	49	0	0	189
Future Vol, veh/h	200	1870	115	39	1001	83	0	0	49	0	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	222	2078	128	43	1112	92	0	0	54	0	0	210

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1204	0	0	2206	0	0	-	-	1039	-	-	556
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	575	-	-	235	-	-	0	0	227	0	0	475
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	575	-	-	235	-	-	-	-	227	-	-	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.8			25.8			18.4		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	575	-	-	235	-	-	475
HCM Lane V/C Ratio	0.24	0.386	-	-	0.184	-	-	0.442
HCM Control Delay (s)	25.8	15.2	-	-	23.8	-	-	18.4
HCM Lane LOS	D	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.9	1.8	-	-	0.7	-	-	2.2

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	129	13	0	0	140	5	5	0	17	0
Future Vol, veh/h	0	0	129	13	0	0	140	5	5	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	143	14	0	0	156	6	6	0	19	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	143	0	0	110	100	72	106	171	0
Stage 1	-	-	-	-	-	-	72	72	-	28	28	-
Stage 2	-	-	-	-	-	-	38	28	-	78	143	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1440	-	-	868	790	990	873	722	-
Stage 1	-	-	-	-	-	-	938	835	-	989	872	-
Stage 2	-	-	-	-	-	-	977	872	-	931	779	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1440	-	-	-	782	990	856	715	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	782	-	856	715	-
Stage 1	-	-	-	-	-	-	938	835	-	989	863	-
Stage 2	-	-	-	-	-	-	946	863	-	920	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1440	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.01	-	-	-
HCM Control Delay (s)	-	0	-	-	7.5	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	12	15	66	0
Future Vol, veh/h	0	39	12	15	66	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	13	17	73	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	116	73	73	0	0
Stage 1	73	-	-	-	-
Stage 2	43	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	880	989	1527	-	-
Stage 1	950	-	-	-	-
Stage 2	979	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	872	989	1527	-	-
Mov Cap-2 Maneuver	872	-	-	-	-
Stage 1	941	-	-	-	-
Stage 2	979	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	989	-	-
HCM Lane V/C Ratio	0.009	-	0.044	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	13	13	0	94	31	62	25	0	77	112	0
Future Vol, veh/h	0	13	13	0	94	31	62	25	0	77	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	14	0	104	34	69	28	0	86	124	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	531	462	124	476	462	28	124	0	0	28	0	0
Stage 1	296	296	-	166	166	-	-	-	-	-	-	-
Stage 2	235	166	-	310	296	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	459	497	927	499	497	1047	1463	-	-	1585	-	-
Stage 1	712	668	-	836	761	-	-	-	-	-	-	-
Stage 2	768	761	-	700	668	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	336	446	927	442	446	1047	1463	-	-	1585	-	-
Mov Cap-2 Maneuver	336	446	-	442	446	-	-	-	-	-	-	-
Stage 1	678	629	-	796	724	-	-	-	-	-	-	-
Stage 2	605	724	-	634	629	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.3		14.4		5.4		3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	602	520	1585	-
HCM Lane V/C Ratio	0.047	-	-	0.048	0.267	0.054	-
HCM Control Delay (s)	7.6	0	-	11.3	14.4	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.1	0.2	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	29	27	105	0
Future Vol, veh/h	0	84	29	27	105	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	32	30	117	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	211	117	117	0	0
Stage 1	117	-	-	-	-
Stage 2	94	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	777	935	1471	-	-
Stage 1	908	-	-	-	-
Stage 2	930	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	760	935	1471	-	-
Mov Cap-2 Maneuver	760	-	-	-	-
Stage 1	888	-	-	-	-
Stage 2	930	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1471	-	935	-	-
HCM Lane V/C Ratio	0.022	-	0.1	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	31	10	0	0	0
Future Vol, veh/h	0	31	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	11	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	23	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	22	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	993	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	1001	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-
Mov Cap-2 Maneuver	986	-	-	-	-
Stage 1	1015	-	-	-	-
Stage 2	1001	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.007	-	0.032	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	36.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1243	2288	84	0	269
Future Vol, veh/h	0	1243	2288	84	0	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1381	2542	93	0	299

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1318
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.32
Pot Cap-1 Maneuver	0	-	- - 0 ~ 148
Stage 1	0	-	- - 0 -
Stage 2	0	-	- - 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - ~ 148
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	\$ 532.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	148
HCM Lane V/C Ratio	-	-	-	2.02
HCM Control Delay (s)	-	-	-	\$ 532.1
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	23.6

Notes
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	39.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘			↘			↘
Traffic Vol, veh/h	246	973	24	7	2024	162	0	0	64	0	0	275
Future Vol, veh/h	246	973	24	7	2024	162	0	0	64	0	0	275
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	375	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	273	1081	27	8	2249	180	0	0	71	0	0	306

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2429	0	0	1108	0	0	-	-	541	-	-	1125
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	~ 192	-	-	626	-	-	0	0	485	0	0	~ 199
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 192	-	-	626	-	-	-	-	485	-	-	~ 199
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	52.3			0			13.7			\$ 307.9		
HCM LOS							B			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	~ 192	-	-	626	-	-	199
HCM Lane V/C Ratio	0.147	1.424	-	-	0.012	-	-	1.535
HCM Control Delay (s)	13.7	264.3	-	-	10.8	-	-	\$ 307.9
HCM Lane LOS	B	F	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.5	16.4	-	-	0	-	-	19.3

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	93	11	0	0	145	17	17	0	11	0
Future Vol, veh/h	0	0	93	11	0	0	145	17	17	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	103	12	0	0	161	19	19	0	12	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	103	0	0	82	76	52	95	127	0
Stage 1	-	-	-	-	-	-	52	52	-	24	24	-
Stage 2	-	-	-	-	-	-	30	24	-	71	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1489	-	-	905	814	1016	888	764	-
Stage 1	-	-	-	-	-	-	961	852	-	994	875	-
Stage 2	-	-	-	-	-	-	987	875	-	939	810	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1489	-	-	-	807	1016	851	758	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	807	-	851	758	-
Stage 1	-	-	-	-	-	-	961	852	-	994	868	-
Stage 2	-	-	-	-	-	-	965	868	-	901	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.4		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1489	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-
HCM Control Delay (s)	-	0	-	-	7.4	0	-	-
HCM Lane LOS	-	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	23	39	43	43	0
Future Vol, veh/h	0	23	39	43	43	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	43	48	48	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	182	48	48	0	0
Stage 1	48	-	-	-	-
Stage 2	134	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	807	1021	1559	-	-
Stage 1	974	-	-	-	-
Stage 2	892	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	784	1021	1559	-	-
Mov Cap-2 Maneuver	784	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	892	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	3.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1021	-	-
HCM Lane V/C Ratio	0.028	-	0.025	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	25	125	0	19	93	12	72	0	48	71	0
Future Vol, veh/h	0	25	125	0	19	93	12	72	0	48	71	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	139	0	21	103	13	80	0	53	79	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	353	291	79	375	291	80	79	0	0	80	0	0
Stage 1	185	185	-	106	106	-	-	-	-	-	-	-
Stage 2	168	106	-	269	185	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	602	619	981	582	619	980	1519	-	-	1518	-	-
Stage 1	817	747	-	900	807	-	-	-	-	-	-	-
Stage 2	834	807	-	737	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	506	591	981	465	591	980	1519	-	-	1518	-	-
Mov Cap-2 Maneuver	506	591	-	465	591	-	-	-	-	-	-	-
Stage 1	810	719	-	892	800	-	-	-	-	-	-	-
Stage 2	720	800	-	586	719	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		9.8		1.1		3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1519	-	-	884	882	1518	-
HCM Lane V/C Ratio	0.009	-	-	0.189	0.141	0.035	-
HCM Control Delay (s)	7.4	0	-	10	9.8	7.5	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.7	0.5	0.1	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	53	83	82	66	0
Future Vol, veh/h	0	53	83	82	66	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	59	92	91	73	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	348	73	73	0	0
Stage 1	73	-	-	-	-
Stage 2	275	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	649	989	1527	-	-
Stage 1	950	-	-	-	-
Stage 2	771	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	608	989	1527	-	-
Mov Cap-2 Maneuver	608	-	-	-	-
Stage 1	890	-	-	-	-
Stage 2	771	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	989	-	-
HCM Lane V/C Ratio	0.06	-	0.06	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	34	0	0	0
Future Vol, veh/h	0	20	34	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	38	0	0	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	77	1	1	0	0
Stage 1	1	-	-	-	-
Stage 2	76	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	926	1084	1622	-	-
Stage 1	1022	-	-	-	-
Stage 2	947	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	905	1084	1622	-	-
Mov Cap-2 Maneuver	905	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	947	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.023	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Queuing Analysis

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	61
Average Queue (ft)	28
95th Queue (ft)	50
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	R	L	L	TR	L	TR
Maximum Queue (ft)	45	11	42	38	34	152	82
Average Queue (ft)	11	0	11	12	10	61	13
95th Queue (ft)	34	6	34	33	28	125	51
Link Distance (ft)					784		648
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100	100	100	100		100	
Storage Blk Time (%)						8	0
Queuing Penalty (veh)						2	0

Intersection: 3: Short Road & Amazon Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	50	36
Average Queue (ft)	2	24	12
95th Queue (ft)	12	48	37
Link Distance (ft)	271	648	276
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	4
95th Queue (ft)	20
Link Distance (ft)	295
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	19
Average Queue (ft)	13	1
95th Queue (ft)	37	12
Link Distance (ft)	714	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	6
Average Queue (ft)	32	0
95th Queue (ft)	50	4
Link Distance (ft)	270	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 2

Intersection: 1: SH 44 & Hamlin Ave

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	8	67
Average Queue (ft)	0	22
95th Queue (ft)	6	50
Link Distance (ft)	711	640
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Short Road & SH 44

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	R	L	TR	L	TR
Maximum Queue (ft)	61	18	25	11	72	30	125	86
Average Queue (ft)	25	1	2	0	22	11	55	14
95th Queue (ft)	54	13	12	8	53	29	118	70
Link Distance (ft)		711				784		642
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100	375	100		100	
Storage Blk Time (%)		0			0		9	0
Queuing Penalty (veh)		0			0		1	0

Intersection: 3: Short Road & Amazon Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	57	31
Average Queue (ft)	1	32	10
95th Queue (ft)	10	49	33
Link Distance (ft)	251	642	281
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	277
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	40	25
Average Queue (ft)	24	1
95th Queue (ft)	45	11
Link Distance (ft)	707	326
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	65	6
Average Queue (ft)	28	0
95th Queue (ft)	54	6
Link Distance (ft)	170	326
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	33
95th Queue (ft)	50
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	R	R
Maximum Queue (ft)	40	9	46	44	46
Average Queue (ft)	9	0	10	15	21
95th Queue (ft)	31	4	33	35	39
Link Distance (ft)				783	647
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100	100	100		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Short Road & Amazon Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	48	31
Average Queue (ft)	1	21	15
95th Queue (ft)	8	47	40
Link Distance (ft)	277	647	276
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	295
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	12
95th Queue (ft)	36
Link Distance (ft)	720
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	6
Average Queue (ft)	31	0
95th Queue (ft)	50	4
Link Distance (ft)	270	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	66
Average Queue (ft)	30
95th Queue (ft)	55
Link Distance (ft)	640
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	R	R
Maximum Queue (ft)	61	15	4	44	49
Average Queue (ft)	24	1	0	18	19
95th Queue (ft)	52	9	3	35	39
Link Distance (ft)				783	642
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100	100	375		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Short Road & Amazon Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	57	31
Average Queue (ft)	1	32	9
95th Queue (ft)	8	47	32
Link Distance (ft)	257	642	281
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	277
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	42
Average Queue (ft)	24
95th Queue (ft)	46
Link Distance (ft)	713
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	53	6
Average Queue (ft)	28	0
95th Queue (ft)	49	4
Link Distance (ft)	170	326
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	64
Average Queue (ft)	33
95th Queue (ft)	55
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	R	L	L	TR	L	TR
Maximum Queue (ft)	49	12	48	42	40	200	554
Average Queue (ft)	13	0	14	10	11	166	318
95th Queue (ft)	37	5	40	33	30	251	748
Link Distance (ft)					784		648
Upstream Blk Time (%)							15
Queuing Penalty (veh)							21
Storage Bay Dist (ft)	100	100	100	100		100	
Storage Blk Time (%)						77	
Queuing Penalty (veh)						17	

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	84	44	52	61
Average Queue (ft)	23	6	26	19
95th Queue (ft)	119	32	48	59
Link Distance (ft)	707	237	648	276
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	46	12
Average Queue (ft)	24	0
95th Queue (ft)	47	6
Link Distance (ft)	496	316
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	46	36
Average Queue (ft)	21	2
95th Queue (ft)	45	16
Link Distance (ft)	707	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	76	29
Average Queue (ft)	33	2
95th Queue (ft)	61	17
Link Distance (ft)	219	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	67
Average Queue (ft)	22
95th Queue (ft)	51
Link Distance (ft)	254
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 38

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	64
Average Queue (ft)	28
95th Queue (ft)	54
Link Distance (ft)	640
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	R	L	TR	L	TR
Maximum Queue (ft)	105	33	4	27	18	130	28	200	592
Average Queue (ft)	42	2	0	3	1	49	11	174	358
95th Queue (ft)	80	21	3	15	9	112	29	241	793
Link Distance (ft)		711					784		644
Upstream Blk Time (%)									24
Queuing Penalty (veh)									22
Storage Bay Dist (ft)	100		100	100	375	100		100	
Storage Blk Time (%)	1	0				13		87	
Queuing Penalty (veh)	2	0				2		11	

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	225	76	66	66
Average Queue (ft)	56	16	38	20
95th Queue (ft)	244	70	57	65
Link Distance (ft)	706	237	644	279
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	31	26
Average Queue (ft)	15	1
95th Queue (ft)	39	12
Link Distance (ft)	414	292
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	61	31
Average Queue (ft)	31	2
95th Queue (ft)	47	16
Link Distance (ft)	706	324
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	54	35
Average Queue (ft)	27	4
95th Queue (ft)	47	20
Link Distance (ft)	219	324
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	40
Average Queue (ft)	15
95th Queue (ft)	41
Link Distance (ft)	170
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 38

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	72
Average Queue (ft)	40
95th Queue (ft)	63
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	WB	NB	SB
Directions Served	L	L	R	R
Maximum Queue (ft)	42	52	62	59
Average Queue (ft)	13	15	17	22
95th Queue (ft)	37	40	44	42
Link Distance (ft)			783	647
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100	100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Short Road & Amazon Dr

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	4	48	36
Average Queue (ft)	0	24	14
95th Queue (ft)	3	47	39
Link Distance (ft)		647	276
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	44	6
Average Queue (ft)	21	0
95th Queue (ft)	45	4
Link Distance (ft)	496	316
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	35
Average Queue (ft)	18
95th Queue (ft)	42
Link Distance (ft)	713
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	57	18
Average Queue (ft)	32	1
95th Queue (ft)	53	10
Link Distance (ft)	219	296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	48
Average Queue (ft)	20
95th Queue (ft)	45
Link Distance (ft)	254
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	80
Average Queue (ft)	41
95th Queue (ft)	68
Link Distance (ft)	640
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	L	T	R	R	R
Maximum Queue (ft)	96	27	20	4	17	48	56
Average Queue (ft)	42	1	1	0	1	18	19
95th Queue (ft)	84	14	11	3	9	39	43
Link Distance (ft)		717		2639		783	644
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100		100		375		
Storage Blk Time (%)	1	0					
Queuing Penalty (veh)	2	0					

Intersection: 3: Short Road & Amazon Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	6	71	31
Average Queue (ft)	0	39	11
95th Queue (ft)	4	59	35
Link Distance (ft)	243	644	279
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	31	19
Average Queue (ft)	18	1
95th Queue (ft)	42	9
Link Distance (ft)	414	292
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	62
Average Queue (ft)	32
95th Queue (ft)	47
Link Distance (ft)	712
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	59	42
Average Queue (ft)	28	5
95th Queue (ft)	50	26
Link Distance (ft)	219	324
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	16
95th Queue (ft)	41
Link Distance (ft)	170
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	120
Average Queue (ft)	29
95th Queue (ft)	85
Link Distance (ft)	656
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	143	103	30	96	45	6	34	194	465	200	658
Average Queue (ft)	60	3	2	30	1	0	3	133	159	188	617
95th Queue (ft)	107	40	14	70	21	4	16	237	490	205	792
Link Distance (ft)		711			2633	2633			784		650
Upstream Blk Time (%)											84
Queuing Penalty (veh)											134
Storage Bay Dist (ft)	100		100	100			375	100		100	
Storage Blk Time (%)	2	0		1	0			71	1	99	
Queuing Penalty (veh)	18	0		3	0			21	0	99	

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	720	184	72	264
Average Queue (ft)	501	80	38	115
95th Queue (ft)	953	204	59	265
Link Distance (ft)	714	257	650	274
Upstream Blk Time (%)	50	1		9
Queuing Penalty (veh)	45	0		0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	197	6	286
Average Queue (ft)	48	1	47
95th Queue (ft)	143	8	202
Link Distance (ft)	507	322	365
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	250	71	38	273
Average Queue (ft)	77	36	4	127
95th Queue (ft)	220	56	21	342
Link Distance (ft)	399	714	656	270
Upstream Blk Time (%)	0			41
Queuing Penalty (veh)	0			78
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	209	24	330
Average Queue (ft)	93	1	112
95th Queue (ft)	222	12	350
Link Distance (ft)	198	270	322
Upstream Blk Time (%)	31		25
Queuing Penalty (veh)	0		27
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	20
95th Queue (ft)	47
Link Distance (ft)	291
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 424

Intersection: 1: SH 44 & Hamlin Ave

Movement	EB	EB	SB
Directions Served	T	T	R
Maximum Queue (ft)	2921	2917	181
Average Queue (ft)	1352	1336	34
95th Queue (ft)	3297	3287	120
Link Distance (ft)	2944	2944	649
Upstream Blk Time (%)	26	23	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Short Road & SH 44

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	R	L	TR	L	TR
Maximum Queue (ft)	250	726	716	22	8	27	183	790	189	650
Average Queue (ft)	246	665	138	3	0	2	162	471	188	625
95th Queue (ft)	266	913	563	16	4	15	232	992	195	732
Link Distance (ft)		711	711		2633			784		642
Upstream Blk Time (%)		69	0					36		88
Queuing Penalty (veh)		429	2					0		146
Storage Bay Dist (ft)	150			100		375	100		100	
Storage Blk Time (%)	98	0					89		100	1
Queuing Penalty (veh)	477	0					24		168	1

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	724	171	65	226
Average Queue (ft)	565	71	35	104
95th Queue (ft)	987	176	55	233
Link Distance (ft)	714	247	642	282
Upstream Blk Time (%)	65			4
Queuing Penalty (veh)	79			0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	186	19	236
Average Queue (ft)	39	1	56
95th Queue (ft)	132	8	203
Link Distance (ft)	419	364	344
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	314	57	13	247
Average Queue (ft)	202	29	1	151
95th Queue (ft)	410	49	8	342
Link Distance (ft)	309	714	649	247
Upstream Blk Time (%)	56			55
Queuing Penalty (veh)	0			66
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	224	40	369
Average Queue (ft)	114	2	168
95th Queue (ft)	260	17	445
Link Distance (ft)	214	247	364
Upstream Blk Time (%)	37		35
Queuing Penalty (veh)	0		23
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	14
95th Queue (ft)	39
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1415

Intersection: 1: SH 44 & Hamlin Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	89
Average Queue (ft)	44
95th Queue (ft)	75
Link Distance (ft)	656
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Short Road & SH 44

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	R	L	T	T	R	R	R
Maximum Queue (ft)	121	38	13	93	58	4	20	73	147
Average Queue (ft)	58	1	1	28	2	0	1	24	69
95th Queue (ft)	100	19	9	72	25	3	11	56	119
Link Distance (ft)		717			2639	2639		783	649
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100	100			375		
Storage Blk Time (%)	1	0		2	0				
Queuing Penalty (veh)	13	0		9	0				

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	8	31	68	31
Average Queue (ft)	0	3	38	12
95th Queue (ft)	4	17	57	36
Link Distance (ft)	720	263	649	274
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	49	25
Average Queue (ft)	22	1
95th Queue (ft)	47	9
Link Distance (ft)	507	322
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	35	73	39	25
Average Queue (ft)	17	36	7	2
95th Queue (ft)	42	55	28	16
Link Distance (ft)	399	720	656	270
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	64	39
Average Queue (ft)	34	5
95th Queue (ft)	55	24
Link Distance (ft)	198	270
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	19
95th Queue (ft)	45
Link Distance (ft)	291
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 22

Intersection: 1: SH 44 & Hamlin Ave

Movement	EB	EB	SB
Directions Served	T	T	R
Maximum Queue (ft)	2981	2981	300
Average Queue (ft)	1443	1420	144
95th Queue (ft)	3325	3308	273
Link Distance (ft)	2944	2944	649
Upstream Blk Time (%)	23	22	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Short Road & SH 44

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	R	R	R
Maximum Queue (ft)	200	730	722	4	34	18	54	87	536
Average Queue (ft)	197	685	134	0	4	1	4	26	402
95th Queue (ft)	209	878	568	3	21	13	23	61	515
Link Distance (ft)		717	717			2639		783	641
Upstream Blk Time (%)		73	0						
Queuing Penalty (veh)		451	2						
Storage Bay Dist (ft)	100			100	100		375		
Storage Blk Time (%)	99						0		
Queuing Penalty (veh)	481						0		

Intersection: 3: Short Road & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	4	25	63	31
Average Queue (ft)	0	1	35	8
95th Queue (ft)	3	10	53	29
Link Distance (ft)	720	253	641	282
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Hamlin Ave & Schultz Ct

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	36	12
Average Queue (ft)	16	1
95th Queue (ft)	41	10
Link Distance (ft)	419	364
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Hamlin Ave & Amazon Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	75	55	19	36
Average Queue (ft)	38	31	1	5
95th Queue (ft)	60	45	10	24
Link Distance (ft)	309	720	649	247
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Hamlin Ave & Apartment Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	52	31
Average Queue (ft)	29	3
95th Queue (ft)	49	18
Link Distance (ft)	214	247
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Hamlin Ave & SF Housing Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	16
95th Queue (ft)	40
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 934

Turn Lane Analysis Worksheets

Turn Lane Warrant Analysis

Following the District Policy as outlined in 7106.4.4, the proposed intersections along Hamlin Avenue with the addition of the Northern Star Development were analyzed for turn lane warrants. For major roads at an intersection, District Policy per NCHRP Reports 279 and 457 were used applying Figure 1 for Left-Turn Guidelines for Two-Lane Roads less than or equal to 40 mph. For minor roads, the evaluation of a second lane per NCHRP Report 457 was followed. Within this study area, Hamlin Ave would follow the major roadway analysis, where the site accesses would fall under the minor roadway analysis. The following Advancing Volumes and Opposing Volumes under the different scenarios were used. **Red AM, Blue PM**

Hamlin Avenue and Amazon Drive:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

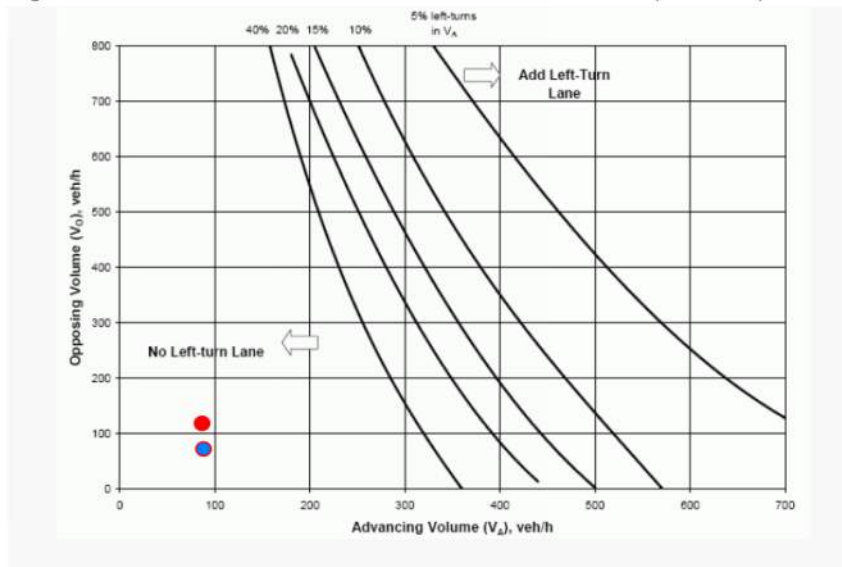
AM Northbound Advancing Volume = 87 vph (71% left turns)

AM Southbound Opposing Volumes = 112 vph

PM Northbound Advancing Volumes = 84 vph (15% left turns)

PM Southbound Opposing Volumes = 71 vph

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



2030 Background with Project Southbound Left Turn Lane: **Does Not Warrant**

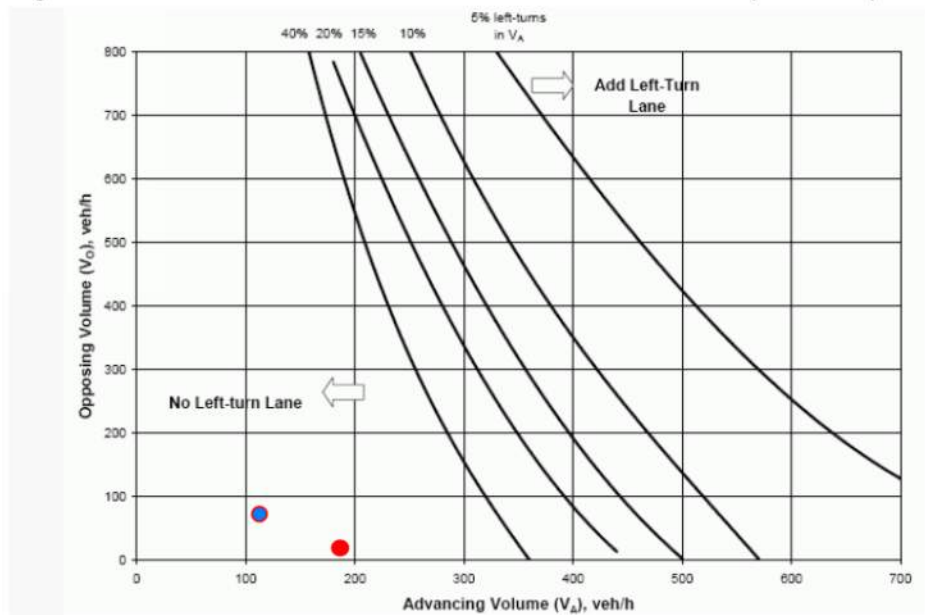
AM Southbound Advancing Volumes = 189 vph (41% left turns)

AM Northbound Opposing Volumes = 25 vph

PM Southbound Advancing Volumes = 119 vph (40% left turns)

PM Northbound Opposing Volumes = 72 vph

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as “0” vehicles are planned to make this movement**

2030 Background with Project Eastbound Left Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

2030 Background with Project Northbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

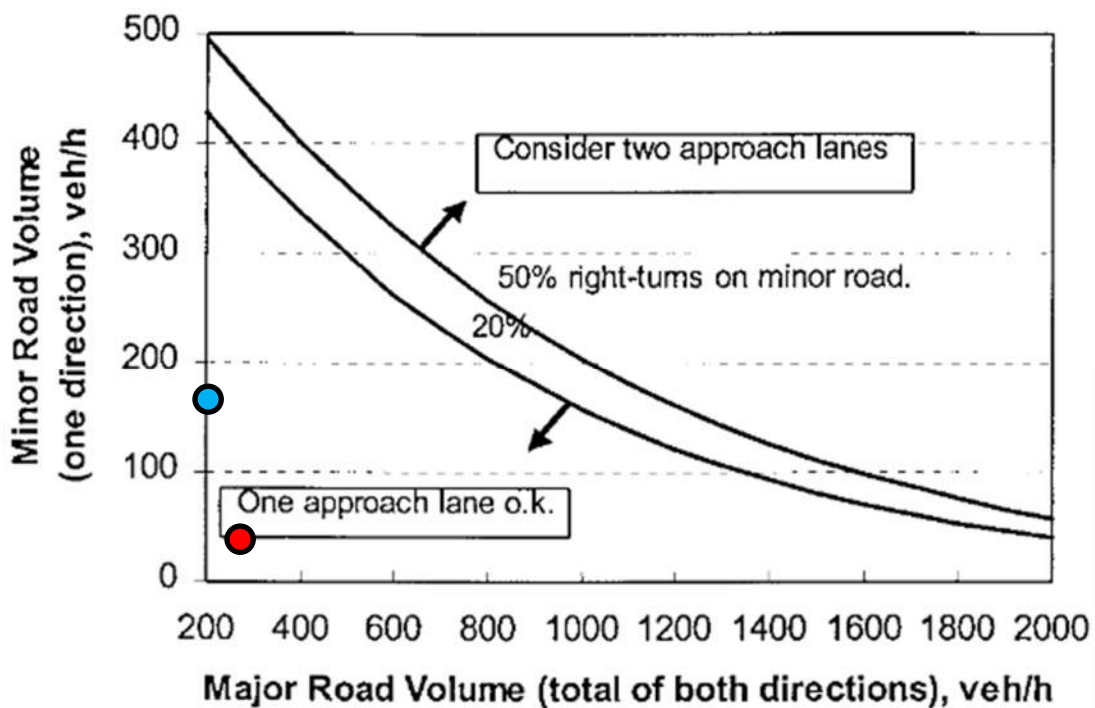
2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 26 vph

AM Major Road Volume = 276 vph

PM Eastbound Minor Road Volume = 150 vph

PM Major Road Volume = 203 vph



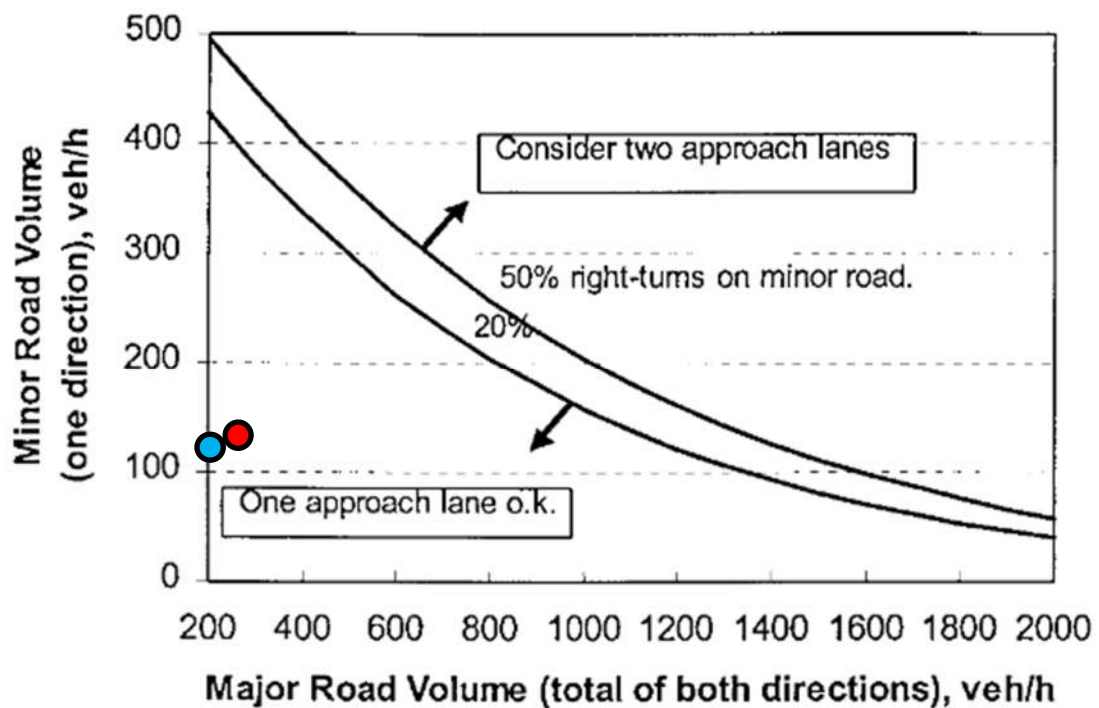
2030 Background Westbound Right Turn Lane: **Does Not Warrant**

AM Westbound Minor Road Volumes = 125 vph

AM Major Road Volumes = 276 vph

PM Westbound Right Turn Volumes = 112 vph

PM Major Road Volumes = 203 vph



Hamlin Avenue and Apartment Access:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

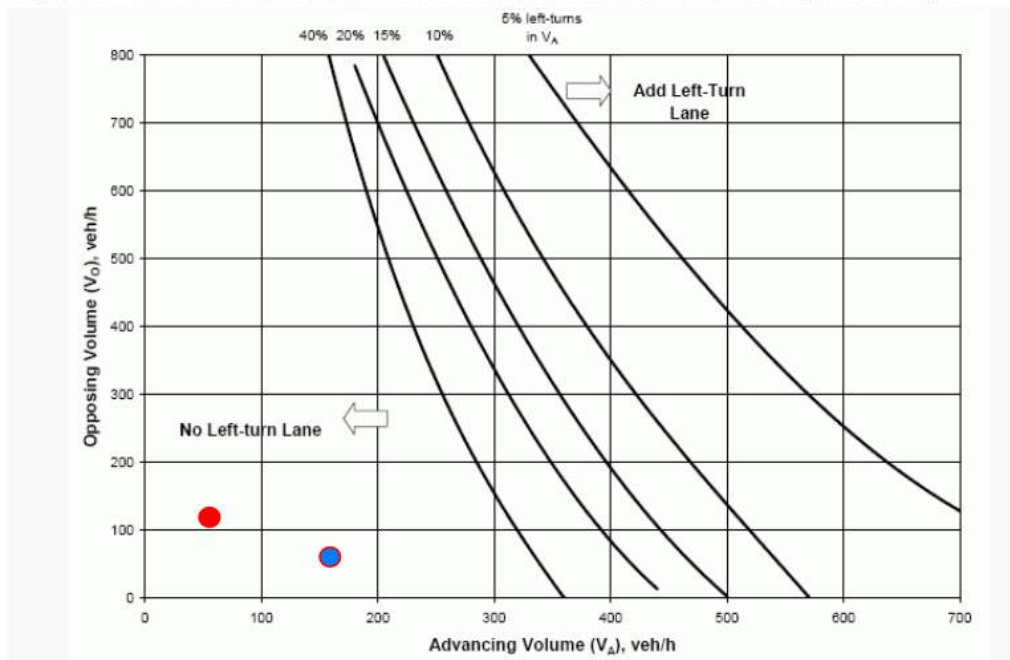
AM Northbound Advancing Volume = 56 vph (52% left turns)

AM Southbound Opposing Volumes = 105 vph

PM Northbound Advancing Volumes = 165 vph (50% left turns)

PM Southbound Opposing Volumes = 66 vph

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant**
as “0” vehicles are planned to make this movement

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant** as
“0” vehicles are proposed to make this turning moment.

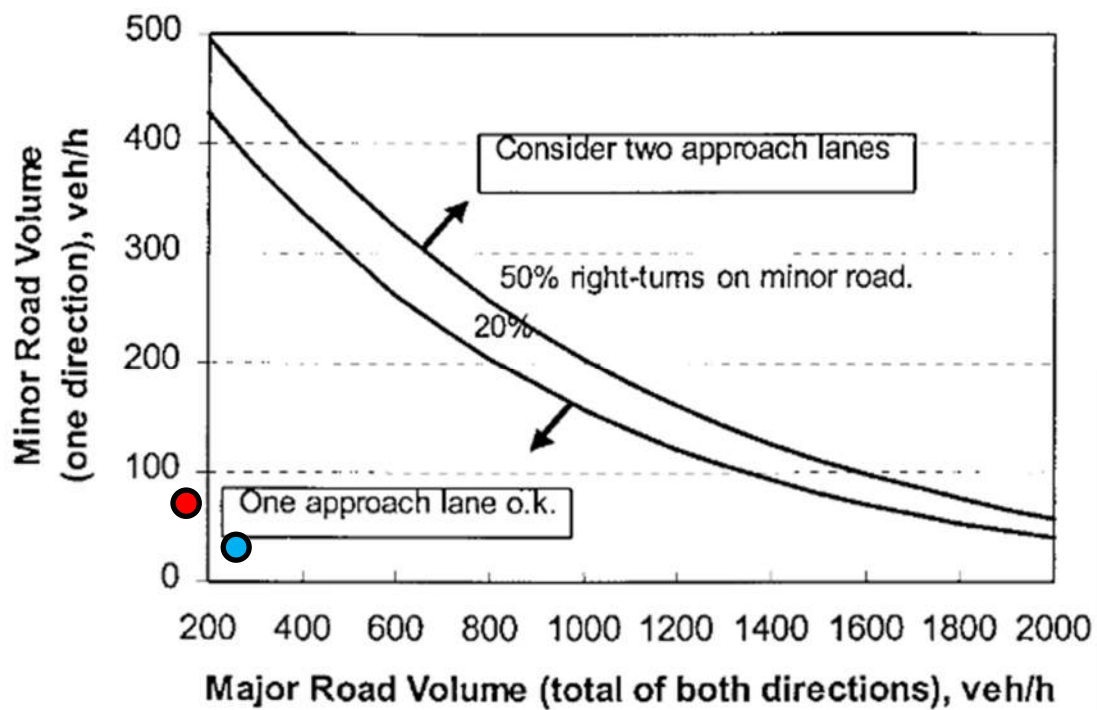
2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 84 vph

AM Major Road Volume = 161 vph

PM Eastbound Minor Road Volume = 53 vph

PM Major Road Volume = 231 vph



Hamlin Avenue and Schultz Court:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

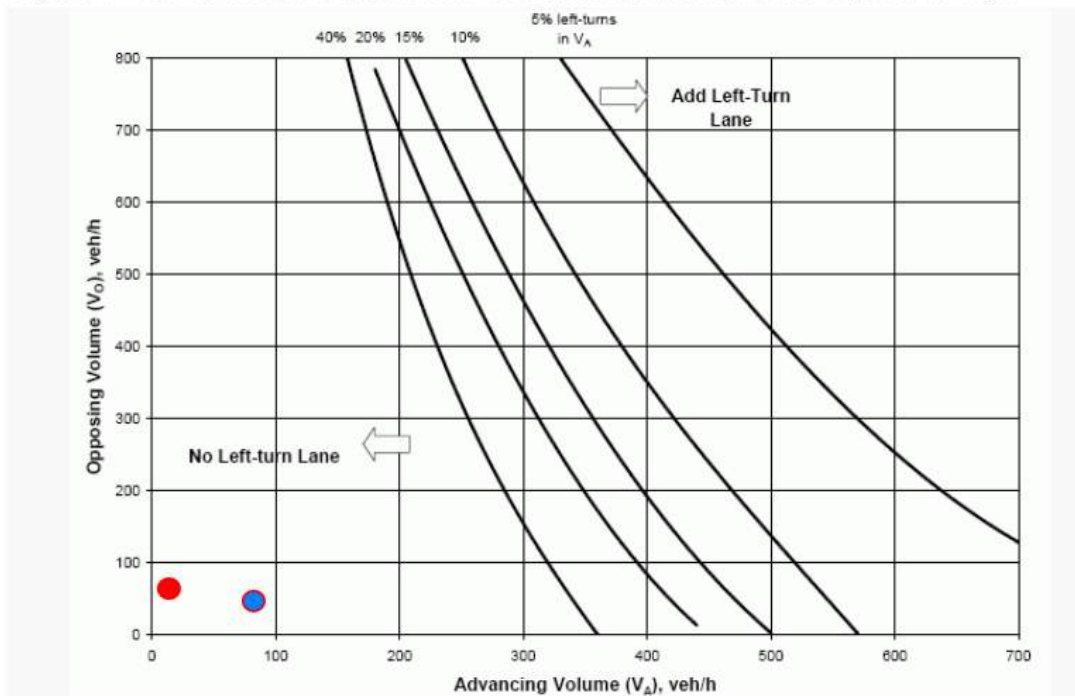
AM Northbound Advancing Volume = 27 vph (44% left turns)

AM Southbound Opposing Volumes = 66 vph

PM Northbound Advancing Volumes = 82 vph (48% left turns)

PM Southbound Opposing Volumes = 43 vph

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as “0” vehicles are planned to make this movement**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

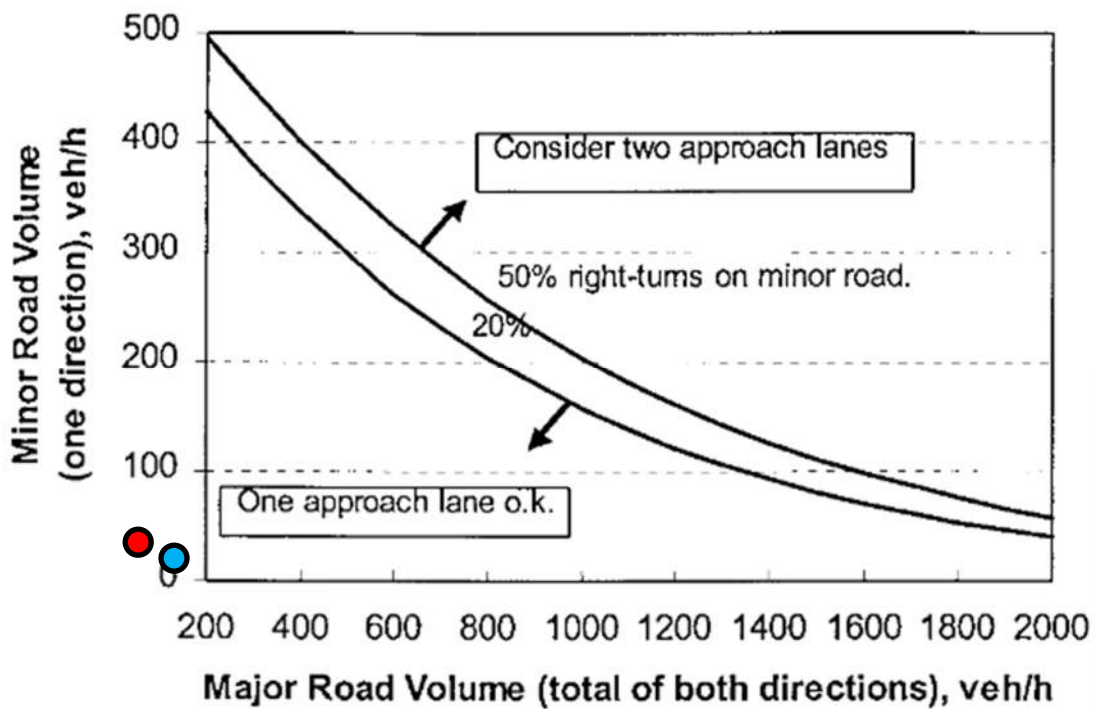
2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 39 vph

AM Major Road Volume = 93 vph

PM Eastbound Minor Road Volume = 23 vph

PM Major Road Volume = 125 vph



Hamlin Avenue and Single-Family Access:

2030 Background with Project Northbound Left Turn Lane: **Does Not Warrant**

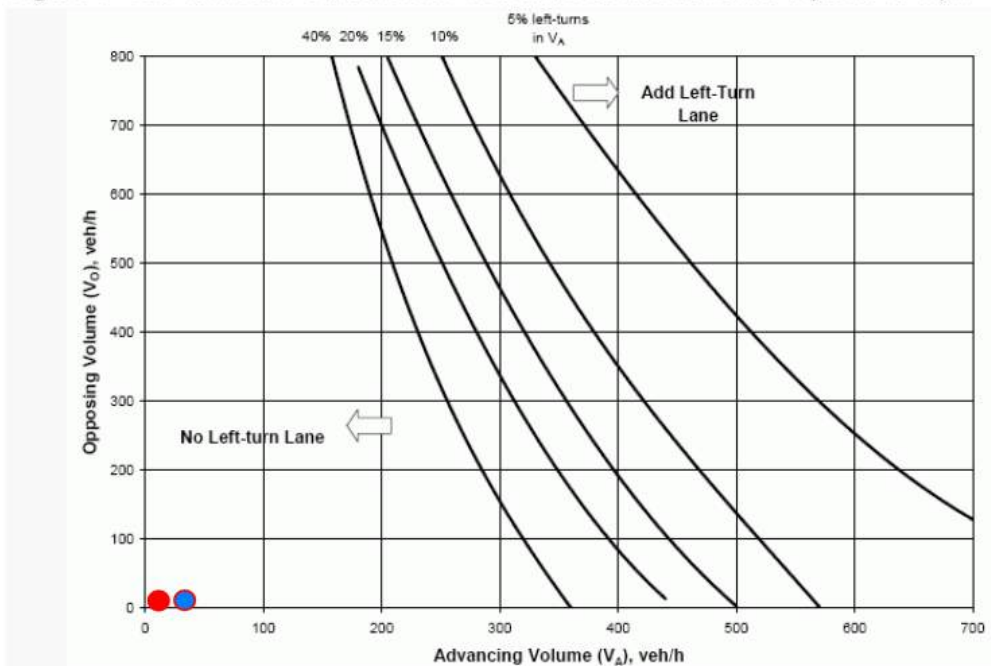
AM Northbound Advancing Volume = 10 vph (100% left turns)

AM Southbound Opposing Volumes = 0 vph

PM Northbound Advancing Volumes = 34 vph (100% left turns)

PM Southbound Opposing Volumes = 0 vph

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



2030 Background with Project Westbound Left Turn Lane: **Does Not Warrant as “0” vehicles are planned to make this movement**

2030 Background with Project Southbound Right Turn Lane: **Does Not Warrant as “0” vehicles are proposed to make this turning moment.**

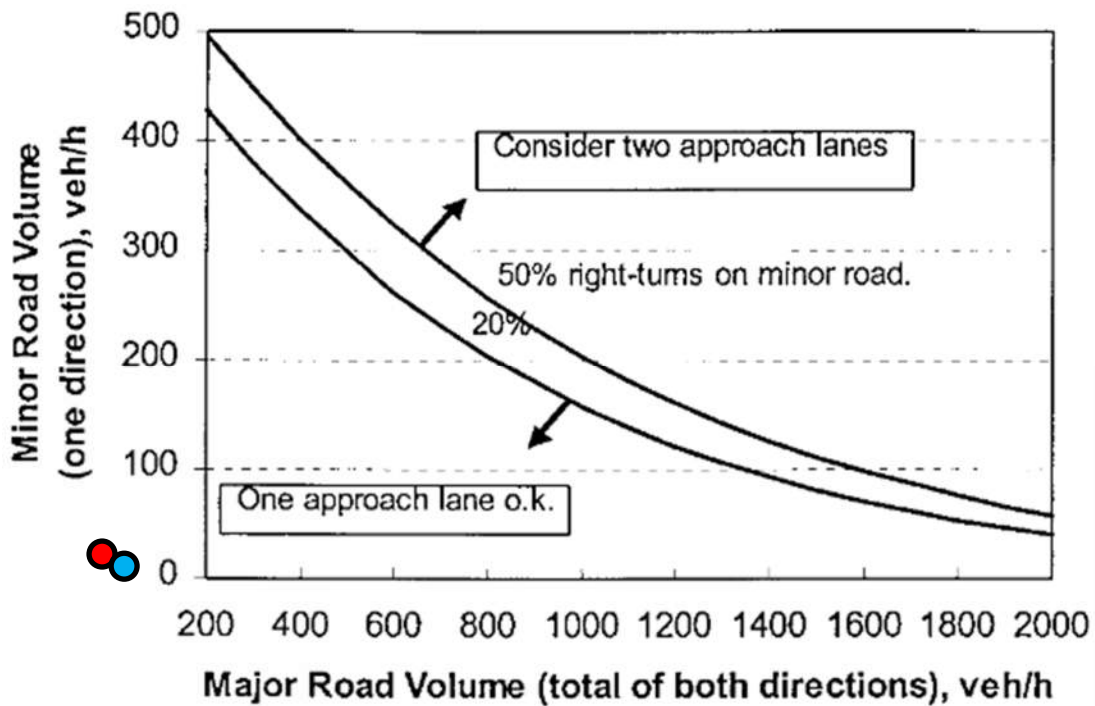
2030 Background Eastbound Right Turn Lane: **Does Not Warrant**

AM Eastbound Minor Road Volume = 31 vph

AM Major Road Volume = 10 vph

PM Eastbound Minor Road Volume = 20 vph

PM Major Road Volume = 34 vph



Based on the above analysis for the needs of right and left turn lanes along Hamlin Avenue and the roadway intersecting from the Northern Star development, no turn lanes are warranted.

Hamlin Avenue & SH 44

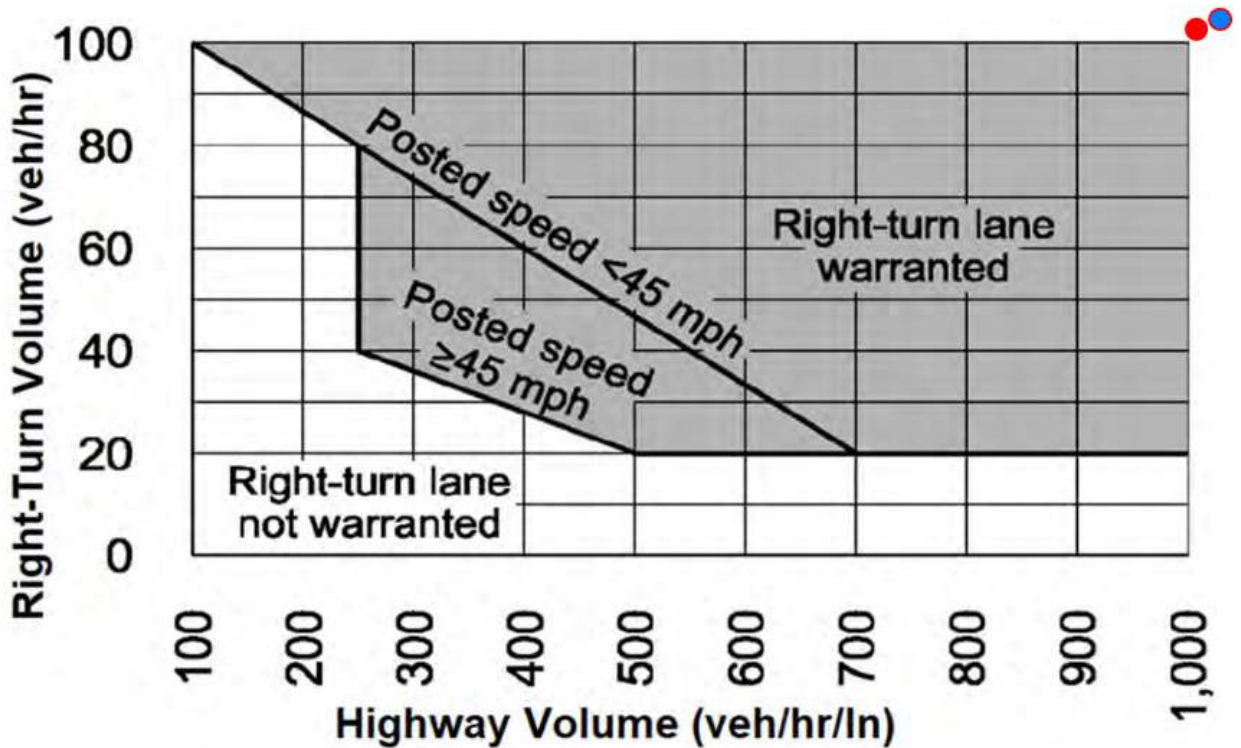
2030 Background Southbound Right Turn Lane: **Warrant**

AM Southbound Right Turn Volume = 125 vph

AM Westbound Major Roadway Volume = 1034 vph

PM Southbound Right Turn Volume = 146 vph

PM Westbound Major Roadway Volume = 2145 vph



2030 Background Westbound Right Turn Lane: **Does Not Warrant**

AM Westbound Right Turn Volume = 87 vph

AM Northbound Major Roadway Volume = 0 vph

PM Westbound Right Turn Volume = 84 vph

PM Northbound Major Roadway Volume = 0 vph

