



# MEMO

To: City of Billings Departments

From: Taylor Jay Kasperick, PE, Project Manager 

Date: 9.30.2025

Re: Copper Square Subdivision Traffic Impact Summary

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This memorandum has been prepared in an effort to provide the City of Billings and reviewing departments with a summary of the Traffic Impact Study that is currently being conducted (anticipated to be complete October 17<sup>th</sup>) and planned to be submitted to the City of Billings as part of the major subdivision review at preliminary plat submittal on November 1<sup>st</sup>. This memorandum is submitted in an effort to meet the City of Billings desire for knowledge of potential traffic impacts based on the proposed subdivision to allow for determination of if the forthcoming TIS (submitted prior to November 1) will be complete and sufficient to allow review of the subdivision.

## 1. Introduction

This memorandum summarizes the anticipated traffic impacts of the proposed Copper Square Subdivision, located just east of the platted Tule Ridge Subdivision and west of the platted 60<sup>th</sup> Street West right-of-way dedicated as part of Sunny Cove Fruit Farm Subdivision. Said development is legally described as Lot 7 of Sunny Cove Fruit Farm Subdivision, less right-of-way. The analysis draws on site-specific trip generation estimates based on anticipated land uses of the proposed commercial subdivision, regional growth assumptions, and findings from recent Traffic Impact Studies (TIS) for area developments including **Trestles Subdivision (2025)**, **Sweetgrass Subdivision (2022)**, **Buffalo Crossing Subdivision (2022)**, and **Fifty-Four West Subdivision (2023)**.

## 2. Site Development, Access, and Study Intersections

### Site Development

The proposed development consists of eleven (11) commercial lots, with the concurrent zone change application contemplating a mix of Corridor Mixed Use -2 and Corridor

Mixed Use -1 zone districts. Said zone districts have been selected based on the planned use of Lot 1 (Paddy Shack – pickleball recreation facility) and currently unknown commercial uses. CMU-2 has been selected for Lot 1 based on the planned size of the pickleball facility, with CMU-1 being more appropriate for the smaller commercial lots to facilitate a mix of restaurants, retail, and office uses which are intended to compliment the “anchor” of the development, Paddy Shack. As the end use of the CMU-1 lots (Lots 2-11) are currently unknown, a mix of uses have been assumed for determining trip generation that can be experienced from the development. In determining assumed land uses, other similar developments such as Cardwell Ranch were assessed, which contain a mix of medical/office, office, coffee with drive through, and eventual restaurants.

It should be noted that the proposed Copper Square Subdivision (Subdivision) is planned to be built out in two phases, with Lots 1 through 6 being included in the first phase (2027 build-out), and Phase 2 following full build out in 2029. Traffic distribution south on 60<sup>th</sup> Street West or out of Tule Ridge Subdivision was not included in this analysis as construction timing and future development of requisite land to incorporate that distribution is unknown, and likely extending past the full build out of the subject property.

### Site Access

Access to the Subdivision at full building out will be via two existing planned access points; the full movement access in the northeast corner of Tule Ridge Subdivision (Phase 1), and via an approach onto 60<sup>th</sup> Street West (Phase 2). Said access points will connect to internal private roadways for the Subdivision (Road A, B, and C), from which direct access to created lots will be provided. No lot will have direct access to Rimrock Road, and will rather be accessed via the internal private roadways. As neither access is currently constructed, those will be built out as the subdivision is constructed. Access points are further detailed below.

- **Shared Approach with Tule Ridge (Road A)**
  - Access point has been previously agreed to as part of the Subdivision Improvement Agreement with Tule Ridge Subdivision. The owners of Tule Ridge Subdivision are agreeable to allowing said access be shared with the Subdivision. Said access point has been previously determined to necessitate, at a minimum, a right-turn slip lane for eastbound traffic to enter the development. As part of this project, it will be verified and warrants for a center left turn lane will also be assessed. It is understood from discussions with the City of Billings that it is likely a center left turn lane is already planned as part of the Rimrock Road widening project.
- **60<sup>th</sup> Street West and Rimrock Road Intersection (Road C)**
  - 60<sup>th</sup> Street West is already dedicated right-of-way. As part of the Subdivision, it is anticipated an additional three (3) feet of right-of-way will be dedicated to the City of Billings, to provide the full 56' local road right of way. The Subdivision plans to have one access point onto 60<sup>th</sup> Street West, which will be constructed through Private Contract during the second phase of the project. In preparing the TIS for this project,

eastbound right and westbound left turn lanes will be analyzed to determine if they are warranted. It is anticipated said turn lanes may be warranted.

### Study Intersections

Intersections that are being analyzed as part of the TIS include those listed below, which are common to various previous studies. Where the intersections are common to other studies, previous findings, recommendations and warrants are listed for each intersection, along with current status of implementation of those recommendations and warrants.

- 62<sup>nd</sup> Street West and Rimrock Road
  - Existing intersection with single lane roundabout.
  - Included in the Trestles Subdivision TIS and utilized to determine approximate current traffic movements (collected in 2025).
  - Intersection current Level of Service (LOS) is indicated as a A during the AM peak and as a A in the PM peak, thus operating sufficiently under current configuration as a roundabout.
  - No improvements or recommendations were identified in the previous TIS. At full build-out of Trestles Subdivision, it is anticipated this intersection would operate at a LOS of B and B for the AM and PM peak hours respectively.
- 62<sup>nd</sup> Street West and Grand Avenue
  - Existing intersection with stop control on southbound traffic on 62<sup>nd</sup> Street West. **No turn lanes present in any direction.**
  - Included in the Trestles Subdivision and Buffalo Crossing TISs and utilized to determine approximate current traffic movements (collected in 2025 and 2022 respectively).
  - Intersection current LOS is indicated as a A during the AM peak and as a A in the PM peak, thus operating sufficiently under current configuration as a roundabout. However, both the Trestles and Buffalo Crossing TISs indicate the southbound traffic at the intersection currently experiences a LOS of C in the AM peak and a LOS of B in the PM peak.
  - At full build-out of Trestles Subdivision in 2031, it is anticipated this intersection will reach a LOS of D in the southbound direction during the AM peak, and a LOS of C in the PM peak.
  - Both the Buffalo Crossing TIS (2022) and Trestles Subdivision (2025) TISs recommend incorporation of eastbound left turn lane and westbound right turn lane at the intersection of 62<sup>nd</sup> and Grand Avenue **based on existing traffic and warrant analysis.**
  - Separated southbound right turn lane and left turn lanes are recommended at this intersection at full build-out of Trestles Subdivision in 2031.
- 58<sup>th</sup> Street West and Rimrock Road
  - Existing intersection with stop control on northbound and southbound traffic on 58<sup>th</sup> Street West. **No turn lanes present in any direction.**

- Intersection was analyzed in the TIS prepared for Sweetgrass Subdivision in 2022. LOS of the intersection at that time was A in both the AM and PM peaks, with the southbound direction AM movements being the worst case LOS of C.
- Generally, the majority of traffic at this intersection is through heading east and west in the AM and PM peak hours.
- At full build-out of Sweetgrass Subdivision in 2027, the LOS of this intersection is projected to remain a levels of A in both the AM and PM peaks, with the majority of traffic added being right turns from 58<sup>th</sup> Street West to head east on Rimrock Road.
- It is recommended to install a westbound left turn lane on Rimrock Road at full building out of Sweetgrass Subdivision 2027.
- 54<sup>th</sup> Street West and Rimrock Road
  - Existing signalized intersection with the following lanes:
    - Northbound dedicated left turn lane
    - Southbound dedicated left turn lane
    - Westbound dedicated through, right, and left lanes
    - Eastbound dedicated left turn lane
  - Intersection was analyzed in each TIS prepared for Sweetgrass Subdivision (2022), Buffalo Crossing Subdivision (2022), Fifty-Four West Subdivision (2023), and Trestles Subdivision (2025).
  - Generally, the majority of traffic at this intersection is through heading east and west on Rimrock Road in the AM and PM peak hours. When comparing to 58<sup>th</sup> Street West, more existing traffic utilizes 54<sup>th</sup> Street West to travel to/from Rimrock Road to Grand Avenue when compared to 58<sup>th</sup> Street West.
  - As noted in the Trestles Subdivision TIS, the intersection currently operates at a LOS of B in both the AM and PM peaks, with the north and south bound legs of the intersections experiencing the highest queues and lowest LOS in the AM and PM peaks of C.
  - Recommendations from the Buffalo Crossing TIS including dedicated left turn lanes in each direction have been incorporated.
  - It is recommended in the Trestles Subdivision TIS that signal timing should be updated to allow for increased green time in the eastbound and westbound through directions to maintain or improve LOS at full build out.

### 3. Trip Generation Summary

To assess the potential impact of the proposed Subdivision on adjacent intersections and roadways, land use assumptions were made for each lot and ITE *Trip Generation Manual (12th Edition)* was utilized to determine appropriate trip generation. Based on the project's locale, and the lack of existing adjacent commercial uses, it is anticipated that trips generated for the development will include a higher rate of "pass-by" traffic. This assumption is largely confirmed when looking at traffic flows from TISs completed for other area developments, in particular Trestles Subdivision which shows approximately 80% of the traffic on Rimrock Road is eastbound in the morning peak hour, and roughly 65% of the traffic on Rimrock Road is westbound in the evening peak

hour. The full TIS will dive into this trend in further detail, but initial findings would indicate that having a commercial development in this area of Billings may reduce impact at intersections and roadways further away from the Subdivision by providing commercial uses closer to an area of town with a high number of residential dwellings and limited commercial facilities. Further, it is likely that a predominant majority of trips generated by the Subdivision in the AM peak will be those entering from the eastbound lane of Rimrock Road (right turn in), and exiting vehicles will also turn right onto Rimrock Road to head east. In the PM peak, it is anticipated this trend will flip, with westbound vehicles on Rimrock Road turning left into the Subdivision, and a more equal split occurring with exiting vehicles heading east and west on Rimrock Road.

Preliminary assumptions for Trip Generation based on anticipated uses and ITE's Trip Generation Manual are provided below.

Lot	Use	GFA/Independent Variable	ITE Trip Generation Land Use Code	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street			ADT
				Total	In	Out	Total	In	Out	
1	Paddy Shack	6 Courts	491	0	0	0	23	23	0	166
2	Office	4000 SF	712	7	5	2	9	3	6	58
3	Medical/Dental Office	4000 SF	720	13	11	2	13	4	9	144
4	Restaurant	2500 SF	932	24	13	11	23	14	9	268
5	Restaurant	2500 SF	932	24	13	11	23	14	9	268
6	Restaurant	3000 SF	932	29	16	13	27	17	10	322
7	Coffee with Drive Through	631/631/2500 SF	937	95	48	47	38	19	19	1334
8	Retail	3000 SF	876	3	2	1	12	6	6	199
9	Office	4000 SF	712	7	5	2	9	3	6	58
10	Office	4000 SF	712	7	5	2	9	3	6	58
11	Retail	3000 SF	876	3	2	1	12	6	6	199
<b>Sum</b>				<b>212</b>	<b>120</b>	<b>92</b>	<b>198</b>	<b>112</b>	<b>86</b>	<b>3074</b>

#### 4. Trip Distribution and Assignment

Based on traffic distribution noted from previous studies, it is anticipated that a majority of traffic currently traveling around the Subdivision is heading east on Rimrock Road in the morning peak, and west on Rimrock Road in the evening peak. Utilizing this knowledge, the trip distribution included in the attached figure was prepared, with primary trip distribution provided as well as secondary trip distribution. This distributions will be confirmed throughout preparation of the full TIS utilizing computerized travel demand models, calculation of travel time for various routes, and the aforementioned existing traffic patterns.

Given the trip distributions noted in the provided figure, it is anticipated trips generated for the proposed Subdivision will largely be attributed to vehicles already passing through study intersections and included on each roadways traffic counts. In other words, given the planned uses, provision of commercial uses such as restaurants, retail, office, and recreation (Paddy Shack) will provide these uses closer to a residential hub which will provide an offering that residents are currently traveling a farther distance to utilize.

## 5. Findings from Prior Studies

Findings from prior studies that have been shown to be warranted, but not yet implemented include the following:

- 62<sup>nd</sup> Street West and Grand Avenue
  - Eastbound left turn lane and westbound right turn lane
  - Dedicated right and left southbound turn lanes
  - Reduction of speed limit on 62<sup>nd</sup> Street West
- 56<sup>th</sup> Street West and Grand Avenue
  - Eastbound right turn lane
  - Eventual signalization in the 5-10 year time horizon

## 6. Traffic Impacts for Copper Square

As noted in the previous trip generation table, it is anticipated the proposed Subdivision will generate 3,074 total trips per day, with 212 morning peak hour trips and 198 evening peak hour trips. Unlike residential developments which have a distinct and easily quantified trip generation based on a relatively known number of units, the end use of the proposed lots of the Subdivision will largely be dictated by the end use of each lot which is unknown at this time. As required by the City of Billings Approach Standards which reference the Subdivision Regulations, if a proposed use exceeds the assumed values by more than 1,000 trips/day or 100 peak hour trips, a new TIS will be required to be compiled for that planned use.

Based on study intersection configurations, it is not anticipated that the proposed development will cause any studied intersection to degrade to a Level of Service of D or worse. This assumption will be verified in the final TIS, which will assign the listed trips generated to each study intersection based on the estimated distribution. The percent impact at each intersection will be evaluated, and it is understood contributions to each intersection will need to be made in accordance with the City's policy.

On-site traffic impact mitigation will be confirmed in the full TIS, but is anticipated to potentially include dedicated right turn slip lanes for both the "Road A" access as well as 60<sup>th</sup> Street West. Based on discussions with the City of Billings, it is understood the proposed Rimrock Road widening project will include a center left turn lane, which will help facilitate a high LOS at each Subdivision approach and improve through traffic on Rimrock Road.

## 7. Recommendations

Anticipated recommendations coming out of the full TIS to be submitted to the City of Billings on October 17<sup>th</sup> include the following:

- Installation of dedicated eastbound left turn and westbound right turn lane at the intersection of 62<sup>nd</sup> Street West and Grand Avenue.
  - This has been recommended in available TISs since 2022 but not yet implemented.
- Installation of dedicated right and left southbound turn lanes at the intersection of 62<sup>nd</sup> Street West and Grand Avenue.
  - This has been previously recommended in the Trestles Subdivision TIS.
- Installation of eastbound right turn lanes at the intersections of Road A and 60<sup>th</sup> Street West with Rimrock Road.
- Time horizon of signal warrant at 62<sup>nd</sup> Street West and Grand Avenue and 58<sup>th</sup> Street West and Rimrock Road.

Attachments:

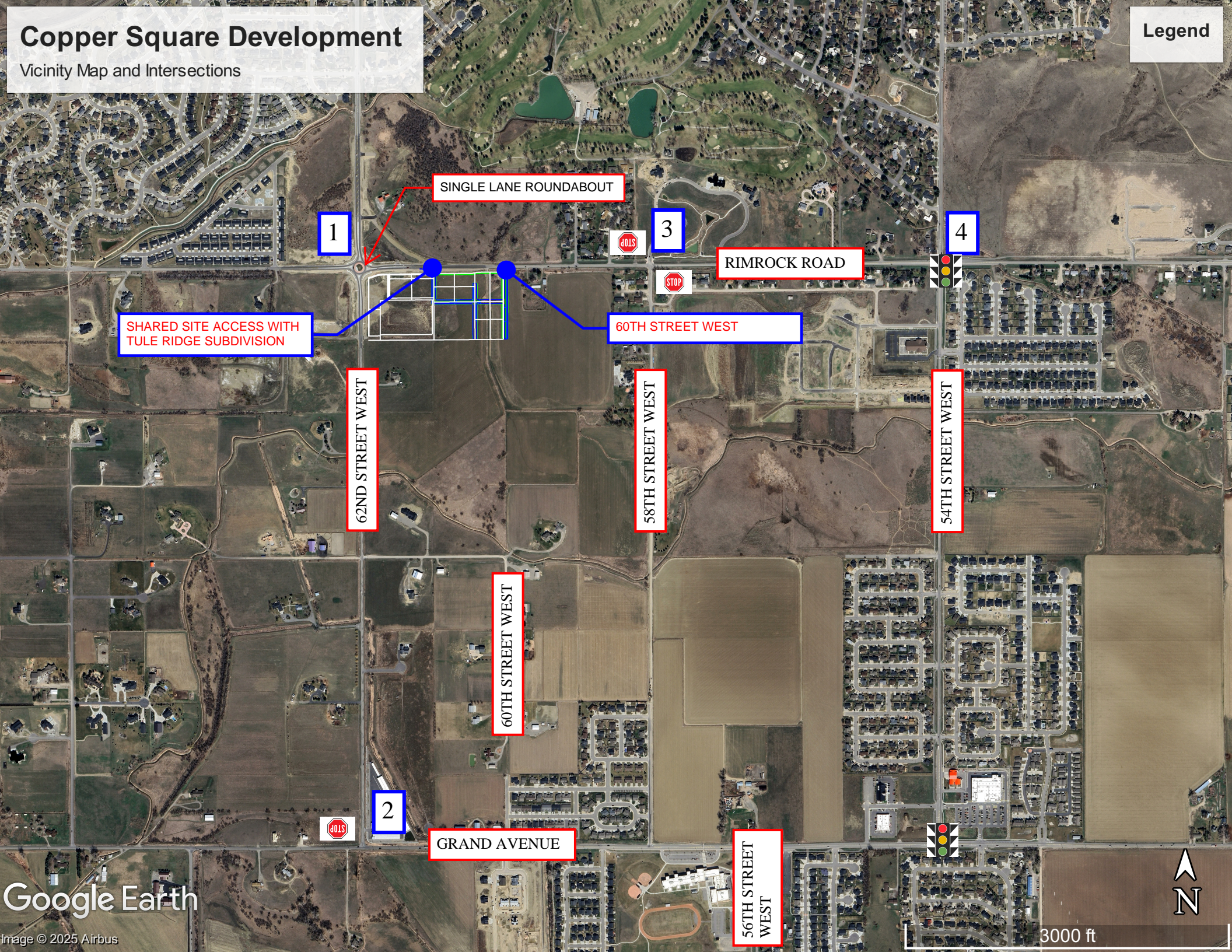
Project Vicinity Map

Trip Distribution and Study Intersections

# Copper Square Development

Vicinity Map and Intersections

Legend



1

SINGLE LANE ROUNDABOUT

3

RIMROCK ROAD

4

SHARED SITE ACCESS WITH TULE RIDGE SUBDIVISION

60TH STREET WEST

62ND STREET WEST

58TH STREET WEST

54TH STREET WEST

60TH STREET WEST

2

GRAND AVENUE

56TH STREET WEST



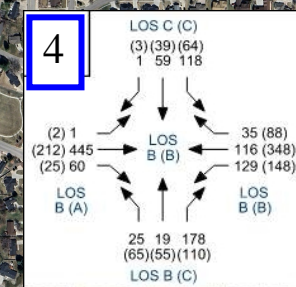
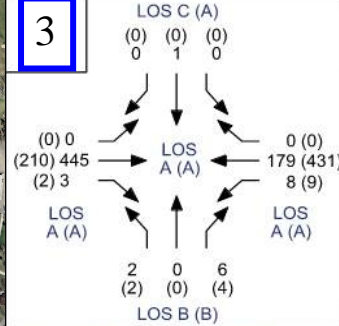
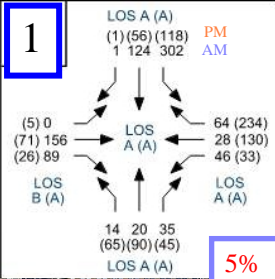
# Copper Square Development

## TRIP DISTRIBUTION AND PRELIMINARY COUNTS

### Legend

493 EB (78%)  
138 WB (22%)

234 EB (37%)  
397 WB (63%)



SHARED SITE ACCESS WITH TULE RIDGE SUBDIVISION

RIMROCK ROAD

60TH STREET WEST

62ND STREET WEST

58TH STREET WEST

54TH STREET WEST

60TH STREET WEST

GRAND AVENUE

56TH STREET WEST

**LEGEND**

- 80% AM PRIMARY DISTRIBUTION
- 35% PM PRIMARY DISTRIBUTION
- 15% AM SECONDARY DISTRIBUTION
- 15% PM SECONDARY DISTRIBUTION

\*\*Count data from TIS prepared by Sanbel for Trestles Subd.; 2025\*\*



3000 ft