

MEMORANDUM

To: City of Steamboat Springs, Planning and Engineering Departments

From: Cassie Slade, PE, PTOE

Date: September 5, 2023

Project: Riverfront Park – Steamboat Springs, Colorado

Subject: Trip Generation Memo

The Fox Tuttle Transportation Group has completed a transportation analysis for the existing mixed-use development of Riverfront Park in Steamboat Springs, Colorado. The project property is located in the southeast corner of Shields Drive at Bridge Lane as shown in the vicinity map in **Figure 1**.

Access to the property is on Bridge Lane with full movement and the crossing of the Yampa River Core Trail. Riverfront Park was constructed as a live/work community and includes three (3) buildings. Building 1 is located on the west side of the property and is approximately 28,714 square feet (sq. ft.) which includes Excel Gymnastics of Steamboat, Goodhart's Dancin', Steamboat Springs Brazilian Jiu Jitsu, Consolidated Electrical Distributors, and other small office and warehousing. Buildings 3 and 4 are located on the river and are designed as live/work units. There are a total of 25 dwelling units and approximately 17,175 sq. ft. of office and warehousing space.

The purpose of this "trip generation memo" is to determine how many vehicular trips would be generated by the proposed project.

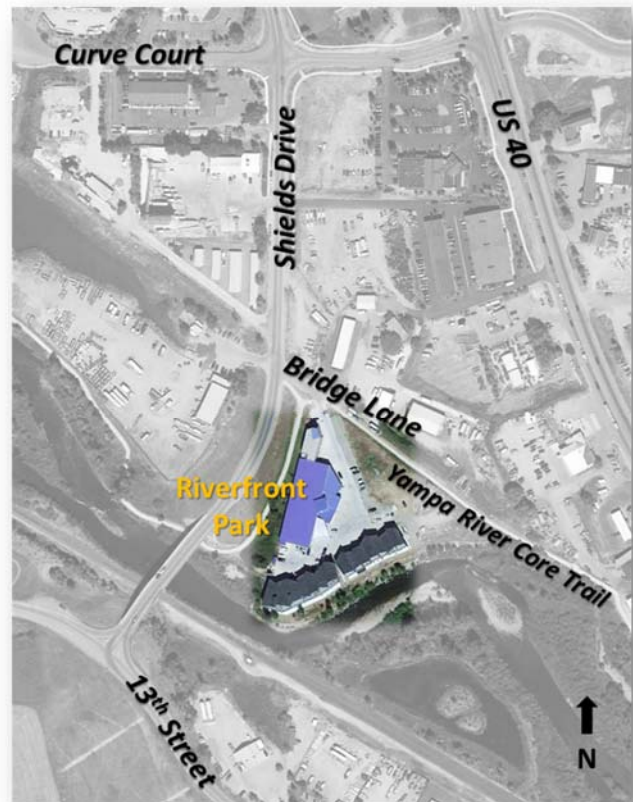


Figure 1. Vicinity Map

Existing Multi-Modal Amenities

There are currently non-continuous sidewalks on both sides of Shields Drive. Along the east and west sides of the Riverfront Park property is the Yampa River Core Trail. This multi-use path parallels to US 40 through Steamboat Springs, between Dougherty Road (south end of town) and Lagoon Court (west end of town) which is approximately seven (7) miles. Yampa River Core Trail is a highly utilized trail provides access to downtown, various parks, and many other trails. There are no on-street bicycle facilities within the study area; however, bicyclists are permitted to travel in the general travel lanes and shoulders.

Currently, there is one (1) bus route that serves the area near Riverfront Park: Main Line. There bus stops on Curve Court and Shields Drive, north of the subject property. The Main Line route travels between the Mt. Werner Loop/Gondola Transit Center to Downtown and West Steamboat. This route has approximately 20-minute headways between 5:55 AM and 12:00 AM. The Red route connects West Steamboat Springs to Downtown, Ski Town around Gondola Transit Center, and along Pine Grove Road. It has 15-minute headways between 7:45 AM and 7:00 PM. Patrons on can transfer to other Steamboat Springs Transit routes to link to other parts of town as desired.

There is the Regional Line that connects Steamboat Springs to nearby cities of Hayden, Milner, and Craig. To catch this bus route, patrons can utilize the bus stops on US 40 at Downhill Drive.

Trip Generation

To estimate the existing volume of trips associated with the Riverfront Park property, the existing land uses were multiplied by the trip data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*¹. The most applicable land use category was multiplied by the trip rate for the daily, AM peak hour, and PM peak hour to approximate the existing traffic. **Table 1** summarizes the estimated total vehicle trips for the project based on ITE rates and adjusted for live/work reduction in travel, multi-modal reduction, and internal capture.

¹ *Trip Generation Manual*. 11th Edition. Institute of Transportation Engineers. Washington, DC. 2021.

Table 1. Trip Generation Estimate

Land Use	Size	Unit	Internal Capture & Non-Auto	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
				Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
ITE 220 - Multi-Family (Low Rise) Housing	25	DU	5%	6.74	160	80	80	0.40	10	2	8	0.51	12	8	4
ITE 712 - Small Office Building	16.145	KSF	50%	14.4	116	58	58	1.67	13	11	2	2.16	17	6	11
ITE 150 - Warehousing	17.744	KSF	20%	1.7	24	12	12	0.17	2	2	0	0.18	3	1	2
ITE 492 - Health/ Fitness Club [Gymnastics and Dance Studios]	12	KSF	5%		156	78	78	1.31	15	8	7	3.45	39	22	17
Total Trips					456	228	228		40	23	17		71	37	34

Source: ITE Trip Generation Manual and Handbook, 11th Edition, 2021.

It was estimated the existing land uses within Riverfront Park generate up to 456 vehicle trips per day (vpd) with up to 40 vehicles per hour (vph) in the AM peak hour and up to 71 vph in the PM peak hour. Existing count data was not collected to verify or adjust the existing trips associated with Riverfront Park.

Trip Distribution and Assignment

The estimated trip volumes were distributed based on existing traffic characteristics, land uses, and traffic patterns in the area. The overall assumed distribution percentages are listed below and shown on **Figure 2**:

- 60% to/from the east via US 40/Lincoln Street
- 15% to/from the west via US 40
- 10% to/from the east via 13th Street
- 5% to/from the north via Elk River Road
- 2% to/from the west via Routt County Road 33
- 8% remaining within the Shields/Curve area

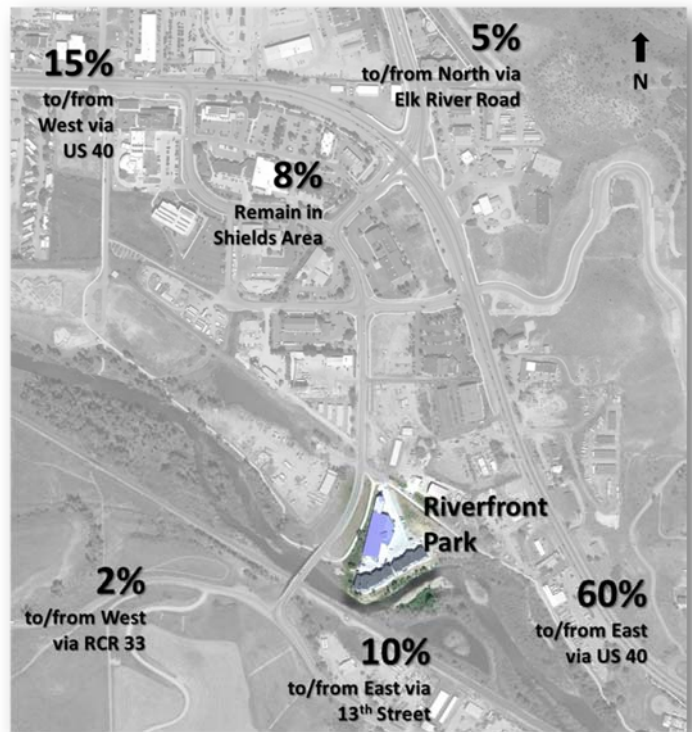


Figure 2. Anticipated Trip Distribution

Using these distribution assumptions, the projected site traffic from **Table 1** was assigned to the access intersection of shields Drive and Bridge Lane for the weekday AM and PM peak hours. **Figure 3** summarizes the trip distribution and assignment.

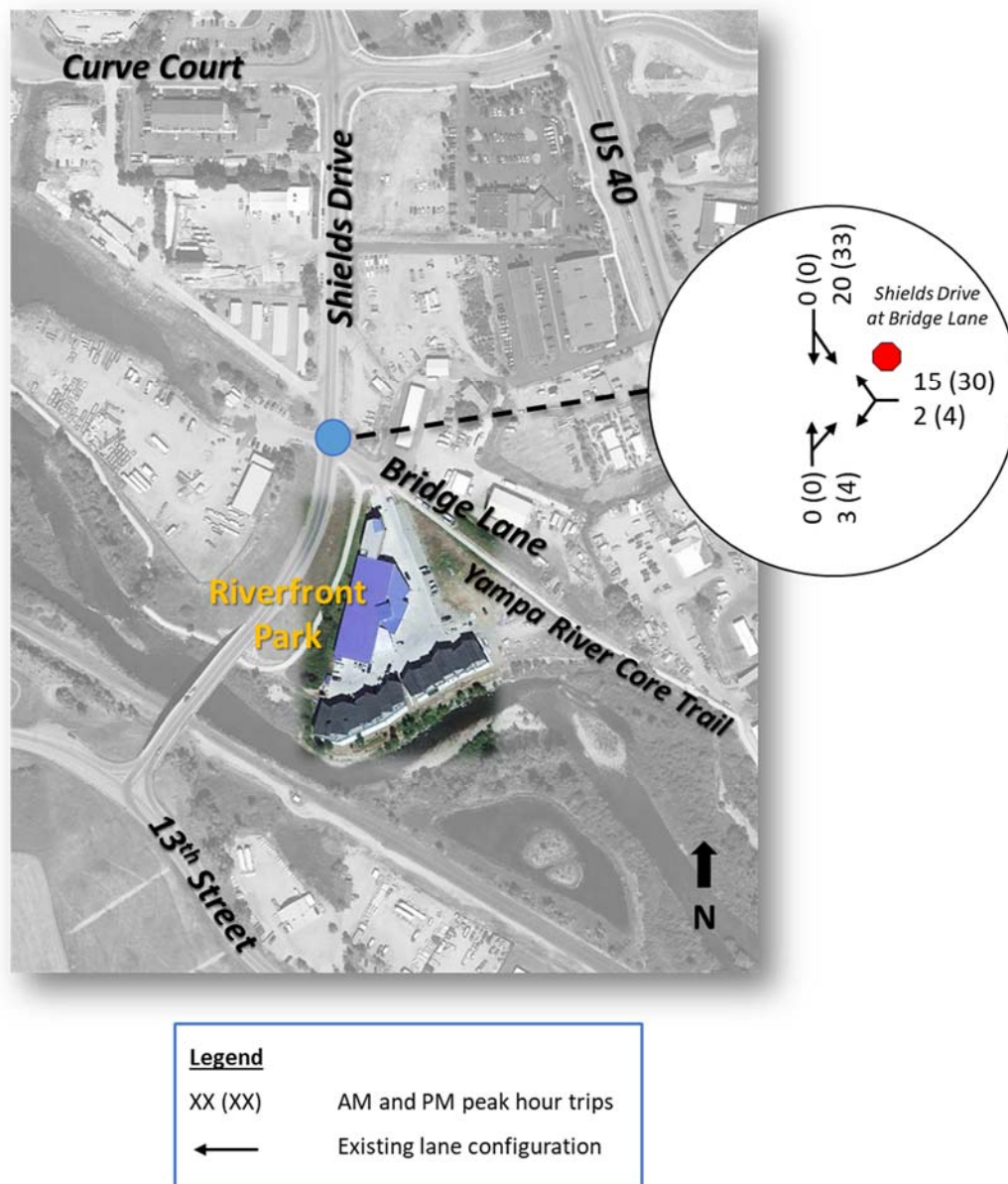


Figure 3. Estimated Existing Trip Assignment

Conclusions

The Riverfront Park project proposes to increase the number of parking spaces to support the existing land uses. The new parking spaces will not generate additional trips associated with Riverfront Park; however, if the existing vehicles do not currently park on site, then the trips to/from the site will increase since they currently park elsewhere. Existing count data was not collected at this point to verify the existing traffic and travel patterns. This trip generation letter estimated that Riverfront Park would generate up to 456 vehicle trips per day (vpd) with up to 40 vehicles per hour (vph) in the AM peak hour and up to 71 vph in the PM peak hour. **It is anticipated that the existing roadway network and intersections will continue to serve the Riverfront Park traffic without the need for additional analysis or mitigation measures since these trips already exist and may just be redirected to the new parking spaces.**

Hopefully the contents of this memorandum are helpful. If you have any questions, please give me a call.

Sincerely,

FOX TUTTLE TRANSPORTATION GROUP, LLC



Cassie Slade, P.E., PTOE
Principal

Attachments: Approved Traffic Scoping Form



Attachment A
TRAFFIC IMPACT STUDY – SCOPE APPROVAL FORM

Prior to starting a traffic impact study, a Scope Approval Form must be submitted for review and signed by the City Public Works Director. It shall be included in every traffic study submittal as Attachment A. This Scope Approval Form is for City requirements only. Consultants must contact CDOT to determine requirements related to access permits and work in CDOT right-of-way.

Project Information

Project Name:	<i>Riverfront Park</i>
Project Location:	<i>1900, 1920, 1940, 1960 Bridge Lane</i>
Developer Name/ Contact:	<i>Bridge Lane Realty</i>
Traffic Engineer Name/ Contact:	<i>Cassie Slade, Fox Tuttle Transportation Group 303-652-3571</i>

Study Parameters

Type of Study Required: ☒ Trip Generation Letter ☐ Long-term Traffic Study
☒ *Parking Study* ☐ Short-term Traffic Study ☐ Trip Evaluation Letter

Traffic Counts

☐ Winter Zone ☒ Summer Zone
☐ Counts w/in last 2 years are available By: _____ Date conducted: _____
☒ New counts will be collected on *Aug or Sept 2023 (if required)*
☐ Existing counts will be estimated based on: _____
% growth rate: _____
Seasonal Adjustment Factor applied (ratio): _____
☐ Future counts will be estimated based on a _____% growth rate.

Peak Hours Analyzed

☒ AM Peak Hour ☒ PM peak hour ☐ Other _____

Trip Generation Rates

☐ From ITE ☐ Other (cite) *No new land uses, just new parking spaces to serve existing land uses. If there are any new trips, it will only be at access intersection since these trips had to get to the area but may have parked elsewhere and will now park on-site.*
☒ No passby or mode split (typical)
☐ Passby or mode split (describe) _____

Trip Distribution – Attach sketch A-1 *N/A*

Study Parameters

List of Study Area Intersections

1.	<i>Shields Drive at Bridge Lane</i>	
2.		
3.		
4.		
5.		
6.		
7.		

Key Analysis items

- ☒ Existing + site traffic at study intersections
- ☐ Peak Hour LOS at study intersections
- ☐ CDOT Access Permit Required (consult with CDOT prior to approval of scope)
- ☐ % Site contribution to intersection/road segment at _____
- ☐ Auxiliary lane evaluation at _____
- ☐ Traffic signal warrants at _____
- ☐ Four-way stop sign warrants at _____
- ☐ Queuing Analysis at _____
- ☒ Other *Parking Study*

Approvals

Cassie Slade

August 8, 2023

Prepared By:

Date

Please note that the approval of this scope approval form shall not be construed as an approval of the proposed use, but rather a methodology for evaluation of the proposed use. During the city development review process, the proposed use will be reviewed by city staff for compliance with code, standards, and community planning documents.

APPROVED
to be generally in
accordance with
CITY ENGINEERING
STANDARDS

08/24/2023