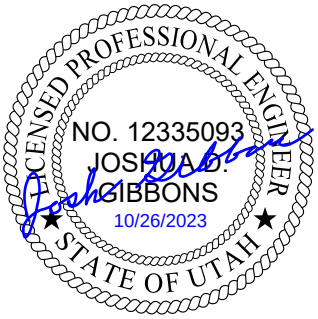
MEMORANDUM



Date: October 26, 2023

To: UDOT Region 4

From: Hales Engineering

Subject: Delta Ranch Campground Trip Generation Study

UT23-2590

Introduction

This memorandum discusses the trip generation study completed for the proposed Delta Ranch Campground development in Delta, Utah. A vicinity map of the proposed development is shown in Figure 1.

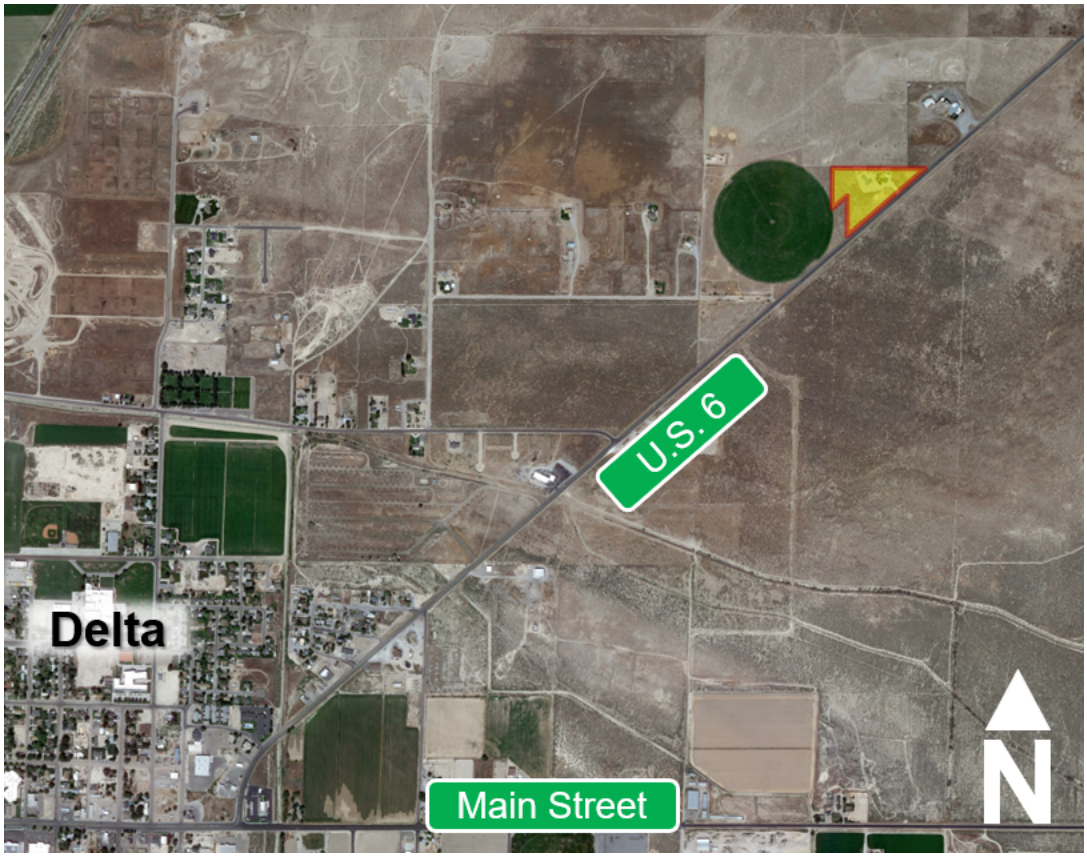


Figure 1: Vicinity map of the proposed development in Delta, Utah

Background

The proposed development is located at 1185 North U.S. 6 in Delta, Utah. The project includes an RV park and rental cabins.

The proposed land use for the development has been identified as follows:

- RV Park 69 Sites
- Rental Cabins 8 Units

Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (11th Edition, 2021)*. ITE calculates trip generation for RV Parks based on occupied sites. It is expected that the RV Park will be at 80% occupancy during peak days. The cabins on this site will be rented like Airbnb rentals. Therefore, ITE's hotel land use was used which is consistent with other studies with similar land uses. Trip generation for the proposed project is included in Table 1.

As shown in Table 1, it is anticipated that the proposed development will generate approximately 216 trips on an average weekday, including 16 trips during the morning peak hour, and 22 trips during the evening peak hour.

Table 1: Trip Generation

Trip Generation Delta Ranch Campground								
Land Use[1]	# of Units	Unit Type	Trip Generation			New Trips		
			Total	% In	% Out	In	Out	Total
Weekday Daily								
Campground/RV Park (416)	56	Occ. Sites	152	50%	50%	76	76	152
Hotel (310)	8	Rooms	64	50%	50%	32	32	64
TOTAL			**216**			**108**	**108**	**216**
AM Peak Hour								
Campground/RV Park (416)	56	Occ. Sites	12	36%	64%	4	8	12
Hotel (310)	8	Rooms	4	56%	44%	2	2	4
TOTAL			**16**			**6**	**10**	**16**
PM Peak Hour								
Campground/RV Park (416)	56	Occ. Sites	16	65%	35%	10	6	16
Hotel (310)	8	Rooms	6	51%	49%	3	3	6
TOTAL			**22**			**13**	**9**	**22**

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, 2021.

SOURCE: Hales Engineering, October 2023

Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. It is anticipated that many people living here will be working on construction work at the Intermountain Power Plant to the north. In addition, many of the local recreational destinations are located to the north. These factors were taking into account when determining the distribution. The resulting distribution of project generated trips during the evening peak hour is shown in Table 2.

Table 2: Trip Distribution

Direction	% To/From Project
North	75%
South	25%

These trip distribution assumptions were used to assign the evening peak hour trip generation at the project's access to create trip assignment, since the evening peak hour has the highest entering volume. Trip assignment for the development consists of the following turning movements at the project's access during the evening peak hour:

- 9 southwest-bound ingress right-turns
- 4 northeast-bound ingress left-turns
- 6 southeast-bound egress left-turns
- 3 southeast-bound egress right-turns

Auxiliary lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

UDOT Administrative Rule R930-6 outlines minimum peak hour turn volumes to warrant auxiliary lanes on UDOT roadways. The following are the minimum requirements for these lanes on U.S 6: (which is classified by UDOT access management standards as an access category 2 roadway).

- Left-turn Deceleration (Ingress): >5 left-turn vehicles per hour
- Left-turn Acceleration (Egress): Is there a safety benefit?
- Right-turn Deceleration (Ingress): >10 right-turn vehicles per hour
- Right-turn Acceleration (Egress): >10 right-turn vehicles per hour

Based on these guidelines and the anticipated project traffic, no auxiliary lanes are recommended at the project access.

Conclusions

The findings of this study are as follows:

- The proposed development includes an RV park, and cabin rentals. It is anticipated that the project will have one access.
- It is anticipated that the proposed project will generate approximately 216 trips on an average weekday, including 16 trips during the morning peak hour, and 22 trips during the evening peak hour.
- Based on UDOT guidelines and the anticipated project traffic, no auxiliary lanes are recommended at the project access.

If you have any questions regarding this memorandum, please contact us at 801.766.4343.