

MEMORANDUM

To: Aaron McKelvey, P.E.
County Engineer
La Plata County, Colorado

From: Bill Fox

Date: February 28, 2024

Project: Roberts RV Resort

Subject: Review comments on Traffic Impact Study prepared by SEH dated August 3, 2023

In response to La Plata County staff's request to review the Roberts RV Resort Traffic Impact Study (August 3, 2023) prepared by SEH, I offer the following comments:

General Comments:

1. The study report generally complies with Section 74-3 IV C Traffic Impact Study of the La Plata County Code but there are some exceptions as noted below.
2. There are numerous instances where the analysis and/or report is incomplete or in need of significant modification to allow a thorough review of the traffic impacts generated by the Roberts RV Resort. These instances are noted below. On this basis it is recommended that the analysis and report be updated.

Comments by Report Section:

3. Section 2.1 Proposed Development should be greatly expanded to detail the mix and type of units that will be included in the project. The analysis currently assumes that all 277 sites will be accessed by large recreational vehicles (RVs). This is misleading. A detailed review of the Site Plan in Figure 2 (dated May 29, 2023) indicates that there will be only 180 true RV sites for motorhomes or campers and 97 "Park Model" sites which are typically accessed by normal automobiles (not large campers and RVs). Information provided also includes a more current Site Plan dated August 1, 2023 which indicates that the project will only include 137 sites for motorhomes and campers, and the remaining 140 sites will include "Cabins" and "Park Models" that will be accessed by automobiles. This is significant because the application of passenger car equivalent (PCE) factors in the analysis should only be applied to the actual larger vehicles that will access the project, not all 277 sites (which has been assumed in the analysis to date). This will result in different results in the analysis. **Proposed development is now 277 full size RV sites per Site Plan in Figure 2 (October 2024).**
4. Section 2.3 Sight Distance describes the limited sight distance looking to the southeast along CR 252 from the south access, and notes that the 400 feet of available intersection sight distance may not be enough to accommodate large RVs turning out from this access. While this is true, it may be appropriate to note that the 400 feet of available sight distance is more than the Stopping Sight

Distance of 250 feet for passenger vehicles (35 mph speed limit) that may be northbound on CR 252. On this basis a northbound vehicle should be able to avoid a slow-moving RV turning out of this southern access. That said, one way to mitigate this issue would be to design the southern driveway as a right-in right-out (RIRO) intersection, or to in some way prevent outbound RV traffic at this southern driveway. **Added in text for stopping sight distance. South access designed as full movement. I have a recommendation for signage in section 2.3 advising large vehicles to use main access.**

5. Section 2.4 Study Area and Evaluation Parameters indicates that “minor intersections along CR 252...were analyzed...”but fails to list or identify which intersections. The level of service (LOS) analysis for the following intersections was included in the Appendix:

- US 550 & CR 252
- CR 252 & Trimble 1 (retail access)
- CR 252 & Trimble 2 (residential access)
- CR 252 & Willow Springs (new residential access)
- CR 252 & Dalton Ranch Road

These intersections should be listed in the report text and all five should be illustrated on all applicable figures in the report. To date only the first three intersections are illustrated on Figures 3, 5, 6, and 7 of the report.

The report also says that the CR 252 & Site Access intersections were also analyzed, but there are no LOS worksheets for these intersections included in the Appendix and no detailed tabulations of LOS results. This is curious and should be rectified. **I have added in the existing intersections for analysis as well as site accesses. All LOS sheets in appendix.**

Section 3.2 Existing Traffic Volumes: This section describes the factoring of previous traffic counts from previous studies to arrive at the volumes used for this study. This is questionable since the original counts referenced were taken by CDOT in 2019 at the intersection of US 550 & CR 252, over four years ago. Furthermore, I can not see where any traffic counts were actually taken at the other four intersections in this study along CR 252. In fact, the traffic volumes used in the analysis of the Dalton Ranch Road intersection appear to have ignored the traffic to/from the south at this intersection on Horse Thief Lane. This intersection is a 4-way intersection but has been modeled as a “T” in the LOS analysis. **New traffic counts collected in October 2024. I have added in the existing intersections for analysis as well as site accesses. All LOS sheets in appendix.**

This analysis would benefit from new traffic counts at study area intersections and clear indications in the report figures of all traffic volumes at all study area intersections. At the very least, the above points of confusion need to be clarified. **New traffic counts collected in October 2024. Per LPLUC, seasonal factor should be used for the October count. However, nearest continuous count station lists October as having a seasonal factor of 0.96. I did not adjust traffic volumes down.**

6. Section 3.3 Existing Levels of Service: This section includes reference to LOS results in Table 1, but Table 1 only includes the US 550 & CR 252 intersection. None of the other four existing intersections and the two new site access intersections have been included in this Table. All intersection LOS results should be included in this Table. The reader should not have to search through an Appendix to find Synchro worksheets with the LOS results. The issue of LOS calculations (or not) at the new site access intersections should also be clarified and resolved. **LOS analyzed at all minor intersections where count data was collected. Results shown in Table 1 and figures. LOS**

worksheets in appendix.

7. Section 3.4 Trip Generation includes information on an adjacent property with RV and Boat storage, yet this use does not appear (at least not obviously) on the Site Plan. Is this storage use still going to be operative when this RV Park is developed? **Storage facility already developed and operational. Removed from project.**

8. This section of the report also describes the Passenger Car Equivalent factor of 3 that has been applied to account for the operational impact of the large RVs and campers and indicates that this factor has been applied to the traffic generated by all 277 sites. Given (based on the Site Plan discussed above) that only approximately half of the sites will be accessed by large RVs and campers, this is an extremely conservative approach. If/when this analysis is updated, this adjustment to the PCE factors should be included so that the traffic impacts of this project are not overstated. All future "plus Site" figures and calculations should be adjusted accordingly. **PCE was revised to 2:1 per guidance in CDOT's Access Code. Most RVs accessing the site will need to be under 40' in order to fit in the 45' space.**

Another overly conservative assumption in this analysis is that all of the traffic in and out of the site generated by the RVs and campers will be made in these large vehicles. In reality, the large vehicles will only access CR 252 when they first arrive, or when they finally depart the RV Park. The vast majority of intermediate trips will be made by normal sized automobiles given that large motorhomes typically tow a small car or jeep, and large campers will be disconnected from the tow vehicles and the tow vehicles (SUVs or pickups) will make the day-to-day trips to surrounding attractions. In this context a reduction factor should be developed when applying PCEs to the RV site traffic. **Assumption is 50% passenger vehicles and 50% RVs will be accessing these sites. A sensitivity analysis was completed with 100% RVs (2:1 factor applied to 100% site generated traffic).**

9. Sections 4 Long-Term Background Analysis and Long-Term Background Plus Site Generated Traffic Analysis should be updated to include all of the suggestions detailed above. All figures should show all intersections, and Table 1 should detail the LOS findings at all intersections, including the site access intersections. **LOS analyzed at all minor intersections where count data was collected. Results shown in Table 1 and figures. LOS worksheets in appendix.**

10. Section 5.4 Queue Length and Design Vehicle Consideration discusses the projection that the westbound left turn storage on CR 252 approaching the RR tracks and US 550 should be adequate to accommodate the projected RV traffic. This is likely the case but should be revisited when the analysis is updated. I do not support the suggestion that the left turn storage length could be increased by striping a two-way left-turn lane between the RR tracks and the first commercial driveway. This approach could result in confusion between on-coming left-turning drivers. It would be better to shorten the length of the striped left turn lane into the shopping center and lengthen the westbound left turn lane. But I would only do this if the westbound left turn queue does back out of the painted left turn lane on a regular basis. **Analysis of the updated site generation figures indicates that the WBL turn lane is projected to have enough storage capacity. Deleted reference to restriping.**

11. Section 6 Additional CR 252 Roadway Analysis: This section indicates that the daily traffic on CR 252 is expected to increase to more than 2,500 vehicles per day by the year 2043. Yet the MS2 Traffic Count Database System indicates that the daily volume on CR 252 is currently 4,338 vehicles per day (vpd) just east of US 550 and 1,815 vpd at the Animas River. In Section 6.1 the daily traffic is listed as 3,720 vpd. To avoid confusion, it would be helpful to specify the location being

considered when discussing daily traffic. **Re-worded paragraph to avoid confusion.**

12. Section 6.2 CR 252 Roadway LOS Analysis describes the area as having no passing zones, yet Street View photos illustrate passing zones on CR 252 adjacent to the RV Park site. Has the striping been updated since the photos were taken? The lack of passing zones apparently factors in to the LOS classification for this roadway segment based on a prior FHU assessment. This issue should be clarified and updated as needed. **There are either no passing zones or limited passing zones just north of the project site to Dalton Ranch Road. This portion of roadway is where LOS will be the worst and was analyzed for site specific impacts.**
13. Section 6.3 Auxiliary Lane Analysis concludes that right turn deceleration lanes are warranted at both site driveways on CR 252. This finding is in part based on the application of PCEs as discussed above. It is recommended that this issue be revisited when the application of PCEs is updated. It is likely that the northern access will warrant a right turn lane, but it is questionable as to whether the southern access will still warrant a right turn lane. This evaluation also needs to consider how the site driveways will be signed and where the office or check-in facility will be located. This will likely determine which driveway will be utilized by RVs that are arriving at the site for the first time. It is not clear on the Site Plan where the check-in location will be, but it will influence where the large vehicles enter the site. This may influence the determination of which site driveway warrants a right turn lane. **Right turn lane warranted at main access only.**
14. Section 6.5 CR 252 Equivalent Single Asle Load (ESAL) Analysis: While I do not have the technical expertise to scrutinize the ESAL calculations included in this evaluation, I suggest that this issue be revisited when the study is updated and the issue of which driveway the large RVs and campers will likely use is better defined. Then the recommendation of which sections of CR 252 are to be overlayed should be revisited. As the study stands now, I believe that the section of CR 252 between the north (west in report) and south site driveways is not recommended to be overlayed. But a review of the Street View photographs of this stretch of CR 252 indicate significant cracking and deterioration in the surface of the pavement. **Roadway will be repaired as part of the project.**

On a related note, is the gravel mine on the northeast side of CR 252 still active and if so, has that truck traffic been figured in to the ESAL calculations? **Figured into the ESAL calcs per truck traffic percentage.**

15. Related site information indicates that a CDOT Access Permit Application has been submitted. This should be referenced in this report along with the traffic numbers that were incorporated. **Typically not referenced in the traffic study – rather Access Permit usually attaches the traffic study to the application.**
16. Bicycle, Pedestrian, and Golf Cart Access and Circulation Considerations: Note that Sec. 74-3 IV C.2.g. and r. of the La Plata County Code require consideration of modal splits and access considerations including paths and sidewalks etc. as part of the traffic study. It should also be noted that this site is adjacent to a country club and golf course, where golf cart traffic is to be expected. In fact, the Site Plan illustrates parking spaces for golf carts. This coupled with neighbors expressed concerns about safely accommodating bicycle, pedestrian, and golf cart traffic along CR 252 suggest that the study should consider these alternative travel modes to the automobile and identify any measures to facilitate their safety. So far, this study is completely lacking in any consideration of bicycle and pedestrian circulation and potential golf cart access both to/from the site and also in the vicinity along RC 252. When updated, this study should address all of these issues from a multimodal safety perspective. This will help address neighbor's concerns.

A review of the promotional materials for the RV Park (Durango Village Camp) describes river front

trails open to the public and multi-use trails along CR 252. These items should be included in the traffic study. **Added into conclusions section. Property owner is not responsible for recreational mobility outside of site unless directed by County.**

Once the traffic numbers are refined and illustrated at all study area intersections then potential measures to accommodate all modes can be discussed. As it stands, some of the concerns expressed such as all-way stops at site accesses cannot even be evaluated. Other questions that might be asked include:

- Has the County ever conducted a speed study along this stretch of CR 252 or is one needed? Is speed mitigation needed in this area?
- Have there been any bicycle counts along CR 252?
- Are golf carts operating along CR 252 in the area and if so, is it “allowed”?
- If new traffic data is to be procured, then the above questions can be answered.
- What enhanced signing might be installed to make all travelers aware of the presence of each other and the need to share the roadway?

I hope this review of the Traffic Impact Study – Final Report for the Roberts RV Resort is helpful. Please let me know if you have any questions.

BF/