

## Hannah Elliott

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**From:** Smith, Adam <asmith@schwabe.com>  
**Sent:** Tuesday, July 23, 2024 12:09 PM  
**To:** John Eisler; Plan; Will VanVactor; Katie McDonald; Hannah Elliott  
**Cc:** Joe Bessman; Brandon Turner  
**Subject:** RE: Crook County File No. 217-24-000047-PLNG/Sunshine [IMAN-PDX.FID4560231]  
**Attachments:** 1950rep\_07222024.pdf

**Importance:** High

All,

Consistent with our previous correspondence, attached is Transight Consulting's updated traffic analysis which addresses all of the TIA criteria. Please include the analysis in the record for File No 217-24-000047-PLNG.

With this submittal, I believe we provided everything that County staff requested so you can now proceed with reviewing the application and issuing an administrative decision. But please let us know if that is not the case, and please also do not hesitate to reach out to me directly if you have any further questions or require any additional documents. We appreciate the coordination and staff's diligence processing this application.

Thanks again,  
-Adam

**Adam Smith**  
Shareholder  
*Pronouns: he, him, his*  
D: 541-749-1759  
[asmith@schwabe.com](mailto:asmith@schwabe.com)

**SCHWABE, WILLIAMSON & WYATT**  
**CLIENT SHOWCASE | INNOVATING FOR GOOD**

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**From:** John Eisler <John.Eisler@crookcountyor.gov>  
**Sent:** Thursday, June 20, 2024 10:49 AM  
**To:** Smith, Adam <asmith@schwabe.com>  
**Cc:** Plan <plan@crookcountyor.gov>; Will VanVactor <Will.VanVactor@crookcountyor.gov>; Katie McDonald <Katie.McDonald@crookcountyor.gov>; Hannah Elliott <Hannah.Elliott@crookcountyor.gov>  
**Subject:** RE: Crook County File No. 217-24-000047-PLNG/Sunshine [IMAN-PDX.FID4560231]

Hi Adam,

Thank you for responding and confirming. Your plan below would likely resolve any issues the County has. The application for Crook County File No. 217-24-000047-PLNG/Sunshine is hereby deemed complete as of May 30, 2024.

Please let me know if you have any further questions.

Best,



## JOHN EISLER

ASSISTANT COUNSEL

Crook County Legal Counsel's Office

Mailing: 300 NE 3<sup>rd</sup> St., Prineville, OR 97754

Office: (541) 416-3919 Ext. 279

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**From:** Smith, Adam <[asmith@schwabe.com](mailto:asmith@schwabe.com)>

**Sent:** Tuesday, June 18, 2024 12:15 PM

**To:** John Eisler <[John.Eisler@crookcountyor.gov](mailto:John.Eisler@crookcountyor.gov)>

**Cc:** Plan <[plan@crookcountyor.gov](mailto:plan@crookcountyor.gov)>; Will VanVactor <[Will.VanVactor@crookcountyor.gov](mailto:Will.VanVactor@crookcountyor.gov)>; Katie McDonald <[Katie.McDonald@crookcountyor.gov](mailto:Katie.McDonald@crookcountyor.gov)>; Joe Bessman <[Joe@transightconsulting.com](mailto:Joe@transightconsulting.com)>

**Subject:** RE: Crook County File No. 217-24-000047-PLNG/Sunshine [IMAN-PDX.FID4560231]

John,

I talked further with Joe Bessman and my clients this morning (both CCed on this email). Joe is going to proceed with preparing a full TIA. Joe estimates that it will take three weeks to provide that updated work product, and we will transmit the TIA to the County as soon as it is completed. Accordingly, there is no need to address the textual arguments raised in my below email. As noted, our goal is to provide the County as much information as possible.

Unless you think otherwise, I also don't think we need to immediately schedule a meeting with you, me, Joe and my clients.

Thanks for the coordination; talk soon.

-Adam

**Adam Smith**

Shareholder

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**SCHWABE, WILLIAMSON & WYATT**

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**From:** Smith, Adam

**Sent:** Monday, June 17, 2024 6:36 PM

**To:** John Eisler <[John.Eisler@crookcountyor.gov](mailto:John.Eisler@crookcountyor.gov)>

**Cc:** Plan <[plan@crookcountyor.gov](mailto:plan@crookcountyor.gov)>; Will VanVactor <[Will.VanVactor@crookcountyor.gov](mailto:Will.VanVactor@crookcountyor.gov)>; Katie McDonald <[Katie.McDonald@crookcountyor.gov](mailto:Katie.McDonald@crookcountyor.gov)>

**Subject:** RE: Crook County File No. 217-24-000047-PLNG/Sunshine [IMAN-PDX.FID4560231]

John,

Thanks for the email. To respond to your specific question, our intent was to start the 150-day clock pursuant to ORS 215.427(2)(a) as we believed we provided the County all of the requested information. If the County disagrees with that assessment, we nonetheless would cite to ORS 215.427(2)(b) indicating that the clock should still be running. As is commonly the case, my clients would then reserve the right to submit additional information to the record as needed up until the point that the record is closed. However, please let me know if you disagree with that analysis. And – more importantly – please note that I will happily work with my client now or in the future to toll the clock if the County believes it needs more time to process our application. Although my client is eager to get a final land use decision so it can proceed with purchasing the property, we have no interest in playing games with the 150-day shot clock.

Substantively, it appears that the issue regarding the applicability of ORS 215.427(2)(a) versus (2)(b) stems from the fact that we submitted a TAL prepared by Transight Consulting instead of the requested TIA. Please let me know if that is not the case.

We submitted a TAL pursuant to CCC 18.180.010(3) because Transight Consulting initially determined that our application does not trigger any of the circumstances described in CCC 18.180.010(2)(a) through (f) formally requiring a TIA. With regard to CCC 18.180.010(2)(a) requiring a TIA if “the development generates 25 or more peak-hour trips or 250 more daily trips,” Transight Consulting provided an analysis demonstrating that our proposed community center use can be assumed to generate 398 weekday daily trips (assuming our client’s proposed substance use disorder treatment generates similar traffic when compared to a nursing home). However, the already-permitted community center use was approved based on the assumption that it would generate 278 daily trips. Accordingly, any new “development” which will be permitted pursuant to our modification application can be assumed to generate only 120 daily trips, far below the 250 daily trip threshold triggering a TIA.

Notably, CCC 18.180.010(2) only requires a TIA “as part of an application for development, a change in use, or a change in access.” In this case, our application does not propose a “change in use” as the formal use – i.e. a “community center” (line 7.7 of Table 1 in CCC 18.16.010) - is not changing. Additionally, our modification application does not propose “a change in access.” Accordingly, CCC 18.180.010(2) requiring a new traffic study is only triggered in this case because our modification application presumably is an “application for development.” But when it comes to traffic impacts, the only “development” being proposed is the addition of 120 daily trips. There is functionally no need or utility in re-analyzing the original 278 daily trips already considered and permitted by the County. Simply stated, our clients are seeking to modify the existing and permitted community center as specifically allowed by CCC 18.172.100(1)(e). We are not seeking to entirely re-permit that community center such that we would need to entirely re-do the original traffic study.

Despite the aforementioned arguments, please note that my client’s primary concerns are the timeliness and costs associated with processing our modification application. If these textual arguments are not persuasive, please let me know ASAP and I’ll discuss the issue further with both my clients and Transight Consulting to determine the time and resources needed to elevate the submitted TAL into a full TIA. To be clear - our intention is to continue working with County staff to provide as much information as reasonable possible.

Please also note that I am happy to schedule a meeting in the near future with County staff, myself, Joe Bessman, and perhaps my clients so we can more fully discuss this issue. Please let me know what week works best for you, and I will proceed with coordinating schedules on our end.

Talk soon,  
-Adam

**Adam Smith**  
Shareholder

Pronouns: he, him, his

D: 541-749-1759

[asmith@schwabe.com](mailto:asmith@schwabe.com)

**SCHWABE, WILLIAMSON & WYATT**  
**CLIENT SHOWCASE | INNOVATING FOR GOOD**

**From:** John Eisler <[John.Eisler@crookcountyor.gov](mailto:John.Eisler@crookcountyor.gov)>  
**Sent:** Thursday, June 13, 2024 1:56 PM  
**To:** Smith, Adam <[asmith@schwabe.com](mailto:asmith@schwabe.com)>  
**Cc:** Plan <[plan@crookcountyor.gov](mailto:plan@crookcountyor.gov)>; Will VanVector <[Will.VanVector@crookcountyor.gov](mailto:Will.VanVector@crookcountyor.gov)>; Katie McDonald <[Katie.McDonald@crookcountyor.gov](mailto:Katie.McDonald@crookcountyor.gov)>  
**Subject:** Crook County File No. 217-24-000047-PLNG/Sunshine

Dear Adam:

Crook County is in receipt of your May 30, 2024 Applicant's Response to April 23, 2024 Incomplete Letter (the "Response"). The County's April 23, 2024 Incomplete Letter requested three things:

- A Transportation Impact Analysis;
- An Updated Site Plan; and
- A Chapel Finding

Your response included a Transportation Analysis Letter, an Updated Preliminary Site Plan Packet, and a Chapel Finding. The County appreciates you submitting this additional information. Further, you requested that the application be deemed complete and that the 150-day review clock begin as of May 30, 2024.

I am writing to bring to your attention that the information and documents provided do not include all of the missing information, specifically, the Transportation Impact Analysis. The County understands your position to be that the Transportation Analysis Letter suffices in place of the Transportation Impact Analysis. Under ORS 215.427(2), the application shall be deemed complete upon receipt of:

- All of the missing information;
- Some of the missing information and written notice from the application that no other information will be provided; or
- Written notice from the applicant that none of the missing information will be provided.

The purpose of this email is to confirm your position that all of the missing information has been provided and your application is complete. In the event that, upon review, staff finds the application does not satisfy all of the applicable criteria, the application could be denied.

Please respond to this email with your confirmation to have the application deemed complete pursuant to ORS 215.427, as submitted, with the 150-day clock beginning May 30, 2024, and ending October 27, 2024.

Best,



**JOHN EISLER**

**ASSISTANT COUNSEL**

Crook County Legal Counsel's Office  
Mailing: 300 NE 3<sup>rd</sup> St., Prineville, OR 97754  
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Date:	July 23, 2024
To:	Will Van Vactor, Crook County Director
From:	Joe Bessman, PE
Project Reference No.:	1950
Project Name:	Sunshine Behavioral Health Transportation Impact Analysis



## EXECUTIVE SUMMARY

This report provides the materials to address the County’s Trip Generation Letter and, if required, Transportation Impact Analysis. Regardless of the application type required, this analysis shows that there is ample capacity within the surrounding transportation system to support the proposed tenant change. The site access driveway onto Alfalfa Road and the Alfalfa Road connection to the Powell Butte Highway operate well within County operational standards today and in the future with or without the tenant change. There are no safety issues based on field review and sight distance measurements, or based on historical crash records. As a site that was previously designed and approved for events, there is an extensive internal network of walking paths, adequate parking, and provisions for emergency access through the gated connection to the Powell Butte Highway. The site complies with the County’s access requirements, and the public connection to Alfalfa Road has already been improved with a southbound right-turn deceleration lane. Additional details are provided within this report.

## INTRODUCTION

This memorandum serves as the Trip Generation Report and Transportation Impact Analysis for the Sunshine Behavioral Health Group, LLC’s proposed substance use disorder (“SUD”) treatment center in Crook County. Specifically, Sunshine Behavioral Health Group, LLC seeks to modify a land use permit obtained for a Catholic retreat center approved in 2007 within File No. C-CU-2337-07. The land use category approved in 2007 was for a “community center,” with the approved facilities including a chapel (church), overnight lodging, a business office, and a residence. The revised proposal still seeks approval of a “community center” use including similar types of overnight services for up to 130 clients, with a new focus on substance abuse recovery and rehabilitation center. Crook County’s TIA requirements that this report addresses are contained within CCC 18.180.010.

The site of the proposed modification application is a 37.89-acre parcel zoned for Exclusive Farm Use Powell Butte Area (EFU-3), with an address of 14427 Alfalfa Road, Powell Butte, Oregon 97753. Figure 1 provides a map illustrating the site vicinity, showing its primary access onto Alfalfa Road and gated secondary access to the Powell Butte Highway.

The proposed use will utilize the existing structures and will include replacement of the seven RV-parking stalls with additional cabin(s) to provide a more suitable treatment environment. The site will contain a total of 75 employees that will be spread among three shifts to provide 24-hour coverage. This will provide about 30 employees on-site between 6:00 a.m. and 10:00 p.m.



While employees will travel to and from the site daily, clients at the center for rehabilitation services will not drive and will only rarely leave the site as part of group activities (typically within shuttles or other types of shared vehicles). Clients will not have a vehicle on-site, and visitors are only permitted on Sundays for clients within the lower level of care (typically about 12 to 18 visitors throughout the day).

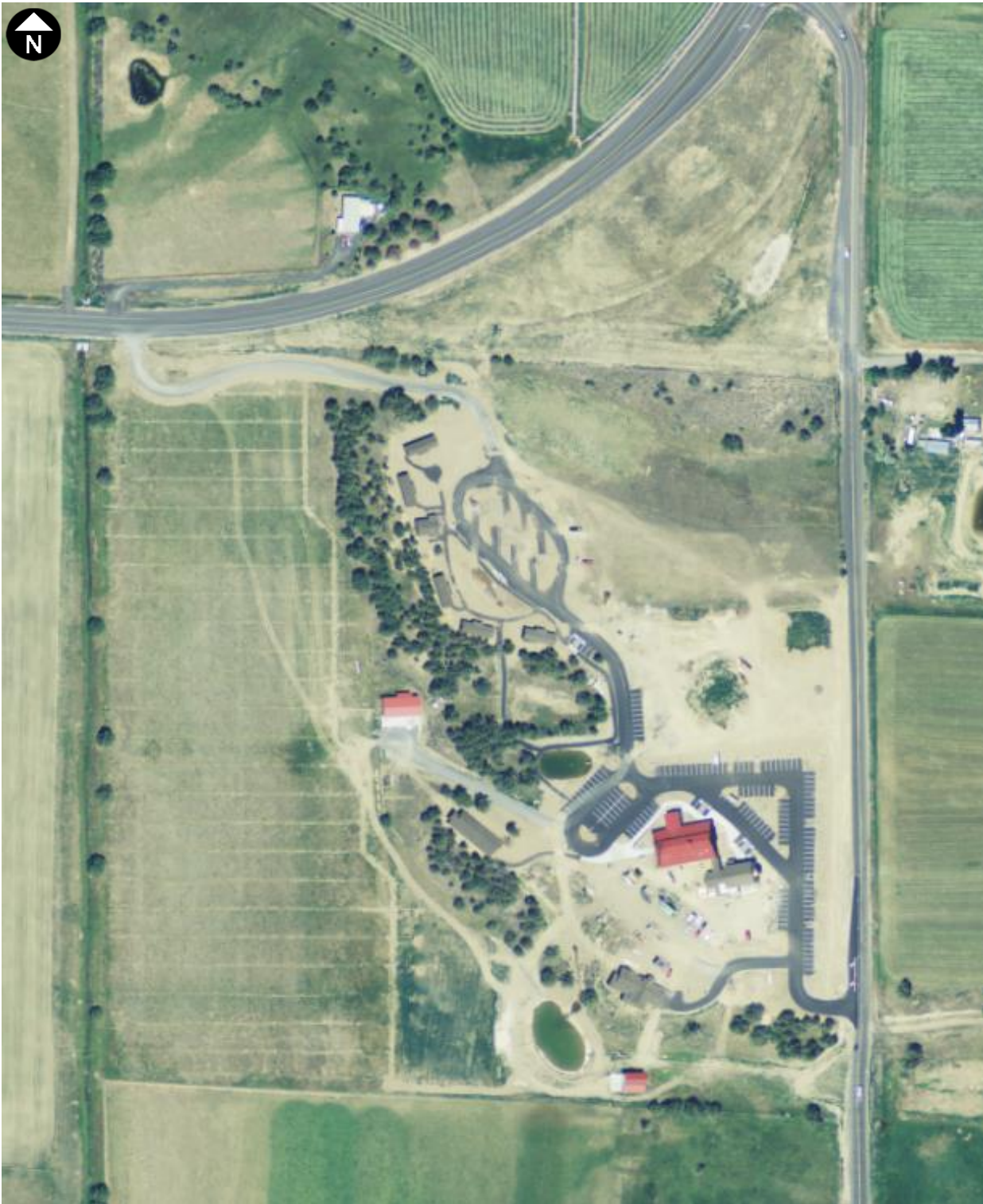


Figure 1. Site Vicinity Map. Source: Crook County GIS

## TRIP GENERATION

Consistent with County policy, trip generation estimates were prepared for the development based on the most current edition of the Institute of Transportation Engineers’ (ITE) standard reference *Trip Generation, 11<sup>th</sup> Edition*. While the manual does not include an identical treatment facility classification, a similar facility is a Nursing Home, which operates in a similar manner to the proposed site, with nearly all trips associated with employees. This same land use classification was applied to Deschutes County’s stabilization center as part of a fairly recent addition within the Bend safety campus.

- **ITE 620: Nursing Home** - A nursing home is a facility whose primary function is to provide care for persons who are unable to care for themselves. Examples include rest homes, chronic care, and convalescent homes. Skilled nurses and nursing aides are present 24 hours a day at these sites. Residents often require treatment from a registered healthcare professional for ongoing medical issues. A nursing home resident is not capable of operating a vehicle. Traffic is entirely generated by employees, visitors, and deliveries.

Using this land use Code for the total number of beds within the facility results in a total of nearly 400 weekday daily trip ends, including 18 weekday a.m. and p.m. peak hour trip ends (a trip end is defined as entering or leaving the site).

**Table 1. Estimated Trip Generation (Source: ITE Trip Generation, 11<sup>th</sup> Edition)**

Land Use	ITE Code	Size (Beds)	Weekday Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Nursing Home	620	Up to 130	398 <i>3.06/Bed</i>	18 <i>0.14/Bed</i>	13 <i>72%</i>	5 <i>28%</i>	18 <i>0.14/Bed</i>	6 <i>33%</i>	12 <i>67%</i>

Crook County Code 18.180.010 outlines the requirements for a Transportation Impact Analysis. This section includes volume thresholds that require a formal analysis for a *change of use* that generates more than 250 weekday daily trips or more than 25 weekday p.m. peak hour trips. The proposed use generates less than 25 weekday p.m. peak hour trips so even if the site were undeveloped this criterion would not be met. However, as the proposed use generates 398 total weekday daily trips further assessment of the approved site uses are needed to identify whether the +250 weekday daily trip threshold is met.

Within the 2007 decision there is reference to a Traffic Impact Analysis that was prepared by Scott Ferguson, PE for the combined site plan elements. The TIA identified that the proposed conference center would accommodate up to 200 to 225 person events (likely on a Saturday) with the following trip rates:

- 112 Friday midday trips;
- 197 Saturday afternoon trips; and
- 6 weekday commute hour trips.

The referenced study was also noted to generate lower levels of “typical” daily traffic associated with on-site staff (8 full time and 8 part-time), which correlates to the 6 weekday p.m. peak hour trips (40 total weekday daily trips).

In addition to the Ferguson’s original trip estimate associated with the proposed conference center, it is also instructive to consider the trips that could be generated by the facilities developed on the property as the 2007 decision does not preclude those facilities being utilized daily and apart from a conference. In review of available ITE data, the following was noted:



- No daily trip rates are available for an RV park within the ITE manual; a seven-stall RV park generates about 3-4 weekday p.m. peak hour trips, or about 30 to 40 weekday daily trips.
- An approximately 3,200 square-foot chapel (church) generates about 24 weekday daily trips.
- A residence generates about 10 weekday daily trips
- Six cabins generate about 57 weekday daily trips

In total, and excluding any events or trips associated with the conference center, these facilities collectively generate a typical ITE-based rate of about 166 weekday daily trips. Accordingly, the County's +250 trip threshold to elevate this analysis to a formal Transportation Impact Analysis with the proposed use will not be met: Proposed Use (398 Daily Trips) – Existing (Non-Event) Uses (166 Daily Trips) = +232 Weekday Daily Trips.

Returning to traffic generated by the proposed conference center, while events typically do not occur on a daily basis, it is notably that events are currently permitted to occur any and every day of the year. To present a worse-case scenario, Ferguson's original 2007 study assumed that conference center events were more likely to occur during the critical peak summer months when traffic is highest on the system (i.e., when area traffic reaches its highest levels due to the nearby resorts). Events that were considered within Ferguson's original 2007 traffic study included summer camps (youth and family camps) with up to 80 attendees, with campers arriving on Monday and departing on Friday (with additional family visits to and from the facility on Friday). Ferguson's original TIA assumed that these vehicles would remain on-site throughout the duration of the event, with about 56 vehicles arriving on Monday, and 56 vehicles departing on Friday along with 28 additional inbound and outbound visitor trips (Friday = 56 outbound + 28 inbound + 28 outbound = 112 total trips). Realistically, there would be some level of trips throughout the week associated with parental visits, early pick-ups, supply errands, camp counselor arrivals, etc. Regardless, the peak daily trip rate assumed about 112 daily event-related trips, for a total of 278 daily trips (166 Daily Trips + 112 Event trips = 278 Daily Trips).

Accordingly, as the existing use in total were approved to generate about 278 daily trips and the proposed use generates 398 trips, the addition of +120 weekday daily trips (398 daily trips – 278 daily trips) also does not meet the County's 250-daily trip threshold and therefore does not trigger the County's formal TIA requirements. It also should be noted that Ferguson's 2007 TIA studied operational conditions during facility events (during peak Friday and Saturday conditions) and found the supporting transportation system operates acceptably even with build-out of area resorts and these on-site activities.

## CROOK COUNTY TRANSPORTATION REQUIREMENTS

DCC 18.180.010 outlines the following criteria for elevating a Transportation Analysis Letter to a Transportation Impact Analysis:

- (a) The development generates 25 or more peak-hour trips or 250 or more daily trips.

**Response:** As noted above, the proposed use generates less than 25 weekday p.m. peak hour trips (18 total), or approximately 12 new trips. The prior study also assumed up to 278 daily trips, so the proposed change of use does not meet the County's +250 trip threshold.

- (b) An access spacing exception is required for the site access driveway(s) and the development generates 10 or more peak-hour trips or 100 or more daily trips.

**Response:** The site will utilize the existing [approved] access for primary and emergency access. As no changes, and as the spacing of approximately 1,870 feet from the Powell Butte Highway/Alfalfa Road intersection exceeds County access spacing standards this does not apply.

- (c) The development is expected to impact intersections that are currently operating at the upper limits of the acceptable range of level of service during the peak operating hour.

**Response:** There are no locations within the site vicinity identified as deficient today. This criterion does not apply.

- (d) The development is expected to significantly impact adjacent roadways and intersections that have previously been identified as high crash locations or areas that contain a high concentration of pedestrians or bicyclists such as school zones.

**Response:** There are very low reported crashes within the area, with no crashes at the access location or the Powell Butte Highway/Alfalfa Road intersection (and low crashes associated with the curve). Neither area is identified within ODOT's SPIS list.

- (e) A change in zoning or a plan amendment designation.

**Response:** The site was previously approved as a conditional use; this criterion does not apply.

- (f) A TIA is required by ODOT.

**Response:** ODOT does not have jurisdictional authority over any of the surrounding roads. A copy of the report will not be provided to ODOT as it is assumed that they will have no comments outside of their jurisdictional boundary.

As none of these criteria are met, only a Transportation Analysis Letter (TAL) is required to support this application as provided herein.

## TRANSPORTATION ANALYSIS LETTER CRITERIA

Crook County Code does not contain any specific requirements related to a Transportation Analysis Letter. The following typical elements of traffic letters pertaining to safety, access, and sight distance were noted:

- No changes are proposed to site access. The existing access location onto Alfalfa Road will continue to serve the proposed Sunshine Behavioral Health Facility, with gated/secondary access onto the Powell Butte Highway.
- There are no reported crashes at the existing Alfalfa Road access point within the time period from January 2017 to December 2021 (the most recent five-year period available). No crashes were reported at the Powell Butte Highway/Alfalfa Road intersection, though there were crashes surrounding the intersection associated with the curve, and crashes to the west attributed to excessive speeds (including a fatality). The frontage and adjacent portions of the Powell Butte Highway are not identified within ODOT's Safety Priority Index System list.
- Access into the retreat center includes a southbound right-turn deceleration lane, separating through and turning traffic. The access is located on a straight and flat section of road that provides extensive sight lines in either direction. As the access has previously been approved by Crook County further review was not conducted.
- No operational or capacity issues were observed within this rural area; historical counts (2017) show bi-directional volumes on Alfalfa Road of about 86 vehicles, or one car passing the access driveway every 42 seconds today. While high growth in the surrounding destination resorts is

planned, there is ample capacity within the system to support the continued activity within this site.

## TRANSPORTATION IMPACT ANALYSIS CRITERIA

Based on review of the prior site approvals a formal TIA is not triggered by the proposed change of use within the site. However, although conference center uses are permitted to occur any and every day of the year, we recognize that Ferguson's original traffic study assumed less intense usage premised largely on summertime activities and camps. Accordingly, it can be expected that the proposed use of the site will include more consistent activity throughout the year, at least compared to those assumptions underpinning Ferguson's original traffic study (even if those assumptions were not then carried over into conditions of approval or other limitation placed on the actual 2007 land use decision).

Going forward, we expect the actual usage of the property to generate traffic impacts experienced on a daily basis similar to those shown in Table 1 for the proposed facility. While this shows a fairly low trip generation during the critical weekday p.m. peak hour impact (18 trips), there are approximately 398 weekday daily trips that occur within a 24-hour period as various clients and staff access the facility on a 24-hour basis. Accordingly, at the request of the County, we elevated the Trip Generation Report to also include the County's requirements for a formal Transportation Impact Analysis. This level of analysis provides additional safety and operational information on the surrounding system.

## EXISTING CONDITIONS

The transportation system surrounding the property is rural in character, with area roads containing two uncurbed travel lanes, with widening for turn lanes only at prominent intersections. Major transportation facilities surrounding the site include Alfalfa Road and the Powell Butte Highway, both of which are under Crook County jurisdiction within the site vicinity (both fall under Deschutes County jurisdiction to the south).

Table 2 summarizes the existing area roadways included in this study and the pertinent characteristics. Most of the roads within the study area are rural in nature with no designated bike lanes, limited shoulders, no sidewalks, and no on-street parking.

Crook County Code defines the study area of TIAs to include the site access intersection, intersections within the County's access spacing distances, and intersections adjacent to the proposed site. Off-site study intersections should also include locations that are impacted by more than 10% of their existing volume. Additional locations can be identified by the County Engineer that are affected by the development. Per CCC 18.176, the access spacing along a *Major Collector* street is 500 feet. Figure 2 illustrates the study area following these criteria, which contains the site access, frontage, and adjacent Powell Butte Highway intersection with Alfalfa Road.

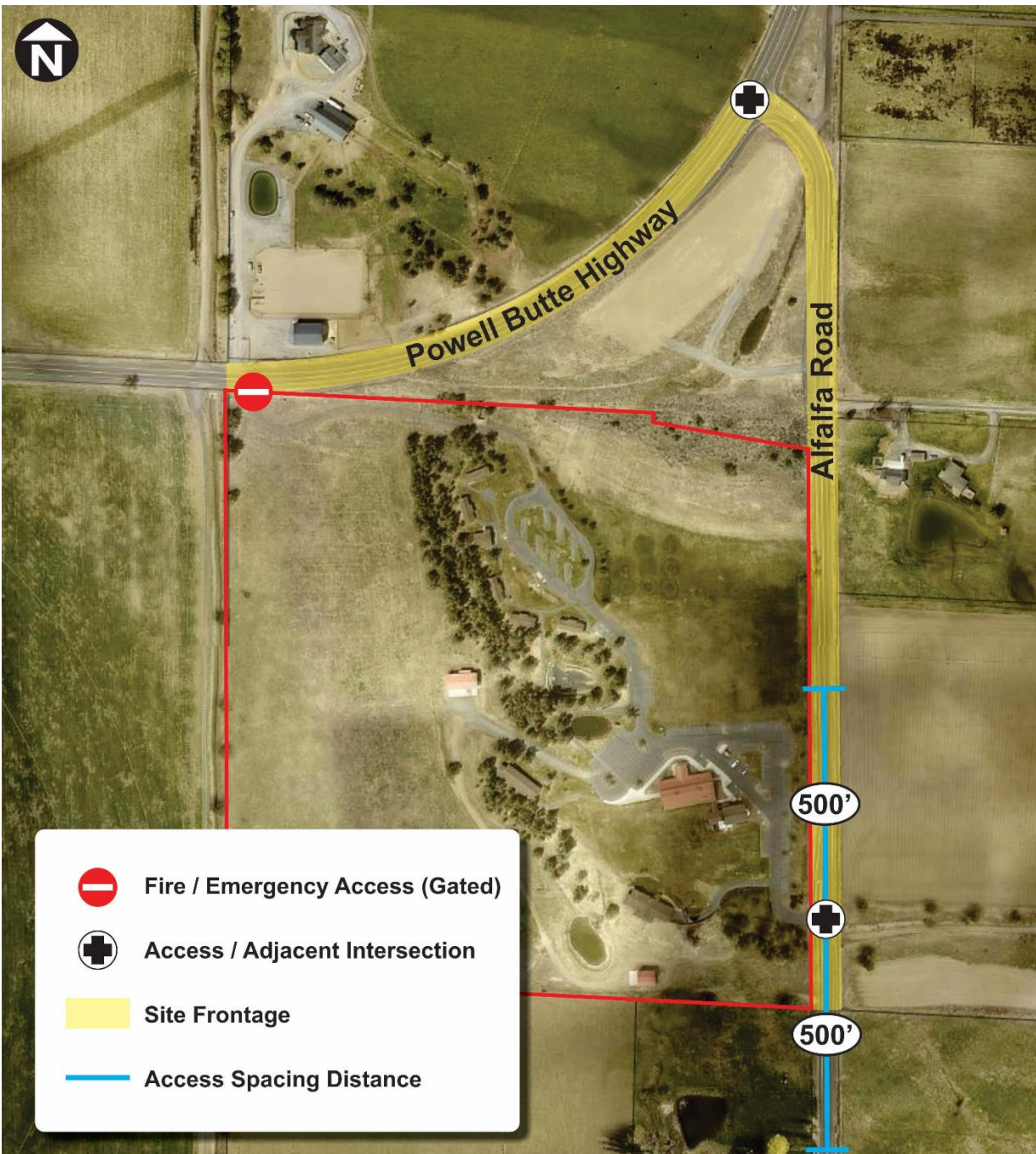


Figure 2. Project Study Area.

**Table 2. Existing Transportation Facility Characteristics**

Roadway	Jurisdiction	Functional Classification	Cross Section	Speed
Powell Butte Highway	Crook County	Minor Arterial	2-lanes	55 mph
Alfalfa Rd	Crook County	Major Collector	2-lanes	55 mph

Supporting this study area, the County’s adopted 2017 Transportation System Plan shows the roadway hierarchy in the area consisting of local access roads (and for the subject property a commercial driveway)

that feed onto Alfalfa Road, which connects to the Powell Butte Highway, and then connects to the highway systems north (OR 126) or south (US 20) to provide connections to the surrounding urban areas.

## TRANSPORTATION SAFETY

Transportation safety was reviewed within the study area through review of the ODOT crash database and verification of intersection sight distance. Historical crash records were obtained for all of Crook County between January 2018 and December 2022, reflective of the most recent five-year period available. Crashes required for reporting to the database include those involving any level of personal injury or property damage exceeding \$2,500. Crashes were reviewed throughout the study area, which identified the following incidents:

- A non-injury crash was reported just north of the Powell Butte Highway/Alfalfa Road intersection on June 22, 2018 at 1:00 a.m. The crash records indicate that the motorist was straddling/driving left of the centerline before leaving the pavement and colliding with street signs and a fence. Weather and surface conditions were not a factor in the collision, and the crash records cite alcohol use.
- A crash involving a deer was reported at the northern edge of the Powell Butte Highway curve on August 1, 2021 at 5:00 p.m. No personal injury resulted from this collision.
- A crash involving a deer occurred on September 7, 2022 at 6:00 p.m. The crash records indicate that excessive speed was a factor, and the crash did result in personal injury (Serious Injury, Injury "A") as the vehicle overturned ejecting the driver.
- Just west of the study area along the Powell Butte Highway, a non-injury collision occurred at the private driveway at 2:00 p.m. on July 30, 2021. The crash records indicate that excessive speed and improper passing were contributing factors in the collision.
- A fatal crash occurred approximately 200 feet west of the northwest corner of the property (outside the study area) on March 29, 2019 at 5:00 a.m. The crash records indicate that the eastbound motorist struck the embankment, a fence and tree, and overturned, resulting in the death of the 19-year old driver and 21-year old passenger. The road was icy at the time of the collision and is listed as a contributing factor.

There were no reported crashes along Alfalfa Road between the Powell Butte Highway and the curves well south of the site. It was noted that the reported crashes along the Powell Butte Highway all involve single-vehicle incidents with fixed objects and deer along and approaching the curved section of the Powell Butte Highway. While the overall crash frequency is low throughout this five-year period, and there are no intersection-related collisions at Alfalfa Road (intersection crash rate = 0.00 per million entering vehicles), the two rollover crashes indicate the need for continued efforts to improve the clear zones and shoulder recovery areas surrounding the Powell Butte Highway, particularly within the right-of-way constrained areas where fencing is situated close to the edge of pavement.

In addition to review of historical crashes, Crook County requires an assessment of intersection sight distance. This review applies the minimum recommended sight distance criteria based on the standard reference *A Policy on Geometric Design of Highways and Streets, 7<sup>th</sup> Edition* published by the American Association of State Highway and Transportation Officials (AASHTO) in 2018 (commonly referred to as the *Green Book*). This reference provides the recommended sight distances as measured from a height of 3.5 feet 14.5 feet from the edge of travel way at the access point serving the proposed development, based on the speed of the roadway. The AASHTO reference is based on conflicts between motorists traveling along the roadway and motorists completing movements at the intersection.



The topography of the area is generally flat, and the speed along Alfalfa Road is 55 miles per hour. Figure 3 illustrates the sight distance measurements and recommended minimum dimensions from the Alfalfa Road access, which will be retained with the proposed change of use.

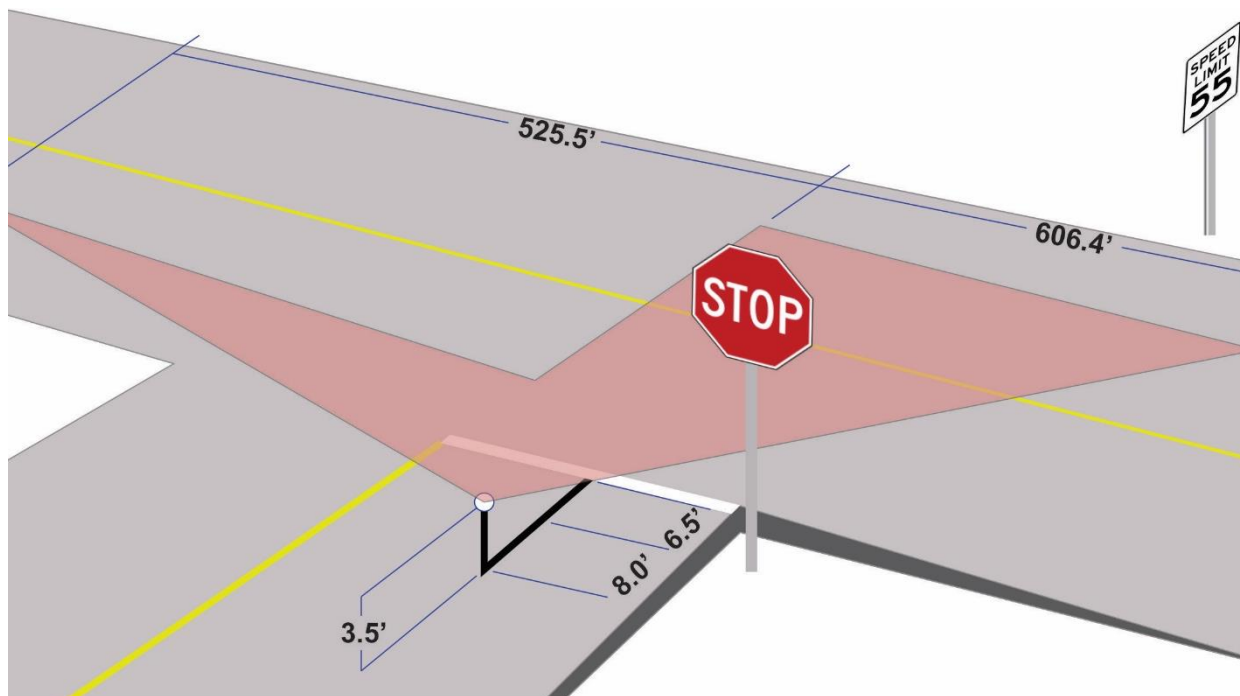


Figure 3. AASHTO minimum recommended intersection sight distance dimensions at the site access.

The site was visited and inventoried in early July 2024. Figures 4 and 5 illustrate the current views from the driveway facing toward the north and south. These figures show that there are extensive views available in both directions that extend well beyond the minimum recommended AASHTO distances. There is also a clear view toward the farm access toward the east (see Figure 6); accordingly, AASHTO sight distance dimensions are met.

As the driveway is situated within the low point of a mild sag vertical curve, approaching motorists from either direction are also afforded adequate Stopping Sight Distance that exceeds minimum AASHTO recommendations of 495 feet for a 55 mile per hour design speed. The photos show that these dimensions are available on both the northbound or southbound Alfalfa Road approach.



Figure 4. Alfalfa Road from the site access facing north toward the Powell Butte Highway.



Figure 5. Alfalfa Road from the site access facing south.



Figure 6. Alfalfa Road facing due east toward the adjacent farm access.

Within the rural area surrounding the site there are no sidewalks, bicycle lanes, or transit facilities, and on-street parking is not permitted or accommodated. These amenities are not included as part of the County's standard roadway design.

The site access intersection onto Alfalfa Road occurs with a paved asphalt driveway access, as shown within the sight distance review figures. The connection to Alfalfa Road has been improved with a southbound right-turn deceleration lane, which is intended to separate higher-speed southbound through motorists from those decelerating to turn into the site. This deceleration lane has been provided from the north, where it serves the majority of the inbound motorists. Access onto Alfalfa Road occurs from a single-lane driveway that must yield to through traffic on Alfalfa Road.

The configuration of the Powell Butte Highway/Alfalfa Road intersection is also stop-sign controlled, with the Powell Butte Highway retaining uncontrolled through movements around the curve. The intersection was reconstructed by Brasada Ranch to form a single perpendicular connection with the Powell Butte Highway, along with a southbound left-turn lane and regrading along the Powell Butte Highway to improve sight lines around the curved roadway alignment. The intersection includes advance wayfinding signage for Brasada Ranch, Intersection Ahead signage, and a northbound right-turn deceleration lane onto Alfalfa Road.

Alfalfa Road curves prior to its connection to the Powell Butte Highway, with curve marking signs and a "Stop Ahead" sign helping indicate the change in roadway design to approaching northbound motorists. Alfalfa Road includes separate left- and right-turn lanes at the intersection to help separate the lower-delay right-turn maneuvers. A private driveway is located near the intersection and serves two tax lots to the northeast.

Crook County requires that traffic counts be no more than 12 months old from the date the report is submitted. Traffic counts were collected on Tuesday, July 2, 2024 during both the morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) to comply with this requirement and the timing of the application. Counts were only collected at the Powell Butte Highway/Alfalfa Road intersection, with volumes at the driveways developed through review of the trips turning onto and off of the Powell Butte Highway. While the counts were collected early in a holiday week, they do reflect peak July summertime travel conditions, and travel for the overall 4<sup>th</sup> of July holiday are expected to be elevated, particularly with increased tourists throughout region. However, to ensure that the conditions adequately reflect “typical” Powell Butte Highway traffic, the counts were also compared to historical traffic counts, as summarized in Figure 7. These show little overall change between the current counts and those collected in 2017, with the older 2017 counts showing a peak that occurred earlier in the evening.

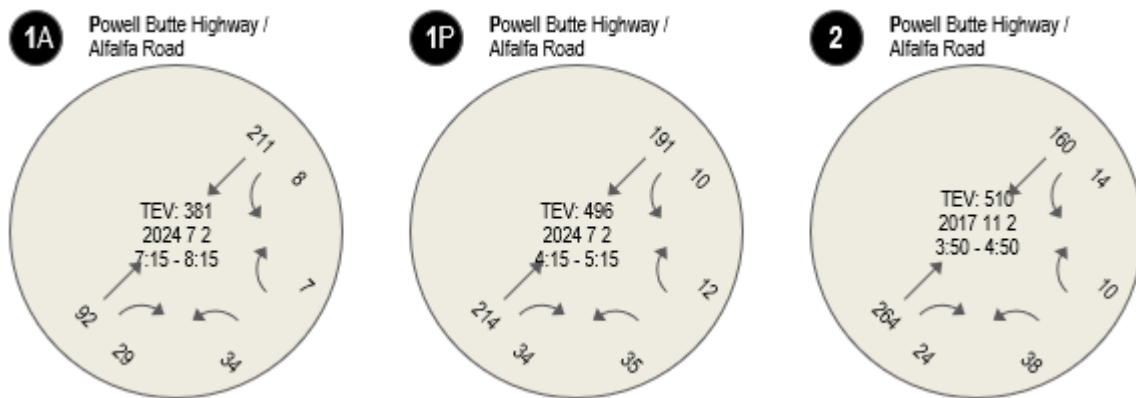


Figure 7. Current and Historical Traffic Volumes

The traffic counts show that the weekday p.m. peak hour is more critical than conditions during the morning period, with just over 30% more traffic. Accordingly, with weekday evening traffic volumes reflecting the most critical analysis period, and with the same number of trips generated in the morning and evening (with more outbound trips using the stop-controlled Alfalfa Road approach in the evening peak hour), this TIA only focuses on the weekday p.m. peak hour, consistent with the analysis within the County’s Transportation System Plan.

Applying the existing traffic counts, an operational analysis was performed using the Highway Capacity Manual 6<sup>th</sup> Edition analysis methodologies. This analysis reflects conditions during the peak fifteen-minutes of the peak hour. Results of this operational assessment show fairly-low stop-controlled delays at the Powell Butte Highway/Alfalfa Road intersection (Level of Service “B” on the stop-controlled Alfalfa Road approach) and limited queuing (95<sup>th</sup> percentile queue of one vehicle), consistent with field observations during the traffic count that observed a maximum queue length of three vehicles, with queues generally only comprised of a single vehicle (see Table 3).

Modifications to the site and site operations are expected to be complete in 2025. Future build-out year traffic conditions (without the proposed Sunshine Behavioral Health in operation) were developed by applying a 3.5% annual growth rate to the observed 2024 traffic volumes. This growth rate is intended to reflect the higher growth anticipated along Alfalfa Road owing to the location of Brasada Ranch. No development within Hidden Canyon Resort is anticipated to occur by 2025, as none of the utilities or grading has been started for its initial phases. This growth rate is higher than historical growth anticipated throughout the County, which is generally less than 2 percent (2017 to 2024 growth has been relatively flat). Figure 8 illustrates the resultant traffic volumes at the study area intersections, and Table 3 provides a summary of the “Without Project” operational conditions.



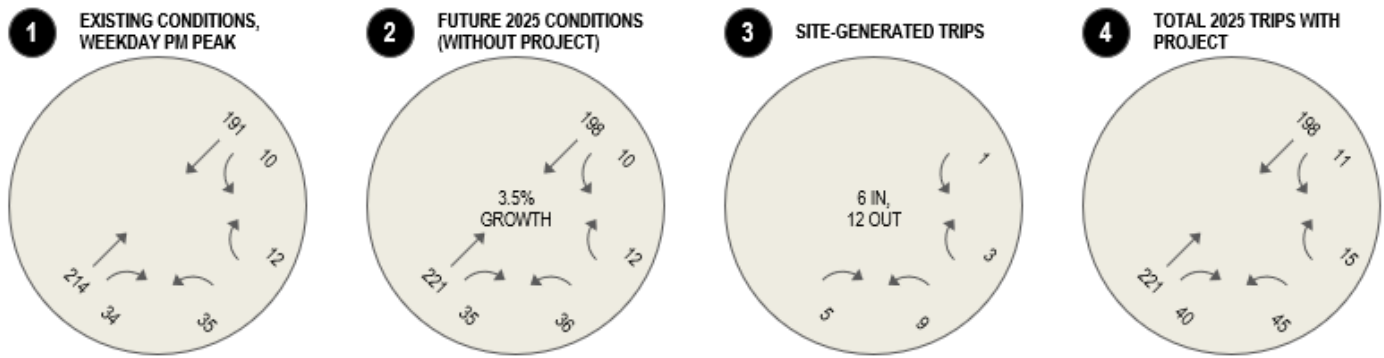


Figure 8. Powell Butte Highway/Alfalfa Road Traffic Volumes, Weekday PM Peak Hour

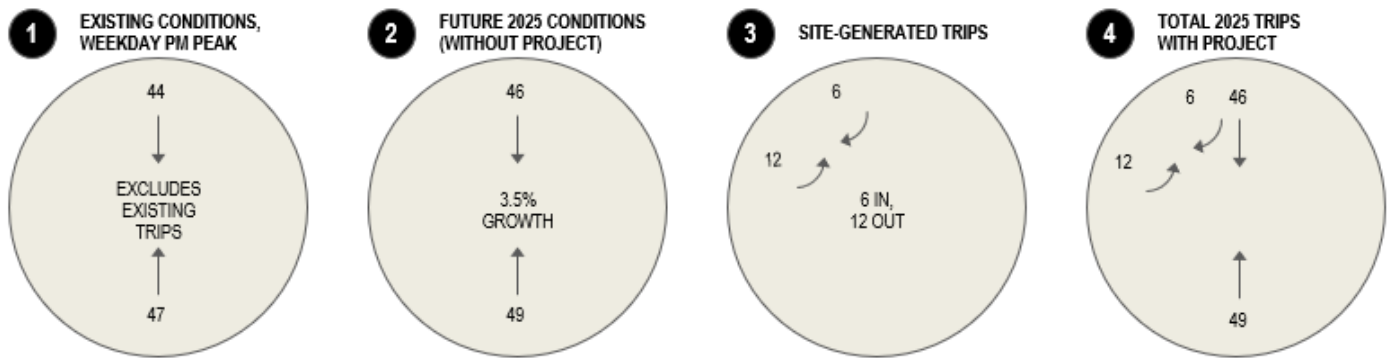


Figure 9. Alfalfa Road/Site Access Driveway Traffic Volumes, Weekday PM Peak Hour

Note: Excludes existing trips to show the full impact of the proposed use.

Trip generation estimates for vehicular trips to and from Sunshine Behavioral Health were assigned to the transportation system in accordance with the existing travel patterns, which are biased toward Bend with about a 75/25 split. Figures 8 and 9 illustrate how the site-generated trips are expected to impact the surrounding intersections, and the figures also illustrate the resultant “with project” traffic volumes. Table 3 includes a summary of the traffic conditions at the study intersections within this “with project” scenario.

Table 3. Summary of Intersection Operations, Weekday PM Peak Hour

Intersection	Jurisdiction/ Performance Standards	LOS	Delay (s/veh)	v/c Ratio	95 <sup>th</sup> % Queue (ft)
<b>Existing Conditions</b>					
Powell Butte Hwy/ Alfalfa Road	Crook County v/c Ratio < 0.95	WBL: LOS B WBR: LOS A	WBL: 12.0 s WBR: 9.5 s	WBL: 0.07 WBR: 0.02	WBL: 25 ft WB R: 25 ft
<b>No-Build Conditions</b>					
Powell Butte Hwy/ Alfalfa Road	Crook County v/c Ratio < 0.95	WBL: LOS B WBR: LOS A	WBL: 12.2 s WBR: 9.6 s	WBL: 0.07 WBR: 0.02	WBL: 25 ft WB R: 25 ft
<b>With-Project Conditions</b>					
Powell Butte Hwy/ Alfalfa Road	Crook County v/c Ratio < 0.95	WBL: LOS B WBR: LOS A	WBL: 12.2 s WBR: 9.6 s	WBL: 0.07 WBR: 0.02	WBL: 25 ft WB R: 25 ft
Alfalfa Road Access Dwy	Crook County v/c Ratio < 0.95	EBLR: LOS A	EBLR: 9.1 s	EBLR: 0.02	EBLR: 25 ft



As shown, both the Powell Butte Highway/Alfalfa Road intersection and the site access driveway contain adequate capacity to support the proposed tenant change while remaining well within Crook County operational standards, operating at Level of Service “B” or better. No mitigation or traffic control changes are needed to support this slightly more intense site use.

## CROOK COUNTY REVIEW POLICY AND PROCEDURE

Crook County Code includes several review criteria for a Transportation Impact Analysis. These criteria, along with our response, are provided below.

(a) The road system is designed to meet the projected traffic demand at full build-out.

**Response:** As included within this report, all of the study intersections operate acceptably with the proposed tenant change.

(b) Adequate intersection and stopping sight distance is available at all driveways.

**Response:** Clear and unobstructed sight lines are available at the driveway that extend beyond the minimum recommended AASHTO Intersection Sight Distance dimensions. The available sight lines on both approaches also extend beyond the minimum recommended AASHTO Stopping Sight Distance dimensions.

(c) Proposed driveways meet the county’s access spacing standards in Chapter [18.176](#) CCC, Access Management Standards, or sufficient justification is provided to allow a deviation from the spacing standard.

**Response:** The site contains a single [existing] driveway that is located 1,870 feet from the Powell Butte Highway/Alfalfa Road intersection. This easily exceeds the County’s 500-foot access spacing dimension. A gated/emergency access is also available to the Powell Butte Highway, but as a gated emergency only connection would not be subject to the County’s access spacing standards.

(d) Opportunities for providing joint or crossover access have been pursued.

**Response:** The existing access is not located at a point where shared or crossover access would be viable. For safety and security, no crossover easements are recommended for this site.

(e) The site does not rely upon the surrounding roadway network for internal circulation.

**Response:** The existing campus has an extensive internal transportation network that can support patient, employee, and visitor needs. This site will not be reliant on the County roadway system for internal site circulation.

(f) The road system provides adequate access to buildings for residents, visitors, deliveries, emergency vehicles, and garbage collection.

**Response:** The site was previously designed to support large events, and contains substantial off-street parking within paved lots. The layout of the site also provides looped access systems that allow larger vehicles (such as trucks) to make a safe “U-turn” within the site.

(g) A pedestrian path system is provided that links buildings with parking areas, entrances to the development, open space, recreational facilities, and other community facilities consistent with the requirements of CCC 18.184.010, Pedestrian access and circulation.

**Response:** As an approved event center there are extensive walkways that are separate from the vehicular system. These pathways connect the parking to the internal buildings. Marked crossings are provided within the main parking area.

## NEXT STEPS

I trust that this letter provides Crook County with adequate information to address transportation impacts associated with repurposing the Catholic Retreat Center to Sunshine Behavioral Health Group, LLC's SUD treatment center. Please let me know if you have any questions on this project at (503) 997-4473 or via email at [joe@transightconsulting.com](mailto:joe@transightconsulting.com).

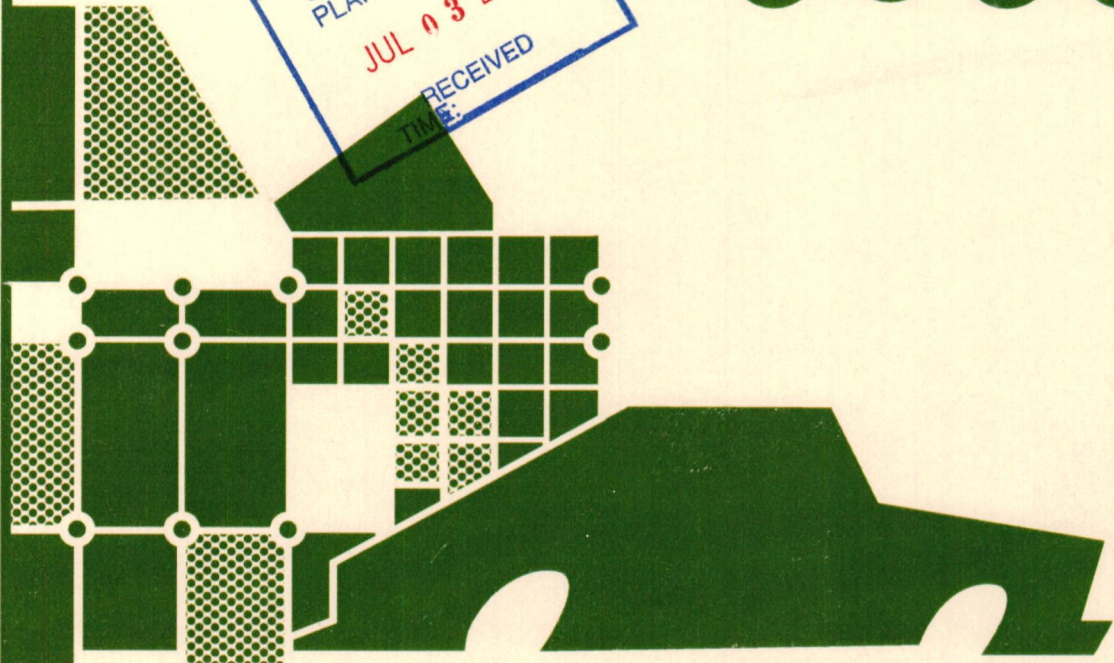
### Attachments:

- Excerpts from 2007 Catholic Retreat Center TIA, Ferguson & Associates, Inc.
- Traffic Count Worksheets
- Operational LOS Worksheets

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C-CU-2337-07

CROOK COUNTY  
PLANNING DEPT.  
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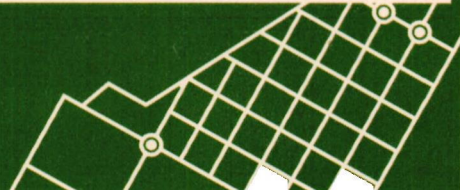


## TRANSPORTATION **IMPACT ANALYSIS**

<b>project</b>	<b>CATHOLIC RETREAT CAMPUS</b>
<b>location</b>	Alfalfa Road Powell Butte, OR
<b>client</b>	David Evans & Assoc.
<b>date</b>	April 2007

P.O. Box 1336 Bend, OR 97709 PHONE 541.617.9352 FAX 541.610.1504 EMAIL [info@traffic-team.us](mailto:info@traffic-team.us)

 **FERGUSON**  
**& ASSOCIATES, INC.**  
Transportation Planning/Traffic Engineering





## EXECUTIVE SUMMARY

This study addresses the traffic impacts of a proposed Catholic Retreat Center that would be located off Alfalfa Road in Crook County, Oregon. This study focuses on traffic operations at the site access and nearby higher-order (collector and arterial streets) intersections. The analysis was conducted for the years 2007 and 2012 for conditions with and without the proposed Catholic Retreat Center.

### STUDY AREA

The site is located off Alfalfa Road, south of Hahlen Avenue. Based on the requirements of *Crook County Transportation Impact Analysis Requirements* and conversation with County staff, the following study intersections were analyzed for this report:

- Alfalfa Road and Powell Butte Highway (existing); and
- Site access off Alfalfa Road.

### FINDINGS AND CONCLUSIONS

#### Trip Generation

The proposed Catholic Retreat Center would include: offices for Diocese Staff (8 full-time and 8 part-time); an office and a part-time residence for the Bishop; meeting rooms and conference facilities for up to 225 people; summer camp facilities; and cabins and RV parking for summer camp. The planned functions of the development include: offices for Baker Diocese operations in Central Oregon; retreat/meetings for parishioners in Central Oregon; and youth and family summer camps.

The offices would be occupied on the average weekday throughout the year. The summer camp is expected to operate during the summer months only. The retreat functions would occur throughout the year with the peak event that attracts more than 200 people occurring on a Saturday.

The proposed office, retreat and summer camp facility was forecast to generate 6 commuter peak hour trips, 112 Friday midday peak hour trips (summer only) and 197 Saturday afternoon peak hour trips.

**Traffic Analysis**

All study intersections were forecast to meet Crook County Level of Service standards in the year 2007 and the year 2012 for each time period for conditions with and without the proposed project.

**Sight Distance**

The existing sight access off Alfalfa Road has a wall on either side of the driveway that is approximately three to four feet high. These walls limit both intersection sight distance and stopping sight distance when measured 15 feet from the edge of the traveled way. Since the wall widens as it gets closer to Alfalfa Road, both intersection sight distance and stopping sight distance guidelines are met when measured five feet from the edge of the traveled way. This wall is on the site and can be modified to allow sight distance to meet AASHTO guidelines.

If the site access is moved 150 feet to the south of the existing driveway, both intersection and stopping sight distance would be met.



## SITE GENERATED TRAFFIC

The time periods for evaluation were selected in consultation with Crook County Roadmaster based on the significant events that are forecast to occur at the Catholic Retreat Center. Trip generated by the proposed project were forecast for three different time periods:

- Commuter Peak Hour;
- Friday midday Peak Hour; and
- Saturday afternoon Peak Hour

These time periods are consistent with the peak hour traffic flow on the adjacent streets and highways (Commuter Peak Hour) and peak trip generation for the proposed development (Friday midday and Saturday afternoon). The forecast considered pass-by trips and modal split. The trips were then distributed and assigned to the study area network. Details are presented below.

The proposed development would include offices for the full-time and part-time diocesan staff, office and part-time residence for the Bishop, retreat facilities and summer camp facilities. Each was forecast to generate trips as described below.

**Commuter Peak Hour** – The site generated traffic during the commuter peak hour would be primarily from the office operations. The site would include 16 offices. One would be for the Bishop who is only expected to be on site occasionally. When he is there, he will stay on site. The remaining 15 offices would be used by full-time and part-time diocesan staff. Presently there are 12 diocesan staff members, 6 are full-time and 6 are part-time. It is assumed that as staff increased, the split between full-time and part-time would remain the same. Therefore there would be 8 full-time staff members and 7 part-time staff members or 12 full-time equivalents. The office employees were forecast to generate 6 p.m. peak hour trips and 40 daily trips, as shown in Table 3.

**TABLE 3 – OFFICE SPACE TRIP GENERATION FORECAST**

ITE LAND USE*	TRIP ENDS RATE (TRIPS PER T.S.F.)		IN/OUT SPLIT (PERCENT)	SIZE	PM PEAK HOUR TRIP ENDS			DAILY
	DAILY	PM PEAK HOUR			IN	OUT	TOTAL	
710	3.32	0.46	17/83	12	1	5	6	40

Notes: \*Source: Trip Generation (ITE, 7th Edition, 2003), land use code 710, general office.

**Friday Midday Peak Hour** – The site generated traffic during the midday on Fridays in the summertime would be primarily from the summer camp facilities. The site would include facilities for operating a youth and family camp. The camp would operate during the summer months and serve both youth and families. Summer camp could accommodate up to 80 attendees. Camp would run during the week. Campers would arrive midday Monday and depart midday Friday. It was assumed

that the highest trip generation would be a week that only youth attended camp and that no campers would drive themselves to camp. Of the 80 youth who would attend, some would carpool. Table 4 shows the type of carpools that would be likely for this type of event and the percentage of attendees who would use each type. When carpooling was considered, there would be 56 vehicles which would enter the site at the beginning of the event and 56 vehicles departing at the end.

**TABLE 4 – CALCULATIONS OF VEHICLE TRIPS FOR SUMMER CAMP FACILITIES**

NUMBER OF ATTENDEES PER VEHICLE (CARPOOL TYPE)	PERCENT OF TOTAL ATTENDEES	NUMBER OF PEOPLE PER CARPOOL TYPE	NUMBER OF VEHICLES
1	50	40	40
2	25	20	10
3	15	12	4
4	10	8	2
<b>TOTAL</b>		<b>80</b>	<b>56</b>

On Fridays during the summer, families of youth campers would be invited to join the campers for Mass at 11:00 a.m. and lunch at 12:00 pm. It was assumed that half of the campers would have families that choose to attend Mass and/or lunch and that lunch would end around 12:45 p.m. All campers and their families would depart after 12:45 p.m. The 56 vehicles were forecast to generate 28 inbound trips between the hours of 10:45 a.m. and 12:00 p.m. and 28 inbound trips between 12:45 p.m. and 1:45 p.m. and 56 outbound trips between the hours of 12:45 p.m. and 1:45 p.m. on Friday afternoon, as shown in Table 7. The 80 youth campers would generate 112 daily trips, as shown in Table 5.

**TABLE 5 – SUMMER CAMP FACILITIES TRIP GENERATION FORECAST, FRIDAY MIDDAY**

FACILITY	MAXIMUM OCCUPANCY	TOTAL VEHICLES	INBOUND TO ATTEND MASS & LUNCH (10:45 AM - 12:00 PM)	INBOUND TO PICK UP (12:45 - 1:45 PM)	OUTBOUND (12:45 - 1:45 PM)	TOTAL TRIPS
Youth Summer Camp	80 campers	56	28	28	56	112

**Saturday Afternoon Peak Hour** – The site generated traffic during the afternoon peak hour on Saturdays would be primarily from the Retreat facilities. The site would include retreat facilities for up to 225 people including staff. The most highly attended retreats (the ones expected to attract up to 225 people) would be held on a Saturday between 9:00 a.m. and 4:00 p.m. Since it has been observed that arrivals to events, such as retreat meetings, tend to be more spread out than departures, it was assumed the retreat facility would generate the most traffic between the hours of 4:00 p.m. and 5:00 p.m. on Saturday afternoon.



It was assumed that of the 225 people who would attend the retreat meeting, 15 would be staff. Of the 210 attendees, some would carpool. Table 6 shows the type of carpools that would be likely for this type of event and the percentage of attendees who would use each type. When carpooling was considered, there would be 182 vehicles which would enter the site at the beginning of the event and 182 vehicles departing at the end.

**TABLE 6 – CALCULATION OF VEHICLES TRIPS FOR RETREAT CENTER FACILITIES**

<b>NUMBER OF ATTENDEES PER VEHICLE (CARPOOL TYPE)</b>	<b>PERCENT OF TOTAL ATTENDEES</b>	<b>NUMBER OF PEOPLE PER CARPOOL TYPE</b>	<b>NUMBER OF VEHICLES</b>
1	75	157	157
2	20	42	21
3	5	11	4
<b>TOTAL</b>		<b>210</b>	<b>182</b>

The 182 vehicles were forecast to generate 182 outbound trips between the hours of 4:00 p.m. and 5:00 p.m. on a Saturday afternoon. The 15 staff people would generate 15 inbound trips and 15 outbound trips. The 210 attendees and the 15 staff people were forecast generate 392 daily trips, as shown in Table 7.

**TABLE 7 – RETREAT FACILITIES TRIP GENERATION FORECAST, SATURDAY AFTERNOON**

<b>FACILITY</b>	<b>NUMBER</b>	<b>TOTAL VEHICLES</b>	<b>INBOUND (7:00 - 9:00 A.M.)</b>	<b>OUTBOUND (4:00 - 5:00 P.M.)</b>	<b>TOTAL TRIPS</b>
Retreat Meeting Rooms	210 attendees	182	182	182	364
Retreat Meeting Rooms	15 staff	15	15	15	30
<b>TOTAL</b>		<b>197</b>	<b>197</b>	<b>197</b>	<b>394</b>

The proposed office, retreat and summer camp facility was forecast to generate 6 commuter peak hour trips, 112 Friday midday peak hour trips (summer only) and 197 Saturday afternoon peak hour trips, as shown in Table 8.

**TABLE 8 – TRIP GENERATION FORECAST SUMMARY**

<b>LAND USE</b>	<b>PEOPLE</b>	<b>IN/OUT SPLIT</b>	<b>TRIP-ENDS GENERATION</b>		
			<b>IN</b>	<b>OUT</b>	<b>TOTAL</b>
Commuter Peak Hour - Office Operations	12	17/83	1	5	6
Friday Midday Peak Hour - Summer Camp Operations	80	50/50	28	56	112
Saturday Afternoon Peak Hour - Retreat Facilities Operations	225	0/100	0	197	197

**Pass-by Trips** - Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers close access to the generator. It was assumed that no trips were pass-by trips.

**Modal Split** - No reduction in vehicle trips was made to account for a potential shift away from the automobile. Total vehicles trips for each function of the proposed development assumed that some carpooling would occur.

**Trip Distribution and Assignment** - Commuter peak hour trips generated by the proposed project were distributed and assigned to the roadway system, as shown in Figure 1.7. Friday midday peak hour trips generated by the proposed project were distributed and assigned to the roadway system, as shown in Figure 1.8. Saturday afternoon peak hour trips generated by the proposed project were distributed and assigned to the roadway system, as shown in Figure 1.9.

Distribution percentages are derived from turning movements documented in traffic counts performed for this report combined with a general knowledge of traffic distribution patterns in Crook County and information from previously approved studies. Also taken into consideration was the fact that the Roman Catholic Diocese of Baker covers the entire eastern portion of the state, from the Cascade Mountains to the state line. The traffic operations calculations presented within this report are not highly sensitive to distribution assumptions, given the relatively small percentage increase in total intersection traffic at higher-order street intersections.

## **TRAFFIC FLOW FORECAST WITH PROJECT**

PM peak hour traffic flow generated by the proposed project was added to the no-project scenarios as discussed below.

**Year 2007 Flow with Project Forecast (Commuter Peak Hour)** - Year 2007 flow with project forecast, as illustrated in Figure 20, was derived by adding the project trips (Figure 1.7) to the year 2007 without project forecast flow (Figure 1.11).

**Year 2007 Flow with Project Forecast (Friday midday Peak Hour)** - Year 2007 flow with project forecast, as illustrated in Figure 21, was derived by adding the project trips (Figure 1.8) to the year 2007 without project forecast flow (Figure 1.12).



**Northbound Street:** Powell Butte Highway  
**Southbound Street:** Powell Butte Highway  
**Eastbound Street:**  
**Westbound Street:** Alfalfa Road  
**Count Date:** Tuesday, July 2, 2024  
**Weather Conditions:** Clear and Sunny  
**Counted By:** JWB

All Vehicles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road				Total
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn	
7:00 AM	1	67				20	2						10		2		102
7:05 AM																	
7:10 AM																	
7:15 AM	3	77				34	6						10		1		131
7:20 AM																	
7:25 AM																	
7:30 AM	1	67				38	8						7		3		124
7:35 AM																	
7:40 AM																	
7:45 AM	3	56				27	13						7		1		107
7:50 AM																	
7:55 AM																	
8:00 AM	2	55				29	15						9		2		112
8:05 AM																	
8:10 AM																	
8:15 AM	2	55				15	8						8		2		90
8:20 AM																	
8:25 AM																	
8:30 AM	0	54				31	14						5		5		109
8:35 AM																	
8:40 AM																	
8:45 AM	2	39				27	5						9		2		84
8:50 AM																	
8:55 AM																	

Heavy Vehicles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road				
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn	
7:00 AM																	1
7:05 AM																	
7:10 AM																	
7:15 AM	1	1				2	1										
7:20 AM																	
7:25 AM																	
7:30 AM		1															
7:35 AM																	
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7:45 AM																	1
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7:55 AM																	
8:00 AM	1	1															
8:05 AM																	
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8:20 AM																	
8:25 AM													1				
8:30 AM																	
8:35 AM																	
8:40 AM																	
8:45 AM		2															
8:50 AM																	
8:55 AM																	

On-Street Bicycles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road				
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn	
7:00 AM																	
7:05 AM																	
7:10 AM																	
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8:50 AM																	
8:55 AM																	

Pedestrians and Cyclists at Crossings	Pedestrian Crossings			
	Northern Crosswalk	Southern Crosswalk	Eastern Crosswalk	Western Crosswalk
	Powell Butte Highway	Powell Butte Highway	Alfalfa Road	0
7:00 AM				
7:05 AM				
7:10 AM				
7:15 AM				
7:20 AM				
7:25 AM				
7:30 AM				
7:35 AM				
7:40 AM				
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8:55 AM				





**Northbound Street:** Powell Butte Highway  
**Southbound Street:** Powell Butte Highway  
**Eastbound Street:**  
**Westbound Street:** Alfalfa Road  
**Count Date:** Tuesday, July 2, 2024  
**Weather Conditions:** Clear and Sunny  
**Counted By:** JWB

All Vehicles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road				Total
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn	
4:00 PM	4	28				46	7						12		2		99
4:05 PM																	
4:10 PM																	
4:15 PM	4	50				85	8						3		3		153
4:20 PM																	
4:25 PM																	
4:30 PM	3	45				53	8						12		2		123
4:35 PM																	
4:40 PM																	
4:45 PM	1	55				76	7						10		5		154
4:50 PM																	
4:55 PM																	
5:00 PM	2	41				66	11						10		2		132
5:05 PM																	
5:10 PM																	
5:15 PM	5	45				68	6						9		2		135
5:20 PM																	
5:25 PM																	
5:30 PM	3	42				58	7						8		3		121
5:35 PM																	
5:40 PM																	
5:45 PM	4	43				59	5						9		4		124
5:50 PM																	
5:55 PM																	

Heavy Vehicles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road			
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn
4:00 PM		1				1									1	
4:05 PM																
4:10 PM																
4:15 PM						1										
4:20 PM																
4:25 PM																
4:30 PM		1														
4:35 PM																
4:40 PM																
4:45 PM						1										
4:50 PM																
4:55 PM																
5:00 PM		2														
5:05 PM																
5:10 PM																
5:15 PM																
5:20 PM																
5:25 PM																
5:30 PM		1				2							1			
5:35 PM																
5:40 PM																
5:45 PM		1														
5:50 PM																
5:55 PM																

On-Street Bicycles	Southbound: Powell Butte Highway				Northbound: Powell Butte Highway				Eastbound:				Westbound: Alfalfa Road			
	SB LT	SB TH	SB RT	U-Turn	NB LT	NB TH	NB RT	U-Turn	EB LT	EB TH	EB RT	U-Turn	WB LT	WB TH	WB RT	U-Turn
4:00 PM																
4:05 PM																
4:10 PM																
4:15 PM																
4:20 PM																
4:25 PM																
4:30 PM																
4:35 PM																
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5:45 PM																
5:50 PM																
5:55 PM																

Pedestrians and Cyclists at Crossings	Pedestrian Crossings			
	Northern Crosswalk	Southern Crosswalk	Eastern Crosswalk	Western Crosswalk
	Powell Butte Highway	Powell Butte Highway	Alfalfa Road	0
4:00 PM				
4:05 PM				
4:10 PM				
4:15 PM				
4:20 PM				
4:25 PM				
4:30 PM				
4:35 PM				
4:40 PM				
4:45 PM				
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5:20 PM				
5:25 PM				
5:30 PM				
5:35 PM				
5:40 PM				
5:45 PM				
5:50 PM				
5:55 PM				

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	35	12	214	34	10	191
Future Vol, veh/h	35	12	214	34	10	191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	38	13	235	37	11	210

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	467	235	0	0	272
Stage 1	235	-	-	-	-
Stage 2	232	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	558	809	-	-	1303
Stage 1	809	-	-	-	-
Stage 2	811	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	554	809	-	-	1303
Mov Cap-2 Maneuver	554	-	-	-	-
Stage 1	809	-	-	-	-
Stage 2	805	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	554	809	1303	-
HCM Lane V/C Ratio	-	-	0.069	0.016	0.008	-
HCM Control Delay (s)	-	-	12	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	36	12	221	35	10	198
Future Vol, veh/h	36	12	221	35	10	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	40	13	243	38	11	218

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	483	243	0	0	281
Stage 1	243	-	-	-	-
Stage 2	240	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	546	801	-	-	1293
Stage 1	802	-	-	-	-
Stage 2	805	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	541	801	-	-	1293
Mov Cap-2 Maneuver	541	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	798	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	541	801	1293
HCM Lane V/C Ratio	-	-	0.073	0.016	0.008
HCM Control Delay (s)	-	-	12.2	9.6	7.8
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	36	12	221	35	10	198
Future Vol, veh/h	36	12	221	35	10	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	40	13	243	38	11	218

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	483	243	0	0	281
Stage 1	243	-	-	-	-
Stage 2	240	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	546	801	-	-	1293
Stage 1	802	-	-	-	-
Stage 2	805	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	541	801	-	-	1293
Mov Cap-2 Maneuver	541	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	798	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	541	801	1293	-
HCM Lane V/C Ratio	-	-	0.073	0.016	0.008	-
HCM Control Delay (s)	-	-	12.2	9.6	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y <sup>Y</sup>			4 <sup>4</sup>	↑	↑
Traffic Vol, veh/h	12	0	0	49	46	6
Future Vol, veh/h	12	0	0	49	46	6
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	-	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	14	0	0	58	54	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	112	54	61	0	0
Stage 1	54	-	-	-	-
Stage 2	58	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	890	1019	1555	-	-
Stage 1	974	-	-	-	-
Stage 2	970	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	890	1019	1555	-	-
Mov Cap-2 Maneuver	890	-	-	-	-
Stage 1	974	-	-	-	-
Stage 2	970	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1555	-	890	-	-
HCM Lane V/C Ratio	-	-	0.016	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-