



CONSULTING. ENGINEERING. CONSTRUCTION.

3/15/2022

To: Crook County Community Development Staff
300 NE 3rd Street.
Prineville, OR

From: Atwell, LLC

RE: Crossing Trails Destination Resort

Planning Addendum #1 - Responses to Incompleteness Letter

This addendum is in response to the February 25th, 2022 Letter of Incompleteness issued by the Crook County Planning Department regarding the Crossing Trails Destination Resort Application (DR-08-0092).

Included in this addendum are specific responses and/or supplemental information that relates to the Crook County Code (i.e. Chapter 18.116 – Destination Resort Overlay and chapter 81.160 – Conditional Uses). It also includes a number of additional attachments that are intended to augment the responses to the County's comments.

Below are the narrative responses to each of the County's incompleteness letter comments. For reference, staff's comments are include for each incompleteness issue.

Title 18, Zoning

Chapter 18.116 Destination Resort Overlay

18.116.040 Standards.

(12) Alterations and nonresidential uses within the 100-year flood plain and alterations and all uses on slopes exceeding 25 percent are allowed only if the applicant submits and the planning commission approves a geotechnical report that demonstrates adequate soil stability and implements mitigation measures designed to mitigate adverse environmental effects. Such alterations and uses include, but are not limited to:

- (a) Minor drainage improvements which do not significantly impact important natural features of the site;
- (b) Roads, bridges, and utilities where there are no feasible alternative locations on the site; and
- (c) Outdoor recreational facilities, including golf courses, bike paths, trails, boardwalks, picnic tables, temporary open sided shelters, boating facilities, ski lifts, and runs.

Staff Comment: *The above code section only allows “alterations and nonresidential development uses” within the 100-year floodplain. The narrative statement submitted with the application indicates “[b]ridges, canal crossings and pathways are the only improvements anticipated in this area.” However, the “Conceptual Layout C5” submitted with the application shows several “Vacation Villas” located at least partially within the 100-year floodplain. The Applicant needs to provide additional explanation as to how such lots are in compliance with CCC 18.116.040(12).*

Additionally, staff was unable to find a geotechnical report demonstrating adequate soil stability and mitigation measures designed to mitigate adverse environmental effects from improvements in the floodplain. The Applicant should provide such report or explain why it is not necessary.

Applicant’s Supplement: *The Applicant acknowledges that “alterations and nonresidential uses within the 100-year flood plain and alterations and all uses on slopes exceeding 25 percent are allowed only if the applicant submits and the planning commission approves a geotechnical report that demonstrates adequate soil stability and implements mitigation measures designed to mitigate adverse environmental effects”.*

Based upon Federal Emergency Management Agency (“FEMA”) mapping data, there is a “100 Year Floodplain” identified on the property. The area mapped as floodplain parallels the COID irrigation ditch as it traverses through the subject property.

The existence of a floodplain on the property raises a number of questions concerning the accuracy and validity of FEMA’s data which is often GIS based and has not been formally delineated.

First of all, it is widely recognized that the irrigation ditch is only operational during the peak irrigation season which occurs from April to October of each year. The amount of water that is allowed to flow through the canal is controlled by the Central Oregon Irrigation District and is seasonally adjusted based on demand. During the off season, which also coincides with the peak rainfall season, there is very little to no flow through the irrigation canals. Therefore, there is no chance of flooding to occur on the subject property.

Secondly, basic hydraulics would suggest that even if the feature identified within the floodplain is capable of flooding, any flooding from this feature would occur downhill or at a lower elevation than the surface elevation of the canal. In many instances, the mapped FEMA floodplain boundary is located at a higher elevation than the highest point of the canal. If the surface water breaches the edge of the canal way, flood waters would flow downhill to the west. It would be impossible for the any floodwater from this feature to flow uphill as suggest by the Federal Emergency Management Agency (“FEMA”) “100 Year Floodplain mapping data.

In response to the mapping discrepancies, the Applicant's design team has prepared an exhibit that more precisely depicts the extents of the 100 year floodplain (assuming this feature is actually capable of flooding). Refer to Attachment #1 – Flood Exhibit. This has been signed and certified by a registered civil engineer in the State of Oregon. Since no development is being proposed within the floodplain, no geotechnical report is necessary.

The Applicant's original statement that the "bridges, canal crossings and pathways amenities are the only improvements anticipated in the 100 floodplain" is still valid. None of the "Vacation Villas" will be located within the 100-year floodplain.

18.116.060 Permitted Uses.

The following uses are allowed on lands designated as eligible for destination resort siting, provided they are part of, and intended to serve persons at, a destination resort approved pursuant to this chapter:

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(3) Residential Accommodations.

(***)

(f) Living quarters for employees.

Staff Comment: CCC 18.116.060(3)(f) allows residential uses, including living quarters for employees. On page B-4 of the Applicant's written narrative, Applicant indicates the workforce housing will be for workers of the resort and the "nearby area". If Applicant intends to provide long term rentals for workers in the area identified as "workforce housing", those units will constitute residential use and will need to be accounted for by in the Applicant's 2:1 overnight lodging ratio calculation. The Applicant should update its narrative to confirm the number of units in the workforce housing area intended for long term rental use for workers who do not work at the resort and confirm that the 2:1 ratio is still met. Alternatively, the narrative should be updated to confirm workforce housing will only be used by employees of the resort.

Applicant's Supplement: While the Applicant believes the long-term rentals for workers in the nearby area would be a valuable asset to the Crook County, the intent of the workforce housing within Crossing Trails Resort development is for employees and will be used exclusively for workers of the resort.

Based on this, the summary description on page B-4 of the original submittal should be revised to read:

- ***"Workforce Housing (100 Units): These range in size from 1,000 SF to 1,200 SF. These units are available for long-term rentals for workers of resort"***.

The Applicant/Contract Purchaser will maintain the required 2:1 ratio during the life of the resort, documenting ongoing compliance prior to the submission of tentative subdivision plan approvals for each phase of resort development.

At build-out, there will be a total of 400 vacation villas and 200 overnight rentals/cabins. This represents a 2:1 ratio of vacation villas sales to overnight lodging/cabins.

A summary of the development is shown on the following page:

Phase	Vacation Villas	Overnight Rentals/Cabins	Overnight Seasonal Rentals	Workforce Housing	Total
Total	400	200	50	100	750

- (4) Open space uses, which may include improvements necessary for the development of golf course fairways and greens, recreational trails, lakes and ponds, primitive picnic facilities including park benches and picnic tables, and irrigation equipment and associated pumping facilities where farming activities would be consistent with identified preexisting open space uses.

Staff Comment: *Staff is uncertain that areas developed for utility use, such as powerlines, constitutes open space. The Applicant may elect to provide a letter from the easement holder confirming that certain uses, such as recreational trails, are permitted and/or otherwise explain why the developed easement area should be considered open space.*

Applicant’s Supplement: Crook County has defined “open space” in two different sections of the County’s Zoning code. In section 18.08.150 (general definitions), open space is defined as:

“Open space” consists of lands used for agricultural or forest uses, and any land or area that would, if preserved and continued in its present use; conserve and enhance natural or scenic resources; protect air or streams or water supply; promote conservation of soils, wetlands, beaches, or marshes; conserve landscaped areas, such as public or private golf courses, that reduce pollution and enhance the value of abutting or neighboring property; enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or other open space; enhance recreation opportunities; preserve historic, geological and archeological sites; promote orderly urban development; and minimize farm and nonfarm conflicts.

In section 18.116.030 (destination resorts), open space is defined as:

(4) “Open space” means any land that is retained in a substantially natural condition, or is improved for outdoor recreational uses such as golf courses, playing fields, hiking or nature trails or equestrian

or bicycle paths, or is specifically required to be protected by a conservation easement. Open spaces may include ponds, lands protected as important natural features, lands preserved for farm or forest use, required landscaped areas and lands used as buffers. Open space does not include residential lots or yards, streets or parking areas.

Since only limited development (i.e. trails and a water tank access road) is proposed beneath the BPA or PGE powerline easements, a majority of the surface area will be left in its natural condition. Based on this, it would satisfy the definition of “open space” under section 18.116.030.

It is also important to note that the area beneath the powerline corridors in the original 2008 approval was identified as open space. Since the area beneath powerlines was previously identified and approved as open space, this area should be also be approved as open space under the current modification.

18.116.080 Application procedures and contents.

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(3) The development plan shall contain the following elements:

(a) Illustrations and graphics to scale, identifying:

(vii) The approximate location and number of acres proposed as open space, buffer area or common area. Areas proposed to be designated as “open space,” “buffer area” or “common area” should be conceptually illustrated and labeled as such;

Staff Comment: *Staff requests a map with labels and acreages depicting the approximate location of open space, buffer area, or common area, to confirm the proposed development plan complies with CCC 18.116.0808(3)(a)(vii).*

Applicant’s Supplement: Based on a 581 +/- acre resort property, a minimum of 50% or 291 acres is required to be maintained as open space within the proposed Crossing Trails Resort.

The proposed open space network consists of a combination of parks/outdoor amenity areas, common areas, surface water/canal easement, buffer areas, natural open areas/powerline easements and wetlands. The location and approximate size of each is summarized below:

Open Space Type	Size (In Acres)
<i>Parks/outdoor amenity areas</i>	<i>18.0 Ac.</i>
<i>Common areas</i>	<i>22.5 Ac.</i>
<i>Surface water/canal easement</i>	<i>10.0 Ac.</i>
<i>Buffer areas</i>	<i>52.0 Ac.</i>
<i>Natural open areas/powerline easements</i>	<i>267.5 Ac.</i>
<i>Wetlands</i>	<i>66.0 Ac.</i>

Total	436.00
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As illustrated on the conceptual Open Space Plan , approximately 75% of the property would be considered open space.

The land devoted to open space is illustrated on the conceptual Open Space Plan. Refer to Attachment #2 – Open Space Plan.

- (b) A conceptual water and sewer facilities master plan for the site, including a master plan study prepared by a professional engineer certified in the state of Oregon, describing:
 - (i) An estimate of water demands for the destination resort at maximum build-out;
 - (ii) Availability of water for estimated demands at the destination resort, including (1) identification of the proposed source; (2) identification of all available information on ground and surface waters relevant to the determination of adequacy of water supply for the destination resort; (3) a copy of any water right application or permit submitted to or issued by the Oregon Water Resources Department (OWRD), including a description of any mitigation measures proposed to satisfy OWRD standards or requirements;
 - (iii) A water conservation plan including an analysis of available measures, which are commonly used to reduce water consumption. This shall include a justification of the chosen water conservation plan. The water conservation plan shall analyze a wastewater disposal plan utilizing beneficial use of reclaimed water to the extent practicable. For the purposes of subsection (3)(b) of this section, beneficial uses may include, but are not limited to:
 - (A) Agricultural irrigation or irrigation of golf courses and greenways;
 - (B) Establishment of artificial wetlands for wildlife habitation;
 - (C) Groundwater recharge.

Staff Comment: *The Applicant provided a Water and Sewer Analysis (Appendix 20) and Water and Sewer Plan (08_C300). However, it does not appear to identify the proposed source of the water, other than to say it is located north of the subject property. Staff requests additional explanation as to how the Applicant complies with CCC 18.116.080(3)(b).*

Applicant’s Supplement: The Applicant/Contract Purchaser has provided a conceptual Water and Sewer Plan as part of the original application materials. The plan was prepared by Atwell, LLC a professional engineering firm located in Portland, Oregon. To supplement this, the Applicant engineers have prepared a detailed Water Analysis. Refer to Attachment #4 – Water Analysis.

The Water Supply Plan includes an estimate of water demand for various types of water uses at the resort at maximum build-out. That demand for the resort is estimated to be 384 acre-feet per year. This includes water for a variety of proposed resort uses including the

vacation villas, overnight lodging, workforce housing, commercial facilities and roughly 28 acres of landscape irrigation.

The original 2008 approval provided a willing and able to service potable water to the Crossing Trails Resort. Refer Attachment #3A – Avion Letter (2008). This was for a total of 680 residential equivalents and 1,500 gpm fire flow. To augment this, Avion Water has provided an updated willing and able to serve letter, dated March 2022 to service potable water. Refer to Attachment #3B – Avion Letter.

As an alternative to this, the Applicant/Contract Purchaser is exploring options of drilling a new well on property to the north of the subject property and develop a conveyance system for on-site use. A test well has been constructed and the well will generate approximately 380 acre-feet per year. The location of the source of water is depicted in Appendix 22 – Water Easement Exhibit. The Applicant is currently in negotiations to secure easements to convey water from the well to the subject property.

The Water and Sewer analysis describes the water sources available to meet the estimated demand. Potable water will be supplied through development of a private well using water provided through water rights and conveying the water to the subject property for potable use.

A Water Management Plan has been prepared to demonstrate non-potable water needs. In addition, the proposed resort will implement the following conservation measures: highly efficient irrigation sprinkler systems; efficient water conveyance systems; beneficial use of treated wastewater; use of individual water meters; use of drought resistant and low-water use landscaping; low water use plumbing fixtures, use of conditions to implement conservation measures; and public education and outreach.

The Water Management Plan also analyzes a wastewater disposal plan utilizing the beneficial use of reclaimed water to the extent practicable. Treated effluent will be conveyed to an effluent pond and infiltrated in to the soils.

(d) A solid waste management plan;

Staff Comment: *The Applicant only states that a franchise hauler will be utilized to provide a solid waste management plan. See page B-26. This does not adequately address the required criteria for a formalized plan. Staff requests written confirmation from a franchise hauler that it is available to manage the resort's waste as well as an explanation of the hauler's plan to manage the resort's solid waste. The plan should be detailed and address the high level of occupancy that is proposed for the facility.*

Applicant's Supplement: *As part of the original submittal, Prineville Disposal provided a willing and able service letter, dated March 19, 2008. This letter indicated that they could provide a full range of services for this development including: drop boxes, construction debris recycling, recycling*

services, and roll cart services in various capacities for residential units. Refer to Attachment #5 – Prineville Disposal (2008).

This provider was purchased by Republic Services, Inc. in January of 2020. Republic Services was contacted in order to provide written confirmation that they are still available to manage the resort’s waste as well as an explanation of the hauler’s plan to manage the resort’s solid waste. Republic Services indicated that it is their policy not to provide written “will serve” documentation. However, the Applicant is continuing to work with Republic Services to obtain a new service provider letter.

Prior to approval of the final development plan, the Contract Purchaser/Applicant will work with Ben Adair (Operations Manager) to develop a solid waste management plan for the Crossing Trails Resort. This will include collection, transfer, processing of recyclables and disposal of solid waste.

- (g) A traffic study which addresses: (1) impacts on affected county, city, and state road systems, and (2) transportation improvements necessary to mitigate any such impacts. The study shall be prepared by a licensed traffic engineer in coordination with the affected road authority (either the county department of public works or the Oregon Department of Transportation, or both);

Staff Comment: *The Applicant has provided a traffic study prepared by a licensed engineer. The County retained Transight Consulting to review the Applicant’s study and provide comment. Those comments are attached to this letter (Attachment A). The Applicant should update its traffic study or otherwise respond to the concerns noted in Transight Consulting’s attached memorandum.*

Applicant’s Supplement: ***A Traffic Impact Analysis (TIA) is included in the application submittal. The TIA was prepared by Kittelson & Associates in cooperation with County and ODOT. The analysis explains potential resort impacts on affected roadways and intersections and proposes mitigation measures***

The Applicant’s Traffic Engineer has reviewed the County’s consultants letter and has prepared a Traffic Technical Supplement to address their concerns. Refer to Attachment #6 – Technical Memorandum – Comment Response.

- (i) A description of any proposed development or design standards, together with an explanation of why the standards are adequate to minimize significant adverse impacts on adjacent land uses within 500 feet of the boundaries of the parcel on which the destination resort is to be developed;

Staff Comment: *CCC 18.116.080(3(i) requires a description of proposed development or design standards with an explanation of why the standards are adequate to minimize significant adverse impacts on adjacent properties. Applicant only provides a very general statement that CC&Rs will be prepared requiring compliance with setbacks and that the CC&Rs will regulate commercial and residential structures. Without additional explanation of the proposed development or design standards the Applicant intends to*

utilize, it is unclear that such standards are adequate to minimize significant adverse impacts on adjacent properties. Applicant should supplement its narrative to include more of a description of the standards it intends to apply towards the development of the resort.

Applicant's Supplement: *All development within the Crossing Trails Resort will ultimately be subject to the developments Conditions, Covenants and Restrictions (CC&Rs) and Architectural Design Guidelines. The CC&Rs and the Architectural Design Guidelines will be prepared as part of the Final Development Plan and regulate the style of commercial and residential structures within the resort to ensure that the structures are compatible with the development and landscape of the area.*

The CC&R's will require compliance with the external setbacks and any additional setbacks imposed by the County. This will ensure that there is sufficient buffer along the perimeter of the property to ensure there is not adverse impact on the adjoining property owners.

The Architectural Standards will regulate the height and lot requirements of the individual "vacation villas", overnight rentals, seasonal rentals and workforce housing.

The Applicant/Contract Purchaser is proposing a number of measures to minimize the impact on the adjoining property owners. In addition to mainlining the buffer setback, the Applicant/Contract Purchaser is proposing to fence a portion of the resort property in an effort to maintain livestock and eliminate potential conflicts with trespassing from users of the destination resort. Activity centers and places of congregation have been located in the central portion of the site in order to minimize the impact of noise and lights on the adjoining property owners.

In general, the proposed modifications identified to the development plan represent a much lower impact than the previous approval.

- (l) A description of the proposed method for providing emergency medical facilities and services and public safety facilities and services, including fire and police protection. (Ord. 18 § 12.080, 2003)

Staff Comment: *The applicant stated in its narrative that the Crook County Sheriff's Office will provide police protection to the resort, and that fire protection would be provided by Crook County Fire & Rescue. Stating only that does not demonstrate that the applicant meets the criterion. A more detailed narrative will need to be supplemented to address this criterion. It will need to detail what facilities and services will be located at the resort, correspondence from Crook County Fire & Rescue and the Crook County Sheriff's Office confirming they are able to provide services to the resort, as well as in-depth emergency response plan.*

Applicant's Supplement: *As part of the original submittal, Crook County Fire District provided a willing and able service letter, dated March 20, 2008. Refer to Attachment #8A – Crook County Fire District Letter (2008). An updated*

service letter, dated March 2020 to emergency services has been obtained. Refer to Attachment #8B – Crook County Fire District Letter.

While no emergency facilities will be located within the proposed Crossing Trails Resort, there will be some first aid services available at each of the amenity centers and at outdoor swimming pools. These areas will be equipped to provide minor medical attention to residents and patrons of the resort. Crook County Fire and Rescue will provide emergency medical services and the Crook County Sheriff will provide police protection.

18.116.100 Approval criteria.

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- (5) The development will be reasonably compatible with surrounding land uses, particularly farming and forestry operations. The destination resort will not cause a significant change in farm or forest practices on surrounding lands or significantly increase the cost of accepted farm or forest practices.

Staff Comment: *The Applicant proposed a new well to service the resort (as discussed above). However, the Applicant does not address potential groundwater impacts of using a new well on surrounding agricultural uses. Staff requests that Applicant supplement its narrative to provide additional explanation as to why potential groundwater impact will not impact adjacent agricultural uses.*

Applicant's Supplement: **The Crossing Trails Resort has been designed in a manner that will ensure compatibility with privately owned parcels in the surrounding area.**

To the north and west, the subject property borders four non-irrigated parcels that lie east of SW Parrish Lane. Larger agricultural parcels (ranging from 39 to 118 acres in size) abut SW Parrish Lane to the west. The subject property borders two vacant and non-irrigated parcels to the south. Larger agricultural operations are located adjacent to SW Wiley Road to the south.

As previously mentioned, the Applicant/Contract Purchaser is exploring the option of constructing a new well and conveyance system to serve the Crossing Trails Resort. The source of water is depicted in Appendix 22 – Water Easement Exhibit.

Because the well location is located a mile north of the subject property and is located in a different aquifer, there will be no impact on the surrounding agricultural practices in the adjoining properties. Discussions with Avion Water District also may use an existing water source that provides a more robust aquifer that could serve the property. The final plan will detail the final source of water for the project of the potential options available to the site.

It is also important to note that the uses on the subject property will require significantly less water than the approved 2008 application due to the elimination of the 18 hole golf course.

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- (a) The traffic study required by CCC 18.116.080(3)(g) illustrates that the proposed development will not significantly affect a transportation facility. A resort development will significantly affect a transportation facility for purposes of this approval criterion if it would, at any point within a 20-year planning period:
- (i) Change the functional classification of the transportation facility;
 - (ii) Result in levels of travel or access which are inconsistent with the functional classification of the transportation facility; or
 - (iii) Reduce the performance standards of the transportation facility below the minimum acceptable level identified in the applicable transportation system plan (TSP).
- (b) If the traffic study required by CCC 18.116.080(3)(g) illustrates that the proposed development will significantly affect a transportation facility, the applicant for the destination resort shall assure that the development will be consistent with the identified function, capacity, and level of service of the facility through one or more of the following methods:
- (i) Limiting the development to be consistent with the planned function, capacity and level of service of the transportation facility;
 - (ii) Providing transportation facilities adequate to support the proposed development consistent with Chapter 660 OAR, Division 12; or
 - (iii) Altering land use densities, design requirements or using other methods to reduce demand for automobile travel and to meet travel needs through other modes.
- (c) Where the option of providing transportation facilities is chosen in accordance with subsection (6)(b)(ii) of this section, the applicant shall be required to provide the transportation facilities to the full standards of the affected authority as a condition of approval. Timing of such improvements shall be based upon the timing of the impacts created by the development, as determined by the traffic study or the recommendations of the affected road authority.

Staff Comment: *As noted above, a Traffic Impact Analysis was prepared by Kittelson & Associates. Staff requests Applicant supplement its narrative to address concerns raised in the attached memorandum or otherwise respond.*

Applicant's Supplement: *The Applicant's Traffic Engineer has reviewed the County's consultants letter and has prepared a Traffic Technical Supplement. Refer to Attachment #7 – Technical Memorandum- TIA Supplement.*

Chapter 18.160 Conditional Uses

18.160.020 General criteria.

In judging whether or not a conditional use proposal shall be approved or denied, the planning director or planning commission shall weigh the proposal's appropriateness and desirability or the public convenience or necessity to be served against any adverse conditions that would result from authorizing the particular development at the location proposed and, to approve such use, shall find that the following criteria are either met, can be met by observance of conditions, or are not applicable:

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- (2) Taking into account location, size, design and operation characteristics, the proposal will have minimal adverse impact on the (a) livability, (b) value and (c) appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.

Staff Comment: *The narrative submitted by Applicant does not adequately explain how the proposal will have minimal adverse impact on (a) livability, (b) value, and (c) appropriate development abutting properties. Applicant should update its narrative provide additional explanation as to how the proposal addresses those criteria.*

Applicant's Supplement: *The proposed development of the Crossing Trails Resort will have minimal adverse impact on the (a) livability, (b) value and (c) appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright*

Livability – *The location and size of the proposed development is smaller than what was depicted and approved in the 2008 Development Plan. The new plan concentrates the higher intensity uses near the central portion of the property and will have a negligible impact from light and noise on the surrounding properties. Overall, the modification of the proposed destination resort is expected to have fewer adverse impacts on the livability of the abutting properties and the surrounding area.*

Value – *Similarly, the proposed development is anticipated to have a positive impact on the value of property within the vicinity of the proposed destination resort. A modification of the previously approved resort is not expected to have an adverse impact on property values.*

Appropriate development abutting & surrounding area – *Crook County approved an overlay designation on this property. Subsequent to this, the County approved a preliminary development plan for destination resort on this property in 2008. The proposed modifications are in alignment with the previous approval while utilizing less of the site area. Given the generous buffers and arrangement of the uses within the site, the proposed modifications are expected to have fewer adverse impacts and be more compatible with the adjoining properties and surrounding area than what was previously approved.*

18.160.050 Standards governing conditional uses.

- (14) Recreation Vehicle Park. A recreation vehicle park shall be built to state standards in effect at the time of construction, with the following provisions and any additional

conditions set forth in the planning director or planning commission's approval prior to occupancy:

Staff Comment: *In Applicant's narrative, on page B-65, it indicates that its concept plan indicates an area for overnight lodging units and that Applicant is considering a recreational vehicle (RV) park. Staff notes that RV parks do not qualify as overnight lodging units. See CCC 18.116.030(5). Staff asks Applicant to supplement its narrative to clarify its intent.*

Applicant's Supplement: The Contract Purchaser/Applicant understands that Recreation Vehicle (RV) Parks do not qualify as overnight lodging units.

An RV park was identified as a possible future use and is not currently be contemplated as part of the proposed modification request.

An updated illustrative plan has been prepared to eliminates the reference to this potential future use. Refer to Attachment #9.

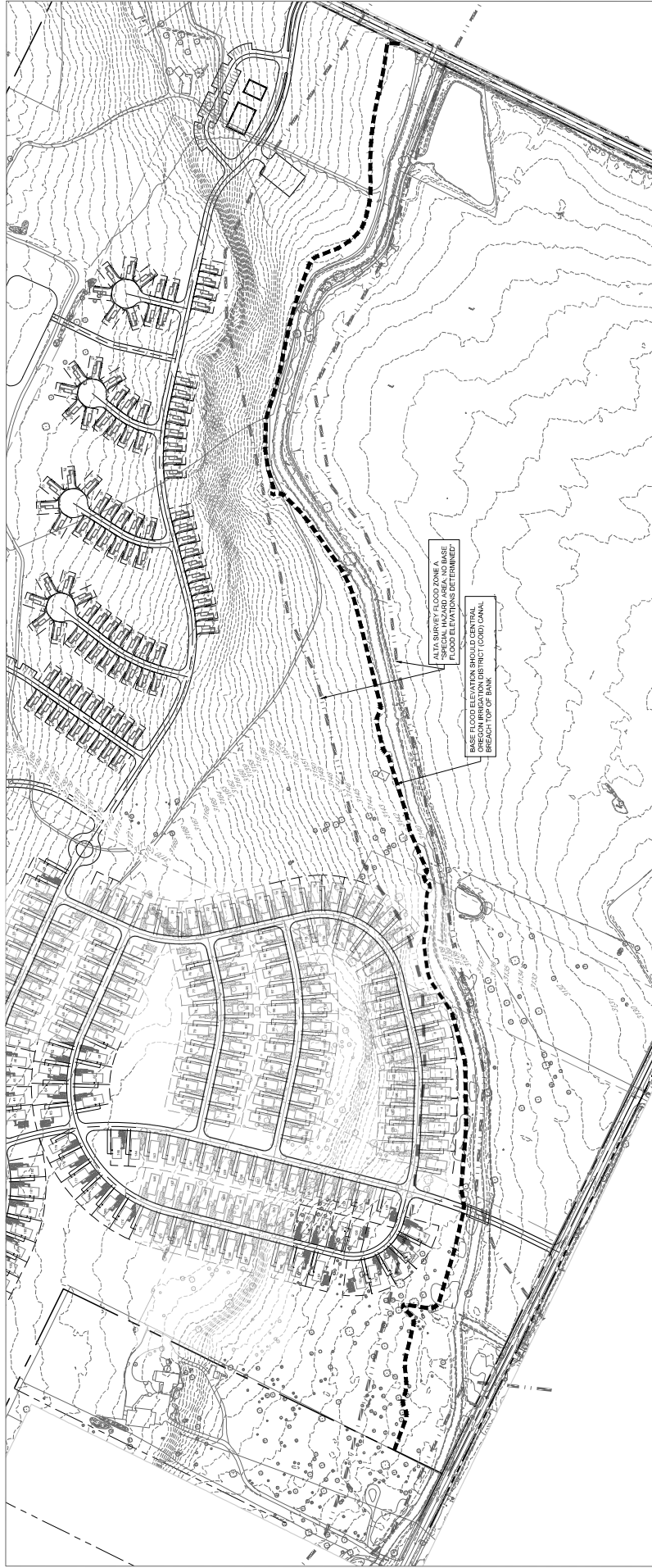
List of Attachments:

- Attachment #1 – Flood Exhibit***
- Attachment #2 – Open Space Plan***
- Attachment #3A - Avion Water - Service Letter (2008)***
- Attachment #3B - Avion Water Company Inc. Letter***
- Attachment #4 - Water Analysis***
- Attachment #5 - Prineville Disposal - Service Letter (2008)***
- Attachment #6 - Technical Memo - Comment Response***
- Attachment #7 - Technical Memo - TIA Supplement***
- Attachment #8a - Crook County Fire - Service Letter (2008)***
- Attachment #8b - Crook County Fire District Letter***
- Attachment #9 - Crossing Trails Resort Illustrative Plan***

CROSSING TRAILS RESORT

FLOOD EXHIBIT

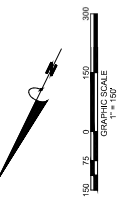
SHEET 1 OF 1



DATE: 12/15/2011
PROJECT NO: 21700019
SCALE: AS SHOWN
VERTICAL DATUM: NAVD 83
SOURCE: GEOTERRA AERIAL FLIGHT 08/05/01
SERIAL NO. 254517321121H



EP:12/17/23



PROJECT NO: 21700019
SCALE: AS SHOWN

ATWELL
8640 NE 145th Ave
Portland, OR 97230
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FAX: 503.254.1122
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811
 Know what's below.
 Call before you dig.

UNDESIGNATED AREAS ARE NOT PERMITTED TO BE OPEN TO THE PUBLIC. THESE AREAS ARE RESERVED FOR FUTURE DEVELOPMENT AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. ANY DEVELOPMENT IN THESE AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION. ANY VIOLATION OF THESE TERMS SHALL BE SUBJECT TO PENALTY.

NOTE:
 THIS PLAN IS A PRELIMINARY PLAN AND IS NOT TO BE USED FOR CONSTRUCTION. THE FINAL PLAN SHALL BE THE ONE APPROVED BY THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION. ANY CHANGES TO THIS PLAN SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION.

DATE: 11/15/2023
 DRAWN BY: J. B. BROWN
 CHECKED BY: J. B. BROWN
 APPROVED BY: J. B. BROWN

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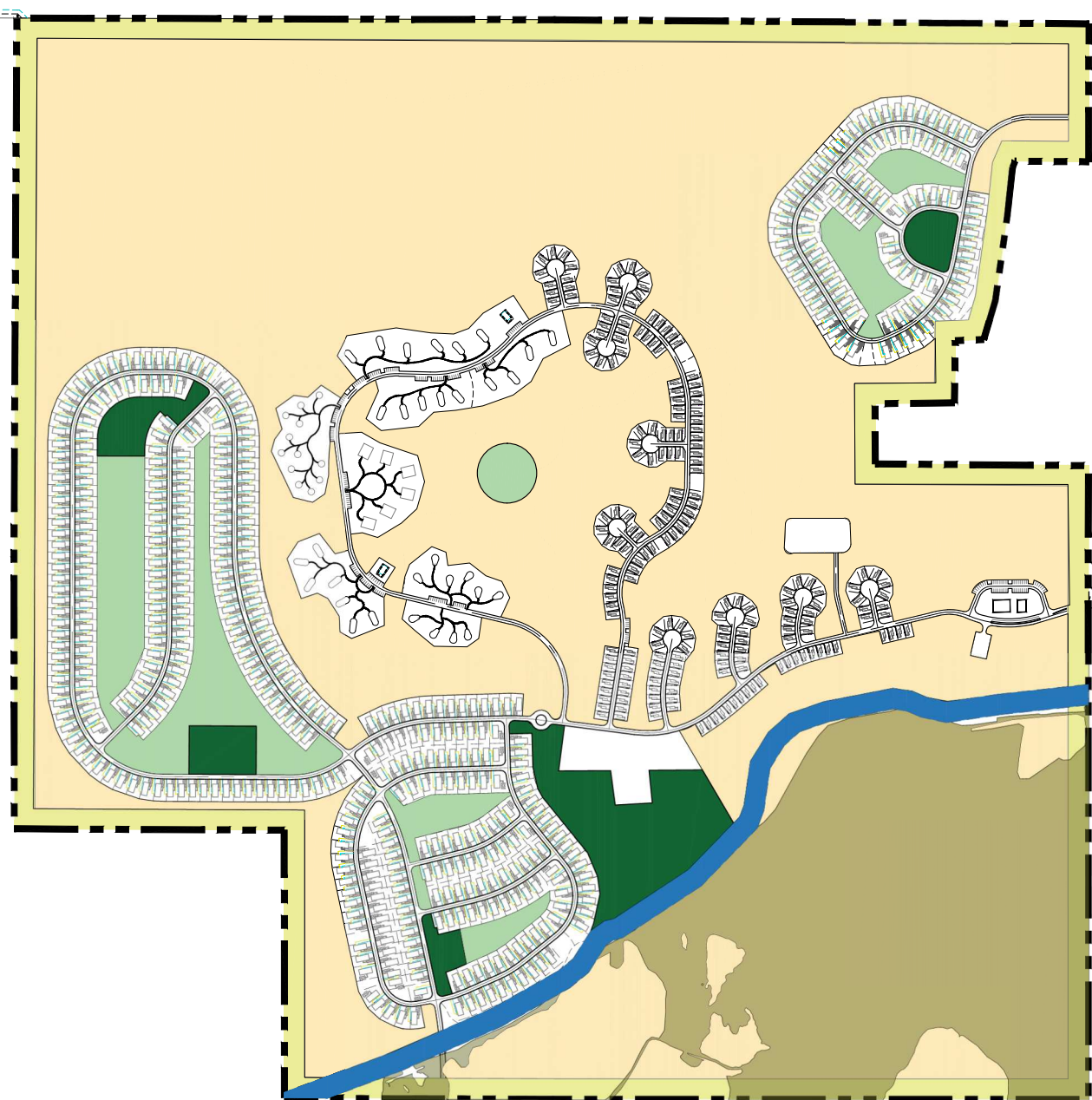
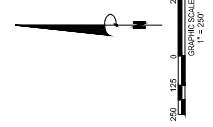
SUN COMMUNITIES, INC.
 CROSSING TRAILS
 CROOK COUNTY, OREGON
 LAND USE SUBMITTAL
 OPEN SPACE EXHIBIT

DATE	11/15/2023
CLIENT	
REVISIONS	

U.S. SHEET NO. 154-50
 U.S. BENCH THEORY
 K88 21/000079
 SHEET NO.

LEGEND:

- PARKS/OUTDOOR AMENITY AREAS
- COMMON AREAS
- SURFACE WATER/CANAL EASEMENT
- BUFFER AREAS
- NATURAL OPEN AREAS/POWERLINE EASEMENTS
- WETLANDS





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Ph: (541) 382-5342 • fax: 541-382-5390 • Email: avlon@avlonwater.com

March 20, 2008

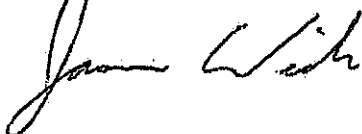
W-H Pacific
920 SW Emkay Dr.
Bend, Or 97701

Ref: Crossing Trails Resort

Avion Water Co, Inc. is willing and able to serve potable water to the Crossing Trails Resort providing all the off-site and on-site requirements by Avion Water Company are met and all monies due are paid in accordance with Avion's tariff.

Please note that this project will require significant off site improvements. Anticipated usage is based on 680 residential equivalents and a 1500 gpm fire flow.

Avion Water Co, Inc.



Jason Wick Vice President



AVION WATER CO INC.

60813 Parrell Rd • Bend, OR 97702 •

Ph: 541-382-5342 • fax: 541-382-5390 • Email: avion@avionwater.com

March 9, 2022

Ref: A proposed development known as Crossing Trails. Also known as tax lots: 1515170000100, 151517000106, 1515170000109 and 1515170000110 Powell Butte, OR.

To Whom It May Concern:

Avion Water Company, Inc. is willing and able to serve potable water to the above-described project, provided all terms, conditions and requirements by Avion Water Company are met and all monies due are paid in accordance with Avion's approved tariff. This approval is good for one year.

Sincerely,



Mike Heffernan
Engineering Department
Avion Water Company, Inc.

Memo

TO: Jason Wick – Avion Water
FROM: Brady Berry, PE
DATE: February 22, 2022
RE: Crossing Trails Resort – Water Analysis

This memo is intended to provide a summary of the analysis and steps taken to date to develop a water source for the Crossing Trails Resort in Crook County Oregon. The resort will have the following uses at full buildout:

Vacation Villas (Manufactured vacation homes)	400 Units
Work Force Housing (Manufactured homes for resort staff)	100 Units
Overnight rentals/Cabins	200 Units
Overnight seasonal rentals	<u>50 Units</u>
Total	750 Units

In developing the water demand for the project, the team used typical usage numbers from Sun Developments analysis of water consumption at their resorts and from the Oregon Department of Environmental quality Table 2, Quantities of Sewage Flows to develop the following range of water demands (see attached worksheets).

Project Average Daily Demand (ADD)	113,100-226,100 Gal/Day
Maximum Monthly Average Demand (MMAD) 1.3*ADD	147,030-293,930 Gal/Day

Peaking was not taken into consideration at this point since an on-site water reservoir will be designed to provide for peaking rather than through well production. Likewise, emergency flow of 180,000 gallons will also be provided through storage management. Given the nature of the development the storage will need to be managed for adequate water quality over the broad spectrum of low demand, full occupancy, and emergency flows.

Irrigation:

Irrigation will be managed by Sun Developments operations management team to assure that guests abide by the “zero scape” irrigation on the individual sites. The common areas will be irrigated with low flow irrigation. The design assumption for site irrigation area was approximately 28 acres of irrigation at a rate of 1.5”/week as a basis for the peak demand on the water source. This equates to 165,824 gallons per day during the irrigation season from 4/15-10/15.

Additional irrigation sources are also being investigated; the first is the use of the existing irrigation water rights from the Central Oregon Irrigation District system, which may require a transfer of beneficial use to continue to exercise these rights for the development and the second would be to utilize the clean effluent from the waste water treatment plant through a “blue pipe” drip system for irrigation.

Test Well:

A test well was constructed and tested to 290 gpm for a 7-hour pump test. Temperature and water quality were analyzed and found to be acceptable from this test. The team understands that a longer duration test may need to be completed to better understand the long-term drawdown effects on the aquifer. It is our understanding from the well driller that the maximum pump test that could be run from the existing test well would 400 gpm.

Well Requirements/Capacity:

Based upon the development demand and irrigation projections we have the following MADD range for the project:

Demand Range Table		
Demand Source	MADD (Gallons/Day)	20-hr pumping requirement (gpm)
Sun Development Nationwide Experience	348,000	242
DEQ Table 2 ADF standards	468,000	325

See attached for additional information

Summary:

This analysis was compiled to provide a review of the developments water demand projections and establish a baseline of what additional testing is necessary to provide accurate well test data for potential water providers. The original provided a flow rate over historical Sun Development experience indicates that similar developments require but did not meet what potential providers determined necessary for accurate drawdown and recovery estimations. It was, however, insufficient for the more conservative DEQ standard for average daily flows.

The range in the above table would suggest that a 72-hr constant flow test at 400 gpm would provide the necessary data points to evaluate the well and impact on the aquifer. This test would be continuously monitored for flow, temperature, and drawdown over the duration of the test. With this information, we believe potential providers can refine their model and determine that the development will not adversely impact the aquifer.

Crossing Trails Resort - 21002079 (Sun Development Demand Experience)

2/18/2022

Crossing Trails Sewer Demand Calculations-Total	Total	Sq Ft(Unit)	ADF/unit gpd/unit	ADF gpd	ADF MGD	Comments
Vacation Villas*	400	Each	150	60,000	0.0600	Sun water study for MH off peak
Overnight Rentals	250	Each	100	25,000	0.0250	Assuming these are like Park models
Workforce Housing	100	Each	200	20,000	0.0200	Sun water study standard MH
Private Amenity Space						
Clubhouse/Pool	2	Ac	500	1,000		General Sun numbers, to be revised as program develops
Shared Amenity Space - 11.2 acres plus 2 ac						
Clubhouse/Pool	13	Ac	500	6,500		General Sun numbers, to be revised as program develops
Other						
Maintenance Center	1	Each	300	300	0.0003	Sun Typical
Welcome Center	1	Each	300	300	0.0003	Sun Typical
				113,100	0.1056	

Irrigation Demands						
Irrigation Season - April 15-October 15. 3 ac-ft per irrigated acre or 1.5 inches per week						
Total site 580 ac						
	Acres Irrigated	ac	gal/ac			
Ave weekly demand at 1.5"/ac/wk	28.5	ac	40,729	1,160,765	gallons/week	
Daily				165,824	Gal/Day	
Well run time based on 16 hours/day				173	gpm Irrigation only (Indicated from well, but will be using COID rights)	
Total Well Capacity including domestic				290	gpm total well capacity	
Well production for 20 hr run time				348,000	gpd	389.8 ACF/Yr
Maximum Monthly Average Demand (MMAD = 1.3*ADD) + Irrigation				312,854	gpd	350.4 ACF/Yr
Emergency Water Flow	2	1500	GPM	180,000	Gallons	
Storage (Emergency flow plus one day domestic use)				492,854	Gallons	

Crossing Trails Resort - 21002079 (OAR 340-071-0220 Table 2)
2/18/2022

Crossing Trails Sewer Demand Calculations-Total	Total	Sq Ft(Unit)	ADF/unit gpd/unit*	ADF gpd	ADF MGD	Comments
Vacation Villas	400	Each	250	100,000	0.1000	Mobile Home Parks
Overnight Rentals/Cabins	200	Each	400	80,000	0.0800	Luxury Camps with four persons
Overnight Seasonal Rentals	50	Each	200	10,000	0.0100	Resort Camps with limited plumbing 4 persons
Workforce Housing	100	Each	250	25,000	0.0250	Mobile Home Parks
Private Amenity Space						
Clubhouse/Pool				4,000		Bathhouses and Swimming Pools (400 users)
Shared Amenity Space						
Clubhouse/Pool				6,500		Bathhouses and Swimming Pools (650 users)
Other						
Maintenance Center	1	Each	300	300	0.0003	
Welcome Center	1	Each	300	300	0.0003	
				226,100	0.2156	

*OAR 340-071-0220 Table 2

Irrigation Demands						
Irrigation Season - April 15-October 15. 3 ac-ft per irrigated acre or 1.5 inches per week						
Total site	580	ac				
Ave weekly demand at 1.5"/ac/wk	28.5	ac	gal/ac	40,729	1,160,765	gallons/week
Daily					165,824	Gal/Day
						73% of average daily flow
Well run time based on 16 hours/day					173	gpm Irrigation only (Indicated from well, but may use COID rights)
Total Well Capacity including domestic					390	gpm total well capacity
Well production for 20 hr run time					468,000	gpd
Maximum Monthly Average Demand (MMAD = 1.3*ADD) + Irrigation					459,754	gpd
						515 ACF/Yr
Emergency Water Flow	2	1500	GPM		180,000	Gallons
Storage (Emergency flow plus two days domestic use)					1,099,507	Gallons
Yearly Demand					384	Acre Feet



1751 North Main Street
Prineville, OR 97784

March 19, 2008

Ron Hand
WH Pacific
920 SW Emkay Dr.
Bend, OR 97702

Dear Mr. Hand,

Thank you for your inquiry regarding disposal service at the proposed Crossing Trails Resort at the intersection of Parrish Lane and Wiley Rd.

We can provide a full range of services for this development including:

- Drop boxes in 10, 20, 30 and 40 cubic yard sizes
- Smaller bin service every Thursday
- Roll cart service in 35, 65 and 95 gallon capacities for residential service
- Recycling of cardboard, newspapers, magazines/catalogs, clear container glass and motor oil. (plastics, tin and mixed paper – effective July 2008)
- Construction debris recycling (wood, metal and cardboard)
- Demolition services (Structural)
- Portable toilets with weekly, twice a month and monthly servicing. (Septic Pros)

Please call us for a quote on the above services. We are a second generation family owned business since 1977 and would appreciate the opportunity to serve you.

Thank you,

Steve Holliday
Owner

phone: 541-447-5208

fax: 541-447-2587

web: www.prinevilledisposal.com

Technical Memorandum

March 1, 2022

Project# 26648

To: Crook County Community Development Staff
300 NE 3rd St.
Prineville, OR

From: Jacki Gulczynski, PE and Marc Butorac, PE

RE: Crossing Trails Destination Resort – Crook County, OR 97754

FEBRUARY 25TH, 2022 COMMENT RESPONSES

This document is a response to the February 25th, 2022 Letter of Incompleteness provided by the Crook County Planning Department regarding the Crossing Trails Destination Resort Application (DR-08-0092). Included in this memorandum are the comment responses related to transportation. The letter references a review document prepared by Transight Consulting, LLC on February 15th, 2022. It should be noted that the review comments are related to draft scoping information that has since been addressed in the Transportation Impact Analysis (dated January 18, 2022) and the Supplementary Memorandum (dated February 18, 2022). Comment from Transight Consulting are italicized, and responses are provided below in standard text.

Comments Related to Preliminary Recommendations Memorandum (August 18, 2021)

COMMENT 1:

The Plan and Policy review provided includes a brief summary of identified projects throughout the study area, associated costs, and their status. One item of note is that the roundabout at the OR 126/Tom McCall Road was designed as a single-lane roundabout as an interim configuration to maximize safety. The status of the roundabout as "complete" simplifies the potential widening needs that were included within the design discussions for this project and will need to be reviewed, but it should not be assumed that the design meets the long-term needs.

On this same note, the OR 126/Powell Butte roundabout is conditioned on the Hidden Canyon destination resort. This was approved through the modification of the original application, but reflects a "pooled contribution" from several smaller impacts toward a priority Crook County safety and operational issue. The application for the Crossing Trails resort should assess whether the single-lane roundabout continues to support the long-term needs with Crossing Trails' additional impacts. A pro-rata share should be provided toward these long-term needs (based on current cost information) to avoid a scenario where subsequent development is not contributing an equitable share of the overall system needs. Similar to Hidden Canyon, this may be part of a pooled contribution towards priority area needs.

Response 1:

The TIA addresses the long-term needs at OR126/Tom McCall (see Page 14 & 23).

The proposed mitigation recommendations include the contribution to the OR126/Powell Butte Hwy intersection with 4% added total volume to the intersection (estimated contribution = \$120K) (see Page 36)

COMMENT 2:

Table 6 provides an updated summary of potential mitigation costs by intersection, but it appears that the percentages may have been miscalculated. Regardless, the proportion of impact would not be a suitable metric if the impact of the added trips changes the overall intersection needs. If, for example, the added trips result in the need for an additional southbound right-turn lane this could easily exceed the \$79,200 cost included in the table and would fully be the responsibility of the applicant. Accordingly, until specific site impacts throughout the study area and changes in long-term plans are known, Table 6 summary provides limited value in assessing the impacts of the project. It does appear that the cited costs are low relative to current ODOT project estimates and will need to be reviewed with ODOT and the County roadmaster.

Response 2:

Table 6 in the Preliminary Recommendations Memo is out of date and not included in the submitted TIA. The updated summary of conditions is provided on page 36 of the TIA. Additionally, none of the intersections except for OR126/Parrish Lane meets mobility standards in the future background condition and exceed standards in the build condition. Therefore, the example regarding full responsibility no longer relevant.

COMMENT 3:

The section titled "Status of Neighboring Destination Resorts" appears to include several development projects within the City of Prineville, some of which remain active and others that have been substantially modified since their original approval. Please coordinate with Josh Smith for corrected information and status on the City projects cited.

Response 3:

A list of current destination resorts was included in the TIA (see Page 21). Email correspondence with Will VanVactor on November 15th, 2021, confirmed no other in process developments needed to be included in the report and could be represented in the regional growth.

COMMENT 4:

I will defer to Crook County staff as to whether the density changes within Remington Ranch have been formally adopted; a formal CIA with ODOT has not been finalized.

Response 4:

N/A

Comments Related to Scoping Memorandum (November 12, 2021)

COMMENT 1:

The unique characteristics of a destination resort will introduce unique types of vehicles and levels of traffic into the rural agricultural lands that have not been accounted for in the County's long-range planning and forecasting. On this note, some of the issues of concern are as follows:

- The need for safe access onto and off of OR 126.
- Accommodation of larger and slower vehicles within the operational analysis to capture the potential impacts or RVs.
- Physical accommodation needs to bring the manufactured homes into the site.

- *Wiles Road is identified for closure in the County TSP; specific information on the applicant's proposal to close this road will be needed within the TIA.*
- *The surrounding roads are narrow and lack shoulders, and there are structural needs (particularly at culverts). Given the travel increase and potential loading increase depending on the quarry site used and routes, bringing the primary resort access routes into structural and dimensional compliance with County standards will be critical.*

Response 1:

- A safety review is provided on Page 18 of the TIA. Additionally, turn lanes are included as a recommended mitigation improvement at OR126/Parrish Lane intersection, the primary access to the site, to improve operations and safety (see Page 33).
- The site does not include RV parking, as is described on Page 28.
- The applicant, ODOT, and County may coordinate construction traffic and single use permits as applicable.
- The current approved application includes the closure of Wiley Road. This closure is included in the Crook County TSP and funding partners are identified as ODOT and the County.
- Structural and pavement needs including geotechnical borings and pavement analysis are not typically included in traffic studies nor requested through the scoping efforts with the City, County, and ODOT.

COMMENT 2:

In addition to review of the County's adopted Transportation Impact Analysis requirements, the application will also require compliance with the Transportation Planning Rule. The destination resort was not included within the travel forecasts of the County's adopted Transportation System Plan. It is my understanding that the County's prior destination resort overlay zone identified lands that were eligible for the resort siting criteria, not lands that would or could be developed as resorts, which is also why these lands were not assumed within the County's (or ODOT's) long-range planning. Therefore, this application will require a long-range analysis, although the build-out timeline of a destination resort would be similarly expected to occur over a 20-year period. It may be helpful to review the Crook County growth assumptions and provide a comparison.

Response 2:

The January 18th, 2022, submitted TIA is a modification to the original study completed in 2008 (see Page 38). The 2008 study was approved and is being updated as part of this application. The 2008 approval addressed Transportation Planning Rule (TPR) requirements. The approved study was completed before the Crook County TSP was adopted in 2017. The findings and recommendations are shown on page 45 in the TIA. Finally, County Code compliance is addressed on Page 38.

COMMENT 3:

Trip generation estimates included within the scoping materials were based on a 2006 study that was conducted at Eagle Crest and Black Butte Ranch, rather than the more recent surveys completed at Brasada or use of the 2021 data within ITE's 11th Edition of the Trip Generation manual. These other materials may or may not be more appropriate, and the applicant should expand on this discussion given the unique characteristics of a manufactured home park/RV park resort. If, for example, the RV park or manufactured homes became a more desirable location for data center employees to rent it could shift travel patterns, but also could result in much higher year-round occupancy than is present at other area resorts. Additional information from the applicant would be helpful in understanding this issue.

Internal workforce housing could provide a useful reduction in off-site trip generation potential, but the information presented in the report does not support its classification with ITE Land Use 210 (which describes

a suburban single-family detached home) or justify the provided internalization rate that would be expected if it were in fact occupied by resort employees. The scoping states the following:

"The workforce housing...is intended to provide convenient housing for employees of the resort. While employment at the resort cannot be conditioned to occupants of the resort, it was assumed a conservative 25% internalization of peak hour trips between the workforce housing and the resort."

The description of this housing and its stated classification as workforce housing may be better described within other land use documents provided by the applicant, but within the transportation materials it is unclear as to how this would function. If the applicant cannot guarantee or limit the use of the homes to resort employees, it does not seem reasonable to conclude that this would be resort housing.

I would recommend that the applicant review the workforce housing component of the recently approved Hidden Canyon Resort and how the resort will manage this component long-term. It is my understanding that within Hidden Canyon the resort will own and manage the employee housing to ensure its long-term use is restricted to employees. Without a mechanism to limit, monitor, or enforce the single-family housing as workforce housing trip reductions would not apply.

The overall trip generation rates do not appear to be unreasonable, but further narrative would be helpful given the significant variation in characteristics between the proposed resort and those cited in the scoping materials at resorts with entirely different characteristics. There are substantial differences between the trip characteristics at Sunriver, Black Butte, Eagle Crest, Brasada, and Tetherow Resorts related to their location, target market, amenities, and price point, as well as the destination resort requirements that were in place at the time of their development. In addition, with a resort that is located farther from services such as Brasada we see trip rates that are different than those being experienced at Eagle Crest. With that said, most other resorts report full-time occupancy within the 20% to 30% range, and most serve as a second home with very limited utilization for the services and tax base provided.

Response 3:

The trip generation rates applied to the Brasada and Hidden Canyon development are 25% lower than those used for this development. Therefore, the trip generation used and shown on Page 28 of the TIA are a conservative estimate compared to recently revised neighboring destination resort applications.

The workforce housing identified for the development will not include a legally binding agreement requiring inhabitants to work at the resort. Therefore, since residents will have flexibility to work wherever, yet the housing is within proximity to the resort, it was estimated a conservative, reasonable percentage of residents would not use the regional transportation network due to working at the resort. Additionally, ITE Land Use 210 – Single Family Detached Housing is the most conservative, applicable land use to use for workforce housing and therefore, would not underestimate trips onto the regional network.

COMMENT 4:

The trip distribution estimate provided within the report shows that the majority of trips will travel west toward the population centers in Redmond and Bend, with about 40 percent destined toward the east. The study indicates that the distribution patterns are based on current travel patterns and "accounts for employer generators near OR 126/Tom McCall, i.e., Facebook, Apple, the Airport..."

While the travel patterns are primarily comprised of employee trips, 2019 traffic counts at the OR 126/Tom McCall Road intersection show the reverse travel pattern from what is included in the scoping materials. The 2019 counts show that 55% of the trips at Tom McCall are headed toward Prineville, 3% continue south onto Millican Road, and 42% travel west toward Redmond and Bend. This would result in a higher impact toward the City of Prineville and would place higher left-turn demands onto the OR 126 corridor during the

evening commute period at Parrish Lane. It will be important to understand the long-term operations of Parrish Lane, particularly with comments below related to the trip assignment and routing of trips via Houston Lake Road.

Finally, the trip distribution figure indicates that 5% of the trips will be “internal” near the data centers. While 5% of the trips may be destined towards these sites, these trips will certainly impact Crook County and ODOT facilities and would not be considered “internal” to the resort.

Response 4:

Review of the 2021 traffic count data collected at OR126/Tom McCall Road indicated 42% of the volume was coming to/from the east leg of OR126 toward Prineville. This confirms the use of a 40% distribution toward Prineville. Additionally, the Hidden Canyon resort traffic study completed by Transight Consulting – located approximately the same distance from OR126 as Crossing Trails – assumed 15% of the trips were to/from Prineville.

The intersections included in the TIA comply with Crook County Code Requirements stating a TIA should evaluate intersections that receive site-generated trips that compromise at least 10 percent or more of the total intersection volume. At the request of City of Prineville staff, a supplementary memorandum was prepared on February 18, 2022, to include two City intersections: OR370/OR126 and OR126/US26.

Finally, the 5% of trips identified near the data centers are accounted for in the trip assignment with the impact, if applicable, to OR126/Tom McCall Road (see Figure 10 of the TIA on page 31).

COMMENT 5:

The trip assignment is provided within Figure B1 and shows how the estimated trips (from Table 1) are assigned to the transportation system. There are several items of concern noted with this assignment:

- The trip assignment does not include the site access locations so it is not clear whether the trip assignment matches the trip generation rates presented.
- The County's Transportation System Plan identifies the planned closure of the Wiley Road intersection with OR 126 but this is not yet a funded improvement and would need to occur with the project if approved by the County Roadmaster. The August materials indicate that this is assumed, but it would be important to understand the applicant's agreement on the timing of this closure occurring with initial construction.
- The trip assignment in Figure B1 will need to be revisited. It appears that half the trips to and from Prineville are assigned along Huston Lake Road which seems unreasonable given the roadway network and characteristics, unless supported with travel time runs. It also appears that Intersection 11 (OR 126/Tom McCall) may have been rotated incorrectly in the graphic as it shows no resort trips traveling towards Prineville – this will need to be revised so as not to impact the applicant's operational analysis.

Response 5:

The trip assignment has been updated in the TIA (see Figure 10 on page 31). The assignment includes the site access points. OR126/Wiley Road is assumed to be closed and should be coordinated with the County Roadmaster.

COMMENT 6:

The report shows 40% of the weekday p.m. peak hour trips continuing east of the Tom McCall Road toward the Prineville “Y” Junction. Similarly, there are 55% of site-generated trips to and from areas west of the OR

126/Powell Butte Highway, yet locations beyond this distance that were included in the original report and showed significant impacts have now been omitted as part of this update.

The levels of trip generation shown will easily exceed City of Prineville and ODOT analysis thresholds at the Prineville "Y" Junction, and will also exceed the City of Redmond's thresholds to the west. As the affected transportation service providers their relevant standards will govern this element of the scoping. Please reference the City of Prineville Transportation System Plan (Volume 1) Appendix 1 (which includes an impact threshold of 25 or more weekday p.m. peak hour trips) to coordinate the potential impact area necessary through the City's transportation system, and coordinate the scope west of Crook County with Deschutes County and the City of Redmond. Study to the west should minimally assess the same area as the original study.

Response 6:

The intersections included in the TIA comply with Crook County Code Requirements stating a TIA should evaluate intersections that receive site-generated trips that compromise at least 10 percent or more of the total intersection volume. At the request of City of Prineville Staff, a supplementary memorandum was prepared on February 18, 2022, to include two City intersections: OR370/OR126 and OR126/US26.

COMMENT 7:

Additional information and discussions related to the collection and use of traffic counts will be important prior to commencing with the analysis, particularly if the applicant is proposing to consider a Saturday time period as presented. Addition of a Saturday analysis will add substantial data collection and report preparation cost increases, and since it does not align with the County's Transportation System Plan or ODOT's design hour it is questionable what value it will provide or what questions this additional analysis is intended to answer.

In addition, there are significant seasonal changes that occur along the OR 126 corridor throughout the year, and with the data centers there are other variations in traffic counts that should be considered, particularly with the amount of approved development present in the campus.

Response 7:

A Saturday analysis was completed (see page 8) to be consistent with past destination resort studies, to capture recreational users and trip generators such as the development, and because AM peak trip rates were 25% lower than PM peak trip rates. The PM peak hour was proven to be the peak period for analysis and mitigation purposes, however, the Saturday peak period provided additional context for weekend traffic conditions.

Seasonal variation and trends were considered and discussed on Page 14 on TIA.

COMMENT 8:

The roads surrounding the Crossing Trails Resort were constructed to support low-volume agricultural use. Information will be needed from the applicant on the primary travel and access routes, how the current cross-section complies with County standards, and the pavement structural conditions (particularly at culverts/bridge crossings). It will be important to identify the primary construction routes to the site, particularly as the nearest quarry is on the opposite side of Wiley Road that the applicant cites is planned for closure.

Response 8:

Primary travel routes are shown in the trip distribution and trip assignment figures in the TIA (Figure 9 and 10, respectively). Existing transportation facility information is provided in Table 4 on Page 12. Construction routing and traffic control is not included in Section 18.180 or 18.116 in the County Code.

Conclusion

The comments provided by Transight Consulting have largely been addressed through correspondence with the agency staff and technical updates included in the TIA and furthermore described in the responses throughout this memorandum. Please let us know if you need any additional information as part of this comment period.

Technical Memorandum

February 18, 2022

Project# 26648

To: Oregon Department of Transportation – Region 4
Crook County Community Development
City of Prineville Community Development

From: Jacki Gulczynski, PE, Marc Butorac, PE, and Dan Bowers

RE: Crossing Trails Destination Resort – Crook County, OR

SUPPLEMENTAL MEMORANDUM

This supplemental memorandum documents the operations and safety analysis of additional intersections requested by the City of Prineville beyond those documented in the Scoping Memorandum (submitted November 12th, 2021) for the proposed Crossing Trails Destination Resort located in Crook County. The additional intersections include:

- OR370/OR126
- OR126/US-26

The information presented in this memorandum is consistent with the methodology used to develop the February 2nd, 2022, Transportation Impact Analysis (TIA) for the previously approved 580-acre destination resort. The memorandum addresses the following items relating to the new intersections:

- Trip Distribution and Assignment
- Crash History Assessment
- Analysis Scenarios and Study Assumptions
- Mobility Targets
- Future Intersection Considerations

Background

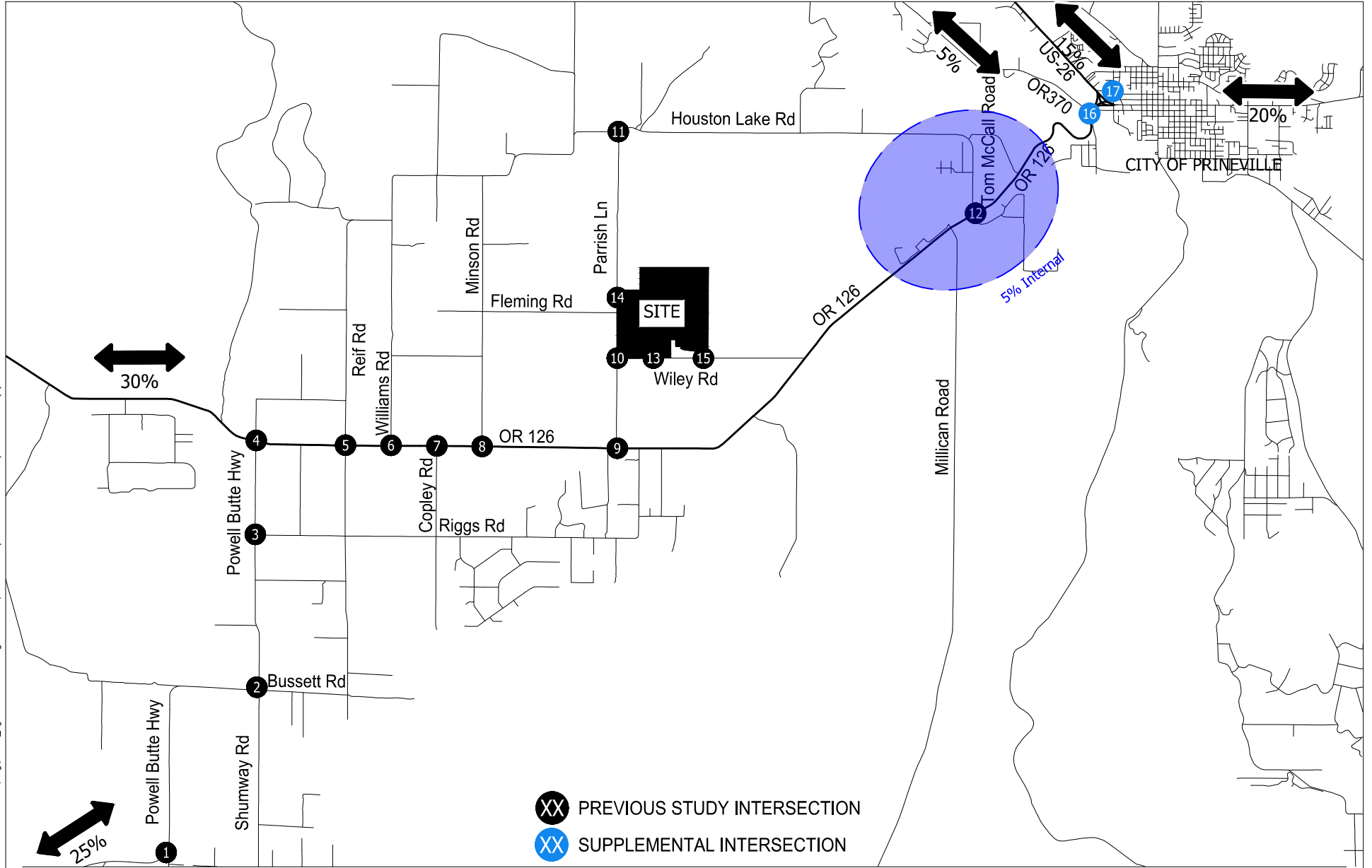
The Crossing Trails Destination Resort TIA was submitted for review on February 2nd, 2022, as part of the land use application process. The proposed development is located on the northeast corner of Parrish Lane/Wiley Road just west of the City of Prineville. The submitted TIA studied thirteen existing intersections surrounding the site and three site access points as outlined in the November 12, 2021 scoping memorandum reviewed and accepted by ODOT, Crook County, and the City of Prineville.

Crook County Code states a TIA should evaluate intersections that receive site-generated trips that compromise at least 10 percent or more of the total intersection volume. *The study intersection included in TIA reflected County Code requirements – intersections that exceed a 10 percent increase in total traffic.* On January 10th, 2022, the City of Prineville staff requested the project team review two additional intersections within City limits.

Trip Distribution and Assignment

The weekday PM peak hour site generated trips are expected to distribute onto the local and regional network like existing travel patterns as shown in Figure 1a. The original distribution reported 40% of site trips traveled east of Tom McCall Road on OR126. These trips were re-distributed through the requested study intersections as shown. The OR126/US-26 intersection (study intersection 17), also known as the “Y”, is a series of four separate stop and yield controlled intersections. The trip assignment is shown in Figure 1b.

H:\26\26648 - Crossing Trails Destination Resort\dwg\26648_figures - Bussett.dwg Feb 16, 2022 - 1:01pm - dbowers Layout Tab: Dist (2)



Trip Distribution
Crook County, Oregon

Figure
1

Crash History Assessment

The most recent five-year crash history (2015-2019) was collected from the ODOT crash database. Table 1 summarizes the crash data for the additional intersections. Neither of the two additional study intersections are within the top 5% or 10% of ODOT's Safety Priority Index System (SPIS). Additionally, neither intersection exceed the 90th percentile crash rates and critical crash rates. Crash rates are reported in Table 2.

Table 1. Historic Crash Data

Int No.	Intersection	Type of Crash				Crash Severity			Total
		Rear End	Angle	Fixed	Backing	PDO ¹	Injury	Fatality	
16	OR 126/OR 370	2	8	0	1	4	6	1	11
17a	SB US 26/WB OR126 West	5	1	0	0	6	0	0	6
17b	SB US 26/WB OR126 East	0	2	0	0	2	0	0	2
17c	NB US 26/NW 3 rd Street Connector	0	2	1	0	2	1	0	3
17d	SB US 26/EB NW 3 rd Street	0	1	0	0	2	0	0	2

Table 2. Intersection Crash Rate Assessment

Int No.	Location	Total Crashes	Observed Crash Rate at Intersection	90 th Percentile Crash Rate by Land Type and Traffic Control ¹	Observed Crash Rate > 90 th Percentile Rate?
16	OR126/OR370	11	0.28	0.48	No
17a	SB US26/WB OR126 W	6	0.42	0.48	No
17b	SB US26/WB OR126 E	2	0.05	0.48	No
17c	NB US26/NW 3 rd Street Connector	3	0.08	0.48	No
17d	SB US26/EB NW 3 rd Street	2	0.05	0.48	No

Analysis Scenarios & Study Assumptions

Traffic data at the two additional intersections was collected in January 2022. Counts were seasonally adjusted per ODOT APM and scoping memo methodology. Traffic data was collected during the weekday PM peak hour only, as this is the critical traffic volume period. Traffic counts are provided in Appendix A.

A growth rate of 1.6% was used to evaluate the future traffic volumes for all intersection turning movements on ODOT and County facilities.

Mobility Targets

Mobility targets for the three highway facilities were identified in Table 6 of the Oregon Highway Plan (OHP). OR126 is designed by the OHP as a Statewide Freight Route and an Expressway, US26 is designated as a Freight Route and a Regional Highway, and OR370 is designated as a District Highway.

The OHP states that a freight route on a statewide highway and an expressway inside of an urban growth boundary should maintain a mobility target v/c ratio less than or equal to 0.80. A freight route on a regional highway should maintain a mobility target v/c ratio of less than or equal to 0.85. The OHP states that district highway and non-state highway unsignalized intersection approaches should adhere to the v/c ratio for District/Local Interest Roads. Therefore, the mobility standard for OR370 and the side street approaches to the highway should be a v/c ratio less than or equal to 0.90.

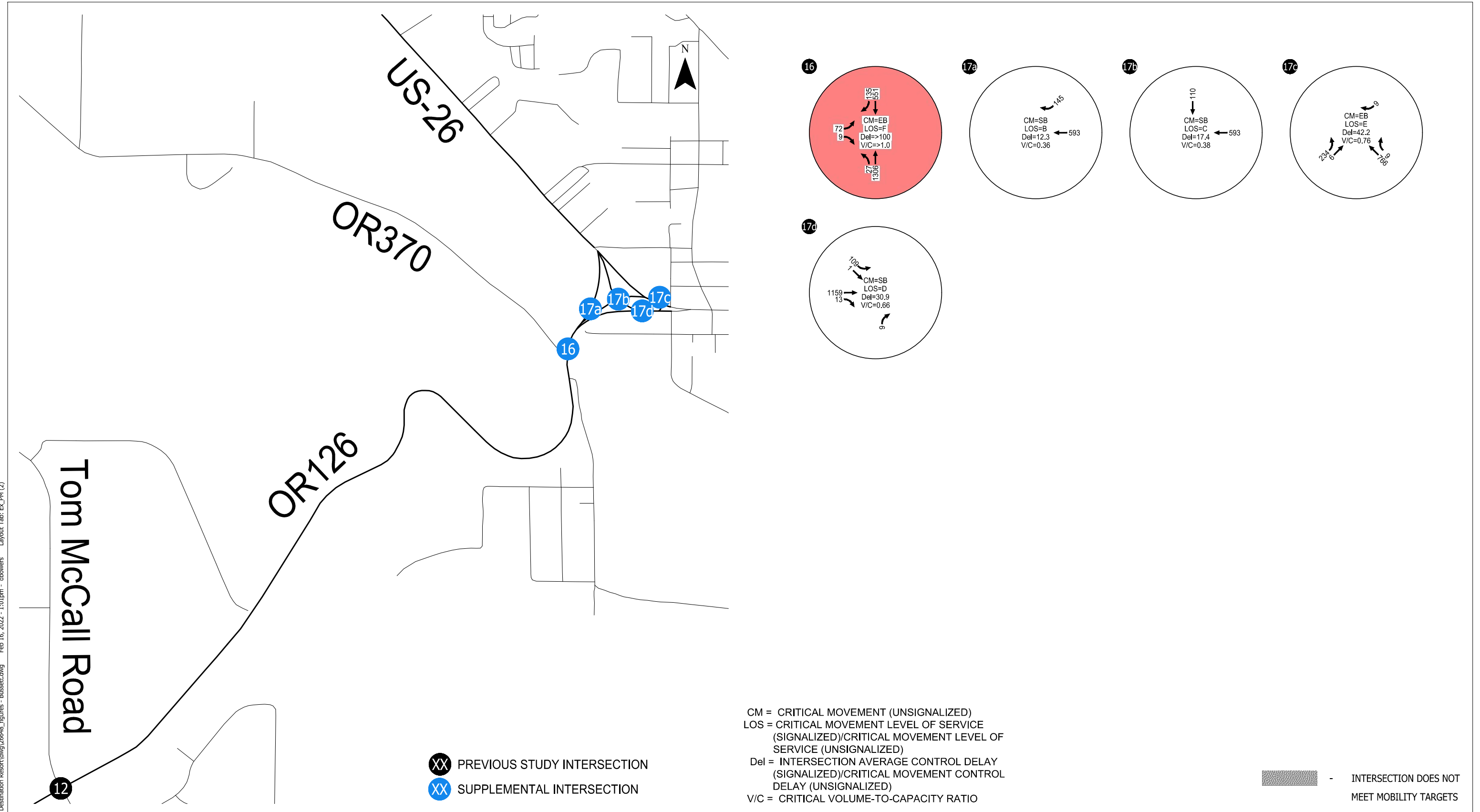
Table 4 shows the mobility targets for the additional intersections requested by ODOT.

Table 4. Study Intersection Control and Mobility Target

Study Int. #	Intersection	Classification / Jurisdiction	Intersection Control	Mobility Target
16	OR370/OR126	ODOT	Stop Controlled	OR 370: v/c < 0.9 OR 126: v/c < 0.85
17	US-26/OR126	ODOT	Stop Controlled/Yield Controlled	US-26: v/c < 0.85 OR 126: v/c < 0.8

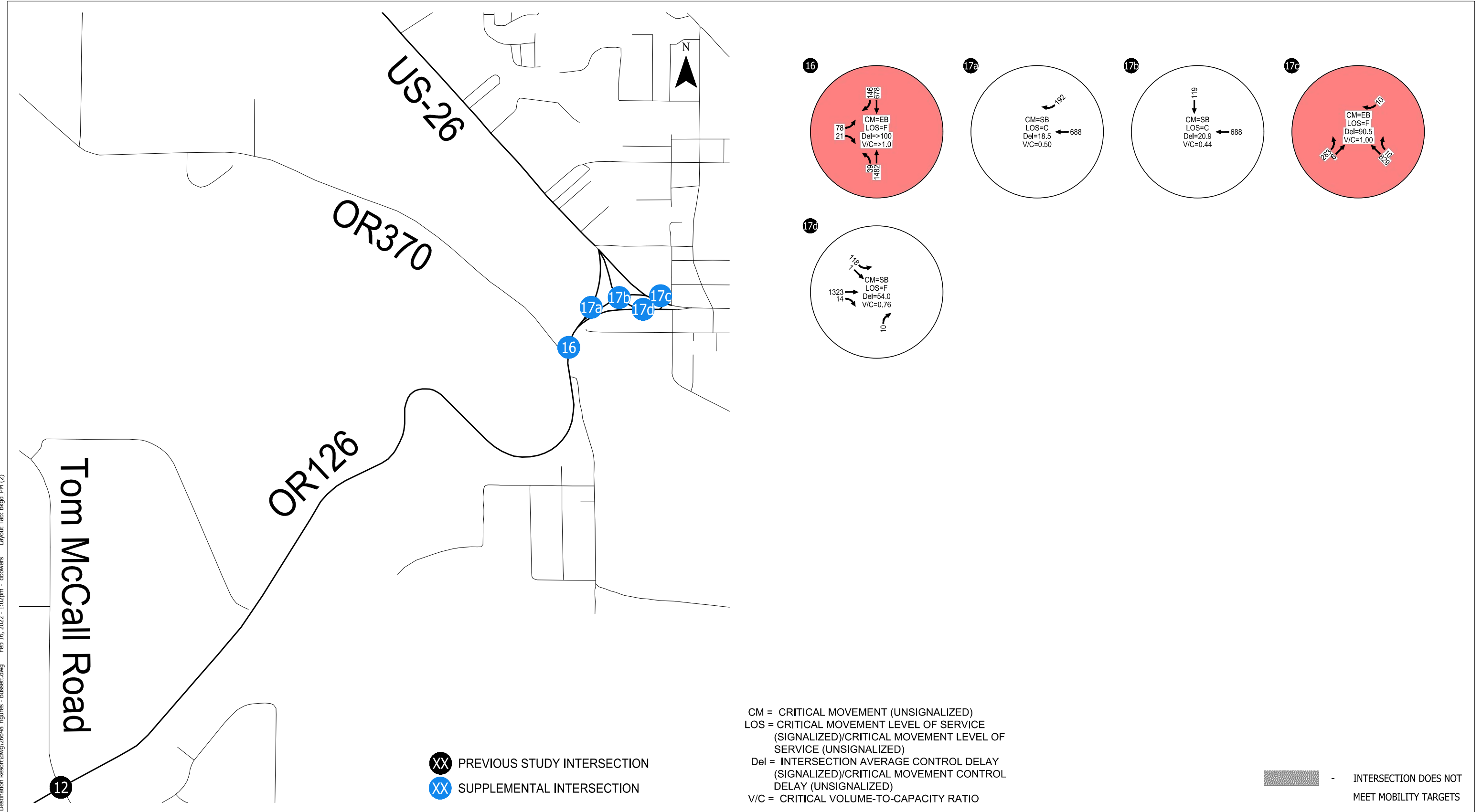
Traffic Impact Analysis

The traffic operations at the additional study intersections are shown in Figures 2, 3, and 4 for existing, background, and total traffic conditions, respectively. The build out year for the resort is 2026. The background conditions reflect a scenario of future conditions including in-process developments but without the proposed development. Total traffic conditions reflect how the intersections will operate with the inclusion of the proposed development in the build out year. The OR370/OR126 intersection is noted to be over the mobility target under all three conditions. The sub US-26/OR126 intersection (17c) between the 3rd Street Connector and US-26 northbound is also over the mobility target in the background and total conditions. Operational analysis results for the two intersections is provided in Appendix B.



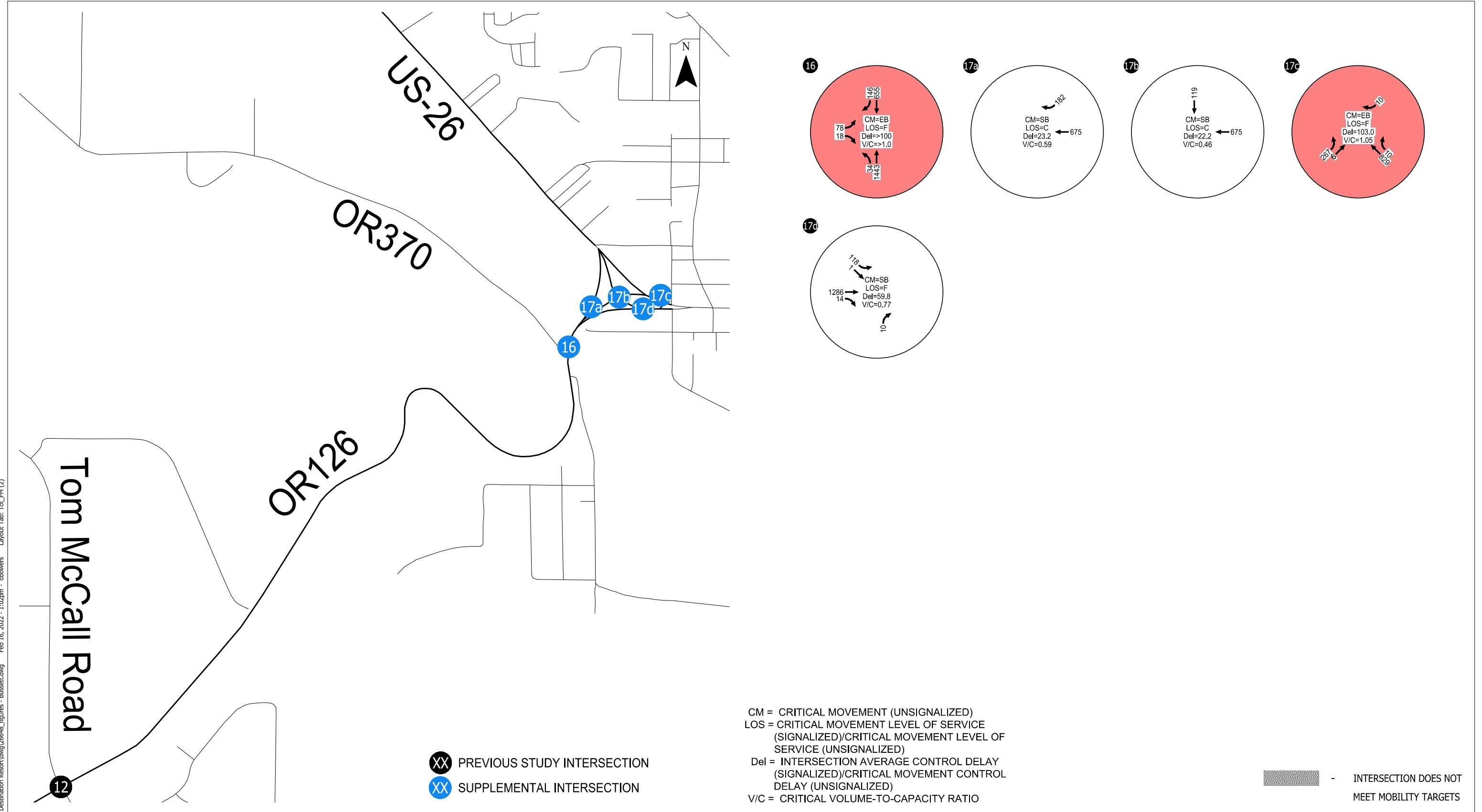
Existing Traffic Conditions
 Weekday PM Peak Hour
 Crook County, Oregon

Figure
 3



Year 2026 Background Traffic Conditions
 Weekday PM Peak Hour
 Crook County, Oregon

Figure
 4



Year 2026 Total Traffic Conditions
 Weekday PM Peak Hour
 Crook County, Oregon

Figure
 5

Future Intersection Considerations and Mitigation Recommendation

OR370/OR126

To address the existing and future deficiency at OR370/OR126, alternative intersection improvements were considered to address operations and safety. A conceptual improvement (see Figure 5) includes restriping the southbound OR 126 approach to include a shared southbound through/right lane in lieu of the two southbound through lanes provided today. By restriping, a two-stage left turn area can be provided for eastbound left vehicles before merging with northbound traffic. The southbound lane reduction would require restriping the existing center turn lane between OR 370 and Rimrock Road to provide adequate tapers when widening back to two lanes. A reduction of travel lanes in the southbound direction reduces conflict points for turning movements and creates more consistent gaps. Table 5 shows the operational improvements between the current configuration and the proposed improvement. As shown, the proposed change would allow the movement to comply with ODOT mobility targets in the total traffic, highest volume, condition. The mitigated condition operational analysis results are provided in Appendix C.

Table 5. 2026 Total Traffic Mitigation Comparison at OR 370/OR 126

Scenario	Mobility Target	Critical Movement	v/c Ratio	LOS	Delay	EB 95 th Percentile Queue
Existing Configuration	OR126 v/c<0.85, OR370 v/c<0.9	Eastbound	>3.0	F	>> 100 seconds	250 ft
Restriped Configuration			0.79	F	88 seconds	100 ft

As stated, the intersection exceeds mobility targets in the existing, background, and total traffic condition. The development is anticipated to send 100 peak hour trips to the intersection. This is approximately 4% of the total traffic in the 2026 total traffic condition. The low-cost improvement would require minimal material, traffic control, and maintenance staff to complete. The total cost of restriping (adding striping and removing striping) is estimated to be \$50,000. To remain consistent with the TIA, a proportionate share cost is recommended as part of the mitigation plan for the development. A summary of the mitigation requirements and pro-rata calculations is shown in Table 6.

Table 6. Summary of Conditions, Mitigation, and Proportionate Share

Intersection (ID)	Existing	Back-ground	Total	Recommended Mitigation and Cost	Proportionate Share Impact and Cost
OR370/OR126				Restriping updated configuration (Estimated Cost = \$50K)	4% of total volume (100 site generated trips) - \$2,000
Proportionate Share Cost Recommended in TIA					\$245,000
Total Proportionate Share Cost					\$247,000

US-26/OR126 – THE “Y”

The Prineville TSP recognizes the need for further evaluation of the “Y” junction and does not include a recommended or a funded change to address existing operational needs. In comparing Figures 3 and 4, it should be noted that the site-generated trips contribute to the degradation of the volume-to-capacity ratio of some of the critical movements. However, given there is not a low-cost planned improvement measure, and no specific change has been identified by the City and ODOT to date, there are no improvement concepts included as part of this application.

H:\27\27155 - The Reserve at Ochoco\report\figs\27155_figures.dwg Feb 16, 2022 - 1:02pm - dhowers Layout Tab: MIT (2)



Proposed Mitigation Exhibit
Crook County, Oregon

Figure
6

Findings and Recommendations

Beyond the mitigation strategy at OR370/OR126, all recommendations and findings from the TIA remain consistent. The additional \$2,000 from proportionate share contribution for the restriping effort increases the total pro-rata payment to \$247,000.

Next Steps

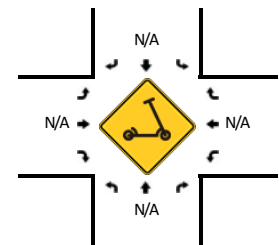
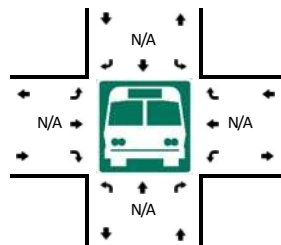
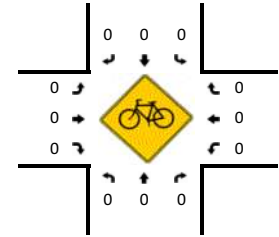
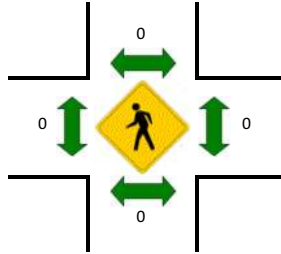
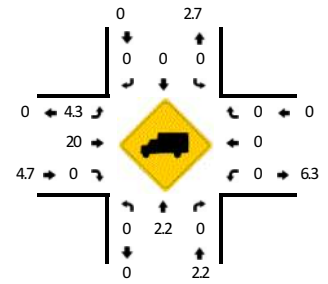
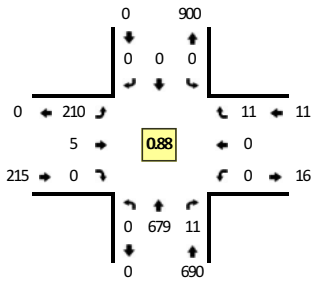
We request ODOT, Crook County, and the City of Prineville review this supplemental memo alongside the original submitted February 2022 Traffic Impact Analysis. Please contact Jacki Gulczynski (541-639-8617 or jgulczynski@kittelson.com) if you have any questions or comments on the information presented in this memorandum.

Appendix A – Traffic Count Data

LOCATION: NB US26 -- NW 3rd St Connector
CITY/STATE: Prineville, OR

QC JOB #: 15684203
DATE: Thu, Jan 20 2022

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM



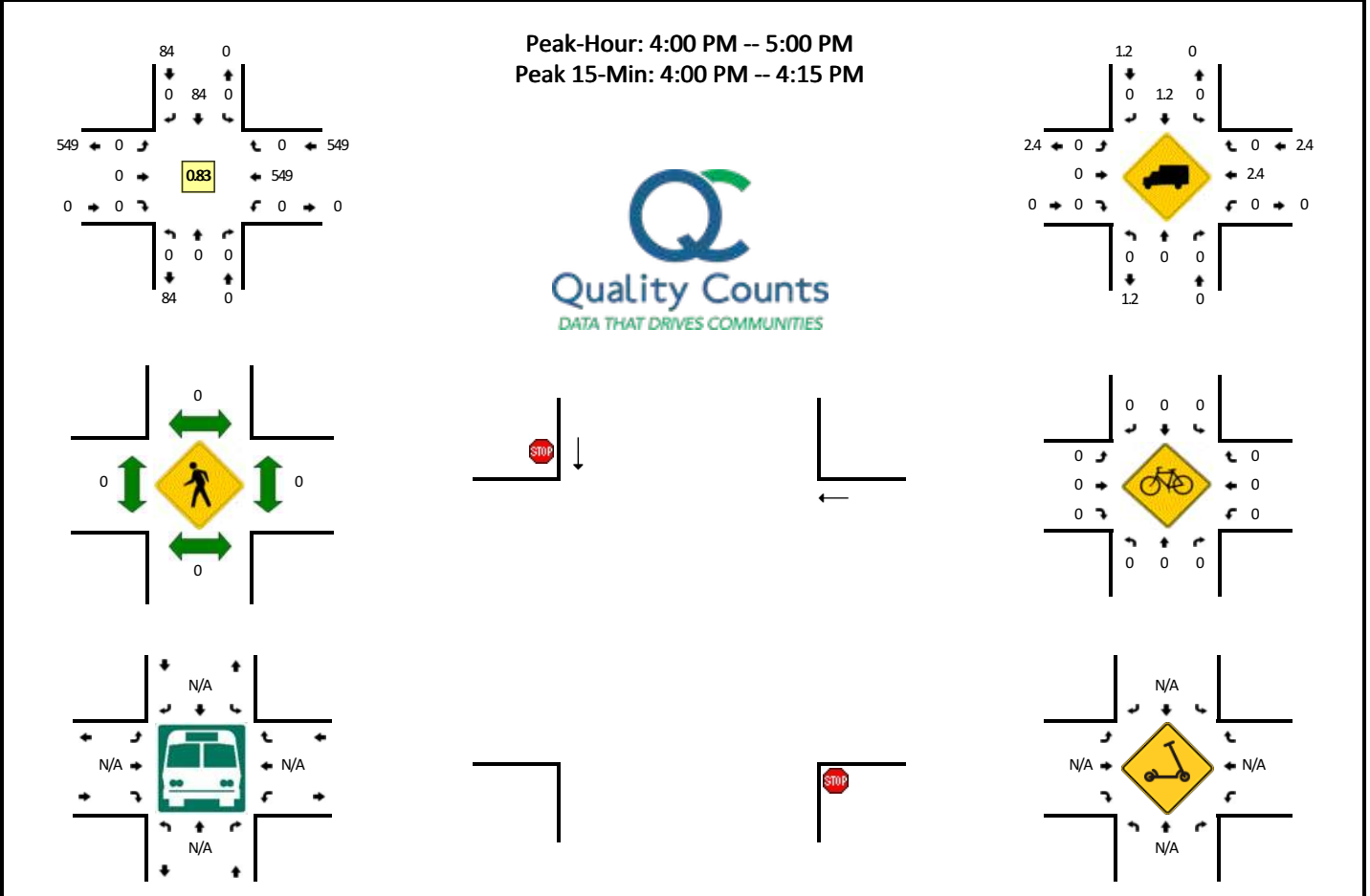
15-Min Count Period Beginning At	NB US26 (Northbound)				NB US26 (Southbound)				NW 3rd St Connector (Eastbound)				NW 3rd St Connector (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	201	4	0	0	0	0	0	48	1	0	0	0	0	5	0	259	
4:15 PM	0	176	4	0	0	0	0	0	47	2	0	0	0	0	1	0	230	
4:30 PM	0	177	1	0	0	0	0	0	52	1	0	0	0	0	3	0	234	
4:45 PM	0	125	2	0	0	0	0	0	63	1	0	0	0	0	2	0	193	916
5:00 PM	0	182	1	0	0	0	0	0	40	1	0	0	0	0	2	0	226	883
5:15 PM	0	136	1	0	0	0	0	0	26	1	0	0	0	0	4	0	168	821
5:30 PM	0	117	1	0	0	0	0	0	24	0	0	0	0	0	1	0	143	730
5:45 PM	0	97	0	0	0	0	0	0	26	1	0	0	0	0	3	0	127	664

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	804	16	0	0	0	0	0	192	4	0	0	0	0	20	0	1036
Heavy Trucks	0	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	32
Buses																	0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	0

Comments:

LOCATION: SB US26 -- WB OR126 (east)
CITY/STATE: Prineville, OR

QC JOB #: 15684205
DATE: Thu, Jan 20 2022

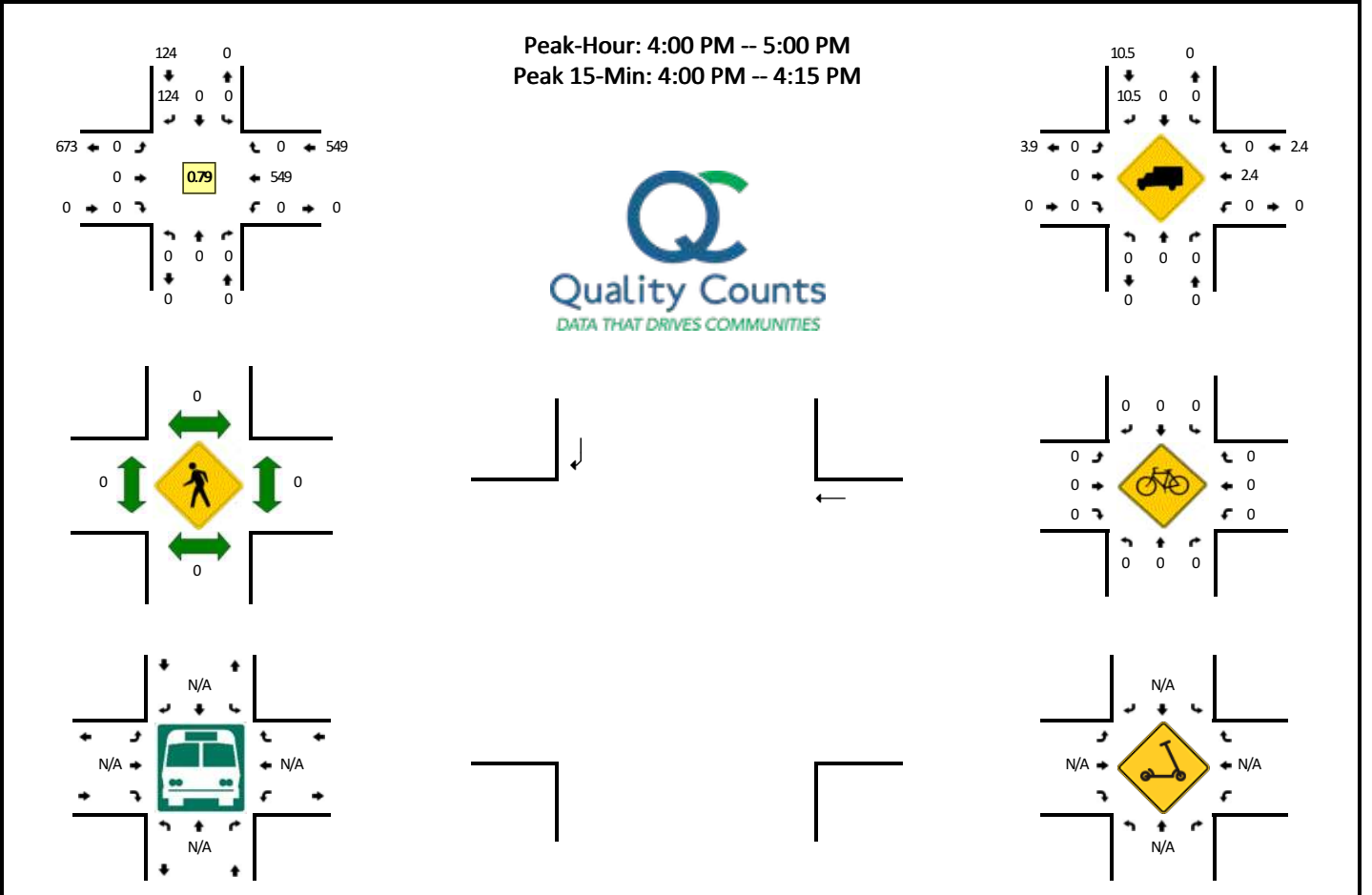


15-Min Count Period Beginning At	SB US26 (Northbound)				SB US26 (Southbound)				WB OR126 (east) (Eastbound)				WB OR126 (east) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	15	0	0	0	0	0	0	0	176	0	0	191	
4:15 PM	0	0	0	0	0	29	0	0	0	0	0	0	0	150	0	0	179	
4:30 PM	0	0	0	0	0	20	0	0	0	0	0	0	0	135	0	0	155	
4:45 PM	0	0	0	0	0	20	0	0	0	0	0	0	0	88	0	0	108	633
5:00 PM	0	0	0	0	0	26	0	0	0	0	0	0	0	138	0	0	164	606
5:15 PM	0	0	0	0	0	19	0	0	0	0	0	0	0	102	0	0	121	548
5:30 PM	0	0	0	0	0	19	0	0	0	0	0	0	0	99	0	0	118	511
5:45 PM	0	0	0	0	0	23	0	0	0	0	0	0	0	66	0	0	89	492
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	60	0	0	0	0	0	0	0	704	0	0	764	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: SB US26 -- WB OR126 (west)
CITY/STATE: Prineville, OR

QC JOB #: 15684206
DATE: Thu, Jan 20 2022

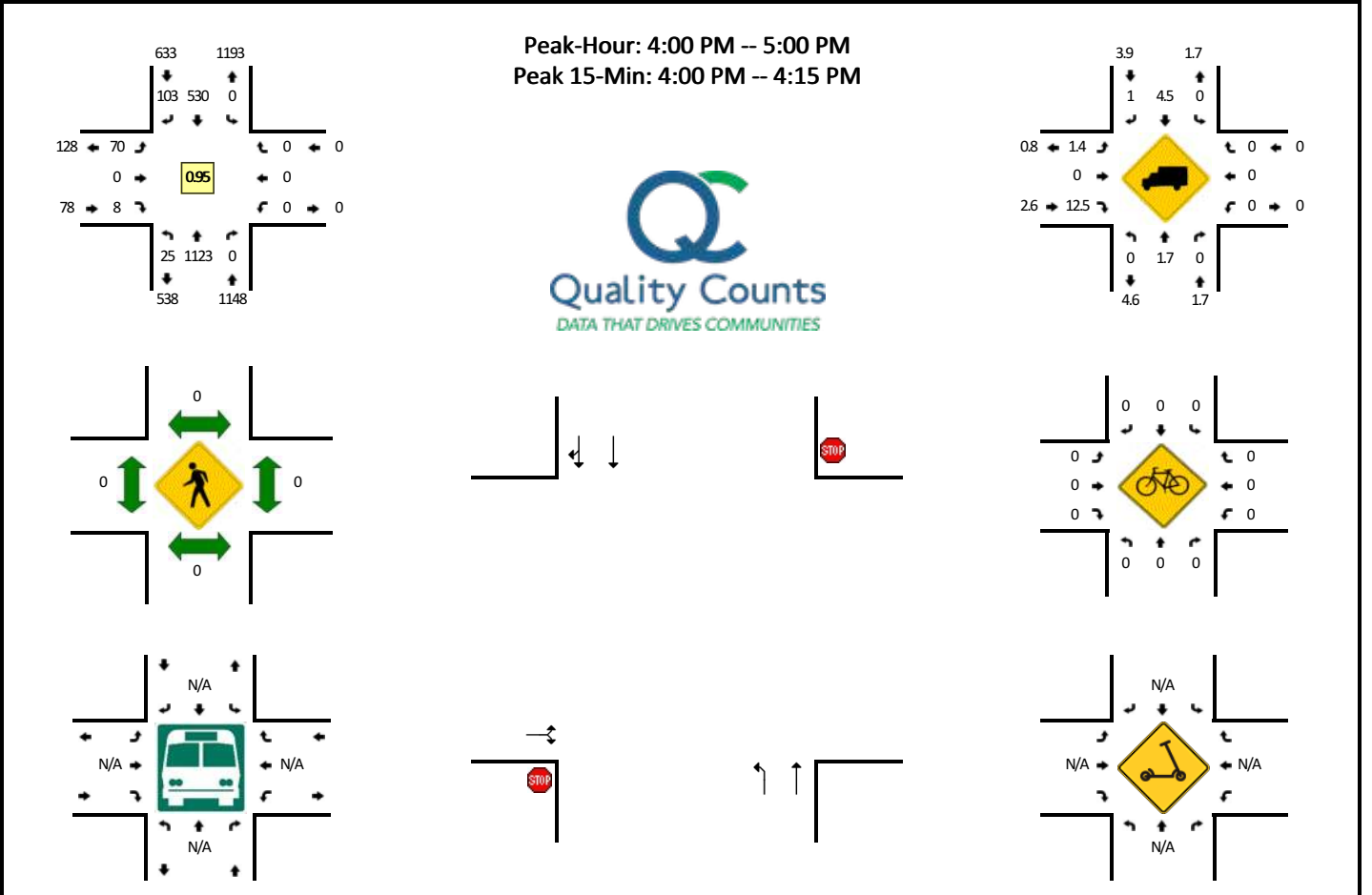


15-Min Count Period Beginning At	SB US26 (Northbound)				SB US26 (Southbound)				WB OR126 (west) (Eastbound)				WB OR126 (west) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	38	0	0	0	0	0	0	176	0	0	214	
4:15 PM	0	0	0	0	0	0	29	0	0	0	0	0	0	150	0	0	179	
4:30 PM	0	0	0	0	0	0	27	0	0	0	0	0	0	135	0	0	162	
4:45 PM	0	0	0	0	0	0	30	0	0	0	0	0	0	88	0	0	118	673
5:00 PM	0	0	0	0	0	0	39	0	0	0	0	0	0	138	0	0	177	636
5:15 PM	0	0	0	0	0	0	34	0	0	0	0	0	0	102	0	0	136	593
5:30 PM	0	0	0	0	0	0	26	0	0	0	0	0	0	99	0	0	125	556
5:45 PM	0	0	0	0	0	0	16	0	0	0	0	0	0	66	0	0	82	520
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	0	152	0	0	0	0	0	0	704	0	0	856	
Heavy Trucks	0	0	0	0	0	0	20	0	0	0	0	0	0	16	0	0	36	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:

LOCATION: OR126 -- OR370
CITY/STATE: Prineville, OR

QC JOB #: 15684207
DATE: Thu, Jan 20 2022



15-Min Count Period Beginning At	OR126 (Northbound)				OR126 (Southbound)				OR370 (Eastbound)				OR370 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	254	0	0	0	174	28	0	24	0	2	0	0	0	0	0	487	
4:15 PM	5	286	0	0	0	134	33	0	16	0	3	0	0	0	0	0	477	
4:30 PM	6	272	0	0	0	127	23	0	14	0	1	0	0	0	0	0	443	
4:45 PM	9	311	0	0	0	95	19	0	16	0	2	0	0	0	0	0	452	1859
5:00 PM	3	257	0	0	0	119	41	0	16	0	2	0	0	0	0	0	438	1810
5:15 PM	2	145	0	0	0	105	27	0	16	0	1	0	0	0	0	0	296	1629
5:30 PM	0	170	0	0	0	102	12	0	13	0	0	0	0	0	0	0	297	1483
5:45 PM	2	161	0	0	0	65	13	0	17	0	1	0	0	0	0	0	259	1290
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	1016	0	0	0	696	112	0	96	0	8	0	0	0	0	0	1948	
Heavy Trucks	0	24	0	0	0	32	0	0	0	0	0	0	0	0	0	0	56	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

Appendix B – Existing, Background, and Total Traffic Operational Analysis

Intersection						
Int Delay, s/veh	16.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	RT		LT	LT	RT	
Traffic Vol, veh/h	72	9	27	1306	551	135
Future Vol, veh/h	72	9	27	1306	551	135
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	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	12	0	2	5	1
Mvmt Flow	76	9	28	1375	580	142

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2082	361	722	0	-	0
Stage 1	651	-	-	-	-	-
Stage 2	1431	-	-	-	-	-
Critical Hdwy	6.615	7.08	4.1	-	-	-
Critical Hdwy Stg 1	5.815	-	-	-	-	-
Critical Hdwy Stg 2	5.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.414	2.2	-	-	-
Pot Cap-1 Maneuver	~ 52	612	889	-	-	-
Stage 1	484	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 50	612	889	-	-	-
Mov Cap-2 Maneuver	~ 50	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	221	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	427.4	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	889	-	56	-	-
HCM Lane V/C Ratio	0.032	-	1.523	-	-
HCM Control Delay (s)	9.2	-	427.4	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	7.8	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

MOVEMENT SUMMARY

Site: 101 [3 - US26 & WB OR126 W (Site Folder: Existing_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
East: OR 126														
6	T1	593	2.0	666	2.0	0.358	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		593	2.0	666	2.0	0.358	0.1	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US 26														
14	R2	145	10.0	163	10.0	0.327	12.3	LOS B	1.7	45.9	0.67	0.75	0.90	29.0
Approach		145	10.0	163	10.0	0.327	12.3	LOS B	1.7	45.9	0.67	0.75	0.90	29.0
All Vehicles		738	3.6	829	3.6	0.358	2.4	NA	1.7	45.9	0.13	0.15	0.18	37.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 101 [4 - US26 & WB OR126 E (Site Folder: Existing_PM)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
East: OR126 WB														
1	L2	1	0.0	1	0.0	0.375	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	37.8
6	T1	593	2.0	698	2.0	0.375	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		594	2.0	699	2.0	0.375	0.1	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US26 SB														
4	T1	110	1.0	129	1.0	0.311	17.4	LOS C	1.4	34.7	0.65	0.72	0.88	27.1
14	R2	1	0.0	1	0.0	0.311	17.0	LOS C	1.4	34.7	0.65	0.72	0.88	27.2
Approach		111	1.0	131	1.0	0.311	17.4	LOS C	1.4	34.7	0.65	0.72	0.88	27.1
All Vehicles		705	1.8	829	1.8	0.375	2.7	NA	1.4	34.7	0.10	0.11	0.14	37.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: H:\26\26648 - Crossing Trails Destination Resort\SIDRA\SUPP\Intersections.sip9

MOVEMENT SUMMARY

Site: 101 [5 - NO_DWY US26 NB & 3rd St Connector (Site Folder: Existing_PM)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist. ft]				
South: US26														
8	T1	766	2.0	815	2.0	0.443	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.7
18	R2	9	0.0	10	0.0	0.443	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	38.3
Approach		775	2.0	824	2.0	0.443	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.7
East: Driveway														
16	R2	1	0.0	1	0.0	0.003	14.5	LOS B	0.0	0.3	0.65	0.47	0.65	28.1
Approach		1	0.0	1	0.0	0.003	14.5	LOS B	0.0	0.3	0.65	0.47	0.65	28.1
West: 3rd St Connector														
5	L2	234	4.0	249	4.0	0.756	42.2	LOS E	7.2	187.5	0.90	1.33	2.34	20.7
2	T1	6	20.0	6	20.0	0.756	43.4	LOS E	7.2	187.5	0.90	1.33	2.34	20.5
Approach		240	4.4	255	4.4	0.756	42.2	LOS E	7.2	187.5	0.90	1.33	2.34	20.6
All Vehicles		1016	2.5	1081	2.5	0.756	10.0	NA	7.2	187.5	0.21	0.31	0.55	32.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [6 - US26 & 3rd St (Site Folder: Existing_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Driveway														
18	R2	9	0.0	9	0.0	0.035	13.8	LOS B	0.1	3.0	0.78	0.78	0.78	28.7
Approach		9	0.0	9	0.0	0.035	13.8	LOS B	0.1	3.0	0.78	0.78	0.78	28.7
North: US 26														
7	L2	109	1.0	115	1.0	0.485	30.9	LOS D	2.4	61.4	0.89	1.00	1.32	23.2
4	T1	1	0.0	1	0.0	0.485	29.2	LOS D	2.4	61.4	0.89	1.00	1.32	23.5
Approach		110	1.0	116	1.0	0.485	30.9	LOS D	2.4	61.4	0.89	1.00	1.32	23.2
West: RoadName														
2	T1	1159	2.0	1220	2.0	0.663	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
12	R2	13	0.0	14	0.0	0.663	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	38.0
Approach		1172	2.0	1234	2.0	0.663	0.4	NA	0.0	0.0	0.00	0.00	0.00	39.4
All Vehicles		1291	1.9	1359	1.9	0.663	2.7	NA	2.4	61.4	0.08	0.09	0.12	37.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection						
Int Delay, s/veh	44.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑↑	
Traffic Vol, veh/h	78	21	39	1482	678	146
Future Vol, veh/h	78	21	39	1482	678	146
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	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	12	0	2	5	1
Mvmt Flow	82	22	41	1560	714	154

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2433	434	868	0	-	0
Stage 1	791	-	-	-	-	-
Stage 2	1642	-	-	-	-	-
Critical Hdwy	6.615	7.08	4.1	-	-	-
Critical Hdwy Stg 1	5.815	-	-	-	-	-
Critical Hdwy Stg 2	5.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.414	2.2	-	-	-
Pot Cap-1 Maneuver	~ 31	548	785	-	-	-
Stage 1	410	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 29	548	785	-	-	-
Mov Cap-2 Maneuver	~ 29	-	-	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	174	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, \$	1089.9	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	785	-	36	-	-
HCM Lane V/C Ratio	0.052	-	2.895	-	-
HCM Control Delay (s)	9.8	\$	1089.9	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	11.8	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

MOVEMENT SUMMARY

Site: 101 [3 - US26 & WB OR126 W - Copy (Site Folder: Bkgd_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
East: OR 126														
6	T1	688	2.0	773	2.0	0.415	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		688	2.0	773	2.0	0.415	0.1	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US 26														
14	R2	192	10.0	216	10.0	0.495	18.5	LOS C	3.2	86.4	0.75	0.94	1.35	26.8
Approach		192	10.0	216	10.0	0.495	18.5	LOS C	3.2	86.4	0.75	0.94	1.35	26.8
All Vehicles		880	3.7	989	3.7	0.495	4.0	NA	3.2	86.4	0.16	0.20	0.29	36.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [4 - US26 & WB OR126 E - Copy (Site Folder: Bkgd_PM)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
East: OR126 WB														
1	L2	1	0.0	1	0.0	0.435	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	37.8
6	T1	688	2.0	809	2.0	0.435	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		689	2.0	811	2.0	0.435	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US26 SB														
4	T1	119	1.0	140	1.0	0.386	20.9	LOS C	1.8	45.8	0.73	0.83	1.10	26.0
14	R2	1	0.0	1	0.0	0.386	20.5	LOS C	1.8	45.8	0.73	0.83	1.10	26.2
Approach		120	1.0	141	1.0	0.386	20.9	LOS C	1.8	45.8	0.73	0.83	1.10	26.0
All Vehicles		809	1.8	952	1.8	0.435	3.1	NA	1.8	45.8	0.11	0.12	0.16	36.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

**Site: 101 [5 - NO_DWY US26 NB & 3rd St Connector - Copy
(Site Folder: Bkgd_PM)]**

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h	HV %]	[Total veh/h	HV %]				[Veh. veh	Dist] ft				
South: US26														
8	T1	829	2.0	882	2.0	0.480	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.7
18	R2	10	0.0	11	0.0	0.480	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	38.3
Approach		839	2.0	893	2.0	0.480	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.7
East: Driveway														
16	R2	1	0.0	1	0.0	0.003	15.4	LOS C	0.0	0.3	0.68	0.51	0.68	27.8
Approach		1	0.0	1	0.0	0.003	15.4	LOS C	0.0	0.3	0.68	0.51	0.68	27.8
West: 3rd St Connector														
5	L2	283	4.0	301	4.0	1.004	90.4	LOS F	16.9	437.4	1.00	1.98	4.38	14.2
2	T1	6	20.0	6	20.0	1.004	91.7	LOS F	16.9	437.4	1.00	1.98	4.38	14.2
Approach		289	4.3	307	4.3	1.004	90.5	LOS F	16.9	437.4	1.00	1.98	4.38	14.2
All Vehicles		1129	2.6	1201	2.6	1.004	23.2	NA	16.9	437.4	0.26	0.51	1.12	27.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [6 - US26 & 3rd St - Copy (Site Folder: Bkgd_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Driveway														
18	R2	10	0.0	11	0.0	0.048	17.3	LOS C	0.2	4.0	0.82	0.82	0.82	27.4
Approach		10	0.0	11	0.0	0.048	17.3	LOS C	0.2	4.0	0.82	0.82	0.82	27.4
North: US 26														
7	L2	118	1.0	124	1.0	0.666	54.0	LOS F	3.7	92.2	0.94	1.14	1.69	18.7
4	T1	1	0.0	1	0.0	0.666	51.2	LOS F	3.7	92.2	0.94	1.14	1.69	18.8
Approach		119	1.0	125	1.0	0.666	54.0	LOS F	3.7	92.2	0.94	1.14	1.69	18.7
West: RoadName														
2	T1	1323	2.0	1393	2.0	0.757	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.1
12	R2	14	0.0	15	0.0	0.757	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	37.8
Approach		1337	2.0	1407	2.0	0.757	0.6	NA	0.0	0.0	0.00	0.00	0.00	39.1
All Vehicles		1466	1.9	1543	1.9	0.757	4.5	NA	3.7	92.2	0.08	0.10	0.14	35.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection						
Int Delay, s/veh	57.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	RT		LT	LT	RT	
Traffic Vol, veh/h	78	30	43	1512	736	146
Future Vol, veh/h	78	30	43	1512	736	146
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	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	12	0	2	5	1
Mvmt Flow	82	32	45	1592	775	154

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2534	465	929	0	-	0
Stage 1	852	-	-	-	-	-
Stage 2	1682	-	-	-	-	-
Critical Hdwy	6.615	7.08	4.1	-	-	-
Critical Hdwy Stg 1	5.815	-	-	-	-	-
Critical Hdwy Stg 2	5.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.414	2.2	-	-	-
Pot Cap-1 Maneuver	~ 26	523	744	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 24	523	744	-	-	-
Mov Cap-2 Maneuver	~ 24	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	166	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, \$	1351.1	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	744	-	33	-	-
HCM Lane V/C Ratio	0.061	-	3.445	-	-
HCM Control Delay (s)	10.2	\$	1351.1	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	13.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

MOVEMENT SUMMARY

Site: 101 [3 - US26 & WB OR126 W - Copy - Copy (Site Folder: Total_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist ft]				
East: OR 126														
6	T1	722	2.0	811	2.0	0.436	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		722	2.0	811	2.0	0.436	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US 26														
14	R2	217	10.0	244	10.0	0.587	23.2	LOS C	4.3	115.3	0.80	1.06	1.64	25.4
Approach		217	10.0	244	10.0	0.587	23.2	LOS C	4.3	115.3	0.80	1.06	1.64	25.4
All Vehicles		939	3.8	1055	3.8	0.587	5.4	NA	4.3	115.3	0.18	0.24	0.38	35.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [4 - US26 & WB OR126 E - Copy - Copy (Site Folder: Total_PM)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
East: OR126 WB														
1	L2	1	0.0	1	0.0	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	37.8
6	T1	722	2.0	849	2.0	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach		723	2.0	851	2.0	0.457	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: US26 SB														
4	T1	119	1.0	140	1.0	0.405	22.2	LOS C	1.9	48.3	0.75	0.86	1.15	25.7
14	R2	1	0.0	1	0.0	0.405	21.8	LOS C	1.9	48.3	0.75	0.86	1.15	25.8
Approach		120	1.0	141	1.0	0.405	22.2	LOS C	1.9	48.3	0.75	0.86	1.15	25.7
All Vehicles		843	1.9	992	1.9	0.457	3.2	NA	1.9	48.3	0.11	0.12	0.16	36.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [5 - NO_DWY US26 NB & 3rd St Connector - Copy - Copy (Site Folder: Total_PM)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h	HV %]	[Total veh/h	HV %]				[Veh. veh	Dist] ft				
South: US26														
8	T1	829	2.0	882	2.0	0.480	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.7
18	R2	10	0.0	11	0.0	0.480	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	38.3
Approach		839	2.0	893	2.0	0.480	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.7
East: Driveway														
16	R2	1	0.0	1	0.0	0.003	15.4	LOS C	0.0	0.3	0.68	0.51	0.68	27.8
Approach		1	0.0	1	0.0	0.003	15.4	LOS C	0.0	0.3	0.68	0.51	0.68	27.8
West: 3rd St Connector														
5	L2	296	4.0	315	4.0	1.049	103.0	LOS F	19.9	515.4	1.00	2.12	4.87	13.2
2	T1	6	20.0	6	20.0	1.049	104.2	LOS F	19.9	515.4	1.00	2.12	4.87	13.1
Approach		302	4.3	321	4.3	1.049	103.0	LOS F	19.9	515.4	1.00	2.12	4.87	13.2
All Vehicles		1142	2.6	1215	2.6	1.049	27.3	NA	19.9	515.4	0.27	0.56	1.29	25.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [6 - US26 & 3rd St - Copy - Copy (Site Folder: Total_PM)]

New Site
 Site Category: (None)
 Yield (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist ft]				
South: Driveway														
18	R2	10	0.0	11	0.0	0.050	18.1	LOS C	0.2	4.1	0.83	0.83	0.83	27.2
Approach		10	0.0	11	0.0	0.050	18.1	LOS C	0.2	4.1	0.83	0.83	0.83	27.2
North: US 26														
7	L2	118	1.0	124	1.0	0.697	59.8	LOS F	3.9	98.2	0.95	1.16	1.77	17.8
4	T1	1	0.0	1	0.0	0.697	56.7	LOS F	3.9	98.2	0.95	1.16	1.77	18.0
Approach		119	1.0	125	1.0	0.697	59.8	LOS F	3.9	98.2	0.95	1.16	1.77	17.8
West: RoadName														
2	T1	1354	2.0	1425	2.0	0.774	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.0
12	R2	14	0.0	15	0.0	0.774	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	37.7
Approach		1368	2.0	1440	2.0	0.774	0.7	NA	0.0	0.0	0.00	0.00	0.00	39.0
All Vehicles		1497	1.9	1576	1.9	0.774	4.9	NA	3.9	98.2	0.08	0.10	0.15	35.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: HCM Delay Formula (Geometric Delay is not included).
 Queue Model: HCM Queue Formula.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix C – Mitigated Condition Operational Analysis

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑↑	
Traffic Vol, veh/h	78	30	43	1512	736	146
Future Vol, veh/h	78	30	43	1512	736	146
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	-	0	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	12	0	2	5	1
Mvmt Flow	82	32	45	1592	775	154

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2534	465	929	0	-	0
Stage 1	852	-	-	-	-	-
Stage 2	1682	-	-	-	-	-
Critical Hdwy	6.615	7.08	4.1	-	-	-
Critical Hdwy Stg 1	5.815	-	-	-	-	-
Critical Hdwy Stg 2	5.415	-	-	-	-	-
Follow-up Hdwy	3.5095	3.414	2.2	-	-	-
Pot Cap-1 Maneuver	~ 26	523	744	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 24	523	744	-	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	166	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	88.1	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	744	-	144	-	-
HCM Lane V/C Ratio	0.061	-	0.789	-	-
HCM Control Delay (s)	10.2	-	88.1	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	4.9	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Crook County Fire & Rescue

est. 1884



March 20, 2008

Ron Hand
W&H Pacific
920 SW Emkay Dr.
Bend OR 97702

Mr. Hand

The proposed Crossing Trails Resort located at the NE corner of Parrish and Wiley roads is within Crook County Fire and Rescue's fire protection district.

This proposed destination resort would receive fire protection services from CCF&R.
Thank you.

Sincerely,

Casey Kump
Crook County Fire & Rescue



CROOK COUNTY FIRE & RESCUE

Est. 1884

March 7, 2022

Craig Kilpatrick
Kilpatrick Consulting LLC
13790 NW O'Neil Highway
Redmond, Oregon 97756

Mr. Kilpatrick,

This letter is to confirm that the properties located at tax lots 1515170000100, 1515170000106, 1515170000109, and 1515170000110, in Crook County, Oregon, are located within Crook County Fire and Rescue's fire protection district. The Fire District will respond to structure fire and other emergencies at this location.

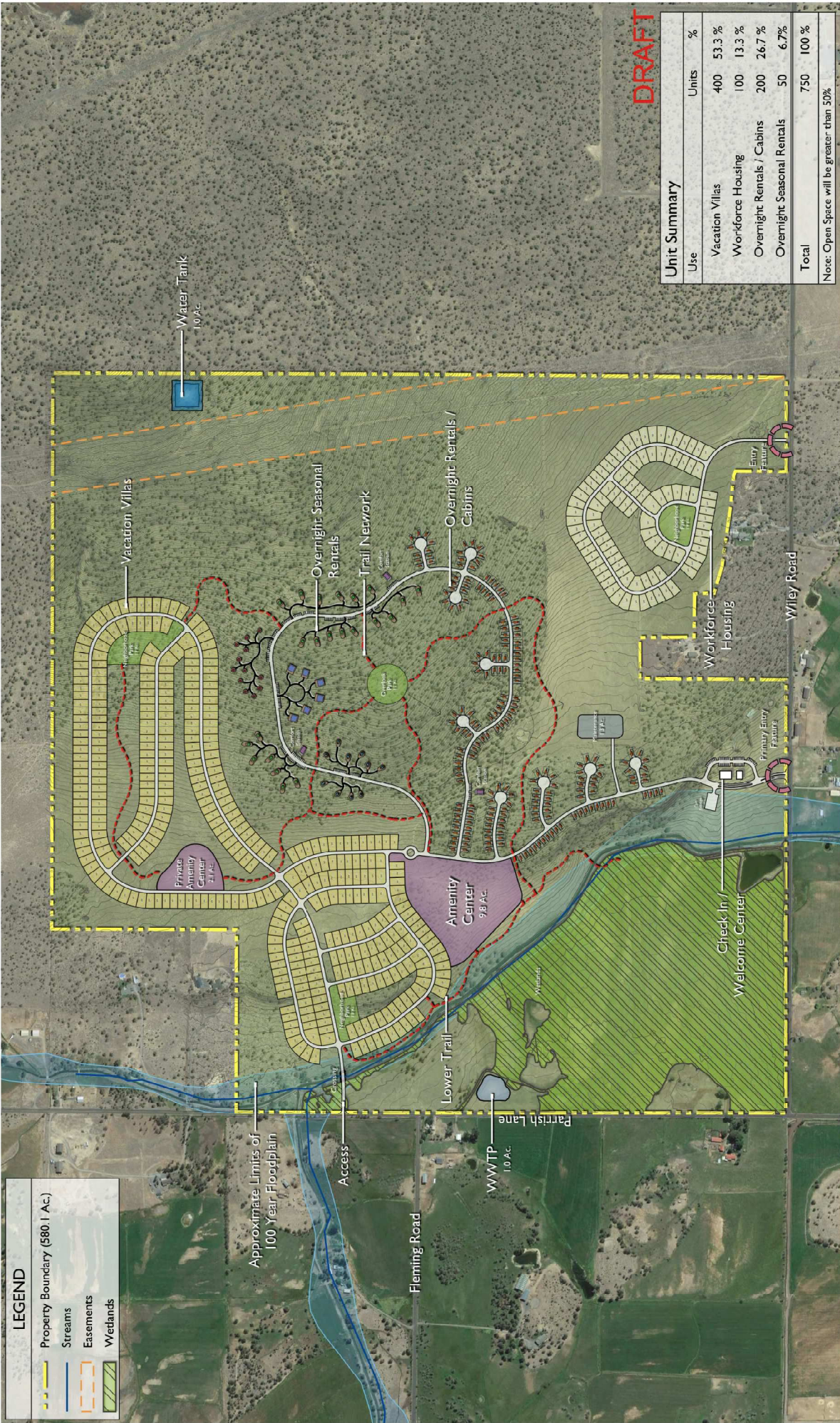
Thank you,

A handwritten signature in blue ink, appearing to read "R. Deboodt", is written over the "Thank you," text.

Russell Deboodt
Division Chief - Fire Marshal
(541) 447- 5011

LEGEND

	Property Boundary (580.1 Ac.)
	Streams
	Easements
	Wetlands



Unit Summary

Use	Units	%
Vacation Villas	400	53.3 %
Workforce Housing	100	13.3 %
Overnight Rentals / Cabins	200	26.7 %
Overnight Seasonal Rentals	50	6.7 %
Total	750	100 %

Note: Open Space will be greater than 50%