UMATILLA PLANNING COMMISSION MEETING
AGENDA
COUNCIL CHAMBERS
MAY 25, 2021
6:30 PM

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1. **CALL TO ORDER & ROLL CALL**

2. **PLEDGE OF ALLEGIANCE**

3. **APPROVAL OF MINUTES**

   3.a April 27, 2021 Minutes *Suggested Action: Approval*

4. **UNFINISHED BUSINESS**

5. **NEW BUSINESS**

   5.a Columbia Basin Development SUB-2-21 *Suggested Action:*

   The applicant, Columbia Basin Development, request approval of a tentative plat for a residential subdivision to divide an existing parcel into 49-lots for residential development. This is the second phase of Vandelay Meadows and will connect with the existing phase. The applicant intends to develop the residential lots with single-family dwellings. The proposal must comply with the applicable standards for the Medium-Density Residential zoning district (R2) and the Land Division Ordinance (LDO).

   5.b Monte Vista Plan Amendment PA-1-21 *Suggested Action:*

   The applicant, Monte Vista, is requesting to rezone two tax lots totaling 81.17 Acres from Single-Family Residential (R-1) to Medium-Density Residential (R-2) for a proposed subdivision application. The proposed subdivision would create a total of 326 new single-family homes. If this Rezone is not approved the proposed subdivision would need to meet the lot size standards of the Single-Family Residential Zone.

   5.c Monte Vista Subdivision SUB-1-21 *Suggested Action:*

   The applicant, MCSUM(MonteVista), request approval of a tentative plat for a residential subdivision to divide two existing parcels into 326-lots for residential development. The applicant intends to develop the residential lots with single-family dwellings. The proposal must comply with the applicable standards for the Medium-Density Residential zoning district (R2) and the Land Division Ordinance (LDO). This application will be processed with the assumption that MonteVista Rezone Plan amendment PA-1-21 has been approved. Planning commissions recommendation will be acted upon by the City Council on June 1st. A condition of approval will be that PA-1-21 is approved.

6. **DISCUSSION ITEMS**

6.a Community Development Director Check In *Suggested Action: An update on things happening within the City of Umatilla*

7. **INFORMATIONAL ITEMS**

7.a Master Park Plan Joint Meeting on June 8th *Suggested Action: Meeting to review the Umatilla Master Park Plan with Parks and Recreation Committee at 6:30 PM*

7.b Chinook Institute Planning Class on June 4th *Suggested Action: Class will be from 9 a.m. – 4 p.m. in the Council Chambers. Lunch will be provided.*

8. **ADJOURNMENT**

This institution is an equal opportunity provider. Discrimination is prohibited by Federal law. Special accommodations to attend or participate in a city meeting or other function can be provided by contacting City Hall at (541) 922-3226 or use the TTY Relay Service at 1-800-735-2900 for appropriate assistance.

UMATILLA PLANNING COMMISSION MEETING
AGENDA MINUTES
COUNCIL CHAMBERS
APRIL 27, 2021
6:30 PM

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1. **CALL TO ORDER & ROLL CALL**

Meeting called to order at 6:31 p.m.

A. **Present**: Commissioners; Boyd Sharp, Kelly Nobles, Bruce McLane, Jennifer Cooper, Keith Morgan
B. **Absent**: Heidi Sipe, Hilda Martinez
C. **Late arrival:**
D. **Staff present:** Community Development Director, Brandon Seitz, City Recorder, Nanci Sandoval and Associate Planner, Jacob Foutz.

2. **PLEDGE OF ALLEGIANCE**

3. **APPROVAL OF MINUTES**

3.a March 23, 2021 Minutes

Motion to approve by Commissioner McLane, seconded by Commissioner Nobles. Motion Carries 4-0.

4. **UNFINISHED BUSINESS**

5. **NEW BUSINESS**

5.a Hayden Enterprises Replat RP-3-21 *Suggested Action:*

The applicant, Hayden Enterprises Inc., requests approval to replat two existing lots into one buildable lot and one unbuildable lot due to powerline easements. The proposed replat would result in two (2) lots. The property is identified as 9700 & 19000 on Assessors Map 5N2820BB. The intent of the replat is to create a lot that meets City standards as well as county assessors' standards for the building of a new single-family home.

Chair Sharp opened the hearing and read into the record the Public Hearing Opening Statement.
Chair Sharp asked if there was any conflicts or objections.
Commissioner McLane stated that he did receive the notice of the application as he lives within 100' of the subject property.
Chair Sharp made note and stated that it would not disqualify him from hearing the replat request.
Chair Sharp asked for the Staff Report
Planner Foutz gave a brief overview of the location of the lot and explained that this replat will make an existing lot become a legal and buildable tax lot. The tax lot had never been originally platted and therefore was not a legal lot of record. This replat

process will allow for it to become a legal lot of record and therefore allow for the building of a home upon it.
Chair Sharp asked for clarification of where the lot lines started and ended.
Planner Foutz pointed on the map to demonstrate where the lot lines are.
Chair Sharp asked for any testimony from the applicant. Not present
Chair Sharp asked for any testimony from the audience. None present.
Chair Sharp called for a motion to close the hearing of RP-3-21. Motion to close by Commissioner Morgan. Seconded by Commissioner Cooper. Motion Carried 4-0.
Chair Sharp asked for any question or discussion among commission members. None.
Chair Sharp called for a motion to approve RP-3-21. Motion to approve by Commissioner Nobles. Seconded by Commissioner Martinez. Motion Carried 4-0.

6. **DISCUSSION ITEMS**

7. **INFORMATIONAL ITEMS**

7.a Community Development Director Check In *Suggested Action: An update on things happening within the City of Umatilla*
Director Seitz shared that Dollar General has broken ground and that two buildings in downtown have changed hands. He stated that the parks masterplan is almost done and that there will be a joint PC and parks and rec committee meeting on June 8th.
Commissioner Nobles asked if this plan will allow for the City to assess parks fees to developers.
Director Seitz explained that it does and the City will once it is approved.

7.b Microsoft Surface Go Training *Suggested Action: The City has invested in Microsoft Surface Go laptop computers for each planning commissioner to use during their term on the Planning Commission. Our City Recorder will be training on the set up of these devices.*
Recorder Sandoval went over the purpose of the new computers.

8. **ADJOURNMENT**

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CITY OF UMATILLA PLANNING COMMISSION
REPORT AND RECOMMENDATION
FOR
TENTATIVE SUBDIVISION PLAT FOR SUB-2-21

DATE OF HEARING : May 25, 2021

REPORT PREPARED BY: Jacob Foutz, Associate Planner

I. GENERAL INFORMATION

Applicant: Columbia Basin Development, P.O box 5160, Pasco, WA 99302.

Property Owners: Columbia Basin Development, P.O box 5160, Pasco, WA 99302.

Land Use Review: Tentative plat review for a 49-lot subdivision.

Property Description: Township 5N, Range 28, Section 20CB, Tax Lots 00100.

Location: The property is generally located North of Dark Canyon Ave.

Existing Development: The subject property is currently undeveloped; however, the first phase of this subdivision has been previously completed.

Proposed Development: To subdivide the property into 49-lots for residential development.

Zone Medium-Density Residential (R2)

Adjacent Land Use(s):

Adjacent Property	Zoning	Use
North	R1	Single-family dwellings
South	R2	The bluffs Subdivision
East	R2	Single-family dwellings
West	EFU(County)	Undeveloped land and irrigated farm land

II. NATURE OF REQUEST

The applicant, Columbia Basin Development, request approval of a tentative plat for a residential subdivision to divide an existing parcel into 49-lots for residential development. This is the second phase of Vandelay Meadows and will connect with the existing phase. The applicant intends to develop the residential lots with single-family dwellings. The proposal must comply with the applicable standards for the Medium-Density Residential zoning district (R2) and the Land Division Ordinance (LDO).

III. ANALYSIS

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

CITY OF UMATILLA ZONING ORDINANCE:

SECTION 10-3A-4: DEVELOPMENT STANDARDS:

Minimum lot area	5,000 square feet
Minimum lot width	50 feet
Minimum lot depth	90 feet
Minimum yard setbacks:	
Front and rear yard	10 feet
Side yard	5 feet
Street side yard	10 feet
Garage	18 feet from any street except an alley
Maximum building height	35 feet

(Ord. 688, 6-15-1999)

Findings: No development is proposed at this time and the minimum yard setbacks are not applicable to this request. The minimum lot area, width and depth are applicable to all of the proposed lots. All of the proposed lots meet or exceed the minimum lot standards listed above as shown on the applicant's submitted tentative plat.

Conclusion: All of the proposed lots exceed the minimum lot standards.

CITY OF UMATILLA LAND DIVISION ORDINANCE

SECTION 11-2-6: LAND DIVISION APPROVAL CRITERIA:

No plat for a subdivision or partition may be considered for approval until the city has approved a tentative plan. Approval of the tentative plan shall be binding upon the city and the applicant for the purposes of preparing the subdivision or partition plat. In each case, the applicant bears the burden of proof to demonstrate that the proposal satisfies applicable criteria and standards.

A. Approval Criteria: Land division tentative plans shall only be approved if found to comply with the following criteria:

1. The proposal shall comply with the city's comprehensive plan.
   Findings: The City of Umatilla's Zoning Ordinance (CUZO) and Land Division Ordinance (LDO) implement the comprehensive plan goals and policies. If a request is found to meet or be capable of meeting the applicable standards and criteria in the CUZO and LDO the request is considered to be consistent with the comprehensive plan.

   Conclusion: This request is found to meet or be capable of meeting all of the applicable standards and criterion in the CUZO and LDO as addressed in this report.

2. The proposal shall comply with the I-82/U.S. 730 interchange area management plan (IAMP) and the access management plan in the IAMP (section 7) as applicable.
Findings: The Interchange Area Management Plan (IAMP) extends along U.S. Highway 730 from its intersection with U.S. Highway 395 west to Eisele Drive just west of the U.S. Post Office within City Limits. The property is not within the IAMP area.

Conclusion: The property is not located within the I-82/U.S. 730 IAMP. This criterion is not applicable.

3. The proposal shall comply with the city's zoning requirements.
Findings: The property is zoned R2, the applicable City zoning requirements are addressed above. This request complies with all of the dimensional standards as addressed in this report.

Conclusion: The request is for approval of a subdivision that would result in 49-lots. All of the proposed lots will meet the minimum dimensional standards as addressed in this report.

4. The proposal shall comply with the city's public works standards.
Findings: The City's public works standards are engineering design standards for construction of streets, sidewalks, curbs, water and sewer lines, other utilities, and safety standards for installation of such improvements. The applicant did not submit engineered construction plans for these facilities. Section 11-5-4 of the LDO provides the applicant/developer with the option of submitting engineered construction plans after tentative plat approval has been obtained. Engineered plans for all public facilities serving the proposed development will be reviewed by the public works director for compliance with the City's public work standards. The applicant is required to install these facilities in compliance with the approved plans and to submit a final set of "as-built" plans to the City upon completion of the improvements.

Conclusion: This requirement is best satisfied as a condition of approval that the applicant obtain approval of engineered construction plans for all public works and utility facilities prior to starting construction and to submit final "as-built" drawing after construction is completed.

5. The proposal shall comply with applicable state and federal regulations, including, but not limited to, Oregon Revised Statutes 92, 197, 227, and wetland regulations.
Findings: The CUZO and LDO implement the applicable provision of ORS 92, 197, 227. The subject property does not contain wetlands as shown on the National Wetlands Inventory (NWI) or figure 5-1.2 in the City's Comprehensive Plan. Except as implemented through the City's ordinance, applicable state and federal regulations will be required to be met as a condition of approval.

Conclusion: This request is found to meet or be capable of meeting all of the standards and criteria as addressed in this report, the proposal will comply with applicable state and federal regulations, as implemented through the City's ordinances. The applicant will be required as a condition of approval to comply with all other state and federal requirements.

6. The proposal shall conserve inventoried natural resource areas and floodplains, including, but not limited to, mapped rivers, creeks, sloughs, and wetlands.
Findings: There are no known wetlands, as identified on the NWI, or flood zones on the subject property. The City of Umatilla's Comprehensive Plan does not identify any significant natural resources on the property and there are no known rivers, creeks or sloughs on the property.

Conclusion: There are no inventoried natural resource areas, waterways, water bodies or floodplain areas to conserve on the property. This criterion is not applicable.

7. The proposal shall minimize disruption of natural features of the site, including steep slopes or other features, while providing for safe and efficient vehicle, pedestrian, and bicycle access.
Findings: The subject property is not identified as having slope in Figure 7.1-2 of the City of Umatilla's Comprehensive Plan. There are no identified natural features on the subject property. The proposed streets, sidewalks and other public facilities will be reviewed for compliance with the City's public works standards which are intended to provide for and protect the public health, safety and welfare.

Conclusion: There are no inventoried or known natural features on the site. Therefore, no disruption of natural feature will occur as a result of the proposed subdivision. Vehicle and pedestrian access will be provided as part of the proposed subdivision; however, these will be reviewed against other applicable standards as addressed in this report. If found to meet or be capable of meeting the standards as addressed in this report the proposed subdivision will comply with this standard.

8. The proposal shall provide adjacent lands with access to public facilities and streets to allow its full development as allowed by the City's codes and requirements.
Findings: A portion of the subject property is part of what was known as "The Bluffs" development plan that was approved in August of 2003. However, only the first phase of the plan was developed and the approval has expired. The applicant's layout and design connect to the existing layout and design of "The Bluffs" phase 1.

Conclusion: The applicants submitted plan includes a tentative street layout that complies with City standards and would provide adjacent lands with access to public facilities and streets to allow its full development.

9. The proposal shall be designed with streets that continue or connect to existing and planned land division plats on adjoining properties. All proposed streets shall comply with standards of this Title and the Public Works Standards.
Findings: The proposed subdivision includes a street layout that connects to the adjoining existing property to the south and to the north. The street layout clearly connects Vandelay Meadows to the existing "The Bluffs" subdivision via High Desert Loop. All proposed streets will be reviewed through this request and through the public works director's review of engineered construction plans to ensure the streets comply with the City's public works standards.

Conclusion: As addressed above, the proposed subdivision includes a street layout for the property that extends and connects to adjoining lands and existing land division plats. The proposed streets will be reviewed for compliance with the City's street standards as contained in the LDO and reviewed by the public works director for compliance with the City's public work standards.

SECTION 11-4-2: STREETS:

The location, width, and grade of streets shall be considered in their relation to existing and planned streets, to topographical conditions, to public utilities, services, convenience, and safety, and to the proposed use of the land to be served by the streets.

A. Street Arrangement: The arrangement of streets in and serving land divisions shall:
   1. Maximize public safety, access, and minimize out of direction travel by utilizing a grid system or comparable design.
   2. Avoid cul-de-sacs, except where there is no other practical alternative to serve a portion of the land area to be divided, due to topographical conditions, existing development, or similar circumstances.
   3. Provide for the continuation of existing streets in surrounding areas.
   4. Conform to any future street plan, neighborhood plan, or other street plan adopted by the City.

   Findings: The proposed phase 2 of the subdivision continues the existing grid system found in "The Bluffs". No cul-de-sacs are proposed. All applicable existing streets are being proposed to be extended.

   Conclusion: The proposed subdivision is a grid type layout, and provides a layout that extends in a practical way. The proposed subdivision continues existing streets. There are no street or neighborhood plans adopted by the city on adjacent properties.

B. Street Layout And Design:
   1. All streets, alleys, bicycle, and pedestrian pathways shall connect to other streets within the land division and to existing and planned streets outside the land division. Streets shall terminate at other streets or at parks, schools, or other public uses within a neighborhood.

      Findings: As addressed in this report the proposed streets will connect with an existing street, High Desert Loop. The proposed subdivision includes sidewalks for pedestrian use.

      Conclusion: The proposed subdivision includes proposed streets that connect to existing streets.

   2. Local streets shall align and connect with other streets when crossing streets with higher level classifications.

      Findings: The proposed subdivision will not create a street that would cross streets with higher level classifications.

      Conclusion: The proposed streets will not cross a street with a higher-level classification.

3. Cul-de-sacs and flag lots shall only be permitted when the following conditions are demonstrated:
   a. Existing conditions, such as topographic features, water features, an irrigation canal, a railroad, a freeway, or other condition, that cannot be bridged or crossed prevents the extension of a street.
   b. The existing development pattern on adjacent properties prevents a street connection.
   c. An accessway is provided consistent with the standards for accessways.
   d. A minor street is not a suitable alternative to multiple flag lots (more than 2 adjacent flags) due to size of the site, topographic features, or other physical constraint.

   Findings: No Cul-de-sacs are proposed. No flag lots are proposed as part of this request.

   Conclusion: The proposed subdivision does not propose cul-de-sacs or flag lots.

4. Cul-de-sacs shall not exceed four hundred feet (400') in length.
   Findings: The proposed subdivision does not propose cul-de-sacs.

   Conclusion: The proposed subdivision does not propose cul-de-sacs.

5. Where a land division includes or is adjacent to land that can be divided and developed in the future, streets, bicycle paths, and pedestrian ways shall continue through the full length of the land division to provide connections for the adjacent land.
   Findings: The proposed subdivision includes streets that continue through the full length of the proposed subdivision. The proposed streets and pedestrian ways continue through the full length of the land division and connect to adjacent subdivisions.

   Conclusion: The proposed subdivision includes a proposed layout that continue the existing streets and pedestrian ways throughout the property.

6. Where proposed lots or parcels in a proposed land division exceed double the minimum lot size and can be redivided, the location of lot and parcel lines and other layout details shall be such that future land divisions may readily occur without interfering with the orderly extension of adjacent streets, bicycle paths, or pedestrianways. Any building restrictions within future transportation locations, such as future street rights of way or future street setbacks, shall be made a matter of record for the purpose of future land divisions.
   Findings: The proposed subdivision would create 49 new residential lots on the subject property, none of the lots are large enough to allow for future land division.

   Conclusion: None of the lots are large enough to allow for future land division.

7. Where there is a reasonable relationship between the impacts of the proposed development and the public need for accessways, such as direct connections to public schools or parks, the land divider shall be required to publicly dedicate accessways to:

a. Connect to cul-de-sacs;
b. Pass through oddly shaped or unusually long blocks; or
c. Provide for networks of public pedestrian and bicycle paths; or
d. Provide access to other transportation routes, businesses, residential, or public uses.

Findings: The proposed subdivision provides for the extension of existing streets. There are no existing parks, schools or other public facilities in the area that would require dedication of additional public access.

Conclusion: The proposed subdivision connects to existing streets. There are no public schools, parks or other public facilities in the area that would require dedication of additional public access.

8. New construction or reconstruction of collector and arterial streets shall include bicycle facilities and pedestrian sidewalks as required by applicable city plans.
9. Sidewalks shall be installed along the street frontage of arterial and collector streets and for any street within a multi-family, commercial, or industrial land division by the land divider. Sidewalks on local streets within a subdivision for single-family residential lots shall be provided with the construction of a structure on the lot and shall be completed prior to occupancy of the structure.

   Findings: The proposed application includes the creation of new portions of local streets within a single-family residential subdivision. Therefore, installation of sidewalks along the property frontage will be required at time of issuance of a building permit.

   Conclusion: Although engineered construction plans were not submitted as part of this application, the proposed internal roads are considered local streets and sidewalks will be required as a condition of approval on a building permit to be installed prior to issuance of a certificate of occupancy.

10. An easement may be required to provide for all or part of sidewalks along one or both sides of a public right of way which lacks width to include sidewalks within the public right of way.

    Findings: All of the proposed new streets will be required to dedicate right of way to a current city standard including sidewalks.

    Conclusion: All of the proposed new streets will be required to meet a current city standard including sidewalks within the public right of way.

11. When a sidewalk in good repair does not exist, all applicants for building permits for a new structure or remodeling of more than a minor nature of an existing structure shall, in conjunction with the issuance of a building permit, obtain a permit to construct a sidewalk for the full frontage of the site. No final inspection or certificate of occupancy shall be issued for the building permit until a sidewalk has been constructed in accordance with the permit requirements.

    Findings: All of the proposed roads are considered local streets and installation of a sidewalk will be required as a condition of approval on a building permit.

Conclusion: All of the proposed local streets will be required to install sidewalks as a condition of approval upon issuance of a building permit.

12. Off site pedestrian improvements may be required concurrent with a land division to ensure access between the land division and an existing developed facility such as a commercial center, school, park, or trail system. The approval authority must show a reasonable relationship between the impacts of the land division and the required improvement.
Findings: There are no public lands or facilities adjacent to the proposer's subdivision to provide access to or that would warrant dedication of off-site pedestrian improvements.

Conclusion: There are no public lands or facilities in the vicinity that would warrant dedication of off-site pedestrian improvements.

13. Structures are not allowed in any dedicated sidewalk areas which will obstruct movements on the sidewalk. The minimum widths of sidewalks shall conform to ADA standards.
Findings: No structures are identified on the preliminary plat. A new structure within a public right of way would be subject to review and approval by the City. All new sidewalks will be required to meet ADA standards.

Conclusion: The tentative plat does not show a structure within an area dedicated for sidewalks or that would obstruct movement on a sidewalk. The applicant's engineered construction plans will be reviewed to ensure new sidewalks meet City and ADA standards.

14. Sidewalks generally shall be parallel to adjacent streets in line and grade, except where existing features or topographical conditions warrant an alternative design.
Findings: As addressed in this report the applicant has not submitted construction plans with this application. However, the applicant has indicated that sidewalks will generally be parallel to the adjacent street as required by this standard.

Conclusion: As addressed in this report engineered construction drawings have not been submitted as part of this review. The construction drawings will show the location of curb and sidewalks within the new subdivision.

15. All sidewalks shall be adjacent to the curb as specified in the public works standards, unless impractical due to special circumstances of the site or adjacent street.
Findings: This provision seems to create some confusion and conflict with the City's adopted street standards in Section 12.2.510 of the City's Transportation System Plan (TSP) as adopted in the City Comprehensive Plan, specifically figure 12.2-10 and Table 12.2-10. The standards addressed in the TSP were intended to allow for greater flexibility enabling the City to apply sound engineering judgment to determine the appropriate functional classification for new streets. However, the TSP designates an optional planter strip for most road classifications that would provide for detached sidewalks set back from the curb. All of the proposed new streets would be considered local residential

streets and are not required to provide a planter strip and will have sidewalks adjacent to the curb.

Conclusion: All of the proposed new streets are considered local residential streets and do not require a planter strip and will have sidewalks adjacent to the curb. However, as addressed in the report engineered construction plans will be required to be submitted and approved by the public works director.

16. Street trees are required along both sides of new public streets, at a minimum of thirty feet (30') on center, with at least one tree for each new lot or parcel. Street tree locations shall be shown on construction plans and shall generally be located at the edge of the right of way. Street trees shall be required with building permits for structures on approved lots and shall be installed prior to approval of occupancy.
Findings: Street trees are not identified on the preliminary plat and are typically not shown on the construction plans. A criterion is best met through a condition of approval.

Conclusion: Installation of street trees are generally not shown on construction plans or the preliminary plat. The applicant is aware of this requirement and intends to comply. A condition of approval will be imposed requiring street trees to be installed in accordance with this standard prior to issuance of a certificate of occupancy.

C. Right Of Way And Roadway Widths: Generally, right of way and roadway widths for state highways and county roads shall be determined by these entities. Unless otherwise determined by the city administrator based on the recommendation of the city engineer and public works director, the widths of streets and roadways shall meet the following standards and, in addition, all street construction shall conform to the public works standards:
   1. The city administrator may modify the width of a planter strip to accommodate drainage and public utilities.
   2. Curbside sidewalks shall be required.
   3. Bike lanes and shoulder bikeways along arterial and collector streets shall be five feet (5') wide and shall be provided for each direction of travel allowed on the street.
   4. Sidewalk and bicycle path lighting shall be provided in conjunction with new road construction and new development.
   5. Wheelchair ramps and other facilities shall be provided as required by the Americans with disabilities act (ADA).
   6. Bikeways shall be designed and constructed consistent with the design standards in the Oregon bicycle plan, 1992, and ASSHTO's "Guide For The Development Of Bicycle Facilities, 1991".
   Findings: As addressed in this report construction plans were not submitted as part of this request. Installation of improvements within the right of way will be reviewed by the public works director to ensure improvements meet City standards.

   Conclusion: The required improvements within the right of way are typically shown on the construction plans not the preliminary plat. As addressed in this report the applicant will be required to submit engineered construction plans to the public works director prior to starting construction. All improvements will be required to meet City standards.

D. Reserve Strips: Public reserve strips or street plugs controlling access to streets may be approved where necessary for the protection of the public welfare or of substantial property rights.
Findings: The use of public reserve strips or street plugs is not proposed nor has the City identified the need for such access control measures.

Conclusion: No reserve strips or street plugs are proposed. This criterion is not applicable.

E. Alignment: Streets other than minor streets shall be in alignment with existing streets by continuations of the centerlines. Staggered street alignment resulting in "T" intersections shall be avoided and in no case shall the distance between centerlines of off set streets be less than two hundred feet (200').
Findings: As addressed in this report the request will include the extension of existing streets. While the proposed street layout includes "T" intersections the intersections are not staggered streets that could be aligned with other planned or existing streets.

Conclusion: The proposed streets are designed to connect to existing streets. Due to the irregular configuration of the lot avoiding all "T" intersections is impractical. No "T" intersections that could be aligned to form continuations of existing streets are proposed and the distance between off set streets is more than two hundred feed (200')

F. Future Extension Of Streets: Streets shall be extended to the boundary of the land division. A temporary turnaround may be required for emergency vehicle access if a dead end street results.
Findings: All of the proposed streets extend to the boundary of the land division.

Conclusion: All of the proposed streets connect to existing streets, therefore they are fully extended to the boundary of the land division.

G. Intersection Angles: Streets shall be laid out to intersect at right angles as nearly as practical. In no case shall the intersection angle be less than seventy five degrees (75°). The intersection of arterial or collector streets with other arterial or collector streets shall have at least one hundred feet (100') of tangent adjacent to the intersection. Other streets, except alleys, shall have at least sixty feet (60') of tangent adjacent to the intersection.
Findings: The layout of the proposed street are nearly at right angles. No new arterial or collector street are proposed.

Conclusion: The proposed street intersections are laid out at nearly right angles.

H. Existing Streets: When existing streets adjacent to or within a site have widths less than city standards, additional right of way shall be provided with the land division.
Findings: All of the proposed streets will be extensions of existing streets. There is one existing street within the adjacent site to the south with widths that will require dedication of additional right of way. The applicant has submitted plans to extend the right of way from their property line into the new developments first intersection that meets City standards. This is addressed in the preliminary plat.

Conclusion: The existing street adjacent to the site have right of way widths not consistent with City standards. The applicant has submitted plans to extend the right of way from their property line into the new developments first intersection that meets City standards.

I. Partial Street Dedication And Improvements: Half streets shall be avoided wherever possible. A partial street dedication may be permitted when a land division abuts undeveloped property which is likely to dedicate the remainder of the street. At minimum, two-thirds ($^2/_3$) of the street dedication and improvement shall be required for any partial street to accommodate two (2) travel lanes, one parking lane, and sidewalk on one side. Reserve strips and street plugs may be required to preserve the objectives of the partial street.
Findings: No partial street dedications/improvements are proposed.

Conclusion: No partial street dedications or improvements are proposed. This criterion is not applicable.

J. Street Names: Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of existing streets. Street names and numbers shall conform to the established pattern in the city, applicable requirements, and shall be approved by the city.
Findings: There are three streets in the proposed development. High Desert Loop is a continuation from "The Bluffs" subdivision. The other two streets are Costanza Ave and Cartwright on the tentative plan lot layout.

Conclusion: All the streets in the proposed subdivision are existing and already named. No naming of streets will be required.

K. Grades And Curves: Centerline radii of curves shall not be less than three hundred feet (300') on arterial streets, two hundred feet (200') on collector streets, or one hundred feet (100') on local streets. Grades shall not exceed six percent (6%) on arterials, ten percent (10%) on collector streets, or twelve percent (12%) on any other street.
Findings: The submitted tentative plat show no centerline curve radius for the proposed streets. All of the proposed streets are considered local streets, and are straight. The grade of the streets is not shown on the tentative plan. The required construction plans will show grade of all of the proposed streets.

Conclusion: All of the proposed streets have a radius exceeding one hundred feet (100'), because they are straight. The required construction plans will be reviewed to ensure compliance with city standards including grade.

L. Streets Adjacent To Railroad Rights Of Way: Wherever the proposed land division includes or is adjacent to a railroad right of way, provisions may be required for a street approximately parallel to and on each side of such right of way at a distance suitable for the appropriate use of the land between the streets and the railroad. The distance shall be determined with due consideration at cross streets of the minimum distance required for approach grades to a future grade separation and to provide sufficient depth to allow vegetative or other screening to be placed along the railroad right of way.

Findings: The proposed land division does not include and is not adjacent to a railroad right-of-way.

Conclusion: There are no railroad rights-of-way included or adjacent to the proposed subdivision. This criterion is not applicable.

M. Marginal Access Streets: Where a land division abuts or contains an existing or proposed arterial street, the city may require marginal access streets, reverse frontage lots with additional depth, screen planting or other screening contained in a nonaccess reservation along the rear or side property line, or other treatment necessary for adequate protection of residential properties and to afford separation of through and local traffic. Alleys are acceptable as a means of providing access to lots or parcels fronting state highways or county roads.
Findings: The proposed subdivision does not abut a minor arterial street.

Conclusion: The proposed subdivision does not abut a minor arterial street. This criterion is not applicable.

N. Alleys:
1. Alleys shall be provided in commercial and industrial districts, unless other permanent provisions for access to off street parking and loading facilities are approved by the city.
2. Alleys are encouraged to serve residential development that front along state highways or county roads to minimize congestion and traffic hazards.
3. The corners of alley intersections shall have a radius of not less than two feet (2').
Findings: The applicant's request is for a subdivision in a residential zone, there is no proposal for an alley.

Conclusion: The subject property is zoned for residential use, not in a commercial or industrial district. There is no proposal for an alley.

SECTION 11-4-3: BLOCKS:
The length, width, and shape of blocks shall take into account the need for adequate lot size and street width. No block shall be more than eight hundred feet (800') in length between street corner lines, unless it is adjacent to an arterial street or unless justified by the location of adjoining streets. The recommended minimum length of blocks along an arterial street is one thousand six hundred feet (1,600'). Any block over eight hundred feet (800') in length may be required to provide pedestrian connections through the block and crosswalks dedicated and improved to city standards.
Findings: The proposed subdivision would in essentially create five new blocks. The longest being less than 800 feet in length with an approximate length of 743 feet in length.

Conclusion: As addressed in this report all of the proposed lots will be less than the maximum block dimensions. All of the proposed blocks will be less than 800 feet in length.

SECTION 11-4-4: EASEMENTS:

A. Utility Lines: Utility lines shall generally be located within public rights of way unless other provisions are required to meet the specific needs of a particular utility provider. A ten foot (10') wide easement for public and private utilities shall be provided along property frontages (measured from the right of way line) and a six foot (6') wide easement for public and private utilities shall be provided along side and rear lot lines, except as otherwise approved by the city administrator.
Findings: The applicant is proposing to dedicate a ten foot (10') public utility easement along all property frontages including side and rear lot lines.

Conclusion: The applicant is proposing to dedicate a ten foot (10') public utility easement along all property frontages including side and rear lot lines.

B. Watercourses: If a land division is crossed by or adjacent to a natural water body, an easement conforming to the riparian area shall be provided to protect the watercourse.
Findings: The proposed subdivision is not crossed or adjacent to a water body.

Conclusion: The proposed subdivision is not crossed or adjacent to a water body. This criterion is not applicable.

11-4-5: LOTS:
Lot and parcel size, shape, and orientation shall be consistent with the applicable zoning district and for the type of use contemplated. No lot or parcel dimension shall include the adjacent public right of way.

A. Through lots with public streets on both front and rear or both sides shall be avoided except when essential to provide separation of residential development from adjacent arterial or collector streets. An easement at least five feet (5') in width shall be located adjacent to the right of way and there shall be no right of access to the major street. A permanent barrier may be required along the right of way, within the easement.
Findings: There are no proposed through lots.

Conclusion: There are no proposed through lots.

B. Lot and parcel side lot lines shall be at right angles to fronting streets or radius to curved streets to the extent practical, in order to create lots and parcels with building sites which are nearly rectangular.
Findings: All of the proposed lots as show on the submitted preliminary plat are nearly rectangular in shape and will provide building sites which are nearly rectangular in shape.

Conclusion: All of the proposed lots will provide a nearly rectangular building area.

C. Lots shall have a width to depth ratio not to exceed 2.5.
Findings: As shown on the submitted preliminary plat all of the proposed lots do not exceed a width to depth ratio of 2.5.

Conclusion: As shown on the submitted preliminary plat all of the proposed lots will have a width to depth ratio no exceeding 2.5.

D. All lots and parcels shall have a minimum street frontage on a public street of fifty feet (50'), except that lots or parcels fronting a cul-de-sac or curved street may have a minimum street frontage of forty feet (40'), so long as the minimum lot width required by the zoning district is provided at a distance equivalent to the required front yard setback.
Findings: As shown on the submitted preliminary plat all of the proposed lots will have a minimum street frontage on a public street of fifty feet (50').

Conclusion: As shown on the submitted preliminary plat all of the proposed lots will exceed the minimum street frontage standards.

E. Flag lots shall not be acceptable for land divisions, but may be approved if the following circumstances apply:
1. For one or two (2) lot land divisions when it is not practical to create or extend a public street or partial public street due to the nature of surrounding development.
2. When topographic conditions or other physical constraints make it impractical or infeasible to create or extend a public street.
3. When the size and shape of the site limit the possible arrangement of new lots or parcels and prevent the creation or extension of a public street.
4. When allowed, the flag portion of a new lot shall have a minimum width of fifteen feet (15') to accommodate a driveway a minimum of twelve feet (12') wide. Two (2) adjacent flag lots may reduce the street frontage and pole width to twelve feet (12') wide, if joint access easements are created and a driveway is provided with a minimum width of twenty feet (20').
Findings: No flag lots are proposed as part of this application.

Conclusion: No flag lots are proposed as part of this application. These criteria are not applicable.

City of Umatilla Zoning Ordinance Section 10-11-10(D) Traffic Impact Analysis Requirements and Approval Criteria

Section 10-11-10(B) of the City of Umatilla Zoning Ordinance (CUZO) requires a Traffic Impact Analysis (TIA) to be submitted with a land use application when certain conditions apply. Subsection 10-11-10(B)(b)(1) identifies an application with an increase in site traffic volume generation by two hundred fifty (250) average daily trips (ADT) or more as one of the conditions in which a TIA is required to be submitted. The applicant submitted a 49-lot subdivision application that will increase site traffic volume by more than 250 average daily trips. The applicant submitted a Traffic Impact Analysis report with the Subdivision application.

Section 10-11-10(C) specifies that a TIA must be prepared by an Oregon Registered Professional Engineer that is qualified to perform traffic engineering analysis.

Section 10-11-10(D) lists the following criteria under Section 10-13-3 of the Zoning Ordinance that must be satisfied and supported with findings and reasons as to how each criterion is met in order for this request to be approved.

1. *The Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis.*

Findings: The Traffic Impact Analysis (TIA) submitted with the subdivision application shows it to have been prepared by the engineering firm, PBS, and is stamped by John Andrew Manix, who is both an Oregon Registered Professional Engineer and a Washington Registered Professional Engineer.

Conclusion: The Traffic Impact Analysis submitted with the land use application was prepared, reviewed and approved by an Oregon Registered Professional Engineer. This criterion is met.

2. *If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the City's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the City Engineer, and ODOT when applicable.*

Findings: According to the Traffic Impact Analysis (TIA) submitted by the applicant, development associated with the proposed single-family residential subdivision will have an impact on existing traffic facilities, as determined by the Level of Service (LOS) at the main intersections of Powerline road in the vicinity of the subject property. A review of the TIA by the City of Umatilla's engineer of record, JUB, states "The intersection of US 730 and Powerline Road is forecast to provide Level of Service "F" with the proposed developments in 2030.". There are several mitigation scenarios presented in the TIA submitted by the applicant. JUB states in their comments that "Installation of a traffic signal or roundabout will achieve the required LOS (level of service) standards." As stated in the applicants TIA "further consultation between city staff and ODOT to determine the ultimate intersection control and configuration" will need to happen. The applicant should contribute an amount (57% is found in the TIA on page VI) based on the increase of traffic caused by their development. In addition to this the TIA and JUB recommend that the City reduce the speed limit on Powerline Road to 35 MPH along the development frontage. The Study shows a need for five left turn lanes at four intersection along Powerline Road. The Study makes the recommendation to not install left turn lanes, whereas JUB states "It appears that the corridor may be well served with a two-way left-turn lane (TWLTL), at least through the areas of the proposed development where there are several local street connections."

Conclusion: As demonstrated by the TIA, mitigation of traffic impacts will be required for the vandelay meadows phase two Subdivision. The applicant will contribute 57% of the costs relating to the traffic mitigation affecting the Powerline Road/Highway 730 intersection caused by this development. In addition, 57% of the cost to construct five left turn lanes along Powerline Road. This will be enforced by a signed development agreement between the applicant and City, before the final plat is recorded. The City has already reduced the speed on Powerline Road to 35 MPH along the development frontage.

3. *The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:*

    a. *Have the least negative impact on all applicable transportation facilities;*

b. *Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;*

c. *Make the most efficient use of land and public facilities as practicable;*

d. *Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and*

e. *Otherwise comply with applicable requirements of the City of Umatilla Code.*

Findings: The proposed subdivision site design and traffic design are able to be considered as having a low negative impact on transportations facilities. The negative impacts to the transportation facilities such as Powerline Road come from the number of trips that will be taken by the residents living in the proposed subdivision, this is a normal and expected consequence of residential growth. The actions listed above will allow for effective mitigation of the negative impacts to applicable transportation facilities. With the installation of sidewalks in the neighborhood and along the frontage of Powerline Road it can be reasonably assumed that the site and traffic design accommodate and encourage non-motor vehicular modes of transportation to the extent practicable. The site plan of the proposed subdivision is able to be considered as making efficient use of land and public facilities and providing the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations.

Conclusion: As shown above the proposed site design and traffic and circulation design and facilities meet the criterion.

IV. PUBLIC COMMENT, SUMMARY AND DECISION

This request by the applicant, Columbia Basin Development, for tentative subdivision plat approval for a 49-lot subdivision on property in the Medium-Density Residential (R-2) Zone appears to meet, or be capable of meeting with appropriate conditions of approval, all of the applicable development standards of the City of Umatilla Zoning Ordinance and the criteria and development standards in the City of Umatilla Land Division Ordinance. Therefore, based on the information in Sections I and II of this report, and the above criteria and standards, findings of fact and conclusions contained in Section III, this request, SUB-2-21, for tentative subdivision plat approval to create a 49-lot subdivision in the Medium-Density Residential (R-2) may be approved, subject to the conditions of approval contained in Section V of this report.

V. CONDITIONS OF APPROVAL

1. The final plat must be approved and recorded within one year from the date of this approval. The final subdivision plat must comply with the requirements of ORS chapter 92, and the requirements under Section 11-3-1 and 11-3-2 of the City of Umatilla Land Division Ordinance which the City will use as a checklist.

2. The applicant/developer shall submit a preliminary copy of the preliminary plat to the County Surveyor and GIS Department for review prior to submitting the final plat to the City.

3. The applicant/developer shall submit engineered construction plans for streets, water, sewer, street lighting and all other improvements within the street rights-of-way to the City Public Works Director for review and approval. No construction shall begin until the construction plans have been approved.

4. Street trees shall be provided as required by the Land Division Ordinance and shall be required as a condition of approval on each building permit issued for a dwelling within the subdivision.

5. A signed development agreement for mitigation of impacted traffic facilities will be signed by the applicant and City prior to final plat approval by The City of Umatilla.

6. Street names approved by the City shall be shown on the final plat. No street name will be approved that is confusing, offensive or duplicates or sounds too similar to existing street names within the urban growth boundary.

7. If any historic, cultural or other archaeological artifacts, or human remains are discovered during construction the applicant shall immediately cease construction activity, secure the site, and notify appropriate agencies including but not limited to the City of Umatilla, and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program.

8. The applicant, or applicant's construction contractor, must obtain all federal, state and local permits, prior to starting construction.

9. The applicant shall be responsible for ensuring that all areas disturbed within existing street rights-of-way by construction are returned to their pre-construction condition or better after construction or installation of required improvements.

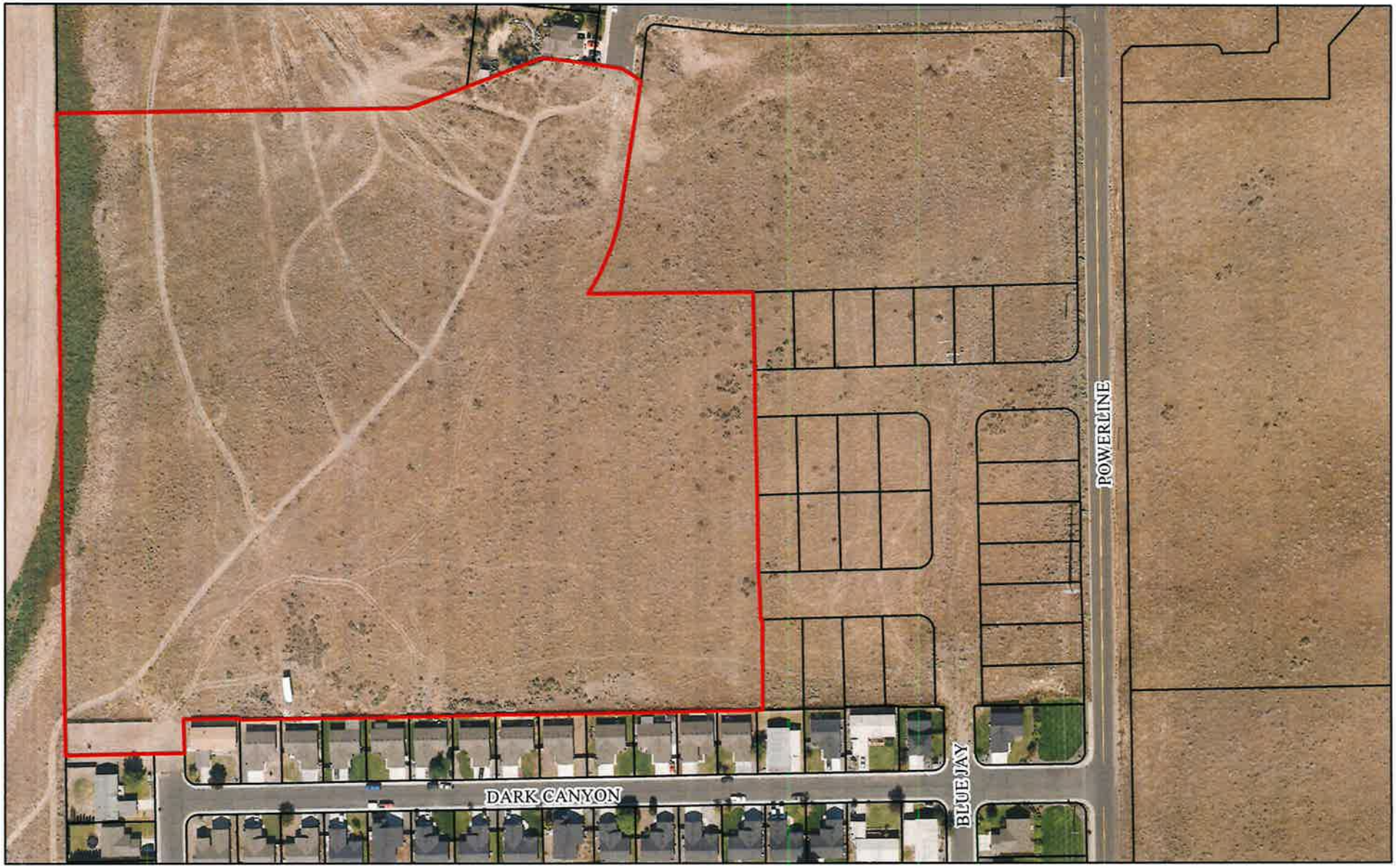
10. The applicant shall submit a copy of the final recorded plat of the subdivision and 'as-built' drawings of all required improvements to the City of Umatilla.

11. No building permit for a dwelling will be issued until final plat approval of the subdivision has been obtained and recorded in the Umatilla County Records Office.

12. Failure to comply with the conditions of approval established herein may result in revocation of this approval.

VI. EXHIBITS

Exhibit A Notice Map



Columbia Basin Development Subdivision

*notice given to property owners within 100'

Map: 5N2820CB Tax Lot: 100

Feet

0 100 200 300 400

Legend

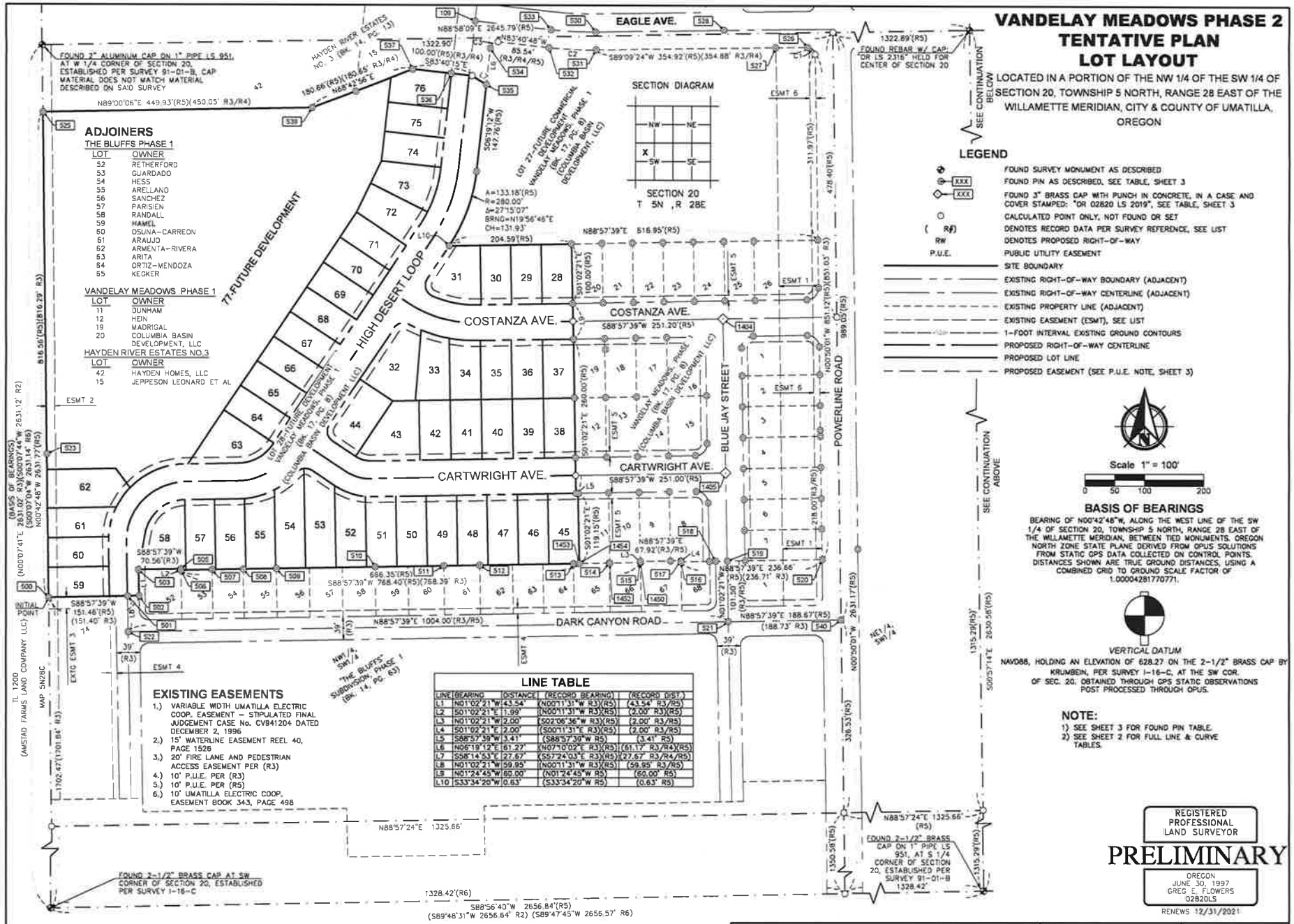
Subject Property

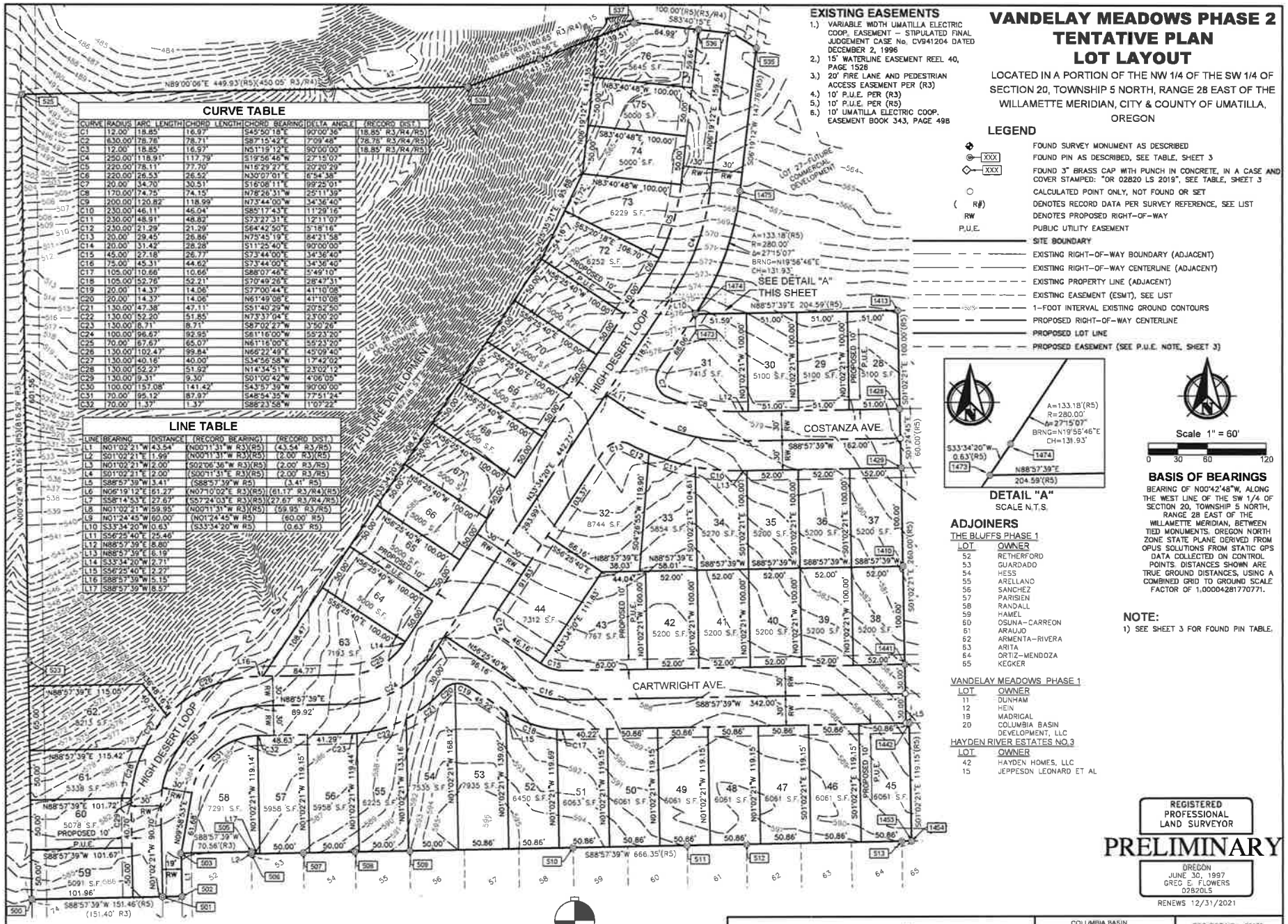
TAXLOTS 3-05-2021

N W E S

Umatilla Est. 1862

MAP DISCLAIMER: No warranty is made as to the accuracy, reliability or completeness of this data. Map should be used for reference purposes only. Not survey grade or for legal use.
Created by Jacob Foutz, on 5/21/2021


VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT
LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON
LEGEND
FOUND SURVEY MONUMENT AS DESCRIBED
FOUND PIN AS DESCRIBED, SEE TABLE, SHEET 3
FOUND 3" BRASS CAP WITH PUNCH IN CONCRETE, IN A CASE AND COVER STAMPED: "OR 02820 LS 2019", SEE TABLE, SHEET 3
CALCULATED POINT ONLY, NOT FOUND OR SET
(R#) DENOTES RECORD DATA PER SURVEY REFERENCE, SEE LIST
RW DENOTES PROPOSED RIGHT-OF-WAY
P.U.E. PUBLIC UTILITY EASEMENT
SITE BOUNDARY
EXISTING RIGHT-OF-WAY BOUNDARY (ADJACENT)
EXISTING RIGHT-OF-WAY CENTERLINE (ADJACENT)
EXISTING PROPERTY LINE (ADJACENT)
EXISTING EASEMENT (ESMT), SEE LIST
1-FOOT INTERVAL EXISTING GROUND CONTOURS
PROPOSED RIGHT-OF-WAY CENTERLINE
PROPOSED LOT LINE
PROPOSED EASEMENT (SEE P.U.E. NOTE, SHEET 3)
SECTION DIAGRAM
SECTION 20
T 5N ,R 28E
Scale 1" = 100'
0 50 100 200
BASIS OF BEARINGS
BEARING OF N00°42'48"W, ALONG THE WEST LINE OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, BETWEEN TIED MONUMENTS. OREGON NORTH ZONE STATE PLANE DERIVED FROM OPUS SOLUTIONS FROM STATIC GPS DATA COLLECTED ON CONTROL POINTS. DISTANCES SHOWN ARE TRUE GROUND DISTANCES, USING A COMBINED GRID TO GROUND SCALE FACTOR OF 1.00004281770771.
VERTICAL DATUM
NAVD88, HOLDING AN ELEVATION OF 628.27 ON THE 2-1/2" BRASS CAP BY KRUMBEIN, PER SURVEY 1-16-C, AT THE SW COR. OF SEC. 20. OBTAINED THROUGH GPS STATIC OBSERVATIONS POST PROCESSED THROUGH OPUS.
NOTE:
1) SEE SHEET 3 FOR FOUND PIN TABLE.
2) SEE SHEET 2 FOR FULL LINE & CURVE TABLES.
ADJOINERS
THE BLUFFS PHASE 1
LOT OWNER
52 RETHERFORD
53 GUARDADO
54 HESS
55 ARELLANO
56 SANCHEZ
57 PARISIEN
58 RANDALL
59 HAMEL
60 OSUNA-CARREON
61 ARAUJO
62 ARMENTA-RIVERA
63 ARITA
64 ORTIZ-MENDOZA
65 KEGKER
VANDELAY MEADOWS PHASE 1
LOT OWNER
11 DUNHAM
12 HEIN
19 MADRIGAL
20 COLUMBIA BASIN DEVELOPMENT, LLC
HAYDEN RIVER ESTATES NO.3
LOT OWNER
42 HAYDEN HOMES, LLC
15 JEPPESON LEONARD ET AL
EXISTING EASEMENTS
1.) VARIABLE WIDTH UMATILLA ELECTRIC COOP. EASEMENT - STIPULATED FINAL JUDGEMENT CASE No. CV941204 DATED DECEMBER 2, 1996
2.) 15' WATERLINE EASEMENT REEL 40, PAGE 1526
3.) 20' FIRE LANE AND PEDESTRIAN ACCESS EASEMENT PER (R3)
4.) 10' P.U.E. PER (R3)
5.) 10' P.U.E. PER (R5)
6.) 10' UMATILLA ELECTRIC COOP. EASEMENT BOOK 343, PAGE 498
LINE TABLE
LINE | BEARING | DISTANCE | (RECORD BEARING) | (RECORD DIST.)
L1 | N01°02'21"W | 43.54' | (N00°11'31"W R3)(R5) | (43.54' R3/R5)
L2 | S01°02'21"E | 1.99' | (N00°11'31"W R3)(R5) | (2.00' R3)(R5)
L3 | N01°02'21"W | 2.00' | (S02°06'36"W R3)(R5) | (2.00' R3/R5)
L4 | S01°02'21"E | 2.00' | (S00°11'31"E R3)(R5) | (2.00' R3/R5)
L5 | S88°57'39"W | 3.41' | (S88°57'39"W R5) | (3.41' R5)
L6 | N06°19'12"E | 61.27' | (N07°10'02"E R3)(R5) | (61.17' R3/R4)(R5)
L7 | S58°14'53"E | 27.67' | (S57°24'03"E R3)(R5) | (27.67' R3/R4/R5)
L8 | N01°02'21"W | 59.95' | (N00°11'31"W R3)(R5) | (59.95' R3/R5)
L9 | N01°24'45"W | 60.00' | (N01°24'45"W R5) | (60.00' R5)
L10 | S33°34'20"W | 0.63' | (S33°34'20"W R5) | (0.63' R5)
CURVE TABLE
CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE | (RECORD DIST.)
C1 | 12.00' | 18.85' | 16.97' | S45°50'19"E | 90°00'36" | (18.85' R3/R4/R5)
C2 | 630.00' | 78.76' | 78.71' | S87°15'42"E | 7°09'48" | (78.76' R3/R4/R5)
C3 | 12.00' | 18.85' | 16.97' | N51°19'12"E | 90°00'00" | (18.85' R3/R4/R5)
SURVEY REFERENCES
(R1) SURVEY FOR BAKER-ROGERS, COUNTY ROAD DEPT. (SURVEY NO. 1-16-C) BY KRUMBEIN
(R2) SURVEY FOR UMATILLA COUNTY (SURVEY NO. 91-01-B) BY EDWARDS
(R3) THE BLUFFS PHASE 1 (BK. 14 OF PLATS, PG. 63) BY CUMMINGS
(R4) HAYDEN RIVER ESTATES NO. 3 (BK. 14, PG. 13) BY CUMMINGS
(R5) VANDELAY MEADOWS PHASE 1 (BK.17, PG. 8) BY FLOWERS
(R6) SURVEY FOR UMATILLA COUNTY (SURVEY NO 98-101-C) BY WELLS
PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 105
Richland, WA 99352
509.942.1600
pbsusa.com
REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY
OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS
RENEWS 12/31/2021
CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.
PROJECT NO.: 66178
SURVEYOR: GREG E. FLOWERS
DATE: 04/07/2021
CALC BY: RDP
DRAWN BY: DWW
SCALE: 1" = 100'
SECTION: 20
TOWNSHIP: 5 N.
RANGE: 28 E
CITY: UMATILLA
COUNTY: UMATILLA
SHEET 1 OF 4


CURVE TABLE
CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE | (RECORD DIST.)
C1 | 12.00' | 18.85' | 16.97' | S45°50'18"E | 90°00'36" | (18.85' R3/R4/R5)
C2 | 630.00' | 78.76' | 78.71' | S87°15'42"E | 7°09'48" | (78.76' R3/R4/R5)
C3 | 12.00' | 18.85' | 16.97' | N51°19'12"E | 90°00'00" | (18.85' R3/R4/R5)
C4 | 250.00' | 118.91' | 117.79' | S19°56'46"W | 27°15'07"
C5 | 220.00' | 78.11' | 77.70' | N16°29'27"E | 20°20'29"
C6 | 220.00' | 26.53' | 26.52' | N30°07'01"E | 6°54'38"
C7 | 20.00' | 34.70' | 30.51' | S16°08'11"E | 99°25'01"
C8 | 170.00' | 74.75' | 74.15' | N78°26'31"W | 25°11'39"
C9 | 200.00' | 120.82' | 118.99' | N73°44'00"W | 34°36'40"
C10 | 230.00' | 46.11' | 46.04' | S85°17'43"E | 11°29'16"
C11 | 230.00' | 48.91' | 48.82' | S73°27'31"E | 12°11'07"
C12 | 250.00' | 21.29' | 21.29' | S64°42'50"E | 5°18'16"
C13 | 20.00' | 29.45' | 26.86' | N75°45'19"E | 84°21'58"
C14 | 20.00' | 31.42' | 28.28' | S11°25'40"E | 90°00'00"
C15 | 45.00' | 27.18' | 26.77' | S73°44'00"E | 34°36'40"
C16 | 75.00' | 45.31' | 44.62' | S73°44'00"E | 34°36'40"
C17 | 105.00' | 10.66' | 10.66' | S88°07'46"E | 5°49'10"
C18 | 105.00' | 52.76' | 52.21' | S70°49'26"E | 28°47'31"
C19 | 20.00' | 14.37' | 14.06' | S77°00'44"E | 41°10'08"
C20 | 20.00' | 14.37' | 14.06' | N61°49'08"E | 41°10'08"
C21 | 130.00' | 47.38' | 47.11' | S51°40'22"W | 20°52'50"
C22 | 130.00' | 52.20' | 51.85' | N73°37'04"E | 23°00'20"
C23 | 130.00' | 8.71' | 8.71' | S87°02'27"W | 3°50'26"
C24 | 100.00' | 96.67' | 92.95' | S61°16'00"W | 55°23'20"
C25 | 70.00' | 67.67' | 65.07' | N61°16'00"E | 55°23'20"
C26 | 130.00' | 102.47' | 99.84' | N66°22'49"E | 45°09'40"
C27 | 130.00' | 40.16' | 40.00' | S34°56'58"W | 17°42'02"
C28 | 130.00' | 52.27' | 51.92' | N14°34'51"E | 23°02'12"
C29 | 130.00' | 9.31' | 9.30' | S01°00'42"W | 4°06'05"
C30 | 100.00' | 157.08' | 141.42' | S43°57'39"W | 90°00'00"
C31 | 70.00' | 95.12' | 87.97' | S48°56'35"W | 77°51'24"
C32 | 70.00' | 1.37' | 1.37 | S88°23'58"W | 1°07'22"
LINE TABLE
LINE | BEARING | DISTANCE | (RECORD BEARING) | (RECORD DIST.)
L1 | N01°02'21"W | 43.54' | (N00°11'31"W R3)(R5) | (43.54' R3/R5)
L2 | S01°02'21"E | 1.99' | (N00°11'31"W R3)(R5) | (2.00' R3)(R5)
L3 | N01°02'21"W | 2.00' | (S02°06'36"W R3)(R5) | (2.00' R3/R5)
L4 | S01°02'21"E | 2.00' | (S00°11'31"E R3)(R5) | (2.00' R3/R5)
L5 | S88°57'39"W | 3.41' | (S88°57'39"W R5) | (3.41' R5)
L6 | N06°19'12"E | 61.27' | (N07°10'02"E R3)(R5) | (61.17' R3/R4/R5)
L7 | S58°14'53"E | 27.67' | (S57°24'03"E R3)(R5) | (27.67' R3/R4/R5)
L8 | N01°02'21"W | 59.95' | (N00°11'31"W R3)(R5) | (59.95' R3/R5)
L9 | N01°24'45"W | 60.00' | (N01°24'45"W R5) | (60.00' R5)
L10 | S33°34'20"W | 0.63' | (S33°34'20"W R5) | (0.63' R5)
L11 | S56°25'40"E | 25.46'
L12 | N88°57'39"E | 8.80'
L13 | N88°57'39"E | 6.19'
L14 | S33°34'20"W | 2.71'
L15 | S56°25'40"E | 2.27'
L16 | S88°57'39"W | 5.15'
L17 | S88°57'39"W | 8.57'
EXISTING EASEMENTS
1.) VARIABLE WIDTH UMATILLA ELECTRIC COOP. EASEMENT – STIPULATED FINAL JUDGEMENT CASE No. CV941204 DATED DECEMBER 2, 1996
2.) 15' WATERLINE EASEMENT REEL 40, PAGE 1526
3.) 20' FIRE LANE AND PEDESTRIAN ACCESS EASEMENT PER (R3)
4.) 10' P.U.E. PER (R3)
5.) 10' P.U.E. PER (R5)
6.) 10' UMATILLA ELECTRIC COOP. EASEMENT BOOK 343, PAGE 498
VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT
LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON
LEGEND
FOUND SURVEY MONUMENT AS DESCRIBED
FOUND PIN AS DESCRIBED, SEE TABLE, SHEET 3
FOUND 3" BRASS CAP WITH PUNCH IN CONCRETE, IN A CASE AND COVER STAMPED: "OR 02820 LS 2019", SEE TABLE, SHEET 3
CALCULATED POINT ONLY, NOT FOUND OR SET
(R#) DENOTES RECORD DATA PER SURVEY REFERENCE, SEE LIST
RW DENOTES PROPOSED RIGHT-OF-WAY
P.U.E. PUBLIC UTILITY EASEMENT
SITE BOUNDARY
EXISTING RIGHT-OF-WAY BOUNDARY (ADJACENT)
EXISTING RIGHT-OF-WAY CENTERLINE (ADJACENT)
EXISTING PROPERTY LINE (ADJACENT)
EXISTING EASEMENT (ESMT), SEE LIST
1-FOOT INTERVAL EXISTING GROUND CONTOURS
PROPOSED RIGHT-OF-WAY CENTERLINE
PROPOSED LOT LINE
PROPOSED EASEMENT (SEE P.U.E. NOTE, SHEET 3)
SEE DETAIL "A" THIS SHEET
COSTANZA AVE.
CARTWRIGHT AVE.
HIGH DESERT LOOP
LOT 27-FUTURE COMMERCIAL DEVELOPMENT
DETAIL "A"
SCALE N.T.S.
Scale 1" = 60'
0 30 60 120
BASIS OF BEARINGS
BEARING OF N00°42'48"W, ALONG THE WEST LINE OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, BETWEEN TIED MONUMENTS. OREGON NORTH ZONE STATE PLANE DERIVED FROM OPUS SOLUTIONS FROM STATIC GPS DATA COLLECTED ON CONTROL POINTS. DISTANCES SHOWN ARE TRUE GROUND DISTANCES, USING A COMBINED GRID TO GROUND SCALE FACTOR OF 1.00004281770771.
NOTE:
1) SEE SHEET 3 FOR FOUND PIN TABLE.
ADJOINERS
THE BLUFFS PHASE 1
LOT OWNER
52 RETHERFORD
53 GUARDADO
54 HESS
55 ARELLANO
56 SANCHEZ
57 PARISIEN
58 RANDALL
59 HAMEL
60 OSUNA-CARREON
61 ARAUJO
62 ARMENTA-RIVERA
63 ARITA
64 ORTIZ-MENDOZA
65 KEGKER
VANDELAY MEADOWS PHASE 1
LOT OWNER
11 DUNHAM
12 HEIN
19 MADRIGAL
20 COLUMBIA BASIN DEVELOPMENT, LLC
HAYDEN RIVER ESTATES NO.3
LOT OWNER
42 HAYDEN HOMES, LLC
15 JEPPESON LEONARD ET AL
REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY
OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS
RENEWS 12/31/2021
SURVEY REFERENCES
(R1) SURVEY FOR BAKER-ROGERS, COUNTY ROAD DEPT. (SURVEY NO. I-16-C) BY KRUMBEIN
(R2) SURVEY FOR UMATILLA COUNTY (SURVEY NO. 91-01-B) BY EDWARDS
(R3) THE BLUFFS PHASE 1 (BK. 14 OF PLATS, PG. 63) BY CUMMINGS
(R4) HAYDEN RIVER ESTATES NO. 3 (BK. 14, PG. 13) BY CUMMINGS
(R5) VANDELAY MEADOWS PHASE 1 (BK.17, PG. 8) BY FLOWERS
(R6) SURVEY FOR UMATILLA COUNTY (SURVEY NO 98-101-C) BY WELLS
VERTICAL DATUM
NAVD88, HOLDING AN ELEVATION OF 628.27 ON THE 2-1/2" BRASS CAP BY KRUMBEIN, PER SURVEY I-16-C, AT THE SW COR. OF SEC. 20. OBTAINED THROUGH GPS STATIC OBSERVATIONS POST PROCESSED THROUGH OPUS.
PBS
PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com
CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.
PROJECT NO.: 56175
SURVEYOR: GREG E. FLOWERS
DATE: 04/07/2021
CALC BY: RDP
DRAWN BY: DWW
SCALE: 1" = 60'
SECTION: 20
TOWNSHIP: 5 N
RANGE: 28 E
CITY: UMATILLA
COUNTY: UMATILLA
SHEET 2 OF 4

VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON

NARRATIVE

THIS SURVEY WAS PERFORMED AT THE REQUEST OF COLUMBIA BASIN DEVELOPMENT, LLC. TO DEVELOP LOT 28 OF THE PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED ON SEPTEMBER 17, 2020 AS INSTRUMENT NUMBER 2020-7070774, IN BOOK 17 AT PAGE 8, IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON AND SUBDIVIDE IT AS SHOWN HEREIN.

DURING OUR INITIAL FIELD WORK, WE RECOVERED AND TIED MOST OF THE PERIMETER LOT CORNERS, ADJACENT ROAD INTERSECTION PINS AND ALL THE CONTROLLING SECTION CORNERS. THIS PROPERTY IS DEFINED ON THE WEST BY THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 20 AND ON THE EAST BY THE SAID PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED IN BOOK 17 AT PAGE 8, IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON.

THIS SURVEY WAS PERFORMED AS A REAL TIME KINEMATIC SURVEY USING TRIMBLE DUAL FREQUENCY GPS RECEIVERS WITH A PRECISION OF ONE CENTIMETER +/- 2 PPM TIMES MEASURED LENGTH. MONUMENTS WERE VISITED IN AUGUST AND SEPTEMBER 2018, MAY 2019 AND JANUARY 2020.

LEGAL DESCRIPTION

A PARCEL OF LAND LOCATED IN A PORTION OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20 IN TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN IN THE CITY & COUNTY OF UMATILLA, STATE OF OREGON, MORE FULLY DESCRIBED AS FOLLOWS:

LOT 28 OF VANDELAY MEADOWS PHASE 1, AS SHOWN ON THE PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED ON SEPTEMBER 17, 2020 AS INSTRUMENT NUMBER 2020-7070774 IN BOOK 17 AT PAGE 8 IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON.

OWNER/DEVELOPER

OWNER/DEVELOPER
COLUMBIA BASIN DEVELOPMENT, LLC
PO BOX 5160
PASCO, WA 99302

FLOOD PLAIN NOTE

FLOOD ZONE FOR THIS AREA IS LISTED AS ZONE X PER UMATILLA COUNTY, OREGON FIRM MAP NUMBER 41059C0265G, IN WHICH ZONE X IS DEFINED AS: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

ZONING

ZONING ON ADJACENT PROPERTIES IS AS FOLLOWS: RESIDENTIAL, MULTI-FAMILY (R2) TO THE SOUTH, RESIDENTIAL, SINGLE FAMILY (R1) TO THE NORTH AND EAST, AND EXCLUSIVE FARM USE (EFU) TO THE WEST, BEING OUTSIDE THE CITY LIMITS.

EXISTING USE OF PROPERTY

THE SITE HAS CURRENTLY BEEN MASS GRADED DURING THE VANDELAY MEADOWS PHASE 1 CONSTRUCTION, IN PREPARATION FOR THIS PHASE OF CONSTRUCTION. A WATER MAIN POTENTIALLY CROSSES THE SITE IN A NORTH – SOUTH DIRECTION, EASTERLY OF THE WEST BOUNDARY LINE IN A WATERLINE EASEMENT. ACCESS TO PUBLIC UTILITIES IS AVAILABLE TO THE SOUTH FROM THE BLUFFS PHASE 1 SUBDIVISION (BK. 14 OF PLATS, PG 63), TO THE NORTH FROM HAYDEN RIVER ESTATES NO.3 (BK. 14 OF PLATS, PG 13) AND TO THE EAST FROM THE PLAT OF VANDELAY MEADOWS PHASE 1, (BK. 17 OF PLATS, PG. 8).

PUBLIC UTILITY EASEMENT NOTE

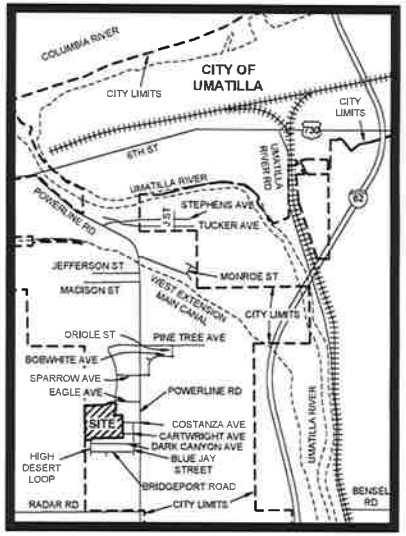
UTILITIES SHALL HAVE THE RIGHT TO INSTALL, MAINTAIN AND OPERATE THEIR EQUIPMENT AND ALL OTHER RELATED FACILITIES ABOVE AND BELOW GROUND WITHIN THE PUBLIC UTILITY EASEMENTS IDENTIFIED ON THIS PLAT MAP AS MAY BE NECESSARY OR DESIRABLE IN PROVIDING UTILITY SERVICES WITHIN AND WITHOUT THE LOTS IDENTIFIED HEREIN, INCLUDING THE RIGHT OF ACCESS TO SUCH FACILITIES AND THE RIGHT TO REQUIRE REMOVAL OF ANY OBSTRUCTIONS INCLUDING STRUCTURES, TREES AND VEGETATION THAT MAY BE PLACED WITHIN THE PUE. THE UTILITY MAY REQUIRE THE LOT OWNER TO REMOVE ALL OBSTRUCTIONS AT THE OWNER'S EXPENSE, OR THE UTILITY MAY REMOVE SUCH OBSTRUCTIONS AT THE LOT OWNER'S EXPENSE. AT NO TIME MAY ANY PERMANENT STRUCTURES BE PLACED WITHIN THE PUE OR ANY OTHER OBSTRUCTION WHICH INTERFERES WITH THE USE OF THE PUE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE UTILITIES WITH FACILITIES IN THE PUE.

SURVEY REFERENCES

(R1) SURVEY FOR BAKER-ROGERS, COUNTY ROAD DEPT. (SURVEY NO. I-16-C) BY KRUMBEIN
(R2) SURVEY FOR UMATILLA COUNTY (SURVEY NO. 91-01-B) BY EDWARDS
(R3) THE BLUFFS PHASE 1 (BK. 14 OF PLATS, PG. 63) BY CUMMINGS
(R4) HAYDEN RIVER ESTATES NO. 3 (BK. 14, PG. 13) BY CUMMINGS
(R5) VANDELAY MEADOWS PHASE 1 (BK.17, PG. 8) BY FLOWERS
(R6) SURVEY FOR UMATILLA COUNTY (SURVEY NO 98-101-C) BY WELLS

FOUND CENTERLINE & PROPERTY PIN TABLE (POSITION FROM CALCULATED TO MEASURED)

#	DESCRIPTION	BEARING	DISTANCE
109	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC	HELD	
500	REBAR W/ ILLEGIBLE YPC	HELD	
501	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC BUSTED	HELD	
502	REBAR W/ YPC: "LS 2316"	HELD	
503	REBAR SHOWN AT SPINHOLE W/ YPC: "LS 2316"	S83°E	0.65'
505	REBAR W/ YPC: "LS 2316"	HELD	
506	REBAR W/ YPC: "LS 2316"	HELD	
507	REBAR W/ YPC: "LS 2316"	S01°E	0.12'
508	REBAR W/ YPC: "LS 2316"	HELD	
509	REBAR W/ YPC: "LS 2316"	HELD	
510	REBAR W/ YPC: "LS 2316"	HELD	
511	REBAR W/ YPC: "LS 2316"	HELD	
512	REBAR SHOWN AT SPINHOLE W/ NO CAP	HELD	
513	REBAR W/ YPC: "LS 2316"	HELD	
514	REBAR W/ YPC: "LS 2316"	HELD	
515	REBAR W/ YPC: "LS 2316"	N37°W	0.11'
516	REBAR W/ YPC: "LS 2316"	HELD	
517	REBAR W/ YPC: "LS 2316"	HELD	
518	REBAR W/ YPC: "LS 2316"	HELD	
519	REBAR SHOWN AT SPINHOLE W/ ILLEGIBLE YPC BUSTED	HELD	
520	REBAR SHOWN AT SPINHOLE W/ YPC: "LS 2316"	HELD	
521	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
522	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
523	REBAR W/ YPC: "LS 2316"	HELD	
525	REBAR SHOWN AT SPINHOLE W/ NO CAP	N89°E	0.14'
526	REBAR W/ YPC: "LS 2316"	HELD	
527	REBAR W/ YPC: "LS 2316"	HELD	
528	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
530	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
531	REBAR W/ NO CAP	N06°W	0.12'
532	REBAR W/ YPC: "LS 2316"	HELD	
533	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
534	REBAR W/ YPC: "LS 2316"	HELD	
535	REBAR W/ YPC: "LS 2316"	N45°E	0.11'
536	REBAR W/ YPC: "LS 2316"	HELD	
537	REBAR W/ ILLEGIBLE YPC BUSTED 0.7'ABOVE GROUND	S45°W	0.89'
538	REBAR W/ YPC: "LS 2316"	HELD	
539	REBAR W/ YPC: "RSI JAB 02735LS	HELD	
540	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC	S84°E	0.12'
1404	3" BRASS CAP IN CONC. IN CASE: "OR 02820 LS"	HELD	
1405	3" BRASS CAP IN CONC. IN CASE: "OR 02820 LS"	HELD	
1410	REBAR W/ YPC: "OR 02820 LS"	HELD	
1413	REBAR W/ YPC: "OR 02820 LS"	HELD	
1428	REBAR W/ YPC: "OR 02820 LS"	HELD	
1429	REBAR W/ YPC: "OR 02820 LS"	HELD	
1441	REBAR W/ YPC: "OR 02820 LS"	HELD	
1442	REBAR W/ YPC: "OR 02820 LS"	HELD	
1450	REBAR W/ YPC: "OR 02820 LS"	HELD	
1452	REBAR W/ YPC: "OR 02820 LS"	HELD	
1453	REBAR W/ YPC: "OR 02820 LS"-REFERENCE PIN	N00°E	1.00'
1454	REBAR W/ YPC: "OR 02820 LS"-REFERENCE PIN	N47°E	0.97'
1473	REBAR W/ YPC: "OR 02820 LS"	HELD	
1474	REBAR W/ YPC: "OR 02820 LS"	HELD	
1475	REBAR W/ YPC: "OR 02820 LS"	HELD	



VICINITY MAP

NOT TO SCALE

REGISTERED PROFESSIONAL LAND SURVEYOR

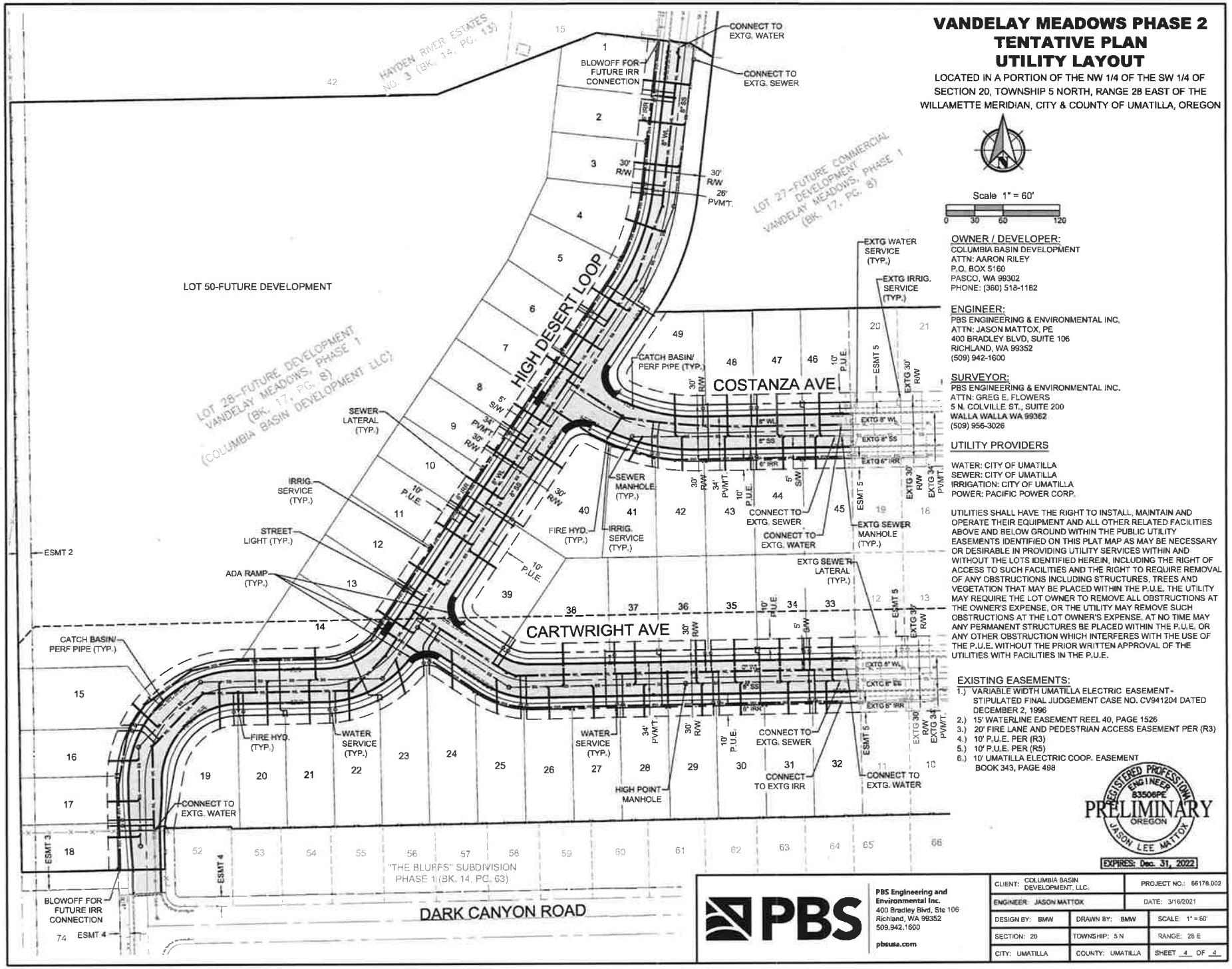
PRELIMINARY

OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS

RENEWS 12/31/2021

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 66178
SURVEYOR: GREG E. FLOWERS		DATE: 04/07/2021
CALC BY: ROP	DRAWN BY: DWW	SCALE: N.T.S.
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 3 OF 4



VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
UTILITY LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON

Scale 1" = 60'

0 30 60 120

OWNER / DEVELOPER:
COLUMBIA BASIN DEVELOPMENT
ATTN: AARON RILEY
P.O. BOX 5160
PASCO, WA 99302
PHONE: (360) 518-1182

ENGINEER:
PBS ENGINEERING & ENVIRONMENTAL INC.
ATTN: JASON MATTOX, PE
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600

SURVEYOR:
PBS ENGINEERING & ENVIRONMENTAL INC.
ATTN: GREG E. FLOWERS
5 N. COLVILLE ST., SUITE 200
WALLA WALLA WA 99362
(509) 956-3026

UTILITY PROVIDERS

WATER: CITY OF UMATILLA
SEWER: CITY OF UMATILLA
IRRIGATION: CITY OF UMATILLA
POWER: PACIFIC POWER CORP.

UTILITIES SHALL HAVE THE RIGHT TO INSTALL, MAINTAIN AND OPERATE THEIR EQUIPMENT AND ALL OTHER RELATED FACILITIES ABOVE AND BELOW GROUND WITHIN THE PUBLIC UTILITY EASEMENTS IDENTIFIED ON THIS PLAT MAP AS MAY BE NECESSARY OR DESIRABLE IN PROVIDING UTILITY SERVICES WITHIN AND WITHOUT THE LOTS IDENTIFIED HEREIN, INCLUDING THE RIGHT OF ACCESS TO SUCH FACILITIES AND THE RIGHT TO REQUIRE REMOVAL OF ANY OBSTRUCTIONS INCLUDING STRUCTURES, TREES AND VEGETATION THAT MAY BE PLACED WITHIN THE P.U.E. THE UTILITY MAY REQUIRE THE LOT OWNER TO REMOVE ALL OBSTRUCTIONS AT THE OWNER'S EXPENSE, OR THE UTILITY MAY REMOVE SUCH OBSTRUCTIONS AT THE LOT OWNER'S EXPENSE. AT NO TIME MAY ANY PERMANENT STRUCTURES BE PLACED WITHIN THE P.U.E. OR ANY OTHER OBSTRUCTION WHICH INTERFERES WITH THE USE OF THE P.U.E. WITHOUT THE PRIOR WRITTEN APPROVAL OF THE UTILITIES WITH FACILITIES IN THE P.U.E.

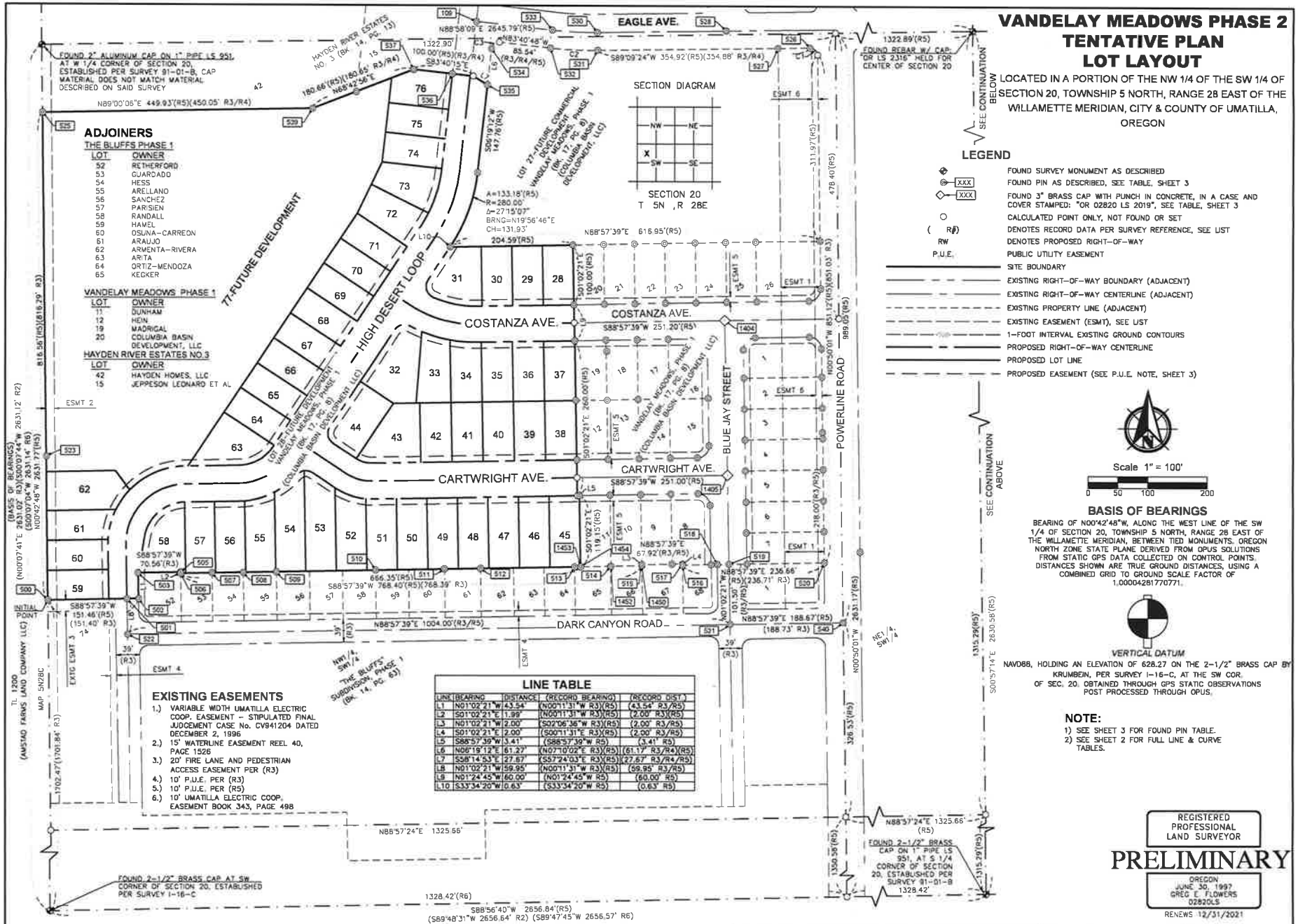
EXISTING EASEMENTS:

1.) VARIABLE WIDTH UMATILLA ELECTRIC EASEMENT - STIPULATED FINAL JUDGEMENT CASE NO. CV941204 DATED DECEMBER 2, 1996
2.) 15' WATERLINE EASEMENT REEL 40, PAGE 1526
3.) 20' FIRE LANE AND PEDESTRIAN ACCESS EASEMENT PER (R3)
4.) 10' P.U.E. PER (R3)
5.) 10' P.U.E. PER (R5)
6.) 10' UMATILLA ELECTRIC COOP. EASEMENT BOOK 343, PAGE 498

REGISTERED PROFESSIONAL ENGINEER 83506PE OREGON JASON LEE MATTOX
PRELIMINARY
EXPIRES: Dec. 31, 2022

PBS
PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 66178.002
ENGINEER: JASON MATTOX		DATE: 3/16/2021
DESIGN BY: BMW	DRAWN BY: BMW	SCALE: 1" = 60'
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 4 OF 4



VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON

LEGEND

- FOUND SURVEY MONUMENT AS DESCRIBED
- FOUND PIN AS DESCRIBED, SEE TABLE, SHEET 3
- FOUND 3" BRASS CAP WITH PUNCH IN CONCRETE, IN A CASE AND COVER STAMPED: "OR 02820 LS 2019", SEE TABLE, SHEET 3
- CALCULATED POINT ONLY, NOT FOUND OR SET
- (R#) DENOTES RECORD DATA PER SURVEY REFERENCE, SEE LIST
- RW DENOTES PROPOSED RIGHT-OF-WAY
- P.U.E. PUBLIC UTILITY EASEMENT
- SITE BOUNDARY
- EXISTING RIGHT-OF-WAY BOUNDARY (ADJACENT)
- EXISTING RIGHT-OF-WAY CENTERLINE (ADJACENT)
- EXISTING PROPERTY LINE (ADJACENT)
- EXISTING EASEMENT (ESMT), SEE LIST
- 1-FOOT INTERVAL EXISTING GROUND CONTOURS
- PROPOSED RIGHT-OF-WAY CENTERLINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT (SEE P.U.E. NOTE, SHEET 3)

Scale 1" = 100'

0 50 100 200

BASIS OF BEARINGS

BEARING OF N00°42'48"W, ALONG THE WEST LINE OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, BETWEEN TIED MONUMENTS, OREGON NORTH ZONE STATE PLANE DERIVED FROM OPUS SOLUTIONS FROM STATIC GPS DATA COLLECTED ON CONTROL POINTS. DISTANCES SHOWN ARE TRUE GROUND DISTANCES, USING A COMBINED GRID TO GROUND SCALE FACTOR OF 1.00004281770771.

VERTICAL DATUM

NAVD88, HOLDING AN ELEVATION OF 628.27 ON THE 2-1/2" BRASS CAP BY KRUMBEIN, PER SURVEY I-16-C, AT THE SW COR. OF SEC. 20. OBTAINED THROUGH GPS STATIC OBSERVATIONS POST PROCESSED THROUGH OPUS.

NOTE:

1) SEE SHEET 3 FOR FOUND PIN TABLE.
2) SEE SHEET 2 FOR FULL LINE & CURVE TABLES.

REGISTERED PROFESSIONAL LAND SURVEYOR

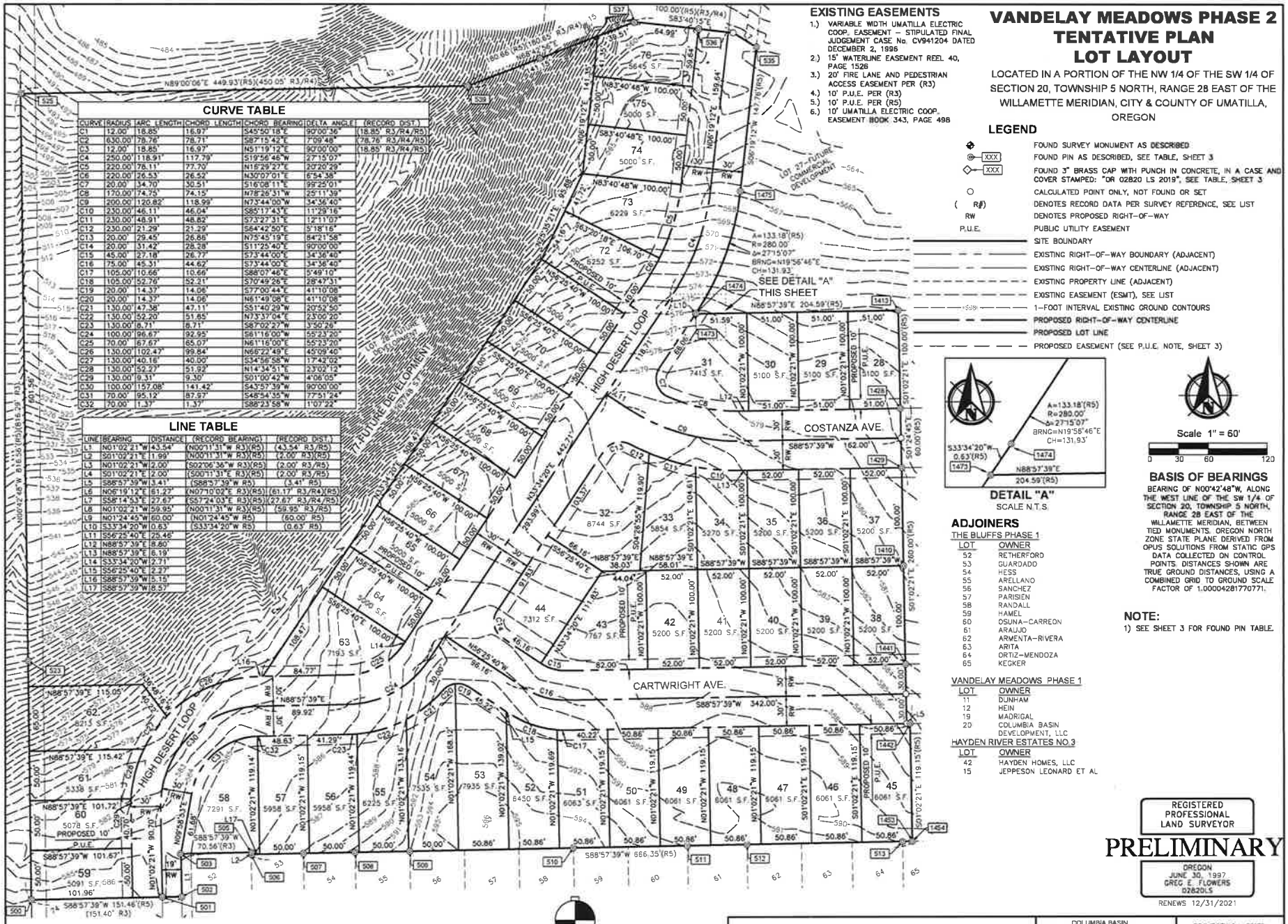
PRELIMINARY

OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS

RENEWS 12/31/2021

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 86178	
SURVEYOR: GREG E. FLOWERS		DATE: 04/07/2021	
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 100'	
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E	
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 1 OF 4	



VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON

EXISTING EASEMENTS

1.) VARIABLE WIDTH UMATILLA ELECTRIC COOP. EASEMENT – STIPULATED FINAL JUDGEMENT CASE No. CV941204 DATED DECEMBER 2, 1996
2.) 15' WATERLINE EASEMENT REEL 40, PAGE 1526
3.) 20' FIRE LANE AND PEDESTRIAN ACCESS EASEMENT PER (R3)
4.) 10' P.U.E. PER (R3)
5.) 10' P.U.E. PER (R5)
6.) 10' UMATILLA ELECTRIC COOP. EASEMENT BOOK 343, PAGE 498

LEGEND

- FOUND SURVEY MONUMENT AS DESCRIBED
- XXX — FOUND PIN AS DESCRIBED, SEE TABLE, SHEET 3
- XXX — FOUND 3" BRASS CAP WITH PUNCH IN CONCRETE, IN A CASE AND COVER STAMPED: "OR 02820 LS 2019", SEE TABLE, SHEET 3
- CALCULATED POINT ONLY, NOT FOUND OR SET
- (R#) — DENOTES RECORD DATA PER SURVEY REFERENCE, SEE LIST
- RW — DENOTES PROPOSED RIGHT-OF-WAY
- P.U.E. — PUBLIC UTILITY EASEMENT
- SITE BOUNDARY
- EXISTING RIGHT-OF-WAY BOUNDARY (ADJACENT)
- EXISTING RIGHT-OF-WAY CENTERLINE (ADJACENT)
- EXISTING PROPERTY LINE (ADJACENT)
- EXISTING EASEMENT (ESMT), SEE LIST
- 1-FOOT INTERVAL EXISTING GROUND CONTOURS
- PROPOSED RIGHT-OF-WAY CENTERLINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT (SEE P.U.E. NOTE, SHEET 3)

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	(RECORD DIST.)
C1	12.00'	18.85'	16.97'	S45°50'18"E	90°00'36"	(18.85' R3/R4/R5)
C2	630.00'	78.76'	78.71'	S87°15'42"E	7°09'48"	(78.76' R3/R4/R5)
C3	12.00'	18.85'	16.97'	N51°19'12"E	90°00'00"	(18.85' R3/R4/R5)
C4	250.00'	118.91'	117.79'	S19°56'46"W	27°15'07"	
C5	220.00'	78.11'	77.70'	N16°29'27"E	20°20'29"	
C6	220.00'	26.53'	26.52'	N30°07'01"E	6°54'36"	
C7	20.00'	34.70'	30.51'	S16°08'11"E	99°25'01"	
C8	170.00'	74.75'	74.15'	N78°26'31"W	25°11'39"	
C9	200.00'	120.82'	118.99'	N73°44'00"W	34°36'40"	
C10	230.00'	46.11'	46.04'	S85°17'43"E	11°29'16"	
C11	230.00'	48.91'	48.82'	S73°27'31"E	12°11'07"	
C12	230.00'	21.29'	21.29'	S64°42'50"E	5°18'15"	
C13	20.00'	29.45'	26.86'	N75°45'19"E	84°21'58"	
C14	20.00'	31.42'	28.28'	S11°25'40"E	90°00'00"	
C15	45.00'	27.18'	26.77'	S73°44'00"E	34°36'40"	
C16	75.00'	45.31'	44.62'	S73°44'00"E	34°36'40"	
C17	105.00'	10.66'	10.66'	S88°07'46"E	5°49'10"	
C18	105.00'	52.76'	52.21'	S70°49'26"E	28°47'31"	
C19	20.00'	14.37'	14.06'	S77°00'44"E	41°10'08"	
C20	20.00'	14.37'	14.06'	N61°49'08"E	41°10'08"	
C21	130.00'	47.38'	47.11'	S51°40'29"W	20°52'50"	
C22	130.00'	52.20'	51.85'	N73°37'04"E	23°00'20"	
C23	130.00'	8.71'	8.71'	S87°02'27"W	3°50'28"	
C24	100.00'	96.67'	92.95'	S61°16'00"W	55°23'20"	
C25	70.00'	67.67'	65.07'	N61°16'00"E	55°23'20"	
C26	130.00'	102.47'	99.84'	N66°22'49"E	45°09'40"	
C27	130.00'	40.16'	40.00'	S34°56'58"W	17°42'02"	
C28	130.00'	52.27'	51.92'	N14°34'51"E	23°02'12"	
C29	130.00'	9.31'	9.30'	S01°00'42"W	4°06'05"	
C30	100.00'	157.08'	141.42'	S43°57'39"W	90°00'00"	
C31	70.00'	95.12'	87.97'	S48°54'35"W	77°51'24"	
C32	70.00'	1.37'	1.37'	S88°23'58"W	1°07'22"	

LINE TABLE

LINE	BEARING	DISTANCE	(RECORD BEARING)	(RECORD DIST.)
L1	N01°02'21"W	43.54'	(N00°11'31"W R3)(R5)	(43.54' R3/R5)
L2	S01°02'21"E	1.99'	(N00°11'31"W R3)(R5)	(2.00' R3/R5)
L3	N01°02'21"W	2.00'	(S02°06'36"W R3)(R5)	(2.00' R3/R5)
L4	S01°02'21"E	2.00'	(S00°11'31"E R3)(R5)	(2.00' R3/R5)
L5	S88°57'39"W	3.41'	(S88°57'39"W R5)	(3.41' R5)
L6	N06°19'12"E	61.22'	(N07°10'02"E R3)(R5)	(61.17' R3/R4)(R5)
L7	S58°14'53"E	27.67'	(S57°24'03"E R3)(R5)	(27.67' R3/R4/R5)
L8	N01°02'21"W	59.95'	(N00°11'31"W R3)(R5)	(59.95' R3/R5)
L9	N01°24'45"W	60.00'	(N01°24'45"W R5)	(60.00' R5)
L10	S33°34'20"W	0.63'	(S33°34'20"W R5)	(0.63' R5)
L11	S56°25'40"E	28.46'		
L12	N88°57'39"E	8.60'		
L13	N88°57'39"E	6.19'		
L14	S33°34'20"W	2.71'		
L15	S56°25'40"E	2.27'		
L16	S88°57'39"W	5.15'		
L17	S88°57'39"W	8.57'		

DETAIL "A"

SCALE N.T.S.

ADJOINERS

THE BLUFFS PHASE 1

LOT	OWNER
52	RETHERFORD
53	GUARDADO
54	HESS
55	ARELLANO
56	SANCHEZ
57	PARISIEN
58	RANDALL
59	HAMEL
60	OSUNA-CARREON
61	ARAUJO
62	ARMENTA-RIVERA
63	ARITA
64	ORTIZ-MENDOZA
65	KEGKER

VANDELAY MEADOWS PHASE 1

LOT	OWNER
11	DUNHAM
12	HEIN
19	MADRIGAL
20	COLUMBIA BASIN DEVELOPMENT, LLC

HAYDEN RIVER ESTATES NO.3

LOT	OWNER
42	HAYDEN HOMES, LLC
15	JEPPESON LEONARD ET AL

Scale 1" = 60'

0 30 60 120

BASIS OF BEARINGS

BEARING OF N00°42'48"W, ALONG THE WEST LINE OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, BETWEEN TIED MONUMENTS. OREGON NORTH ZONE STATE PLANE DERIVED FROM OPUS SOLUTIONS FROM STATIC GPS DATA COLLECTED ON CONTROL POINTS. DISTANCES SHOWN ARE TRUE GROUND DISTANCES, USING A COMBINED GRID TO GROUND SCALE FACTOR OF 1.00004281770771.

NOTE:

1) SEE SHEET 3 FOR FOUND PIN TABLE.

REGISTERED PROFESSIONAL LAND SURVEYOR

PRELIMINARY

OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS

RENEWS 12/31/2021

SURVEY REFERENCES

(R1) SURVEY FOR BAKER-ROGERS, COUNTY ROAD DEPT. (SURVEY NO. I-16-C) BY KRUMBEIN
(R2) SURVEY FOR UMATILLA COUNTY (SURVEY NO. 91-01-B) BY EDWARDS
(R3) THE BLUFFS PHASE 1 (BK. 14 OF PLATS, PG. 63) BY CUMMINGS
(R4) HAYDEN RIVER ESTATES NO. 3 (BK. 14, PG. 13) BY CUMMINGS
(R5) VANDELAY MEADOWS PHASE 1 (BK.17, PG. 8) BY FLOWERS
(R6) SURVEY FOR UMATILLA COUNTY (SURVEY NO 98-101-C) BY WELLS

VERTICAL DATUM

NAVD88, HOLDING AN ELEVATION OF 628.27 ON THE 2-1/2" BRASS CAP BY KRUMBEIN, PER SURVEY I-16-C, AT THE SW COR. OF SEC. 20. OBTAINED THROUGH GPS STATIC OBSERVATIONS POST PROCESSED THROUGH OPUS.

PBS Engineering and Environmental Inc.
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Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 56178
SURVEYOR: GREG E. FLOWERS		DATE: 04/07/2021
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 60'
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 2 OF 4

VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
LOT LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON

NARRATIVE

THIS SURVEY WAS PERFORMED AT THE REQUEST OF COLUMBIA BASIN DEVELOPMENT, LLC, TO DEVELOP LOT 28 OF THE PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED ON SEPTEMBER 17, 2020 AS INSTRUMENT NUMBER 2020-7070774, IN BOOK 17 AT PAGE 8, IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON AND SUBDIVIDE IT AS SHOWN HEREIN.

DURING OUR INITIAL FIELD WORK, WE RECOVERED AND TIED MOST OF THE PERIMETER LOT CORNERS, ADJACENT ROAD INTERSECTION PINS AND ALL THE CONTROLLING SECTION CORNERS. THIS PROPERTY IS DEFINED ON THE WEST BY THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 20 AND ON THE EAST BY THE SAID PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED IN BOOK 17 AT PAGE 8, IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON.

THIS SURVEY WAS PERFORMED AS A REAL TIME KINEMATIC SURVEY USING TRIMBLE DUAL FREQUENCY GPS RECEIVERS WITH A PRECISION OF ONE CENTIMETER +/- 2 PPM TIMES MEASURED LENGTH. MONUMENTS WERE VISITED IN AUGUST AND SEPTEMBER 2018, MAY 2019 AND JANUARY 2020.

LEGAL DESCRIPTION

A PARCEL OF LAND LOCATED IN A PORTION OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20 IN TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN IN THE CITY & COUNTY OF UMATILLA, STATE OF OREGON, MORE FULLY DESCRIBED AS FOLLOWS:

LOT 28 OF VANDELAY MEADOWS PHASE 1, AS SHOWN ON THE PLAT OF VANDELAY MEADOWS PHASE 1, RECORDED ON SEPTEMBER 17, 2020 AS INSTRUMENT NUMBER 2020-7070774 IN BOOK 17 AT PAGE 8 IN THE PLAT RECORDS OF UMATILLA COUNTY, OREGON.

OWNER/DEVELOPER

OWNER/DEVELOPER
COLUMBIA BASIN DEVELOPMENT, LLC
PO BOX 5160
PASCO, WA 99302

FLOOD PLAIN NOTE

FLOOD ZONE FOR THIS AREA IS LISTED AS ZONE X PER UMATILLA COUNTY, OREGON FIRM MAP NUMBER 41059C0265G, IN WHICH ZONE X IS DEFINED AS: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

ZONING

ZONING ON ADJACENT PROPERTIES IS AS FOLLOWS: RESIDENTIAL, MULTI-FAMILY (R2) TO THE SOUTH, RESIDENTIAL, SINGLE FAMILY (R1) TO THE NORTH AND EAST, AND EXCLUSIVE FARM USE (EFU) TO THE WEST, BEING OUTSIDE THE CITY LIMITS.

EXISTING USE OF PROPERTY

THE SITE HAS CURRENTLY BEEN MASS GRADED DURING THE VANDELAY MEADOWS PHASE 1 CONSTRUCTION, IN PREPARATION FOR THIS PHASE OF CONSTRUCTION. A WATER MAIN POTENTIALLY CROSSES THE SITE IN A NORTH - SOUTH DIRECTION, EASTERLY OF THE WEST BOUNDARY LINE IN A WATERLINE EASEMENT. ACCESS TO PUBLIC UTILITIES IS AVAILABLE TO THE SOUTH FROM THE BLUFFS PHASE 1 SUBDIVISION (BK. 14 OF PLATS, PG 63), TO THE NORTH FROM HAYDEN RIVER ESTATES NO.3 (BK. 14 OF PLATS, PG 13) AND TO THE EAST FROM THE PLAT OF VANDELAY MEADOWS PHASE 1, (BK. 17 OF PLATS, PG. 8).

PUBLIC UTILITY EASEMENT NOTE

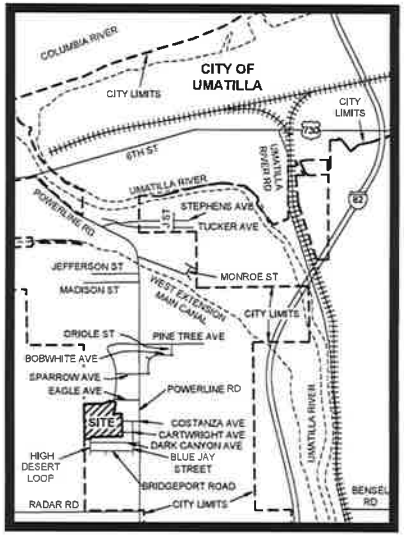
UTILITIES SHALL HAVE THE RIGHT TO INSTALL, MAINTAIN AND OPERATE THEIR EQUIPMENT AND ALL OTHER RELATED FACILITIES ABOVE AND BELOW GROUND WITHIN THE PUBLIC UTILITY EASEMENTS IDENTIFIED ON THIS PLAT MAP AS MAY BE NECESSARY OR DESIRABLE IN PROVIDING UTILITY SERVICES WITHIN AND WITHOUT THE LOTS IDENTIFIED HEREIN, INCLUDING THE RIGHT OF ACCESS TO SUCH FACILITIES AND THE RIGHT TO REQUIRE REMOVAL OF ANY OBSTRUCTIONS INCLUDING STRUCTURES, TREES AND VEGETATION THAT MAY BE PLACED WITHIN THE PUE. THE UTILITY MAY REQUIRE THE LOT OWNER TO REMOVE ALL OBSTRUCTIONS AT THE OWNER'S EXPENSE, OR THE UTILITY MAY REMOVE SUCH OBSTRUCTIONS AT THE LOT OWNER'S EXPENSE. AT NO TIME MAY ANY PERMANENT STRUCTURES BE PLACED WITHIN THE PUE OR ANY OTHER OBSTRUCTION WHICH INTERFERES WITH THE USE OF THE PUE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE UTILITIES WITH FACILITIES IN THE PUE.

SURVEY REFERENCES

(R1) SURVEY FOR BAKER-ROGERS, COUNTY ROAD DEPT. (SURVEY NO. I-16-C) BY KRUMBEIN
(R2) SURVEY FOR UMATILLA COUNTY (SURVEY NO. 91-01-B) BY EDWARDS
(R3) THE BLUFFS PHASE 1 (BK. 14 OF PLATS, PG. 63) BY CUMMINGS
(R4) HAYDEN RIVER ESTATES NO. 3 (BK. 14, PG. 13) BY CUMMINGS
(R5) VANDELAY MEADOWS PHASE 1 (BK.17, PG. 8) BY FLOWERS
(R6) SURVEY FOR UMATILLA COUNTY (SURVEY NO 98-101-C) BY WELLS

FOUND CENTERLINE & PROPERTY PIN TABLE (POSITION FROM CALCULATED TO MEASURED)

#	DESCRIPTION	BEARING	DISTANCE
109	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC	HELD	
500	REBAR W/ ILLEGIBLE YPC	HELD	
501	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC BUSTED	HELD	
502	REBAR W/ YPC: "LS 2316"	HELD	
503	REBAR SHOWN AT SPINHOLE W/ YPC: "LS 2316"	S83°E	0.65'
505	REBAR W/ YPC: "LS 2316"	HELD	
506	REBAR W/ YPC: "LS 2316"	HELD	
507	REBAR W/ YPC: "LS 2316"	S01°E	0.12'
508	REBAR W/ YPC: "LS 2316"	HELD	
509	REBAR W/ YPC: "LS 2316"	HELD	
510	REBAR W/ YPC: "LS 2316"	HELD	
511	REBAR W/ YPC: "LS 2316"	HELD	
512	REBAR SHOWN AT SPINHOLE W/ NO CAP	HELD	
513	REBAR W/ YPC: "LS 2316"	HELD	
514	REBAR W/ YPC: "LS 2316"	HELD	
515	REBAR W/ YPC: "LS 2316"	N37°W	0.11'
516	REBAR W/ YPC: "LS 2316"	HELD	
517	REBAR W/ YPC: "LS 2316"	HELD	
518	REBAR W/ YPC: "LS 2316"	HELD	
519	REBAR SHOWN AT SPINHOLE W/ ILLEGIBLE YPC BUSTED	HELD	
520	REBAR SHOWN AT SPINHOLE W/ YPC: "LS 2316"	HELD	
521	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
522	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
523	REBAR W/ YPC: "LS 2316"	HELD	
525	REBAR SHOWN AT SPINHOLE W/ NO CAP	N89°E	0.14'
526	REBAR W/ YPC: "LS 2316"	HELD	
527	REBAR W/ YPC: "LS 2316"	HELD	
528	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
530	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
531	REBAR W/ NO CAP	N06°W	0.12'
532	REBAR W/ YPC: "LS 2316"	HELD	
533	REBAR FLUSH AT SURFACE W/ YPC: "LS 2316"	HELD	
534	REBAR W/ YPC: "LS 2316"	HELD	
535	REBAR W/ YPC: "LS 2316"	N45°E	0.11'
536	REBAR W/ YPC: "LS 2316"	HELD	
537	REBAR W/ ILLEGIBLE YPC BUSTED 0.7'ABOVE GROUND	S45°W	0.89'
538	REBAR W/ YPC: "LS 2316"	HELD	
539	REBAR W/ YPC: "RS JAB 02735LS	HELD	
540	REBAR FLUSH AT SURFACE W/ ILLEGIBLE YPC	S84°E	0.12'
1404	3" BRASS CAP IN CONC. IN CASE: "OR 02820 LS"	HELD	
1405	3" BRASS CAP IN CONC. IN CASE: "OR 02820 LS"	HELD	
1410	REBAR W/ YPC: "OR 02820 LS"	HELD	
1413	REBAR W/ YPC: "OR 02820 LS"	HELD	
1428	REBAR W/ YPC: "OR 02820 LS"	HELD	
1429	REBAR W/ YPC: "OR 02820 LS"	HELD	
1441	REBAR W/ YPC: "OR 02820 LS"	HELD	
1442	REBAR W/ YPC: "OR 02820 LS"	HELD	
1450	REBAR W/ YPC: "OR 02820 LS"	HELD	
1452	REBAR W/ YPC: "OR 02820 LS"	HELD	
1453	REBAR W/ YPC: "OR 02820 LS"-REFERENCE PIN	N00°E	1.00'
1454	REBAR W/ YPC: "OR 02820 LS"-REFERENCE PIN	N47°E	0.97'
1473	REBAR W/ YPC: "OR 02820 LS"	HELD	
1474	REBAR W/ YPC: "OR 02820 LS"	HELD	
1475	REBAR W/ YPC: "OR 02820 LS"	HELD	



VICINITY MAP
NOT TO SCALE

REGISTERED PROFESSIONAL LAND SURVEYOR

PRELIMINARY

OREGON
JUNE 30, 1997
GREG E. FLOWERS
02820LS

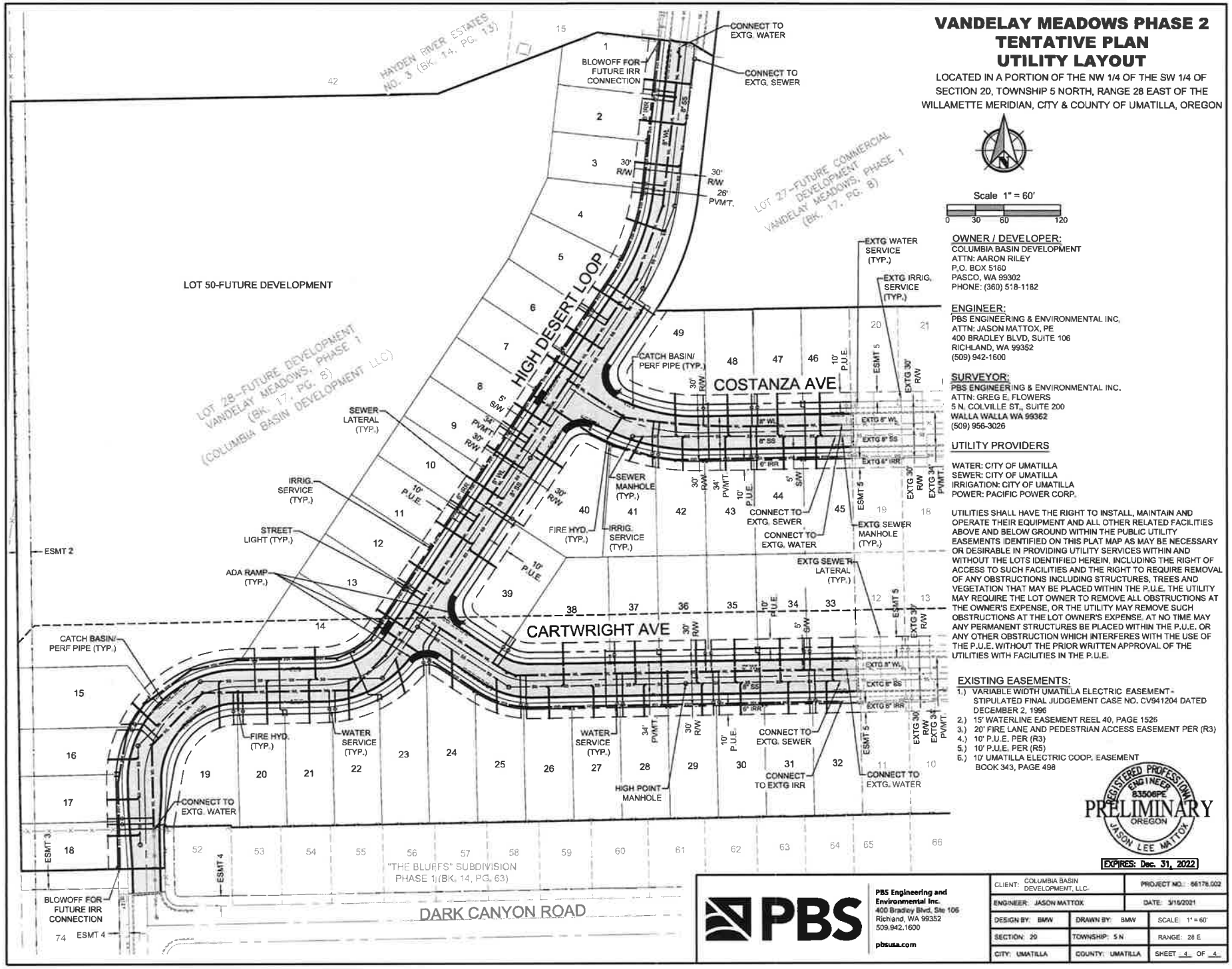
RENEWS 12/31/2021

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 66178
SURVEYOR: GREG E. FLOWERS		DATE: 04/07/2021
CALC BY: ROP	DRAWN BY: DWW	SCALE: N.T.S.
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 3 OF 4

VANDELAY MEADOWS PHASE 2
TENTATIVE PLAN
UTILITY LAYOUT

LOCATED IN A PORTION OF THE NW 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY & COUNTY OF UMATILLA, OREGON



Scale 1" = 60'

0 30 60 120

OWNER / DEVELOPER:
COLUMBIA BASIN DEVELOPMENT
ATTN: AARON RILEY
P.O. BOX 5160
PASCO, WA 99302
PHONE: (360) 518-1182

ENGINEER:
PBS ENGINEERING & ENVIRONMENTAL INC.
ATTN: JASON MATTOX, PE
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600

SURVEYOR:
PBS ENGINEERING & ENVIRONMENTAL INC.
ATTN: GREG E. FLOWERS
5 N. COLVILLE ST., SUITE 200
WALLA WALLA WA 99362
(509) 956-3026

UTILITY PROVIDERS

WATER: CITY OF UMATILLA
SEWER: CITY OF UMATILLA
IRRIGATION: CITY OF UMATILLA
POWER: PACIFIC POWER CORP.

UTILITIES SHALL HAVE THE RIGHT TO INSTALL, MAINTAIN AND OPERATE THEIR EQUIPMENT AND ALL OTHER RELATED FACILITIES ABOVE AND BELOW GROUND WITHIN THE PUBLIC UTILITY EASEMENTS IDENTIFIED ON THIS PLAT MAP AS MAY BE NECESSARY OR DESIRABLE IN PROVIDING UTILITY SERVICES WITHIN AND WITHOUT THE LOTS IDENTIFIED HEREIN, INCLUDING THE RIGHT OF ACCESS TO SUCH FACILITIES AND THE RIGHT TO REQUIRE REMOVAL OF ANY OBSTRUCTIONS INCLUDING STRUCTURES, TREES AND VEGETATION THAT MAY BE PLACED WITHIN THE P.U.E. THE UTILITY MAY REQUIRE THE LOT OWNER TO REMOVE ALL OBSTRUCTIONS AT THE OWNER'S EXPENSE, OR THE UTILITY MAY REMOVE SUCH OBSTRUCTIONS AT THE LOT OWNER'S EXPENSE. AT NO TIME MAY ANY PERMANENT STRUCTURES BE PLACED WITHIN THE P.U.E. OR ANY OTHER OBSTRUCTION WHICH INTERFERES WITH THE USE OF THE P.U.E. WITHOUT THE PRIOR WRITTEN APPROVAL OF THE UTILITIES WITH FACILITIES IN THE P.U.E.

EXISTING EASEMENTS:

1.) VARIABLE WIDTH UMATILLA ELECTRIC EASEMENT - STIPULATED FINAL JUDGEMENT CASE NO. CV941204 DATED DECEMBER 2, 1996
2.) 15' WATERLINE EASEMENT REEL 40, PAGE 1526
3.) 20' FIRE LANE AND PEDESTRIAN ACCESS EASEMENT PER (R3)
4.) 10' P.U.E. PER (R3)
5.) 10' P.U.E. PER (R5)
6.) 10' UMATILLA ELECTRIC COOP. EASEMENT BOOK 343, PAGE 498

REGISTERED PROFESSIONAL ENGINEER 83508PE OREGON JASON LEE MATTOX

PRELIMINARY

EXPIRES: Dec. 31, 2022

PBS

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: COLUMBIA BASIN DEVELOPMENT, LLC.		PROJECT NO.: 66176.002
ENGINEER: JASON MATTOX		DATE: 3/16/2021
DESIGN BY: BMW	DRAWN BY: BMW	SCALE: 1" = 60'
SECTION: 20	TOWNSHIP: 5 N	RANGE: 28 E
CITY: UMATILLA	COUNTY: UMATILLA	SHEET 4 OF 4

CITY OF UMATILLA PLANNING COMMISSION
REPORT AND RECCOMENDATION
FOR
PLAN AMENDMENT PA-1-21

DATE OF HEARING: May 25, 2021

REPORT PREPARED BY: Jacob Foutz, Associate Planner

I. GENERAL INFORMATION AND FACTS

Applicant:	MCSUM, LLC (Monte Vista) 62958 NE Layton Ave STE 5 Bend, OR 97701
Property Owner:	Mitchell L McClannahan PO BOX 2022 Kalama, WA 98625
Land Use Review:	Comprehensive Plan Map Amendment and Zone Change (Type IV review).
Subject Property Description:	Township 5N, Range 28, Section 18, Tax Lots 903 and 904.
Location:	The property is located on South hill along the west extension irrigation district irrigation canal.
Proposed Development:	Proposed subdivision development.
Existing Zoning:	Single-Family Residential (R-1) Zone.
Proposed New Zoning:	Medium-Density Residential (R-2) Zone.

II. Nature of Request/Applicable Comprehensive Plan and Zoning Ordinance Provisions

The applicant, Monte Vista, is requesting to rezone two tax lots totaling 81.17 Acres from Single-Family Residential (R-1) to Medium-Density Residential (R-2) for a proposed subdivision application. The proposed subdivision would create a total of 326 new single-family homes. If this Rezone is not approved the proposed subdivision would need to meet the lot size standards of the Single-Family Residential Zone.

The applicable decision criteria are listed in Chapter 13, Section 3 of the City of Umatilla Zoning Ordinance (CUZO), as outlined in this report, and the review procedures are contained under

Chapter 14, Sections 6(C) and 7 of the CUZO.

II. Analysis

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

CUZO SECTION 10-11-10: TRAFFIC IMPACT ANALYSIS (TIA):

D. Approval Criteria: When a traffic impact analysis is required, approval of the proposal requires satisfaction of the following criteria:

1. Traffic impact analysis was prepared by an Oregon registered professional engineer qualified to perform traffic engineering analysis;
   Findings: The Traffic Impact Analysis (TIA) submitted with the application was prepared by the engineering firm, Lancaster Mobley, and is stamped by Todd E. Mobley, who is an Oregon Registered Professional Engineer.

   Conclusion: The Traffic Impact Analysis submitted with the land use application was prepared, reviewed and approved by an Oregon Registered Professional Engineer.

2. If the proposed action shall cause a significant effect pursuant to the transportation planning rule, or other traffic hazard or negative impact to a transportation facility, the traffic impact analysis shall include mitigation measures that meet the city's level of service and/or volume/capacity standards and are satisfactory to the city engineer, and ODOT when applicable; and
   Findings: The applicant is proposing to amend the City's Comprehensive Plan Map and Zoning Map to change from R-1 to R-2. The Submitted TIA was reviewed by the City of Umatilla's Traffic Engineer of record and was determined to require improvements to City facilities. Improvements are needed as determined by the Level of Service (LOS) at the main intersections in the vicinity of the subject property. In Order to keep the LOS to an acceptable City standard(D) at the Intersection of Madison and Powerline a southbound right turn lane will be required. As shown on page 14 of the submitted TIA a northbound left turn lane at the intersection of Tyler and Powerline as well as at the intersection Madison and Powerline.

   Conclusion: As demonstrated by the TIA and review of the TIA, mitigation measures are necessary to meet the City's LOS or Volume/Capacity Standards for existing streets if the applicant's proposal is approved. These will be enforced upon Subdivision approval. Any additional future development of the subject properties will be required to meet the zoning and land division standards.

3. The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:
   a. Have the least negative impact on all applicable transportation facilities;
   b. Accommodate and encourage nonmotor vehicular modes of transportation to the extent practicable;

c. Make the most efficient use of land and public facilities as practicable;
d. Provide the most direct, safe and convenient routes practicable between on site destinations, and between on site and off site destinations; and
e. Otherwise comply with applicable requirements of this code.

Findings: This request is for an amendment to the City's Comprehensive Plan Map and Zoning Map to change the current R-1 zoning to R-2 zoning. A subsequent subdivision application will be required to meet City standards for site design and traffic circulation.

Conclusion: This criterion includes standards that are applicable to a specific proposed site plan review, subdivision or similar type of development. A plan map amendment/zone change would determine what types of uses could be permitted for the site, but would not specifically authorize any particular use. This criterion will be addressed in the subsequent subdivision application.

CUZO SECTION 10-13-3: AMENDMENTS TO THE ZONING TEXT OR MAP:

D. Approval Criteria: An amendment to this title or official map shall comply with the following criteria:

1. The proposed designation is consistent with and supports the purposes of the portions of the city's comprehensive plan not proposed for amendment, or circumstances have changed to justify a change in the comprehensive plan.

Applicant's Findings: The property has been identified as a property that is suitable to be rezoned zone from R-1 to R-2 designation. The request is based a number of factors identified in the comprehensive plan, specifically adherence with the policies found in chapter 10 Housing of the Umatilla comprehensive Plan. The Comprehensive plans as established is at aimed accomplishing 3 primary goals:

- Support future growth projections within the City of Umatilla
- Aligning the housing supply with the income levels for the area.
- Addressing the need for low income and affordable housing

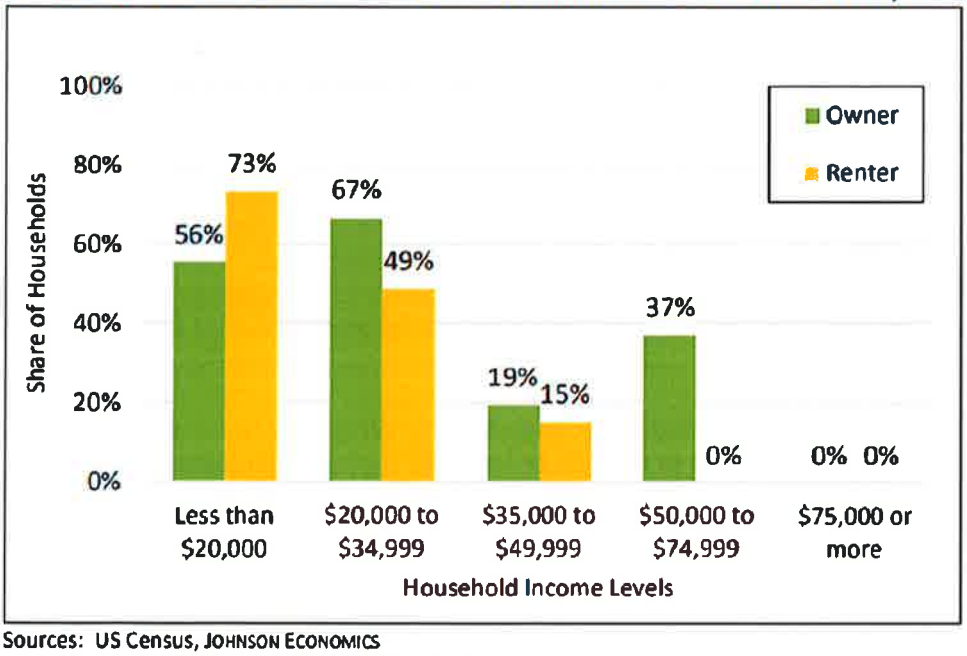
In order to ensure that the plan amendment/zone change meets the overall goals, the applicant has addressed each of the comprehensive plan polices found under chapter 10.

The comprehensive policy provides guidance that encourages a variety of housing types to be provided. The current R-1 zoning on property is a low-density zone that provides for limited housing options, while R-2 is more robust in the housing variety.
In order to provide a housing mix that addresses the established policy, the City needs to increase lands that allow for a variety of housing types and style. According to the Housing Needs Analysis (HNA) included within Chapter 10 of the comprehensive plan, there is a surplus of both R-1 land and R-2 land. According to the HNA there is a surplus of 182 acres of R-2 land, while there is a surplus of 680 acres of R-1 land. While there is not an existing deficiency in R-2 land, there is certainly an overabundance of R-1 land. As noted above, the R-1 is not particularly aimed at accomplishing the goals as set forth in the comprehensive plan policy. Therefore, in order to better align with the policy, the rezone as proposed would be appropriate. By supplying addition units, the City can maintain a housing supply that is in line with the growing population, while providing housing for current residents.

The proposed rezone does not a have an affordable housing component that is directly related to the request. However, the amendment will increase density within the in the City, resulting in additional units to serve the existing and future population. The increase in inventory for the area will ensure that supply is appropriate for the demand, allowing home prices to stay within a range that provides supply for median to lower income families. The zone change will increase the amount of buildable land within the area, providing a greater opportunity for families with variety of incomes level. Particularly the change will allow for housing varieties within complete residential subdivisions, allowing for the inclusion of a families with varying income levels. The mix of housing that is contemplated with the R-2 zoning should be highly encouraged within the City to ensure that this policy is met. By maintaining a large amount of acreage at lower density (R-1), the majority of housing that will be built will be larger single-family type homes that only appeal to a limited percentage of the population and does not encourage the diversification that is needed to ensure that the fair housing goals are met.

As noted above, a majority of the surplus acreage is related to R-1 zoning, which does not provide for a mix of housing. In order to provide a framework to address future growth, while addressing housing pressures from an income perspective, R-2 zoning will need to be increased throughout the City. As mentioned previously, by increasing the amount of higher density a larger variety of housing options become available. The variety in housing ensures that a variety of product type can be built to serve the needed housing as the demand grows. It should be specifically noted that the largest income to ownership/rent spread is at the lower income bracket as seen the chart below for the HNA.

FIGURE 2.6: SHARE OF HOUSEHOLDS SPENDING MORE THAN 30% ON HOUSING COSTS, BY INCOME GROUP



Sources: US Census, JOHNSON ECONOMICS
Census Table: B25106 (2017 ACS 5-yr Estimates)

By allowing a large surplus of low-density zoned land to the remain, the income to housing

cost discrepancy will only continue to grow. In order to combat the discrepancy and stay in step with the growing population, specifically the lower income brackets, the City has a responsibility to create lands that provide a buildable inventory that addresses the need to for all housing groups. Given that, the proposed amendment should be made to ensure that inventory keeps place with the growth and housing needs.

Based on the HNA, the City of Umatilla will continue to grow at a rate of almost 2 percent a year. In order to keep pace with the demand and affordability aspect, lands will need to be up zoned from R-1 to R-2. Rezones, such as the ones proposed, will continue to address the growing need and ensure lands are available to address the needed housing supply. The request actively addressees the supply issues moving forward and ensures that adequate lands are available to mitigate the needs for demand. The timing and availability of lands is essential to slowing price increases for home owners and renters. The proposal will ensure that adequate lands are available to address the change as it occurs.

The zone change will allow for an efficient use of land within the City limits by capitalizing on the existing infrastructure to serve the area. Utilization of the existing services will allow for lands within the UGB to be more efficiently utilized, while avoiding additional costs that are typical with the low-density development.

The development patterns within the R-2 zoning is typically residential development that is located within a subdivision. However, the R-2 allows the ability to provide various housing types on individual lots. Based on the size and shape of the property, the property will more than likely be developed in a manner that is similar to the surrounding area. Code requirements in place ensure compatibility between existing and new development, building additional compatibility.

The amendment as proposed will increase density from 5 units per acre as allowed in the R-1 zone to 8 units per acre as allowed in the R-2 zone. The result will be an increase in density, which allows for a greater opportunity to create more ADU 's. The creation of more ADU's will add diversification to subdivisions and serve as an affordable housing option.

As discussed above, the allowance of the amendment from R-1 to R-2 will allow for an increase in density and housing types allowing for a diversification of inventory that will keep pace with population growth. The City recognizes through the comprehensive plan policies that having an adequate supply of housing inventory is important to combating the threat of increasing housing prices. The applicant finds that the amendment is necessary to remain consistent with the comprehensive plan policies and real market demands that exists now and in the future.

Staff's Conclusion: As stated by the applicant, the proposed rezone will allow for a higher density housing within the City of Umatilla. This is in alignment with the City of Umatilla Comprehensive Plan goals 10.9.105, 10.9.106 and Statewide Planning Goal 10 which encourages "flexibility of housing location, type and density" An increase of density will not only allow for more buildable lots but will also allow for an increase of opportunity to do other type of developments such as Townhomes, Duplexes, and other higher density housing units. Staff believes that this increase of density will allow for a more an affordable and equitable use of the housing inventory. With a forecasted future land need surplus of approximately 873 acres of R-1 land the removal of approximately 80 acres to R-2 will not hurt the current inventory.

2. The proposed change will not affect the land supply for the existing zoning designation as related to projected need for the particular land use.
Applicant's Findings: Both the R-1 and R-2 zones are residentially designated lands to serve the housing need for the City of Umatilla. The zone change from R-1 to R-2 will not negatively impact the residential housing land supply. Rather, the amendment as proposed will increase supply to address the growing need for affordable housing by increasing the density and mix of housing types that can be built. This is particularly significant based on the percentage of lower income families that are spending more than 30% of income on their rent. As noted above, while there is a surplus in both the R-1 and R-2 zoning, the surplus in R-1 zoning is much greater in acreage, 680 acres vs. the 182 acres of surplus land for the R-2 zone. The gap that exists between the two zones is not consistent with the policies set forth by the City in the Comprehensive plan. In order to better align the policies with the needed land inventory, properties will need to be redesignated from R-1 to R-2. The proposed zone change is a step that is needed to make sure that the alignment between zoning and affordable housing demand is maintained as growth continues. The applicant finds that the timing for the request for the amendment is appropriate and will not have a negative impact on the land supply specified in the HNA.

Staff's Conclusion: The City of Umatilla Comprehensive Land Use Plan discusses the projected need for land designated for single-family residential use and medium density residential. The Housing Needs Analysis identifies the need for 163 acres of vacant buildable land to accommodate single-family residential development (including manufactured homes) to meet the demand for the 20-year planning period from 2019-2039. Assuming that the 163 acres is fully built out in the 20-year planning horizon, there will be a surplus of 873 acres.

Based on Chapter 10 of the comprehensive land us plan, the proposed amendment would not significantly affect the inventory of vacant single-family residential zoned lands. Therefore, the City will have an adequate supply of vacant single-family residential lands.

3. The proposed designation will not negatively impact existing or planned public facilities and services. In particular, pursuant to the Oregon transportation planning rule, proposed text and map amendments shall determine whether the proposed change will significantly affect a collector or arterial transportation facility and must comply with the requirements of Oregon administrative rule (OAR) 660-012-0060 as applicable. In the I-82/U.S. 730 interchange area management plan (IAMP) management area, proposed access shall be consistent with the access management plan in section 7 of the IAMP.
Applicant's Findings: Existing facilities have been extended to the property boundary and can be extended with the future development. The availability and ability extend the necessary facilities to serve future development at the contemplated levels, demonstrates the zone change promotes orderly development in an efficient manner. Oregon Administrative Rule 660-012 (Transportation Planning Rule) is an important component to addressing the requested plan amendment. The proposed findings addressing the specific elements of the TPR are included in the Transportation Impact Analysis (TIA)

submitted with this application. The findings within the report provide a conclusion that the change will not have an adverse impact on the system, allowing the proposed change to be consistent with goal 12. Based on the findings, the amendment will contribute to the orderly development pattern in the area and ensure that it will not negatively impact existing or planned public facilities and services.

Staff's Conclusion: The subject property has the capability of being served with water, sewer, electricity. At time of development the developer will be required to extend these facilities to the proposed site. The Submitted Traffic Impact Analysis found no negative impacts to existing streets, intersections or accesses that could not be mitigated by improvements to accommodate the proposed development. These improvements as well as any determined by the City of Umatilla engineer of record will be required at time of development. The City does not have any existing facilities or services or any future facilities or services planned that would be adversely affected by the proposed change and subsequent development that are not able to be mitigated.

4. The site is suitable for the proposed use, considering the topography, adjacent streets, access, size of the site, availability of public facilities, and any other pertinent physical features.
Applicant's Findings: The subject property is relatively flat and void of vegetation, making it suitable for development as contemplated within the R-2 zone. The availability of the public infrastructure to the property boundary allows for the extension of facilities to serve future development on the property, ensuring that the zone change contributes to the orderly development of lands in the area.

Staff's Conclusion: The subject property does not have any inventoried features that would lend to difficult development. No physical alterations to the site would be required to develop single family dwellings on the properties. Access, and utility facilities and services are available to the boundary of the subject property. The site is suitable for the proposed use, considering the topography, adjacent streets, access, size of the site, availability of public facilities, and other pertinent physical features.

5. Other sites in the city or the vicinity are unsuitable for the proposed use. In other words, ownership and desire to develop a particular use in themselves provide insufficient rationale for changing a zoning designation that does not support the interests of the city as a whole.
Applicant's Findings: As noted other lands in the City will need to be rezoned over to time to account for the change in population and need to serve various income level through housing options. As noted above, the property location is suitable to serve the higher density as services are available to the property. While other properties within the City may similar acreage and could facilitate the necessary demand, the subject property is unique in that will extend the urbanized area that connect the downtown area the exterior portion of the City. Other parcels of similar size are not immediately adjacent to urbanized area that have been developed with streets, water and sewer. Based on the location of the subject property, the applicant finds that the rezone promotes the logical extension of the services and development pattern within the City.

Staff's Conclusion: Despite the fact that other sites within the vicinity or the city appear capable of accommodating the proposed use without the need for a plan map amendment/zone change, this criterion does not necessarily preclude the amendment if the proposal can be found to support the interests of the City as a whole. The City has a large surplus of single-family residential lands and has a need for higher density additional housing. Therefore, the proposed plan map amendment/zone change could be found to support the interests of the City as a whole.

IV. SUMMARY CONCLUSIONS AND STAFF RECOMMENDATION

An increased need for additional park space and/or recreational facilities is anticipated as a result of the applicant's plan map/zone change amendment and subsequent residential subdivision development. Such a determination however, is more appropriately addressed during review of the subdivision rather than this request.

Therefore, based on the information in Sections I and II of this report and the findings of fact and conclusions contained in Section III, the Umatilla City Staff recommends Planning Commission recommends **APPROVAL** of this request, PA-1-21, to amend the City of Umatilla Comprehensive Plan and Zoning Map from the R-1 Single-Family Residential to the R-2 Medium-Density Residential Zone to the City Council. The properties are identified as Tax Lots 903 and 904 in Township 5 North, Range 28 East, Section 18.

V. EXHIBITS

Exhibit A – Notice & Zoning Maps
Exhibit B – Applicant's Narrative
Exhibit C – Transportation Impact Analysis

81.17 Acres to be rezoned from Single-Family Residential to Medium-Density Residential

Feet

0 200 400 600 800

Legend

Subject Property

TAXLOTS03_05_2021

N W E S

Umatilla Est. 1862

MAP DISCLAIMER: No warranty is made as to the accuracy, reliability or completeness of this data. Map should be used for reference purposes only. Not survey grade or for legal use.
Created by Jacob Foutz, on 4/21/2021

CITY OF UMATILLA PLANNING COMMISSION
REPORT AND RECOMMENDATION
FOR
TENTATIVE SUBDIVISION PLAT FOR SUB-1-21

DATE OF HEARING: May 25, 2021

REPORT PREPARED BY: Jacob Foutz, Associate Planner

I. GENERAL INFORMATION

Applicant: MCSUM, LLC, 62958 NE Layton Ave STE 5, Bend, OR 97701

Property Owners: Mitchell L McClannahan, PO BOX 2022, Kalama, WA 98625

Land Use Review: Tentative plat review for a 326-lot subdivision.

Property Description: Township 5N, Range 28, Section 18, Tax Lots 00903, 00904.

Location: The property is generally located west of the Powerline Road and south of the irrigation canal.

Existing Development: The subject property is currently undeveloped.

Proposed Development: To subdivide the property into 326-lots for residential development.

Zone Single-Family Residential, if rezone approved prior to this application it will be Medium-Density Residential.

Adjacent Land Use(s):

Adjacent Property	Zoning	Use
North	EFU	Irrigation Canal
South	EFU	Undeveloped land and irrigated farm land
East	Single-Family(R1)	Single Family Homes
West	EFU(County)	Undeveloped land and irrigated farm land

II. NATURE OF REQUEST

The applicant, MCSUM(MonteVista), request approval of a tentative plat for a residential subdivision to divide two existing parcels into 326-lots for residential development. The applicant intends to develop the residential lots with single-family dwellings. The proposal must comply with the applicable standards for the **Medium-Density Residential zoning district (R2)* and the Land Division Ordinance (LDO). This application will be processed with the assumption that MonteVista Rezone Plan amendment PA-1-21 has been approved. Planning commissions recommendation will be acted upon by the City Council on June 1st. A condition of approval will be that PA-1-21 is approved.

**Subject to approval of Rezone (PA-1-21)*

III. ANALYSIS

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

CITY OF UMATILLA ZONING ORDINANCE:

SECTION 10-3A-4: DEVELOPMENT STANDARDS:

Minimum lot area	5,000 square feet
Minimum lot width	50 feet
Minimum lot depth	90 feet
Minimum yard setbacks:	
Front and rear yard	10 feet
Side yard	5 feet
Street side yard	10 feet
Garage	18 feet from any street except an alley
Maximum building height	35 feet

(Ord. 688, 6-15-1999)

Findings: No development is proposed at this time and the minimum yard setbacks are not applicable to this request. The minimum lot area, width and depth are applicable to all of the proposed lots. All of the proposed lots meet or exceed the minimum lot standards listed above as shown on the applicant's submitted tentative plat.

Conclusion: All of the proposed lots exceed the minimum lot standards.

CITY OF UMATILLA LAND DIVISION ORDINANCE

SECTION 11-2-6: LAND DIVISION APPROVAL CRITERIA:

No plat for a subdivision or partition may be considered for approval until the city has approved a tentative plan. Approval of the tentative plan shall be binding upon the city and the applicant for the purposes of preparing the subdivision or partition plat. In each case, the applicant bears the burden of proof to demonstrate that the proposal satisfies applicable criteria and standards.

A. Approval Criteria: Land division tentative plans shall only be approved if found to comply with the following criteria:

1. The proposal shall comply with the city's comprehensive plan.
   Findings: The City of Umatilla's Zoning Ordinance (CUZO) and Land Division Ordinance (LDO) implement the comprehensive plan goals and policies. If a request is found to meet or be capable of meeting the applicable standards and criteria in the CUZO and LDO the request is considered to be consistent with the comprehensive plan.

   Conclusion: This request is found to meet or be capable of meeting all of the applicable standards and criterion in the CUZO and LDO as addressed in this report.

2. The proposal shall comply with the I-82/U.S. 730 interchange area management plan (IAMP) and the access management plan in the IAMP (section 7) as applicable.
Findings: The Interchange Area Management Plan (IAMP) extends along U.S. Highway 730 from its intersection with U.S. Highway 395 west to Eisele Drive just west of the U.S. Post Office within City Limits. The property is not within the IAMP area.

Conclusion: The property is not located within the I-82/U.S. 730 IAMP. This criterion is not applicable.

3. The proposal shall comply with the city's zoning requirements.
Findings: The property will be zoned R2 if PA-1-21 is approved, the applicable City zoning requirements of R2 are addressed above. This request is capable of complying with all of the dimensional standards as addressed in this report.

Conclusion: The request is for approval of a subdivision that would result in 326-lots. The property is not currently zoned as Medium-Density Residential. Only if PA-1-21 is approved will this application be valid. Therefore, a condition of approval will be imposed requiring PA-1-21 to be approved before this application is valid.

4. The proposal shall comply with the city's public works standards.
Findings: The City's public works standards are engineering design standards for construction of streets, sidewalks, curbs, water and sewer lines, other utilities, and safety standards for installation of such improvements. The applicant did not submit engineered construction plans for these facilities. Section 11-5-4 of the LDO provides the applicant/developer with the option of submitting engineered construction plans after tentative plat approval has been obtained. Engineered plans for all public facilities serving the proposed development will be reviewed by the public works director for compliance with the City's public work standards. The applicant is required to install these facilities in compliance with the approved plans and to submit a final set of "as-built" plans to the City upon completion of the improvements.

Conclusion: This requirement is best satisfied as a condition of approval that the applicant obtain approval of engineered construction plans for all public works and utility facilities prior to starting construction and to submit final "as-built" drawing after construction is completed.

5. The proposal shall comply with applicable state and federal regulations, including, but not limited to, Oregon Revised Statutes 92, 197, 227, and wetland regulations.
Findings: The CUZO and LDO implement the applicable provision of ORS 92, 197, 227. The subject property does not contain wetlands as shown on the National Wetlands Inventory (NWI) or figure 5-1.2 in the City's Comprehensive Plan. Except as implemented through the City's ordinance, applicable state and federal regulations will be required to be met as a condition of approval.

Conclusion: This request is found to meet or be capable of meeting all of the standards and criteria as addressed in this report, the proposal will comply with applicable state and

federal regulations, as implemented through the City's ordinances. The applicant will be required as a condition of approval to comply with all other state and federal requirements.

6. The proposal shall conserve inventoried natural resource areas and floodplains, including, but not limited to, mapped rivers, creeks, sloughs, and wetlands.
Findings: There are no known wetlands, as identified on the NWI, or flood zones on the subject property. The City of Umatilla's Comprehensive Plan does not identify any significant natural resources on the property and there are no known rivers, creeks or sloughs on the property.

Conclusion: There are no inventoried natural resource areas, waterways, water bodies or floodplain areas to conserve on the property. This criterion is not applicable.

7. The proposal shall minimize disruption of natural features of the site, including steep slopes or other features, while providing for safe and efficient vehicle, pedestrian, and bicycle access.
Findings: A portion of the subject property is identified as having slope in Figure 7.1-2 of the City of Umatilla's Comprehensive Plan. The portion of the property with identified slope is shown as open park space on the submitted preliminary plat. There are no other identified natural features on the subject property. The proposed streets, sidewalks and other public facilities will be reviewed for compliance with the City's public works standards which are intended to provide for and protect the public health, safety and welfare.

Conclusion: There is slope on the subject property that is identified in the City of Umatilla's Comprehensive Plan, the natural feature of slope will not be disrupted as the tentative plan shows the area as open park space. Vehicle and pedestrian access will be provided as part of the proposed subdivision; however, these will be reviewed against other applicable standards as addressed in this report. If found to meet or be capable of meeting the standards as addressed in this report the proposed subdivision will comply with this standard.

8. The proposal shall provide adjacent lands with access to public facilities and streets to allow its full development as allowed by the City's codes and requirements.
Findings: The applicants submitted plan includes a tentative street layout that complies with City standards and would provide adjacent lands with access to public facilities and streets to allow its full development.

Conclusion: The applicants submitted plan includes a tentative street layout that complies with City standards and would provide adjacent lands with access to public facilities and streets to allow its full development.

9. The proposal shall be designed with streets that continue or connect to existing and planned land division plats on adjoining properties. All proposed streets shall comply with standards of this Title and the Public Works Standards.
Findings: The proposed subdivision includes a street layout that connects to the adjoining existing property to the east. All proposed streets will be reviewed through this request and

through the public works director's review of engineered construction plans to ensure the streets comply with the City's public works standards.

Conclusion: As addressed above, the proposed subdivision includes a street layout for the property that extends and connects to adjoining lands and existing land division plats. The proposed streets will be reviewed for compliance with the City's street standards as contained in the LDO and reviewed by the public works director for compliance with the City's public work standards.

SECTION 11-4-2: STREETS:

The location, width, and grade of streets shall be considered in their relation to existing and planned streets, to topographical conditions, to public utilities, services, convenience, and safety, and to the proposed use of the land to be served by the streets.

A. Street Arrangement: The arrangement of streets in and serving land divisions shall:
   1. Maximize public safety, access, and minimize out of direction travel by utilizing a grid system or comparable design.
   2. Avoid cul-de-sacs, except where there is no other practical alternative to serve a portion of the land area to be divided, due to topographical conditions, existing development, or similar circumstances.
   3. Provide for the continuation of existing streets in surrounding areas.
   4. Conform to any future street plan, neighborhood plan, or other street plan adopted by the City.

      Findings: No cul-de-sacs are proposed. All applicable existing streets are being proposed to be extended. There is no adopted street plan or neighborhood plan in the area.

      Conclusion: The proposed subdivision is a grid type layout, and provides a layout that extends in a practical way. The proposed subdivision continues existing streets. There are no street or neighborhood plans adopted by the city on adjacent properties.

B. Street Layout And Design:
   1. All streets, alleys, bicycle, and pedestrian pathways shall connect to other streets within the land division and to existing and planned streets outside the land division. Streets shall terminate at other streets or at parks, schools, or other public uses within a neighborhood.

      Findings: As addressed in this report the proposed streets will connect with existing streets, Grant and Roosevelt. The proposed subdivision utilizes Grant and Roosevelt throughout the whole subject property and allow for future connections to these streets on the west side of the subject property.

      Conclusion: The proposed subdivision includes a tentative layout for the subject property that would allow all of the proposed streets to connect to other streets or would allow for the proposed streets to be extended onto lands outside the proposed subdivision.

   2. Local streets shall align and connect with other streets when crossing streets with higher level classifications.

      Findings: The proposed subdivision will not create a new intersection.

Conclusion: The proposed streets will not cross a street with a higher-level classification.

3. Cul-de-sacs and flag lots shall only be permitted when the following conditions are demonstrated:
   a. Existing conditions, such as topographic features, water features, an irrigation canal, a railroad, a freeway, or other condition, that cannot be bridged or crossed prevents the extension of a street.
   b. The existing development pattern on adjacent properties prevents a street connection.
   c. An accessway is provided consistent with the standards for accessways.
   d. A minor street is not a suitable alternative to multiple flag lots (more than 2 adjacent flags) due to size of the site, topographic features, or other physical constraint.

   Findings: No Cul-de-sacs are proposed. No flag lots are proposed as part of this request.

   Conclusion: The proposed subdivision does not propose cul-de-sacs or flag lots.

4. Cul-de-sacs shall not exceed four hundred feet (400') in length.
   Findings: The proposed subdivision does not propose cul-de-sacs.

   Conclusion: The proposed subdivision does not propose cul-de-sacs.

5. Where a land division includes or is adjacent to land that can be divided and developed in the future, streets, bicycle paths, and pedestrian ways shall continue through the full length of the land division to provide connections for the adjacent land.
   Findings: The existing streets (Grant & Roosevelt) and pedestrian ways continue through the full length of the land division and can provide connections to the adjacent land.

   Conclusion: The proposed subdivision is adjacent to lands that can be divided and developed. The proposed subdivision includes a proposed layout that continues the streets and pedestrian ways throughout the property and connects to adjacent lands that may be divided and developed in the future.

6. Where proposed lots or parcels in a proposed land division exceed double the minimum lot size and can be redivided, the location of lot and parcel lines and other layout details shall be such that future land divisions may readily occur without interfering with the orderly extension of adjacent streets, bicycle paths, or pedestrian ways. Any building restrictions within future transportation locations, such as future street rights of way or future street setbacks, shall be made a matter of record for the purpose of future land divisions.
   Findings: The proposed subdivision would create 326 new residential lots. There is one large parcel of land that will be used for park space and is land that is not developable due to the canal and slope of the area. Adjacent lands will be developable but are addressed in previous standards.

Conclusion: The purposes of this criterion are met.

7. Where there is a reasonable relationship between the impacts of the proposed development and the public need for accessways, such as direct connections to public schools or parks, the land divider shall be required to publicly dedicate accessways to:
   a. Connect to cul-de-sacs;
   b. Pass through oddly shaped or unusually long blocks; or
   c. Provide for networks of public pedestrian and bicycle paths; or
   d. Provide access to other transportation routes, businesses, residential, or public uses.

   Findings: The proposed subdivision provides for the extension of existing streets. There are no existing parks, schools or other public facilities in the area that would require dedication of additional public access.

   Conclusion: The proposed subdivision connects to existing streets. There are no public schools, parks or other public facilities in the area that would require dedication of additional public access.

8. New construction or reconstruction of collector and arterial streets shall include bicycle facilities and pedestrian sidewalks as required by applicable city plans.
9. Sidewalks shall be installed along the street frontage of arterial and collector streets and for any street within a multi-family, commercial, or industrial land division by the land divider. Sidewalks on local streets within a subdivision for single-family residential lots shall be provided with the construction of a structure on the lot and shall be completed prior to occupancy of the structure.

   Findings: The proposed application includes the creation of new local streets within a single-family residential subdivision. Therefore, installation of sidewalks along the property frontage will be required at time of issuance of a building permit.

   Conclusion: Although engineered construction plans were not submitted as part of this application, the proposed internal roads are considered local streets and sidewalks will be required as a condition of approval on a building permit to be installed prior to issuance of a certificate of occupancy.

10. An easement may be required to provide for all or part of sidewalks along one or both sides of a public right of way which lacks width to include sidewalks within the public right of way.

    Findings: All of the proposed new streets will be required to dedicate right of way to a current city standard including sidewalks.

    Conclusion: All of the proposed new streets will be required to meet a current city standard including sidewalks within the public right of way.

11. When a sidewalk in good repair does not exist, all applicants for building permits for a new structure or remodeling of more than a minor nature of an existing structure shall, in conjunction with the issuance of a building permit, obtain a permit to construct a sidewalk for the full frontage of the site. No final inspection or certificate of occupancy

shall be issued for the building permit until a sidewalk has been constructed in accordance with the permit requirements.
Findings: All of the proposed roads are considered local streets and installation of a sidewalk will be required as a condition of approval on a building permit.

Conclusion: All of the proposed local streets will be required to install sidewalks as a condition of approval upon issuance of a building permit.

12. Off-site pedestrian improvements may be required concurrent with a land division to ensure access between the land division and an existing developed facility such as a commercial center, school, park, or trail system. The approval authority must show a reasonable relationship between the impacts of the land division and the required improvement.
Findings: There are no public lands or facilities adjacent to the proposed subdivision to provide access to or that would warrant dedication of off-site pedestrian improvements.

Conclusion: There are no public lands or facilities in the vicinity that would warrant dedication of off-site pedestrian improvements.

13. Structures are not allowed in any dedicated sidewalk areas which will obstruct movements on the sidewalk. The minimum widths of sidewalks shall conform to ADA standards.
Findings: No structures are identified on the preliminary plat. A new structure within a public right of way would be subject to review and approval by the City. All new sidewalks will be required to meet ADA standards.

Conclusion: The tentative plat does not show a structure within an area dedicated for sidewalks or that would obstruct movement on a sidewalk. The applicant's engineered construction plans will be reviewed to ensure new sidewalks meet City and ADA standards.

14. Sidewalks generally shall be parallel to adjacent streets in line and grade, except where existing features or topographical conditions warrant an alternative design.
Findings: As addressed in this report the applicant has not submitted construction plans with this application. However, the applicant has indicated that sidewalks will generally be parallel to the adjacent street as required by this standard.

Conclusion: As addressed in this report engineered construction drawings have not been submitted as part of this review. The construction drawings will show the location of curb and sidewalks within the new subdivision.

15. All sidewalks shall be adjacent to the curb as specified in the public works standards, unless impractical due to special circumstances of the site or adjacent street.
Findings: This provision seems to create some confusion and conflict with the City's adopted street standards in Section 12.2.510 of the City's Transportation System Plan (TSP) as adopted in the City Comprehensive Plan, specifically figure 12.2-10 and Table 12.2-10. The standards addressed in the TSP were intended to allow for greater flexibility

enabling the City to apply sound engineering judgment to determine the appropriate functional classification for new streets. However, the TSP designates an optional planter strip for most road classifications that would provide for detached sidewalks set back from the curb. All of the proposed new streets would be considered local residential streets and are not required to provide a planter strip and will have sidewalks adjacent to the curb.

Conclusion: All of the proposed new streets are considered local residential streets and do not require a planter strip and will have sidewalks adjacent to the curb. However, as addressed in the report engineered construction plans will be required to be submitted and approved by the public works director.

16. Street trees are required along both sides of new public streets, at a minimum of thirty feet (30') on center, with at least one tree for each new lot or parcel. Street tree locations shall be shown on construction plans and shall generally be located at the edge of the right of way. Street trees shall be required with building permits for structures on approved lots and shall be installed prior to approval of occupancy.
Findings: Street trees are not identified on the preliminary plat and are typically not show on the construction plans. A criterion is best met through a condition of approval.

Conclusion: Installation of street trees are generally not shown on construction plans or the preliminary plat. A condition of approval will be imposed requiring street trees to be installed in accordance with this standard prior to issuance of a certificate of occupancy.

C. Right Of Way And Roadway Widths: Generally, right of way and roadway widths for state highways and county roads shall be determined by these entities. Unless otherwise determined by the city administrator based on the recommendation of the city engineer and public works director, the widths of streets and roadways shall meet the following standards and, in addition, all street construction shall conform to the public works standards:
1. The city administrator may modify the width of a planter strip to accommodate drainage and public utilities.
2. Curbside sidewalks shall be required.
3. Bike lanes and shoulder bikeways along arterial and collector streets shall be five feet (5') wide and shall be provided for each direction of travel allowed on the street.
4. Sidewalk and bicycle path lighting shall be provided in conjunction with new road construction and new development.
5. Wheelchair ramps and other facilities shall be provided as required by the Americans with disabilities act (ADA).
6. Bikeways shall be designed and constructed consistent with the design standards in the Oregon bicycle plan, 1992, and ASSHTO's "Guide For The Development Of Bicycle Facilities, 1991".
Findings: As addressed in this report construction plans were not submitted as part of this request. Installation of improvements within the right of way will be reviewed by the public works director to ensure improvements meet City standards.

Conclusion: The required improvements within the right of way are typically shown on the construction plans not the preliminary plat. As addressed in this report the applicant

will be required to submit engineered construction plans to the public works director prior to starting construction. All improvements will be required to meet City standards.

D. Reserve Strips: Public reserve strips or street plugs controlling access to streets may be approved where necessary for the protection of the public welfare or of substantial property rights.
Findings: The use of public reserve strips or street plugs is not proposed nor has the City identified the need for such access control measures.

Conclusion: No reserve strips or street plugs are proposed. This criterion is not applicable.

E. Alignment: Streets other than minor streets shall be in alignment with existing streets by continuations of the centerlines. Staggered street alignment resulting in "T" intersections shall be avoided and in no case shall the distance between centerlines of off set streets be less than two hundred feet (200').
Findings: As addressed in this report the request will include the extension of existing streets and provides a tentative layout for future streets. While the future street layout includes "T" intersections the intersections are not staggered streets that could be aligned with other planned or existing streets.

Conclusion: The proposed streets and future street layout is designed to connect to existing and proposed future streets. Due to the irregular configuration of the lot avoiding all "T" intersections is impractical. No "T" intersections that could be aligned to form continuations of existing streets are proposed and the distance between off set streets is more than two hundred feed (200')

F. Future Extension Of Streets: Streets shall be extended to the boundary of the land division. A temporary turnaround may be required for emergency vehicle access if a dead end street results.
Findings: All of the proposed streets extend to the boundary of the land division.
Conclusion: All of the proposed streets connect to existing streets, therefore they are fully extended to the boundary of the land division.

G. Intersection Angles: Streets shall be laid out to intersect at right angles as nearly as practical. In no case shall the intersection angle be less than seventy five degrees (75°). The intersection of arterial or collector streets with other arterial or collector streets shall have at least one hundred feet (100') of tangent adjacent to the intersection. Other streets, except alleys, shall have at least sixty feet (60') of tangent adjacent to the intersection.
Findings: The layout of the proposed street are nearly at right angles. No new arterial or collector street are proposed.

Conclusion: The proposed street intersections are laid out at nearly right angles.

H. Existing Streets: When existing streets adjacent to or within a site have widths less than city standards, additional right of way shall be provided with the land division.
Findings: There are no existing streets within or adjacent to the site with widths that would require dedication of additional right of way.

Conclusion: All of the existing streets adjacent to the site have right of way widths consistent with City standards.

I. Partial Street Dedication And Improvements: Half streets shall be avoided wherever possible. A partial street dedication may be permitted when a land division abuts undeveloped property which is likely to dedicate the remainder of the street. At minimum, two-thirds ($^2/_3$) of the street dedication and improvement shall be required for any partial street to accommodate two (2) travel lanes, one parking lane, and sidewalk on one side. Reserve strips and street plugs may be required to preserve the objectives of the partial street.
Findings: No partial street dedications/improvements are proposed.
Conclusion: No partial street dedications or improvements are proposed. This criterion is not applicable.

J. Street Names: Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of existing streets. Street names and numbers shall conform to the established pattern in the city, applicable requirements, and shall be approved by the city.
Findings: There are ten streets in the proposed development. Both Roosevelt street and Grant street are extensions of existing streets. The eight new streets will need to be named in accordance with the established pattern in the area. They will need to be named after Presidents that have passed away from the United States of America.

Conclusion: Two streets will be continuation of existing streets (Roosevelt & Grant). The remaining eight will need to be named in accordance with the established pattern of the area and will need to be approved prior to final plat approval.

K. Grades And Curves: Centerline radii of curves shall not be less than three hundred feet (300') on arterial streets, two hundred feet (200') on collector streets, or one hundred feet (100') on local streets. Grades shall not exceed six percent (6%) on arterials, ten percent (10%) on collector streets, or twelve percent (12%) on any other street.
Findings: The submitted tentative plat show no centerline curve radius for the proposed streets. All of the proposed streets are considered local streets, and are straight. The grade of the streets is not shown on the tentative plan. The required construction plans will show grade of all of the proposed streets.

Conclusion: The required construction plans will be reviewed to ensure compliance with city standards including radius and grade.

L. Streets Adjacent To Railroad Rights Of Way: Wherever the proposed land division includes or is adjacent to a railroad right of way, provisions may be required for a street approximately parallel to and on each side of such right of way at a distance suitable for the appropriate use of the land between the streets and the railroad. The distance shall be determined with due consideration at cross streets of the minimum distance required for approach grades to a future grade separation and to provide sufficient depth to allow vegetative or other screening to be placed along the railroad right of way.

Findings: The proposed land division does not include and is not adjacent to a railroad right-of-way.

Conclusion: There are no railroad rights-of-way included or adjacent to the proposed subdivision. This criterion is not applicable.

M. Marginal Access Streets: Where a land division abuts or contains an existing or proposed arterial street, the city may require marginal access streets, reverse frontage lots with additional depth, screen planting or other screening contained in a nonaccess reservation along the rear or side property line, or other treatment necessary for adequate protection of residential properties and to afford separation of through and local traffic. Alleys are acceptable as a means of providing access to lots or parcels fronting state highways or county roads.
Findings: The proposed subdivision does not abut an arterial street. This criterion does not apply.
Conclusion: The proposed subdivision does not abut an arterial street. This criterion does not apply.

N. Alleys:
1. Alleys shall be provided in commercial and industrial districts, unless other permanent provisions for access to off street parking and loading facilities are approved by the city.
2. Alleys are encouraged to serve residential development that front along state highways or county roads to minimize congestion and traffic hazards.
3. The corners of alley intersections shall have a radius of not less than two feet (2').
Findings: The applicant's request is for a subdivision in a residential zone. No alleys are proposed.
Conclusion: The subject property is zoned for residential use. No alleys are proposed.

SECTION 11-4-3: BLOCKS:
The length, width, and shape of blocks shall take into account the need for adequate lot size and street width. No block shall be more than eight hundred feet (800') in length between street corner lines, unless it is adjacent to an arterial street or unless justified by the location of adjoining streets. The recommended minimum length of blocks along an arterial street is one thousand six hundred feet (1,600'). Any block over eight hundred feet (800') in length may be required to provide pedestrian connections through the block and crosswalks dedicated and improved to city standards.
Findings: The proposed subdivision would in essentially create eight new blocks. All of the proposed blocks are less than 800 feet.

Conclusion: As addressed in this report all of the proposed lots will be less than the maximum block dimensions. All of the proposed blocks will be less than 800 feet in length.

SECTION 11-4-4: EASEMENTS:
A. Utility Lines: Utility lines shall generally be located within public rights of way unless other provisions are required to meet the specific needs of a particular utility provider. A ten foot (10') wide easement for public and private utilities shall be provided along property frontages

(measured from the right of way line) and a six foot (6') wide easement for public and private utilities shall be provided alongside and rear lot lines, except as otherwise approved by the city administrator.
Findings: A ten-foot-wide easement is not shown on the current site plan. The applicant will be required to provide a ten-foot-wide easement for public and private utilities along property frontages, and six feet for the side and rear lot lines along property frontages.
Conclusion: The applicant will be required through a condition of approval to provide a ten-foot-wide easement for public and private utilities along property frontages, and six feet for the side and rear lot lines along property frontages.

B. Watercourses: If a land division is crossed by or adjacent to a natural water body, an easement conforming to the riparian area shall be provided to protect the watercourse.
Findings: The proposed subdivision is not crossed or adjacent to a water body.

Conclusion: The proposed subdivision is not crossed or adjacent to a water body. This criterion is not applicable.

11-4-5: LOTS:
Lot and parcel size, shape, and orientation shall be consistent with the applicable zoning district and for the type of use contemplated. No lot or parcel dimension shall include the adjacent public right of way.

A. Through lots with public streets on both front and rear or both sides shall be avoided except when essential to provide separation of residential development from adjacent arterial or collector streets. An easement at least five feet (5') in width shall be located adjacent to the right of way and there shall be no right of access to the major street. A permanent barrier may be required along the right of way, within the easement.
Findings: No through lot are proposed. This criterion is not applicable.

Conclusion: No through lot are proposed. This criterion is not applicable.

B. Lot and parcel side lot lines shall be at right angles to fronting streets or radius to curved streets to the extent practical, in order to create lots and parcels with building sites which are nearly rectangular.
Findings: All of the proposed lots as show on the submitted preliminary plat are nearly rectangular in shape and will provide building sites which are rectangular in shape.

Conclusion: All of the proposed lots will provide a rectangular building area.

C. Lots shall have a width to depth ratio not to exceed 2.5.
Findings: As shown on the submitted preliminary plat all of the proposed lots do not exceed a width to depth ratio of 2.5.

Conclusion: As shown on the submitted preliminary plat all of the proposed lots will have a width to depth ratio no exceeding 2.5.

D. All lots and parcels shall have a minimum street frontage on a public street of fifty feet (50'), except that lots or parcels fronting a cul-de-sac or curved street may have a minimum street

frontage of forty feet (40'), so long as the minimum lot width required by the zoning district is provided at a distance equivalent to the required front yard setback.
Findings: As shown on the submitted preliminary plat all of the proposed lots will have a minimum street frontage on a public street of fifty feet (50').

Conclusion: As shown on the submitted preliminary plat all of the proposed lots will exceed the minimum street frontage standards.

E. Flag lots shall not be acceptable for land divisions, but may be approved if the following circumstances apply:
   1. For one or two (2) lot land divisions when it is not practical to create or extend a public street or partial public street due to the nature of surrounding development.
   2. When topographic conditions or other physical constraints make it impractical or infeasible to create or extend a public street.
   3. When the size and shape of the site limit the possible arrangement of new lots or parcels and prevent the creation or extension of a public street.
   4. When allowed, the flag portion of a new lot shall have a minimum width of fifteen feet (15') to accommodate a driveway a minimum of twelve feet (12') wide. Two (2) adjacent flag lots may reduce the street frontage and pole width to twelve feet (12') wide, if joint access easements are created and a driveway is provided with a minimum width of twenty feet (20').
   Findings: No flag lots are proposed as part of this application.

   Conclusion: No flag lots are proposed as part of this application. These criteria are not applicable.

City of Umatilla Zoning Ordinance Section 10-11-10(D) Traffic Impact Analysis Requirements and Approval Criteria

Section 10-11-10(B) of the City of Umatilla Zoning Ordinance (CUZO) requires a Traffic Impact Analysis (TIA) to be submitted with a land use application when certain conditions apply. Subsection 10-11-10(B)(b)(1) identifies an application with an increase in site traffic volume generation by two hundred fifty (250) average daily trips (ADT) or more as one of the conditions in which a TIA is required to be submitted. The applicant submitted a 326-lot subdivision application that will increase site traffic volume by more than 250 average daily trips. The applicant submitted a Traffic Impact Analysis report with the Subdivision application.

Section 10-11-10(C) specifies that a TIA must be prepared by an Oregon Registered Professional Engineer that is qualified to perform traffic engineering analysis.

Section 10-11-10(D) lists the following criteria under Section 10-13-3 of the Zoning Ordinance that must be satisfied and supported with findings and reasons as to how each criterion is met in order for this request to be approved.

1. *The Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis.*

Findings: The Traffic Impact Analysis (TIA) submitted with the subdivision/Rezone application shows it to have been prepared by the engineering firm, Lancaster Mobley, and is stamped by Todd Mobley, who is an Oregon Registered Professional Engineer.

Conclusion: The Traffic Impact Analysis submitted with the land use application was prepared, reviewed and approved by an Oregon Registered Professional Engineer. This criterion is met.

2. *If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the City's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the City Engineer, and ODOT when applicable.*

Findings: According to the Traffic Impact Analysis (TIA) submitted by the applicant, development associated with the proposed single-family residential subdivision will have an impact on existing traffic facilities, as determined by the Level of Service (LOS) at the main intersections of Powerline road and Tyler as well as Powerline road and US 730. The City anticipates that Powerline road will be significantly updated within the next few years. Therefore, the applicant will be required to pay their portion of the Powerline road and US 730 intersection improvements as well as one left turn lane onto Powerline Road as addressed in their submitted TIA. This will be determined by a signed development agreement between the applicant and City, and assessed by a per lot fee.

Conclusion: As demonstrated by the TIA, as well as the memo from the City of Umatilla's engineer of record mitigation of traffic impacts will be required for the McClannahan Summit Subdivision. The applicant will contribute their percentage of the costs relating to the traffic mitigation affecting the Powerline Road/Highway 730 intersection caused by this development as well as on left turn lane onto Powerline road as determined by a signed development agreement. These costs will be assessed by a per lot fee. This will be enforced by requiring a signed development agreement between the applicant and City, before the final plat is recorded.

3. *The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:*

   a. *Have the least negative impact on all applicable transportation facilities;*

   b. *Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;*

   c. *Make the most efficient use of land and public facilities as practicable;*

   d. *Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and*

   e. *Otherwise comply with applicable requirements of the City of Umatilla Code.*

Findings: The proposed subdivision site design and traffic design are able to be considered as having a low negative impact on transportations facilities. The negative impacts to the transportation facilities such as Powerline Road come from the number of trips that will be taken by the residents living in the proposed subdivision, this is a normal and expected consequence of residential growth. The actions listed above will allow for effective mitigation of the negative impacts to applicable transportation facilities. With the installation of sidewalks in the neighborhood it can be reasonably assumed that the site and traffic design accommodate and encourage non-motor vehicular modes of transportation to the extent practicable. The site plan of the proposed subdivision is able to be considered as making efficient use of land and public facilities and providing the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations.

Conclusion: As shown above the proposed site design and traffic and circulation design and facilities meet the criterion.

IV. PUBLIC COMMENT, SUMMARY AND DECISION

This request by the applicant, MCSUM(MonteVista), for tentative subdivision plat approval for a 326-lot subdivision on property in the Medium-Density Residential (R-2) Zone appears to meet, or is capable of meeting through conditions of approval, all of the applicable development standards of the City of Umatilla Zoning Ordinance and the criteria and development standards in the City of Umatilla Land Division Ordinance. Therefore, based on the information in Sections I and II of this report, and the above criteria and standards, findings of fact and conclusions contained in Section III, Staff Recommends, that the City of Umatilla Planning Commission approves SUB-1-21, subject to the conditions of approval contained in Section V of this report.

V. CONDITIONS OF APPROVAL

1. This application shall be valid only upon the approval of PA-1-21 by City Council.

2. The final plat must be approved and recorded within one year from the date of this approval. The final subdivision plat must comply with the requirements of ORS chapter 92, and the requirements under Section 11-3-1 and 11-3-2 of the City of Umatilla Land Division Ordinance which the City will use as a checklist.

3. The applicant/developer shall submit a preliminary copy of the preliminary plat to the County Surveyor and GIS Department for review prior to submitting the final plat to the City.

4. The applicant/developer shall submit engineered construction plans for streets, water, sewer, street lighting and all other improvements within the street rights-of-way to the City Public Works Director for review and approval. No construction shall begin until the construction plans have been approved.

5. At the beginning of the second phase Grant street shall be extended to the development and built to a two-thirds City standard (curb, gutter, sidewalk on one side) unless otherwise determined by a signed development agreement between applicant and City of Umatilla.

6. Prior to final plat approval the applicant shall have a signed development agreement with the City of Umatilla for the applicants proportionate share of mitigation to the HWY 730 and Powerline road intersection as well as one left turn lane onto Powerline road.

7. Street trees shall be provided as required by the Land Division Ordinance and shall be required as a condition of approval on each building permit issued for a dwelling within the subdivision.

8. A ten foot (10') wide easement for public and private utilities shall be provided along property frontages (measured from the right of way line) and a six foot (6') wide easement for public and private utilities shall be provided along side and rear lot lines along property frontages.

9. Street names approved by the City shall be shown on the final plat. No street name will be approved that is confusing, offensive or duplicates or sounds too similar to existing street names within the urban growth boundary.

10. If any historic, cultural or other archaeological artifacts, or human remains are discovered during construction the applicant shall immediately cease construction activity, secure the site, and notify appropriate agencies including but not limited to the City of Umatilla, and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program.

11. The applicant, or applicant's construction contractor, must obtain all federal, state and local permits, prior to starting construction.

12. The applicant shall be responsible for ensuring that all areas disturbed within existing street rights-of-way by construction are returned to their pre-construction condition or better after construction or installation of required improvements.

13. The applicant shall submit a copy of the final recorded plat of the subdivision and 'as-built' drawings of all required improvements to the City of Umatilla.

14. No building permit for a dwelling will be issued until final plat approval of the subdivision has been obtained and recorded in the Umatilla County Records Office.

15. Failure to comply with the conditions of approval established herein may result in revocation of this approval.

VI. EXHIBITS

Exhibit A Notice Map

MonteVista Homes Subdivision (SUB-1-21)
Map: 5N2818 Tax Lots: 903&904

*Notice given to property owners within 100'

Feet
0 200 400 600 800

Legend

Subject Property

TAXLOTS 03-05-2021

N W E S

Umatilla Est. 1862

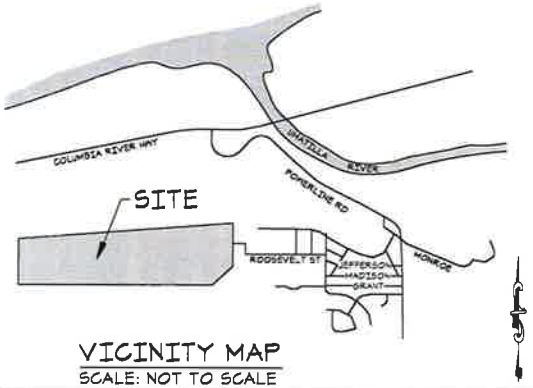
MAP DISCLAIMER: No warranty is made as to the accuracy, reliability or completeness of this data. Map should be used for reference purposes only. Not survey grade or for legal use.
Created by Jacob Foutz, on 5/4/2021

McCLANNAHAN SUMMIT

MARCH 2021

CITY OF UMATILLA

UMATILLA COUNTY, OREGON



VICINITY MAP

SCALE: NOT TO SCALE

DEVELOPER:
McSUM, LLC
62958 NE Layton Ave, Ste 5
Bend, Oregon 97701

BUILDER:
MonteVista Homes
62958 NE Layton Ave, Ste 5
Bend, Oregon 97701

DENSITY SUMMARY
MEDIUM DENSITY RESIDENTIAL (R-2)
1 DWELLING PER 3,500 SF
5,000 SF MINIMUM LOT SIZE

PARKS DEDICATION:	17.63 ACRES	21.7 %
R.O.W. DEDICATION:	16.87 ACRES	20.8 %
NET AREA:	46.87 ACRES	57.5 %
GROSS AREA:	81.17 ACRES	

DENSITY PROVIDED: 14.2%

SETBACK SUMMARY

FRONT:	10'
GARAGE:	18'
REAR:	10'
SIDE:	5'
STREET SIDE:	10'

SQUARE FOOTAGE SUMMARY

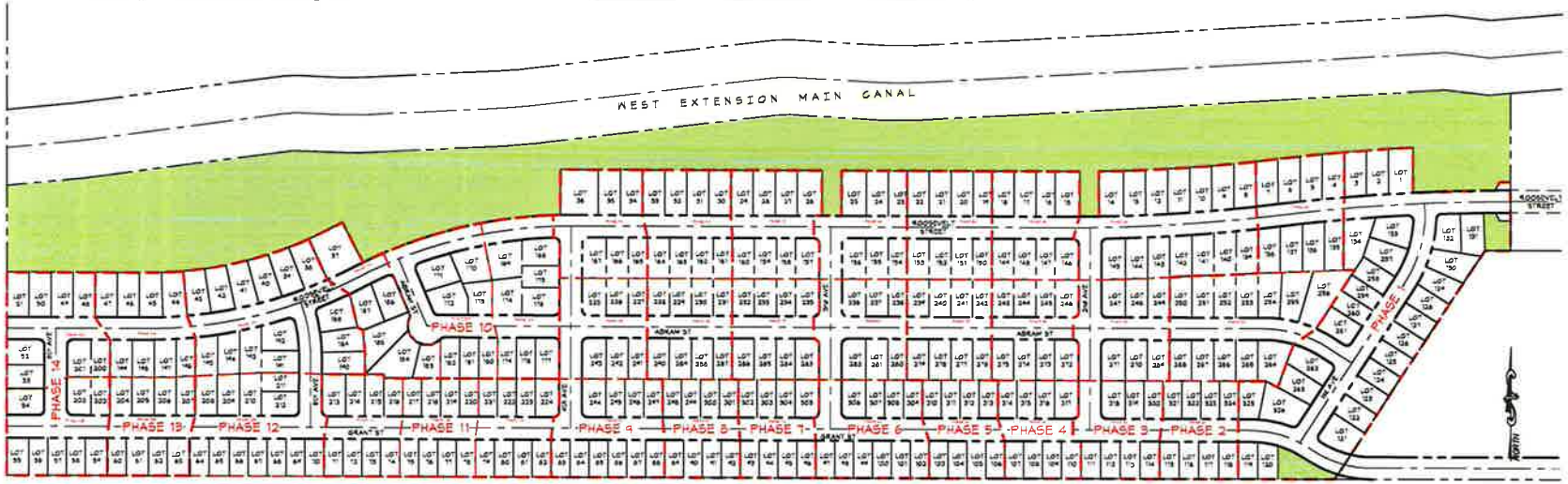
5,000 to 5,999	162	LOTS
6,000 to 7,499	140	LOTS
7,500 & GREATER	24	LOTS
TOTAL	326	LOTS

SHEET INDEX:

APPROVALS:

UTILITY COMPANY CONTACT NUMBERS:

UMATILLA ELECTRIC, MONTE ELLIS 541 564-4379
CASCADE NATURAL GAS COMPANY, RON COFFELL 541 278-4464
EASTERN OREGON TELECOM, R. TOOLEY 541 289-7017



SITE PLAN

SCALE: 1"=150'

M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

DESIGNED BY: MJF
DRAWN BY: SLM
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
PRELIMINARY LAYOUT COVER

NO. REVISIONS

SHEET: 1

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES WHICH MAY BE IN THE WORK AREA BEFORE HIS CONSTRUCTION IS UNDERTAKEN. THE NEW UTILITIES SHALL BE INSTALLED TO AVOID CONFLICT WITH THE EXISTING UTILITIES.
2. CONTRACTOR TO OBTAIN ALL APPLICABLE PERMITS.
3. ALL WORK AND MATERIALS SHALL CONFORM WITH THE AMERICAN PUBLIC WORKS SPECIFICATIONS- DIVISION I, AND THE OREGON STATE HEALTH DIVISION ADMINISTRATIVE RULES CHAPTER 333, LATEST EDITION, AS APPLICABLE TO THIS WORK AND COMPLY WITH CITY STANDARDS.
4. CONTRACTOR TO PROVIDE TRAFFIC CONTROL PER THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
5. ALL PLUMBING SHALL BE IN CONFORMANCE TO ALL APPLICABLE STATE & LOCAL PLUMBING CODES.
6. THRUST RESTRAINT TO BE PROVIDED AT ALL TEES, PLUGS, CAPS, BENDS, AND AT ALL OTHER LOCATIONS WHERE UNBALANCED FORCES EXIST PER CITY STANDARD.
7. THE ENGINEER HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND CONSTRUCTION REVIEW SERVICES RELATING TO THE CONTRACTOR'S SAFETY PRECAUTIONS.
8. DISINFECTION PROCEDURE FOR NEW WATER LINE TO BE PERFORMED IN COMPLIANCE WITH ADMINISTRATIVE RULES CHAPTER 333, LATEST EDITION AND CITY STANDARDS AND SPECIFICATIONS.
9. EXISTING WATER LINE & SERVICES TO BE MAINTAINED UNTIL NEW SERVICES ARE COMPLETED. COORDINATE WITH THE CITY ON THE NUMBER AND LOCATION OF EXISTING SERVICES. ABANDONED WATER SERVICES SHALL BE COMPLETELY REMOVED AND A BRASS PLUG SHALL BE INSTALLED IN THE PIPE AT THE LOCATION OF THE WATER SERVICE CONNECTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL DEVICES NECESSARY IN COMPLIANCE WITH BEST MANAGEMENT PRACTICES.
11. ADA ACCESSIBLE RAMPS SHALL CONFORM TO THE CITY STANDARDS.
12. BRASS CAP BENCHMARK: ELEVATION.
13. HOT TAPS TO EXISTING SEWER OR WATER FACILITIES MUST BE COMPLETED BY A CONTRACTOR APPROVED BY THE CITY.
14. A LENGTH OF AT LEAST 20 LF OF C900 PIPE SHALL BE USED FOR SANITARY SEWER AND SEWER SERVICES WHENEVER THEY CROSS WITHIN 18\" OF A WATER MAIN.
15. ALL DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARDS.
16. TEN FOOT SEPARATION IS REQUIRED BETWEEN SEWER AND WATER SERVICES. NO UTILITIES SHALL BE PLACED WITHIN TEN FEET OF WATER MAINS OR SERVICES.
17. STREET NAME AND STOP SIGN LOCATIONS SHALL BE COORDINATED WITH THE CITY AND INSTALLED BY THE CONTRACTOR.
18. SEWER AND WATER SERVICES EXTENDED BEYOND PUBLIC RIGHT-OF-WAYS AND EASEMENTS SHALL BE INSPECTED BY THE CITY BUILDING DEPARTMENT.
19. THE CONTRACTOR SHALL EXPOSE, VERIFY, AND/OR MATCH EXISTING UTILITIES AND IMPROVEMENTS, IN CONFORMANCE WITH THE INTENT OF THESE PLANS AND SPECIFICATIONS, TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS. ANY DISCREPANCIES AT PROPOSED CONNECTION POINTS SHALL BE REPORTED TO THE ENGINEER AND AFFECTED UTILITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
20. DRY UTILITY TRENCHING (WHERE JOINT USE INCLUDES POWER, TELEPHONE, CABLE TV, & GAS) SHALL BE COMPLETED IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS OF THE APPLICABLE UTILITY COMPANY. CONTRACTOR SHALL COORDINATE TRENCH EXCAVATION, BEDDING, BACKFILL, AND LOCATION OF TRENCH AND LOCATION OF RISERS, VAULTS, AND OTHER APPURTENANCES WITH THE APPROPRIATE UTILITY REPRESENTATIVE. ALL CONSTRUCTION SHALL CONFORM TO STATE AND FEDERAL STANDARDS REGARDING.
21. ALL CONSTRUCTION SHALL CONFORM TO STATE AND FEDERAL STANDARDS REGARDING ACCESSIBILITY TO PEOPLE WITH DISABILITIES.
22. TEMPORARY ACCESS FOR ALL USERS, INCLUDING THOSE WITH DISABILITIES, SHALL BE MAINTAINED WITHIN THE EXISTING RIGHT OF WAY.

CONSTRUCTION NOTES:

1. NO CONSTRUCTION SHALL BE STARTED WITHOUT A PRE-CONSTRUCTION MEETING BETWEEN THE CITY AND CONTRACTOR. NO CONSTRUCTION SHALL BE STARTED WITHOUT A NOTICE TO PROCEED BY THE CITY ENGINEERING DEPARTMENT. THE CITY ENGINEERING DEPARTMENT AND THE DESIGN ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY CONSTRUCTION WORK DONE PRIOR TO NOTICE TO PROCEED BEING ISSUED OR WITHOUT INSPECTION WILL BE REJECTED.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS ON THE JOB SITE INCLUDING BUT NOT LIMITED TO, ALL DIMENSIONS, GRADES, ELEVATIONS, EXTENT AND COMPATIBILITY TO THE EXISTING SITE CONDITIONS, AND WITH THE WORK DESCRIBED ON THE ENGINEER'S DRAWINGS. ANY DISCREPANCIES OR UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY. CONTRACTOR SHALL NOT PROCEED WITH ANY OF THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, THEN IT IS UNDERSTOOD THAT THE CONTRACTOR IS CHOOSING TO PROCEED AT THE CONTRACTOR'S OWN RISK AND SHALL INCUR ALL COSTS, IF ANY, TO RESOLVE THE ISSUES TO THE SATISFACTION OF THE ENGINEER.
3. A CITY INSPECTOR ACTING ON BEHALF OF THE CITY MAY REQUIRE REVISIONS IN PLANS TO SOLVE UNFORESEEN PROBLEMS THAT MAY ARISE IN THE FIELD.
4. ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE CITY STANDARDS AND SPECIFICATIONS, AND ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT \"UNDERGROUND LOCATE SERVICE\" AT 1-800-332-2344 AT LEAST 48 BUSINESS-DAY HOURS PRIOR TO THE START OF CONSTRUCTION FOR THE LOCATION OF POWER, GAS, CABLE TV AND TELEPHONE UNDERGROUND FACILITIES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE PUBLIC AGENCY FOR THE LOCATION OF UNDERGROUND FACILITIES.
6. ALL UTILITIES SHOWN ARE ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. NO POTHOLING TO VERIFY LOCATIONS AND ELEVATIONS HAS AUTHORIZED BY THE OWNER. THE CONTRACTOR HAS THE TOTAL RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND TO NOTIFY THE UTILITY COMPANIES WHEN WORKING IN THEIR PROXIMITY. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)232-1987.
7. ALL GRADING SHALL BE IN CONFORMANCE WITH THE CURRENT CITY STANDARDS AND SPECIFICATIONS. ALL SUBGRADE MATERIAL SHALL BE CONSIDERED CLASS A AND COMPACTED TO 95% OF ASTM 698, METHOND D. AS SPECIFIED IN THESE PLANS. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% RELATIVE COMPACTION PER THE CITY TESTING REQUIREMENTS.
8. ALL FINAL CUT SLOPES SHALL NOT EXCEED A GRADE OF 3 TO 1 VERTICAL UNLESS OTHERWISE APPROVED BY THE CITY. FILL SLOPES SHALL NOT EXCEED A GRADE OF 3 HORIZONTAL TO 1 VERTICAL UNLESS OTHERWISE APPROVED BY THE ENGINEER AND THE CITY.
9. ALL UNSUITABLE SOILS MATERIALS, RUBBISH AND DEBRIS RESULTING FROM GRADING OPERATIONS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF PROPERLY.
10. THE CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT, AND METHODS REQUIRED TO PREVENT DUST IN AMOUNTS DAMAGING TO PROPERTY, CULTIVATED VEGETATION AND DOMESTIC ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM CONSTRUCTION.
11. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE INDUSTRIAL SAFETY REGULATIONS, THE CITY AND THEIR OFFICIALS, THE ENGINEER, AND THE OWNER SHALL NOT BE RESPONSIBLE FOR ENFORCING SAFETY REGULATIONS.
12. MATERIAL QUANTITIES USED, NOTED, OR PROVIDED IN A SEPARATE ITEMIZED QUANTITY TAKE-OFF ARE AN ENGINEER'S OPINION OF PROBABLE MATERIAL REQUIREMENTS, AND IS AN ESTIMATE ONLY. CONTRACTOR'S HAVE THE SOLE RESPONSIBILITY OF MAKING THEIR OWN QUANTITY TAKE-OFF AND COST ESTIMATE.
13. ALL WORK SHALL BE PERFORMED BY A CITY APPROVED CONTRACTOR.
14. UTILITIES SHALL HAVE THE RIGHT TO INSTALL, MAINTAIN, AND OPERATE THEIR EQUIPMENT ABOVE AND BELOW GROUND AND ALL OTHER RELATED FACILITIES WITHIN THE PUBLIC UTILITY EASEMENTS (P.U.E) IDENTIFIED ON THIS PLAT MAP AS MAY BE NECESSARY OR DESIRABLE IN SERVING THE LOTS IDENTIFIED HEREIN, INCLUDING THE RIGHT OF ACCESS TO SUCH FACILITIES AND THE RIGHT TO REQUIRE THE REMOVAL OF ANY OBSTRUCTIONS INCLUDING TREES AND VEGETATION THAT MAY BE PLACED WITHIN THE P.U.E. AT THE LOT OWNERS EXPENSE. AT NO TIME MAY ANY PERMANENT STRUCTURES BE PLACED WITHIN THE P.U.E OR ANY OTHER OBSTRUCTION WHICH INTERFERES WITH THE USE OF THE P.U.E WITHOUT PRIOR WRITTEN APPROVAL OF THE UTILITIES AND FACILITIES IN THE P.U.E.
15. CITY APPROVAL DOES NOT CONSTITUTE APPROVAL OF FACILITIES PROPOSED ON PRIVATE PROPERTY. SEPARATE PERMITS ISSUED BY THE BUILDING DEPARTMENT ARE REQUIRED AND SHALL BE OBTAINED BY THE DEVELOPER FOR FACILITIES LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY.
16. ANY WORK WITHIN EXISTING PUBLIC RIGHT-OF-WAY OR DEDICATED CITY EASEMENTS REQUIRES A SEPARATE RIGHT-OF-WAY EXCAVATION PERMIT OBTAINED FROM THE CITY.
17. THE CONTRACTOR SHALL STAMP ON THE CURB ALL UTILITY CROSSINGS UNDER THE CURB WITH THE FOLLOWING CODE OR CODES: \"S\" - SANITARY SEWER, \"W\" - POTABLE WATER, \"I\" - IRRIGATION, \"C\" - CONDUIT (UTILITIES, ELECTRICAL, TELEPHONE, CABLE, GAS, ECT. LETTERS NOT PLACED BY A SPECIFIED STAMP WILL NOT BE ACCEPTED AND THAT SECTION OF CURB MUST BE REMOVED AND REPLACED.
18. THE CONTRACTOR SHALL PROVIDE AS-BUILT PLANS TO THE ENGINEER AT THE END OF THE PROJECT.

GRADING NOTES

1. INSPECT ALL ROADWAYS ADJACENT TO THE CONSTRUCTION ACCESS ROUTE AT THE END OF EACH DAY. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE CONSTRUCTION SITE MUST BE CLEANED UP WITHIN 24 HOURS AND STABILIZED BACK ON THE SITE OR PROPERLY DISPOSED.
2. COVER AND SECURE ALL DUMP TRUCK LOADS LEAVING THE CONSTRUCTION SITE TO MINIMIZE SPILLAGE ON ROADS.
3. KEEP SEDIMENT ON THE PROJECT SITE, TO THE MAXIMUM EXTENT PRACTICAL.
4. CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY. DUST CONTROL MUST BE CONTINUOUS, PARTICULARLY DURING THE DRY SEASON.
5. STABILIZE EXPOSED UNWORKED SOILS AS NEEDED TO PREVENT EROSION.
6. PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, SO THAT SEDIMENT DOES NOT ENTER THE CONVEYANCE SYSTEM (BOTH ON AND OFFSITE).
7. KEEP ROADS ADJACENT TO INLETS CLEAN, SEDIMENT AND STREET WASH WATER SHALL NOT BE ALLOWED TO ENTER THE CONVEYANCE SYSTEM (BOTH ON AND OFFSITE) WITHOUT PRIOR TREATMENT.
8. INSTALL SEDIMENT CONTROLS ALONG THE SITE PERIMETER ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE BEFORE COMMENCING EARTH DISTURBING ACTIVITIES.
9. WHENEVER POSSIBLE, CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHOULD BE OPERATIONAL BEFORE THE CONSTRUCTIONS OF IMPERVIOUS SITE IMPROVEMENTS.
10. DESIGNATE THE LOCATION OF A SLURRY PIT WHERE CONCRETE TRUCK AND EQUIPMENT CAN BE WASHED OUT. SLURRY PITS ARE NOT TO BE LOCATED IN OR UPSTREAM OF A SWALE, DRAINAGE AREA, STORMWATER FACILITY, WATER BODY, OR IN AN AREA WHERE A STORMWATER FACILITY EXISTS OR IS PROPOSED.
11. STOCKPILE MATERIALS (SUCH AS TOPSOIL) ONSITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
12. COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, OTHER HAZARDOUS MATERIALS, AND NON-INERT WASTE PRESENT ONSITE FROM PRECIPITATION AND/OR VANDALISM. MAINTAIN A SUPPLY OF MATERIALS ON HAND TO ADDRESS AND CONTAIN SPILLS.
13. DESIGNATE AN AREA FOR CLEANING PAINTING EQUIPMENT AND TOOLS. NEVER CLEAN BRUSHES OR RINSE CONTAINERS INTO THE STREET, GUTTER, DRAINAGE INLET, OR WATERWAY.
14. APPLY FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES.
15. INSPECT ON A REGULAR BASIS (DURING/AFTER A RUNOFF PRODUCING STORM EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO ENSURE SUCCESSFUL PERFORMANCE OF BMPS.
16. REMOVE TEMPORARY ESC BMPS WITHIN 30 DAYS AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED.
17. EROSION CONTROL FACILITIES SHALL BE PLACED TO RETAIN STORM DRAINAGE ON SITE DURING CONSTRUCTION AND SHALL REMAIN OPERABLE UNTIL THE SITE HAS BEEN REGLAIMED.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION, DRAINAGE, AND DUST CONTROL DURING CONSTRUCTION.
19. ALL GRADING AND DRAINAGE ACTIVITIES SHALL CONFORM TO THE CITY GRADING, EXCAVATION, AND STORMWATER MANAGEMENT ORDINANCE.
20. SLOPE STABILIZATION AND/OR VEGETATION SHALL BE PROVIDED WITHIN 30 DAYS OF FINAL GRADING.
21. NO COMPRESSIBLE SOILS (CLAYS) ARE KNOWN TO EXIST ON THIS SITE.
22. MEASURES TO PREVENT THE TRANSPORTATION OF SILT, MUD, AND/OR STORM WATERS FROM EXITING THE SITE SHALL BE UTILIZED AS SET FORTH IN THE CITY STANDARDS AND SPECIFICATIONS.
23. NO DEBRIS, FILL, STOCKPILES, OR EQUIPMENT SHALL BE STORED WITHIN A PUBLIC RIGHT-OF-WAY, OR IN ANY LOCATION THAT PROHIBITS ACCESS BY EMERGENCY VEHICLES AND PERSONNEL.
24. WITHIN THE CITY RIGHT OF WAY, ANY CUT SLOPE EXCEEDING 3:1, ANY FILL SLOPE EXCEEDING 3:1, OR ANY RETAINING STRUCTURE OVER THREE FEET IN HEIGHT SHALL REQUIRE APPROVAL FROM THE CITY.
25. ON PRIVATE PROPERTY ANY CUT OR FILL SLOPE EXCEEDING 2:1, OR ANY RETAINING STRUCTURE EXCEEDING 4' IN HEIGHT SHALL REQUIRE A BUILDING PERMIT OR APPROVAL BY THE CITY.
26. TREE PROTECTION MEASURES AS SPECIFIED IN THE CITY SPECIFICATIONS SHALL BE EMPLOYED AND MAINTAINED AS REQUIRED FOR THOSE TREES TO BE SAVED IN THE VICINITY OF CONSTRUCTION ACTIVITIES.

EXPIRES: 12/31/21

M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

DESIGNED BY: MJF
DRAWN BY: S.L.M
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
CONSTRUCTION NOTES

NO	REVISIONS

SHEET: 2

McCLANNAHAN SUMMIT
UMATILLA, OREGON

M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

DESIGNED BY: MJF
DRAWN BY: SJK
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
PRELIMINARY LAYOUT

NO REVISIONS

SHEET: 3

McCLANNAHAN SUMMIT
UMATILLA, OREGON

M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

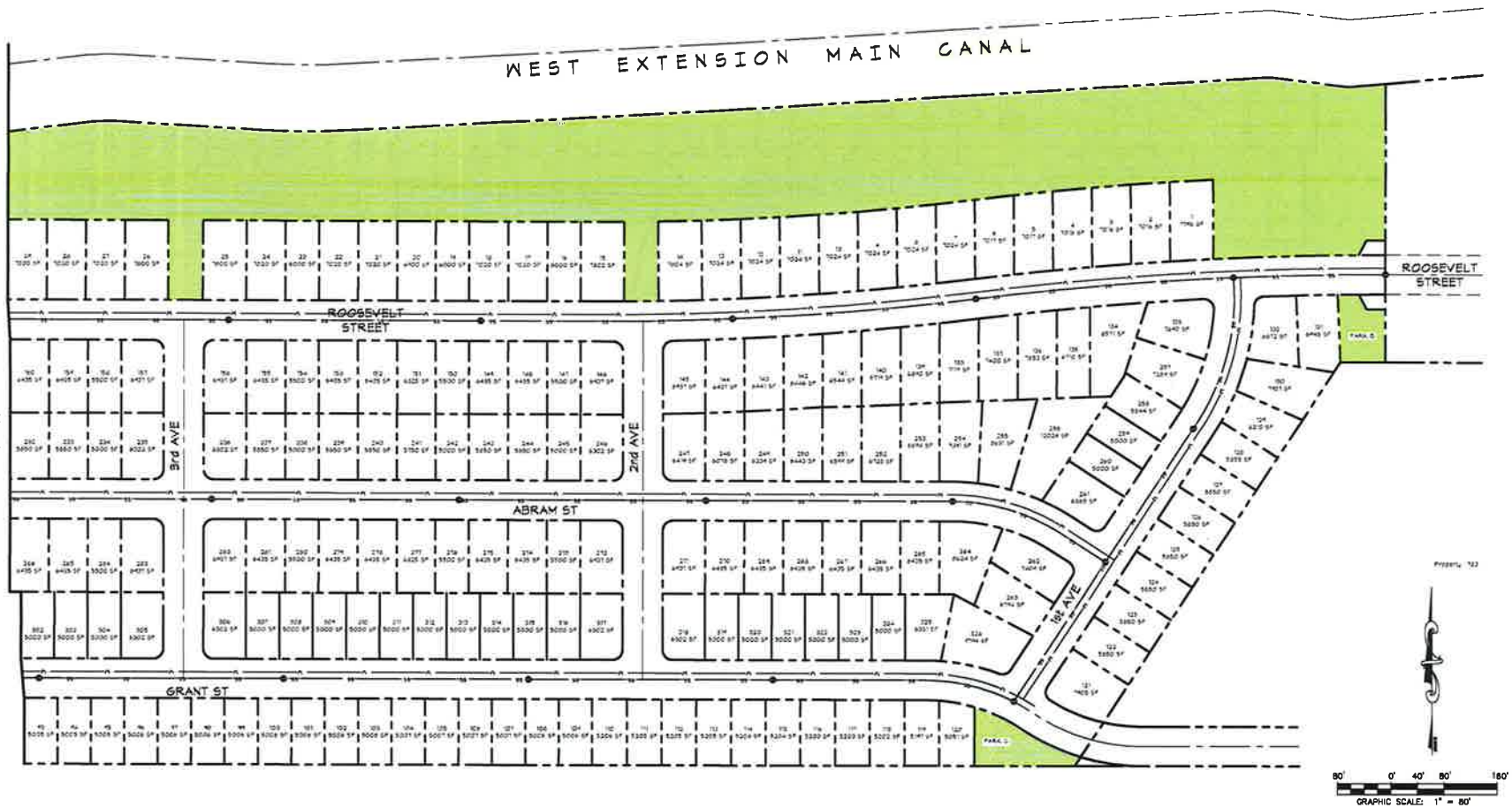
DESIGNED BY: M.J.F.
DRAWN BY: S.L.M.
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
PRELIMINARY LAYOUT

No	REVISIONS

SHEET: 4

McCLANNAHAN SUMMIT
UMATILLA, OREGON



M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

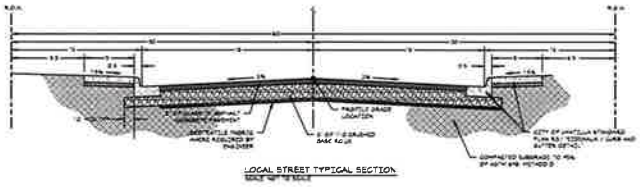
DESIGNED BY: HJF
DRAWN BY: SLM
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
SEWER & WATER LAYOUT

REVISIONS

SHEET: 5

McCLANNAHAN SUMMIT
UMATILLA, OREGON



M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

DESIGNED BY: M.J.F
DRAWN BY: S.L.M
SCALE: AS NOTED
DATE: 5/18/2021

McCLANNAHAN SUMMIT
SEWER & WATER LAYOUT

NO. REVISIONS

SHEET: 6

M & L ENGINEERING, LLC
62958 NE LAYTON AVE, STE. 5 BEND, OREGON 97701
• 541-699-4340 •

DESIGNED BY: M.F
DRAWN BY: S.H
SCALE: AS NOTED
DATE: 5/18/2021

MCCLANNAHAN SUMMIT
STANDARD DETAILS

No	REVISIONS:

SHEET: 1

Umatilla Rural Fire Protection District

921 6th Street · PO Box 456 · Umatilla, OR 97882
(541) 922 - 3718 · Fax (541) 922 - 3914

May 19, 2021

Brandon,

Thank you for meeting with us today.

Upon review of the preliminary plat for this development (approximately 328 dwelling units) there would be a requirement of two separate and approved fire apparatus access roads for developments that exceed 30 single family dwelling units (2019 Oregon Fire Code (OFC) Section D-107.1). These required access points should also meet the requirement of OFC Section D-107.2 for separation distance. We may be able to trade off an access road for an improved city street accessing this development.

Sincerely,

Steven R. Potts

Chief Steven R. Potts

lancaster mobley

McClannahan Summit

Transportation Impact Study

Umatilla, Oregon

Date:
March 11, 2021

Prepared for:
Luke Pickerill
MonteVista Homes

Prepared by:
Nick Mesler, EIT
Todd Mobley, PE

RENEWS: 12/31/2022

Table of Figures

Table of Tables

Executive Summary

1. The McClannahan Summit subdivision is located on the parcel 5N2818-00-00903 & 00904 in the far western corner of the City of Umatilla. The project encompasses 81.17 acres and is bordered by undeveloped property to the north, west, and south and agricultural farmland to the south.
2. A total of 350 single-family homes are proposed for the site. This includes a change in zoning from the current R-1 Single-Family Residential designation to R-2 Medium Density Residential.
3. At build-out, the subdivision is projected to generate 259 new morning peak hour trips, 347 new evening peak hour trips, and 3,304 new weekday trips.
4. The need for the following intersection deficiencies have been identified:
    a. A northbound left-turn lane on Powerline Road at Tyler Avenue will be warranted by the 2040 horizon year either with or without the proposed subdivision.
    b. Powerline Road at US 730 exceed the applicable v/c ratio standard of 0.85 in the 2040 horizon year either with or without the proposed subdivision.
5. A traffic signal at the intersection of Powerline Road at US 730 was previously identified in the City of Umatilla's Capital Improvement Plan (CIP). However, both the CIP and the City's Transportation System Plan (TSP) have expired. The City is currently working to update and adopt new versions of both plans.
6. A total of six mitigation options were identified and analyzed that would offset the traffic impacts of the proposed subdivision, but it is beyond the scope of this project to conduct a full and complete investigation into the preferred ultimate configuration of the intersection.
7. It is recommended that the intersection be examined in detail as part of the upcoming TSP update. This is an appropriate venue for the necessary analysis, agency coordination, and public outreach necessary to develop and vet a long-range plan for the intersection. As part of that process, the CIP can be updated to include the preferred intersection improvement, and the City of Umatilla's System Development Charges (SDCs) can also be updated to reflect the necessary funding for this and other projects in the City.
8. The McClannahan Summit subdivision will pay a substantial amount of SDCs fees as homes are constructed within the site. These SDC fees will help to pay a significant portion of eventual mitigation at the intersection of Powerline Road and US 730. It should be noted that the intersection currently operates acceptably, and congestion is not expected in the near term, but as this site and other surrounding subdivisions build out. These projects will all create a substantial SDC revenue stream for the City of Umatilla.

    Additional homes that will be constructed on the site as a result of the proposed change in zoning from R-1 to R-2 will also be subject to payment of SDCs. In this manner, impacts associated with the increase in density will be mitigated through payment of these fees. It should also be noted that a significant portion of the 81-acre site is not buildable. Under the R-1 designation, over 400 homes would be allowed based on simple density calculations over 81 acres. Even with the change to R-2, only 350 homes are proposed.

Project Description

Introduction

This report describes and evaluates the transportation impacts associated with the proposed development of the McClannahan Summit residential site in Umatilla, Oregon. The site is currently zoned as R-1 Single-Family Residential and is proposed to be rezoned as R-2 Medium Density Residential. This TIS was conducted in support of this project to assess the satisfaction of the City of Umatilla's Zoning Ordinance Sections 10-4B-7-(B)(1) and 10-11-10(C).

The rezone from R-1 Single-Family Residential to R-2 Medium Density Residential is anticipated to be able to construct a maximum of 350 single-family dwelling units on approximately 81.17 total acres.

Based on correspondence with the City of Umatilla, a safety and capacity/level of service analysis was conducted at the following intersections:

1. Madison Street & Powerline Road
2. McFarland Avenue & Madison Street
3. Tyler Avenue & Powerline Road
4. Powerline Road & US 730
5. Powerline Road & I-82 SB Ramps
6. Powerline Road & I-82 NB Ramps

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendix to this report.

Location Description

The project site is located on the parcel 5N2818-00-00903 & 00904 in the far western corner of the City of Umatilla. The project encompasses 81.17 acres and is bordered by undeveloped property to the north, west, and south and agricultural farmland to the south. The north, west, and south is unincorporated Umatilla County. The site is currently zoned as R-1 Single-Family Residential and is proposed to be rezoned as R-2 Medium Density Residential.

The project intends to construct the western extension of Roosevelt Street to access the site. Several internal roadways are planned within the subdivision. Roosevelt Street functions as a local roadway as identified in City of Umatilla *Roadway Network and Functional Classification System.* Access to the greater transportation network is provided via local street McFarland Avenue and Van Buren Drive before connecting to the local street Tyler Avenue or the Collector roadway Madison Street and then Powerline Road.

Vicinity Roadways

The proposed development is expected to impact six (6) vicinity roadways. Table 1 provides a description of each vicinity roadway.

Table 1: Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
Madison Street	City of Umatilla	Neighborhood Collector	25 mph (prima facie)	None	Parallel	None
McFarland Avenue	City of Umatilla	Local	25 mph (prima facie)	None	Parallel	None
Van Buren Drive	City of Umatilla	Local	25 mph (prima facie)	Both Sides	Parallel	None
Tyler Avenue	City of Umatilla	Local	25 mph (prima facie)	Both Sides	Parallel	None
Powerline Road	Umatilla County	Minor Arterial	35-55 mph	None	Prohibited	None
US 730	ODOT	Major Arterial	25-55 mph	None	Prohibited	None

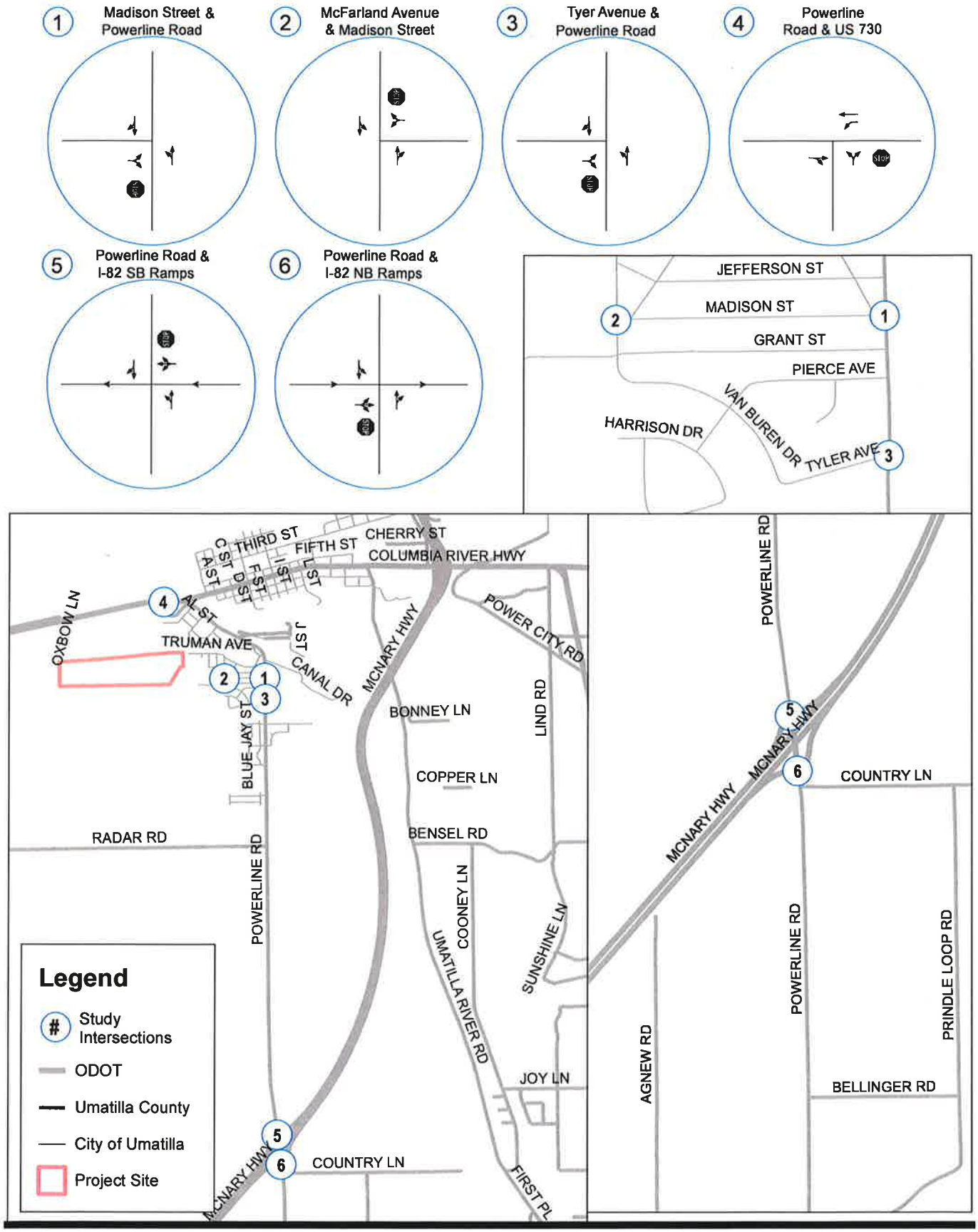
Study Intersections

The proposed development is expected to impact six (6) existing vicinity intersections of significance. Table 2 below provides a summarized description of each study intersection.

Table 2: Vicinity Intersection Descriptions

ID	Intersection	Approaches	Traffic Control	Phasing/Stopped Approaches
1	Madison Street & Powerline Road	Three	Side-Street Stop-Controlled	WB Stop Controlled
2	McFarland Avenue & Madison Street	Three	Side-Street Stop-Controlled	EB Stop Controlled
3	Tyler Avenue & Powerline Road	Three	Side-Street Stop-Controlled	WB Stop Controlled
4	Powerline Road & US 730	Three	Side-Street Stop-Controlled	NB Stop Controlled
5	Powerline Road & I-82 SB Ramps	Three	Side-Street Stop-Controlled	WB Stop Controlled
6	Powerline Road & I-82 NB Ramps	Three	Side-Street Stop-Controlled	EB Stop Controlled

A vicinity map displaying the project site, vicinity streets, and the study intersections with their associated lane configurations and control types is shown in Figure 1.



lancaster mobley

Vicinity Map

NOT TO SCALE

Figure 1
McClannahan Summit TIS
3/11/2021

Site Trips

Trip Generation

The proposed rezoning will allow for the potential construction of 350 single-family homes. For the purpose of the site development analysis, no trip credit is given for the existing R-1 zoning. To estimate the number of trips that are projected to be generated by the proposed development, trip rates from the *Trip Generation Manual*[1] were used. Specifically, data from land use code 210, Single Family Detached Residential, was used to estimate the proposed development's trip generation based on the number of dwelling units. This land use code is consistent with the character of the proposed development and the allowable use under R-2 zoning.

The trip generation calculations show that the proposed development is projected to generate 259 new morning peak hour trips, 347 new evening peak hour trips, and 3,304 new average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included as an attachment to this memorandum.

Table 3: Trip Generation Summary

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			Weekday
			In	Out	Total	In	Out	Total	Total
Single-Family Detached Residential	210	350 DU	65	194	259	219	128	347	3,304

As shown, trip generation is highest during the PM peak hour. Consistent with the Ballard TIA (prepared by PBS Engineering, April 10, 2020) and the Ambiance Homes TIA (prepared by Whipple Consulting Engineers, Inc., January 3, 2020), the PM peak hour is chosen as the analysis peak hour.

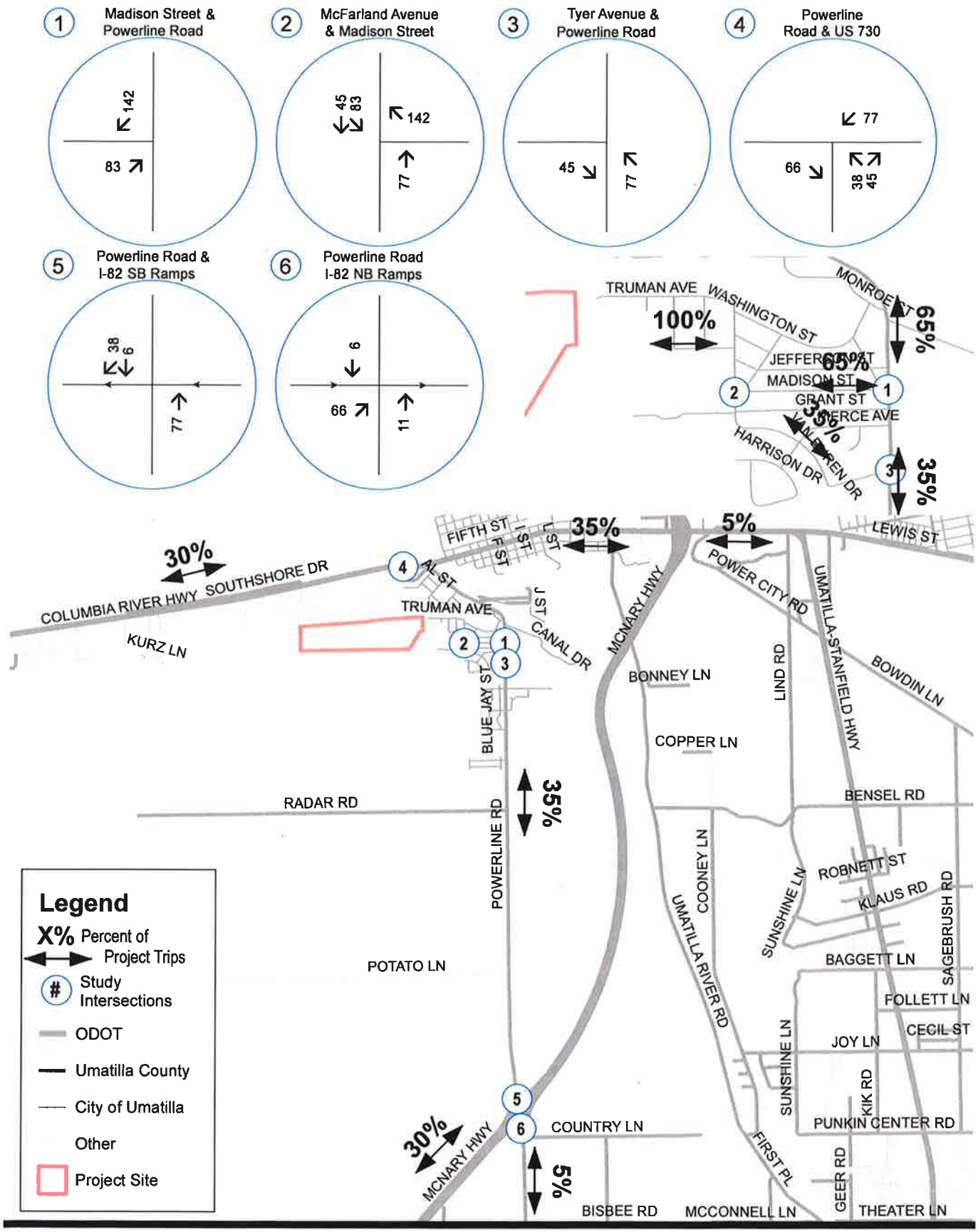
Trip Distribution

The project trip distribution was developed based on the geographical location of the project, US residential/employment census data (https://onthemap.ces.census.gov/), preferred route choice, and the existing roadway network facilities. The following trip distribution is projected:

- 35 percent of site trips are expected to travel to and from the south along Powerline Road via Van Buren Drive and Tyler Avenue;
- 30 percent of site trips are expected to travel to and from the west along US-730 via Madison Avenue and Powerline Road; and
- 35 percent of site trips are expected to travel to and from the east along US-730 via Madison Avenue and Powerline Road;
    - 5 percent of the total site trips are expected to utilize this route to travel to and from the City center.

The regional trip distribution and traffic assignment for site trips generated by the proposed development are shown in Figure 2.

1 Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.



lancaster mobley

TRAFFIC VOLUMES
Trip Distribution & Assignment
PM Peak Hour

NOT TO SCALE

Figure 2
McClannahan Summit TIS
3/11/2021

Traffic Volumes

This section describes the study intersection peak hour traffic volumes under existing conditions (year 2021), the Planning Horizon Year 2040 background volumes, and the Planning Horizon Year 2040 buildout volumes.

Existing Conditions

Since this study is being conducted during the COVID-19 viral pandemic, which has become a public health concern throughout the State of Oregon, collection of current traffic counts is not feasible at this time. Due to the pandemic, traffic volumes have been significantly depressed statewide since March 2020. In order to reflect normal travel conditions, historical traffic count data at the intersections of Pine Tree Avenue & Powerline Road found in the Ballard TIA (prepared by PBS Engineering, April 10, 2020) were obtained. Upon reviewing the traffic counts, the 2020 data was found to be higher than the 2021 COVID-era counts by 26.8%. Therefore, the historical 2020 traffic counts were utilized for analysis in lieu of the 2021 counts. All traffic counts were conducted from 4:00 to 6:00 PM. Data was used from each intersections' respective evening peak hour. Intersections without 2020 traffic counts were collected in 2021 and adjusted by a 1.268 factor to account for pre-COVID conditions.

To adjust for year 2021 baseline conditions, a conservative, compounding annual growth rate of 1.50% was applied to each intersection movement. This rate was identified by City of Umatilla planning staff as an appropriate growth rate. Figure 3 displays the baseline existing conditions traffic volumes for the study intersections during the evening peak hour. The 2020 and 2021 count data is provided as an appendix to this report. Note that Tyler Avenue & Powerline Road traffic volumes were estimated from the Madison Street & Powerline Road traffic volumes, which is considered to be a conservative analysis as Tyler Avenue is a local street whereas Madison Street is designated as a Collector roadway.

Background Conditions

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. Consistent with the growth factors identified in the development of the Existing Conditions baseline volume, an annual compounding 1.50% growth rate was applied to the 2021 Existing Conditons baseline volumes for Planning Horizon Year 2040 conditions.

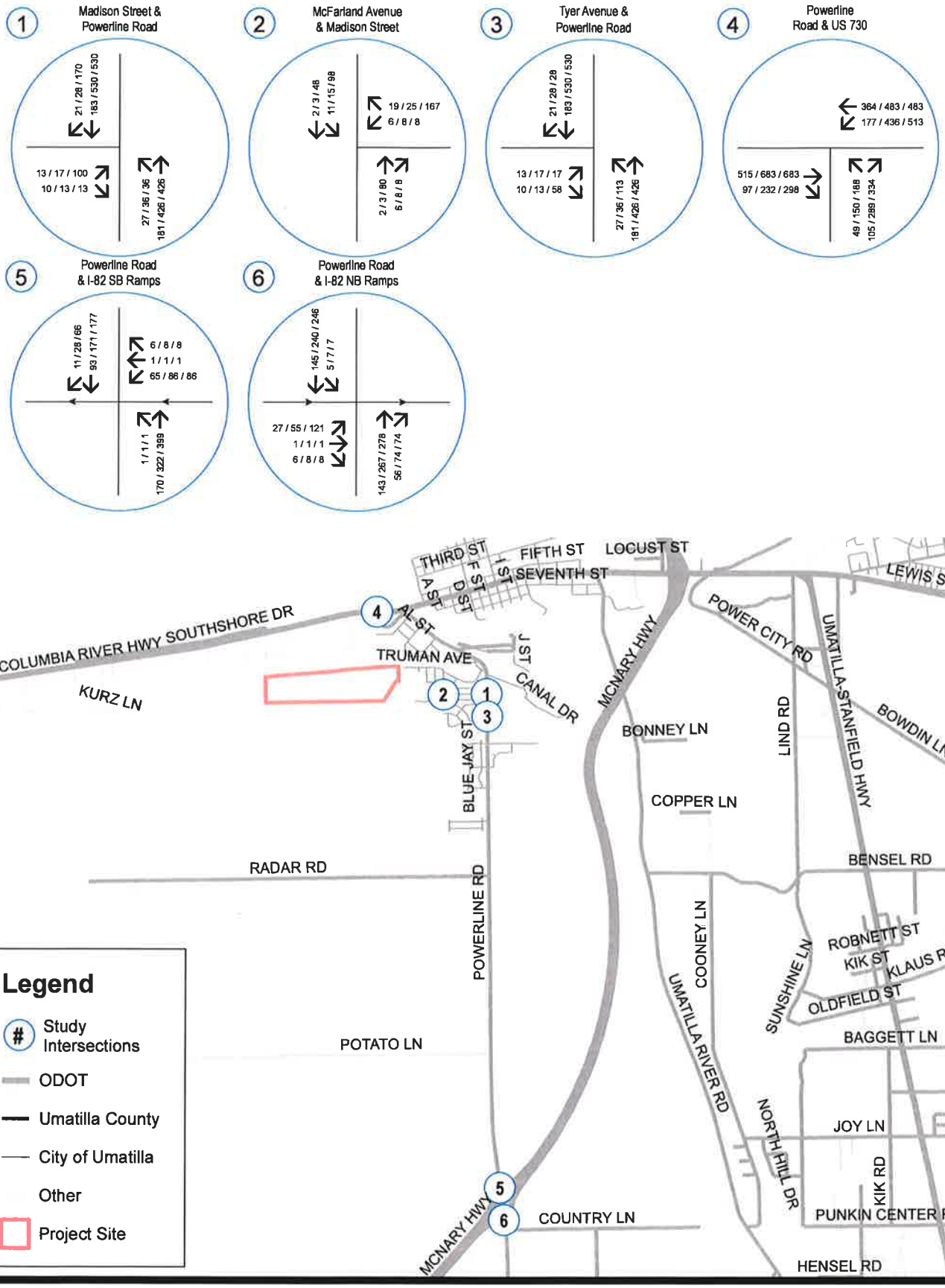
Additional traffic volume from nearby developments is included in the Planning Horizon Year 2040 conditions. Traffic volumes were derived from the *Ambiance Homes TIA* (prepared by Whipple Consulting Engineers) and the *Ballard TIA* (prepared by PBS Engineering).

Figure 4 displays the Planning Horizon Year 2040 background volumes during the evening peak hour.

Buildout Conditions

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the Planning Horizon Year 2040 background volumes to obtain the expected Year 2040 buildout conditions.

Figure 5 displays the Planning Horizon Year 2040 background volumes with the additional site trips projected to be generated by the proposed development.



lancaster mobley

TRAFFIC VOLUMES

PM Peak Hour

NOT TO SCALE

Figure 3
McClannahan Summit TIS
3/11/2021

Safety Analysis

Crash History Review

Using data obtained from ODOT's Crash Analysis and Reporting Unit, a review was performed of the most recent five years of available crash data at the study intersections (January 2014 through December 2018). The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for each intersection. Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated under the common assumption that traffic counted during the evening peak hour represents approximately ten percent of annual average daily traffic (AADT) at each intersection. Crash rates in excess of 1.00 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

With regard to crash severity, ODOT classifies crashes in the following categories:

1. Property Damage Only (*PDO*);
2. Possible Injury – Complaint of Pain (*Injury C*);
3. Non-Incapacitating Injury (*Injury B*);
4. Incapacitating Injury – Bleeding, Broken Bones (*Injury A*); and
5. Fatality or Fatal Injury.

The study intersections adhere to the crash analysis methodologies within ODOT's APM. According to *Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control* of the APM, intersections which experience crash rates in excess of their respective 90th percentile crash rates should be "flagged for further analysis". Crash rates in excess of 90th percentile crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation. The 90th percentile rates for unsignalized, three-leg intersections in urban areas is 0.293 CMEV.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the study intersections. Detailed crash reports are included in the technical appendix to this report.

Table 4: Crash Type Summary

Intersection	Crash Type		Total Crashes
	Non-Collision	Turning	
3. Powerline Road & US 730	0	1	1
4. Powerline Road & I-82 SB Ramps	1	0	1
5. Powerline Road & I-82 NB Ramps	1	0	1

Table 5: Crash Severity and Rate Summary

Intersection	Crash Severity					Total Crashes	PHEV	Crash Rate
	PDO	C	B	A	Fatal			
3. Powerline Road & US 730	1	0	0	0	0	1	1,298	0.04
4. Powerline Road & I-82 SB Ramps	0	0	1	0	0	1	347	0.16
5. Powerline Road & I-82 NB Ramps	1	0	0	0	0	1	383	0.14

BOLDED text indicates crash rate exceeding ODOT 90th percentile crash rate.

Based on a review of the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no additional safety mitigation is recommended per the crash data analysis.

Warrant Analysis

Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for all unsignalized study intersections. Methodologies were based on the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration in 2009. Warrant 1, Eight-Hour Vehicular Volumes, was evaluated based on the common assumption that traffic counted during the evening peak hour represents 10 percent of the average daily traffic (ADT) and that the 8th highest hour is 5.65 percent of the daily volume. Detailed analysis worksheets can be found in an appendix to this report.

The preliminary traffic signal analysis determined that signal warrants are not projected to be met at any of the applicable study intersections under year Buildout Year 2040 Conditions, with the exception of the following intersection:

- Powerline Road & US 730

This intersection meets the traffic signal warrant under existing conditions and Buildout Year 2040 Conditions, with and without the addition of project traffic. This intersection is identified in the City of Umatilla *Capital Improvement Plan (2016-2021)* (CIP) which intends to electrify and install a traffic signal.

Left-Turn Lane Warrants

Left-turn lane warrants were examined for the site access intersection under year 2040 buildout conditions. A left-turn refuge is primarily a safety consideration for the major-street approach, removing left-turning vehicles from the through traffic stream. Warrants for an eastbound left-turn lane at the site access intersection were based on the methodology outlined in the National Cooperative Highway Research Program (NCHRP) Report Number 457[2]. This methodology evaluates the need for a left-turn lane based on the number of left-turning vehicles, the number of travel lanes, the number of advancing and opposing vehicles, and the roadway travel speed. Detailed warrant analyses for each study intersection are included in the technical appendix to this report.

Left-turn lane warrants are not projected to be met at any of the study area intersections under full buildout of the project site during the PM Peak Hour, with the exception of the following intersections:

- Tyler Avenue & Powerline Road (northbound approach)
- Madison Street & Powerline Road (northbound approach)

The northbound approach at both of these intersections meet the left-turn lane warrant under Buildout Year 2040 Conditions, with and without the addition of project traffic.

However, it should be noted that the proposed project does not anticipate adding any project related trips to the intersection of Madison Street & Powerline Road northbound left-turn movement; therefore, the project is not required to implement a northbound left-turn lane as it does not directly contribute to meeting this warrant.

2 Bonneson, James A. and Michael D. Fontaine, *NCHRP Report 457: An Engineering Study Guide for Evaluating Intersection Improvements*, Transportation Research Board, 2001.

Operational Analysis

Capacity and delay analyses were conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* [3] (HCM). Calculations for the intersections are performed using Synchro 10.3.122.0 software. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Performance Standards

The operating standards adopted by the City of Umatilla, Umatilla County, and ODOT are summarized below.

Umatilla County

Powerline Road is under the jurisdiction of Umatilla County. The County has defined operating standards for stop controlled intersections as follows:

- Level of service "A" through "D" are considered acceptable;
- Level of service "E" is generally considered "marginally acceptable"; and
- Level of service "F" is unacceptable.

City of Umatilla

Madison Street and McFarland Street are under the jurisdiction of the City of Umatilla. The City has defined operating standards for stop controlled intersections as follows:

- Level of service D and v/c ratio less than 0.99

Oregon Department of Transportation

In accordance with the ODOT Oregon Highway Plan (1999), freeway ramps and intersections on a regional highway freight route outside an MPO and STA with a roadway speed of 40 mph require an intersection v/c ratio not to exceed 0.85.

Analysis Parameters

The operational analysis implemented several system-wide analysis parameters to maintain consistency with the ODOT Analysis Procedures Manual. The notable parameters include the following:

- Peak Hour Factor (PHF)
  - Calculated for Existing Conditions
  - 0.95 PHF for Horizon Year 2040 Conditions (consistent with ODOT APM guidance)
- Saturation Flow Rate = 1700 passenger cars/hour of green/lane (pcphgl) (per ODOT APM guidance)

3 Transportation Research Board, *Highway Capacity Manual*, 6th Edition, 2016.

Delay & Capacity Analysis

The v/c, delay, and LOS results of the capacity analysis are shown in Table 6 below for evening peak hour. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

Table 6: Intersection Capacity Analysis Summary

Intersection	Jurisdiction	Scenario	PM Peak Hour		
			V/C	LOS	Delay (s)
1. Madison Street & Powerline Road	Umatilla County	Existing Conditions	0.04	B	11.0
		2040 Background Conditions	0.11	C	18.4
		2040 Buildout Conditions	0.55	E	40.0
2. McFarland Avenue & Madison Street	City of Umatilla	Existing Conditions	0.04	A	8.6
		2040 Background Conditions	0.03	A	8.5
		2040 Buildout Conditions	0.19	A	9.7
3. Tyler Avenue & Powerline Road	Umatilla County	Existing Conditions	0.04	B	11.0
		2040 Background Conditions	0.11	C	18.4
		2040 Buildout Conditions	0.23	C	18.5
4. Powerline Road & US 730	ODOT	Existing Conditions	0.40	C	18.6
		2040 Background Conditions	**3.30**	F	>300
		2040 Buildout Conditions	**7.63**	F	>300
5. Powerline Road & I-82 SB Ramps	ODOT	Existing Conditions	0.19	B	12.4
		2040 Background Conditions	0.20	B	13.6
		2040 Buildout Conditions	0.22	C	15.3
6. Powerline Road & I-82 NB Ramps	ODOT	Existing Conditions	0.09	B	12.0
		2040 Background Conditions	0.14	B	13.6
		2040 Buildout Conditions	0.30	C	16.0

BOLDED text indicates intersection operation above jurisdictional standards.

Based on the results of the operational and capacity analysis, all study intersections are currently operating acceptably per City of Umatilla, Umatilla County, and ODOT standards and are projected to continue operating acceptably in Background Year 2040, both with and without the addition of project traffic, with the following exceptions:

3. Powerline Road & US 730 – **v/c ratio exceeds 0.85 during PM Peak Hour under all 2040 scenarios**

Intersection Mitigation Analysis

As noted in the previous section, and consistent with the findings and recommendation of the City of Umatilla TSP, there is one study area intersection that has existing operational deficincies that are anticipated to continue in the year 2040 buildout year, with and without the addition of project traffic.

- The intersection of Powerline Road & US 730 was previously identified in the expired City of Umatilla *Capital Improvement Plan (2016-2021)* to electrify and install a traffic signal or construct a roundabout.

These improvement scenarios were analyzed under 2040 Buildout conditions, with several other potential interim improvement options. The mitigation scenarios analyzed include:

- Actuated uncoordinated signal timing with existing lane geometry;
- A traditional single-lane roundabout with existing approach geometry;
- A roundabout with an additional westbound bypass lane;
- Restriping the western leg striped median to a receiving lane for a northbound two-stage left-turn;
- Widening and striping the northbound approach to include dedicated left and right turn lanes
- Combined two-stage left-turn restriping and northbound approach widening.

Each of these improvement scenarios will reduce intersection v/c. Table 7 summarizes the v/c ratio, level of service, and delay for the background, buildout, and the several mitigated scenario conditions:

Table 7: Intersection Mitigation Analysis

Intersection	Scenario	PM Peak Hour		
		V/C	LOS	Delay (s)
3. Powerline Road & US 730	2040 Background Conditions	**3.30**	F	>300
	2040 Buildout Conditions	**7.63**	F	>300
	2040 Mitigation: Actuated Uncoordinated Signal	**1.50**	F	224.9
	2040 Mitigation: Traditional Single-Lane Roundabout	**1.13**	F	105.1
	2040 Mitigation: Roundabout with Westbound Bypass Lane	**1.40**	F	89.4
	2040 Mitigation: Two-Stage Northbound Left-Turn	**7.43**	F	>300
	2040 Mitigation: Widen Northbound Approach	**1.38**	F	>300
	2040 Mitigation: Widen NB Approach & Two-Stage NB Left	**1.35**	F	>300

BOLDED text indicates intersection operation above jurisdictional standards.

The identified mitigation options will improve intersection operations to better than 2040 Background Conditions, with the exception of a two-stage northbound left-turn restriping. As detailed in the analysis, the intersection is projected to operate far outside of the operational v/c standard, even without the addition of the project traffic. Thus, it is recommended that these improvement options be explored further by the City of Umatilla and implemented.

The proposed project will pay the proportional site System Development Charges to support the City's overall infrastructure needs. This intersection will be addressed by the SDC fee program. It should also be noted that the project is planning to construct the Neighborhood Collector extension of Madison Street, in support of the City's TSP.

Proportionate Share Mitigation Assessment

Proportionate share fees were evaluated at the intersection of Powerline Road & US 730. Table 8 below provides the methodology used to calculate proportionate share fees based on the proposed development's trip generation impacts.

Table 8: Proportional Share Methology Summary

Intersection	Powerline Road & US 730
Peak Hour	Weekday PM
Scenario when Mitigation is Triggered	No Build (2040)
Existing Total Entering Volume, TEV (X)	1,307
2040 No Build (Background, Y)	2,273
Project Trips (PT)	226
Background Growth (Z=Y-X)	966
Proportional Share (%, PT/(PT+Z))	18.96%

Transportation Planning Rule Analysis

The subject site is proposed for a zone change from *Single-Family Residential (R-1)* to *Medium-Family Residential (R-2)*. Zone changes in Oregon are subject to the state's Transportation Planning Rule (TPR), and accordingly this report addresses the proposal's compliance with the TPR.

The factors determining the development potential under the proposed zoning, several factors including minimum lot size, topography, and net buildable land. The reasonable worst-case scenario number of tax lots identified to be feasible under the proposed zoning is 350 dwelling units. This estimate takes into account feasibility of construction, public right-of-way dedication, stormwater considerations, and open space requirements.

The factors determining the development potential under existing zoning are the minimum lot area requirement. In accordance with the City of Umatilla Zoning Ordinance Section 10-3A-4, the minimum lot area for the development is 8,000 square feet. For 81.17 total site acres, this equates to a maximum development potential of 241 total single-family lots. Similarly, this estimate takes into account feasibility of construction, public right-of-way dedication, stormwater considerations, and open space requirements identified in the proposed zoning worst-case scenario. Thus, this yields a one-to-one comparison between the existing and proposed zoning.

Trip Comparison

In order to determine the change in trip generation potential as a result of the site zone change, a comparative trip generation analysis was conducted and is presented in Table 9. As shown, the maximum development potential change is projected to generate 81 new morning peak hour trips, 108 new evening peak hour trips, and 1,028 new average weekday trips.

Table 9: Trip Generation Summary – Proposed Zoning

Land Use	ITE Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday
			In	Out	Total	In	Out	Total	Total
Single-Family Detached Residential (Existing)	210	241 DU	45	133	178	151	88	239	2,276
Medium Density Detached Residential (Proposed)	210	350 DU	65	194	259	219	128	347	3,304
		Net Change	20	61	81	68	40	108	1,028

Transportation Planning Rule Adherence

Zone changes in the State of Oregon must adhere to the Transportation Planning Rule (TPR), which aims to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable section of the TPR is quoted directly in italics below, with a response directly following.

660-012-0060

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Regarding subsections (a) and (b), the City of Umatilla TSP identifies a planned future western roadway extension of Grant Street near the southern boundary of the City Limits. The future roadway extension is classified as a Neighborhood Collector. The project proposes to construct the western extension of Roosevelt Street into the project site. The proposed roadway extension will be built to Neighborhood Collector standards. Although the alignment of the identified roadway extension is changed under the development proposal, the function and purpose are consistent with the City's TSP, while providing additional connectivity options to nearby properties and improved access. Additionally, the proposed street plan provides a greater extent of dedicated right-of-way throughout the site, whereas the TSP was limited to the eastern end of the property.

Regarding subsection (c), the adopted TSP planning horizon year expired in 2017. In lieu of the TSP horizon year analysis, an assumed buildout of 2040 is appropriate for a planning period. The reasonable worst-case scenario development potential under the proposed R-2 zoning of the subject site would be the construction of 350 single-family residential homes. This is 109 more single-family homes than the existing R-1 zoning. This is anticipated to increase trip generation of the site, and therefore require the payment of more System Development Charges (SDCs) than the existing zoning could allow. The McClannahan Summit subdivision will pay a substantial amount of TSDC fees as homes are constructed within the site. These SDC fees will help to pay a significant portion of eventual mitigation at the intersection of Powerline Road and US 730. It should be noted that the intersection currently operates acceptably, and congestion is not expected in the near term, but as this site and other surrounding subdivisions build out. These projects will all create a substantial SDC revenue stream for the City of Umatilla.

Summary

While the proposed zoning would generate more traffic than the existing zoning, the development proposal would generate less than the existing buildout potential of the site. The proposed project anticipates constructing a Neighborhood Collector in support of the identified future connection in the City of Umatilla Transportation System Plan. Although the intersection of Powerline Road & US 730 is anticipated to operate above jurisdictional standards, this occurrence is not a result of the zone change and would occur at the buildout potential of the existing zoning, thereby meeting the criteria of the TPR. The project zone change will pay additional SDC fees than the existing zoning could support, thereby providing additional funding for intersection mitigation.

Conclusions

Based on a review of the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no additional safety mitigation is recommended per the crash data analysis.

The need for the following intersection deficiencies have been identified:

a. A northbound left-turn lane on Powerline Road at Tyler Avenue will be warranted by the 2040 horizon year either with or without the proposed subdivision.

b. Powerline Road at US 730 exceed the applicable v/c ratio standard of 0.85 in the 2040 horizon year either with or without the proposed subdivision.

A traffic signal at the intersection of Powerline Road at US 730 was previously identified in the City of Umatilla's Capital Improvement Plan (CIP). However, both the CIP and the City's Transportation System Plan (TSP) have expired. The City is currently working to update and adopt new versions of both plans.

A total of six mitigation options were identified and analyzed that would offset the traffic impacts of the proposed subdivision, but it is beyond the scope of this project to conduct a full and complete investigation into the preferred ultimate configuration of the intersection.

It is recommended that the intersection be examined in detail as part of the upcoming TSP update. This is an appropriate venue for the necessary analysis, agency coordination, and public outreach necessary to develop and vet a long-range plan for the intersection. As part of that process, the CIP can be updated to include the preferred intersection improvement, and the City of Umatilla's System Development Charges (SDCs) can also be updated to reflect the necessary funding for this and other projects in the City.

The McClannahan Summit subdivision will pay a substantial amount of SDCs fees as homes are constructed within the site. These SDC fees will help to pay a significant portion of eventual mitigation at the intersection of Powerline Road and US 730. It should be noted that the intersection currently operates acceptably, and congestion is not expected in the near term, but as this site and other surrounding subdivisions build out. These projects will all create a substantial SDC revenue stream for the City of Umatilla.

Additional homes that will be constructed on the site as a result of the proposed change in zoning from R-1 to R-2 will also be subject to payment of SDCs. In this manner, impacts associated with the increase in density will be mitigated through payment of these fees. It should also be noted that a significant portion of the 81-acre site is not buildable. Under the R-1 designation, over 400 homes would be allowed based on simple density calculations over 81 acres. Even with the change to R-2, only 350 homes are proposed.

Appendix

Appendix A

Trip Generation Worksheets

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Setting/Location General Urban/Suburban
Variable: Dwelling Units
Variable Value: 350

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**65**	**194**	**259**

PM PEAK HOUR

Trip Rate: 0.99

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**219**	**128**	**347**

WEEKDAY

Trip Rate: 9.44

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,652**	**1,652**	**3,304**

SATURDAY

Trip Rate: 9.54

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,669**	**1,669**	**3,338**

Source: Trip Generation Manual, Tenth Edition

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Setting/Location General Urban/Suburban
Variable: Dwelling Units
Variable Value: 241

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**45**	**133**	**178**

PM PEAK HOUR

Trip Rate: 0.99

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**151**	**88**	**239**

WEEKDAY

Trip Rate: 9.44

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,138**	**1,138**	**2,276**

SATURDAY

Trip Rate: 9.54

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,150**	**1,150**	**2,300**

Source: Trip Generation Manual, Tenth Edition

TRIP GENERATION CALCULATIONS

Land Use: Multifamily Housing (Low-Rise)
Land Use Code: 220
Setting/Location General Urban/Suburban
Variable: Dwelling Units
Variable Value: 1010

AM PEAK HOUR

Trip Rate: 0.46

	Enter	Exit	Total
Directional Distribution	23%	77%	
Trip Ends	**107**	**358**	**465**

PM PEAK HOUR

Trip Rate: 0.56

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**357**	**209**	**566**

WEEKDAY

Trip Rate: 7.32

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**3,697**	**3,697**	**7,394**

SATURDAY

Trip Rate: 8.14

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**4,111**	**4,111**	**8,222**

Source: TRIP GENERATION, Tenth Edition

Appendix B

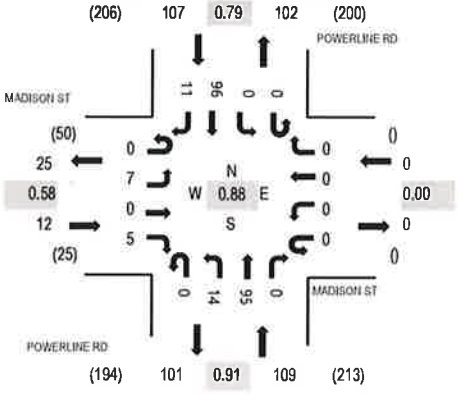
Traffic Counts

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

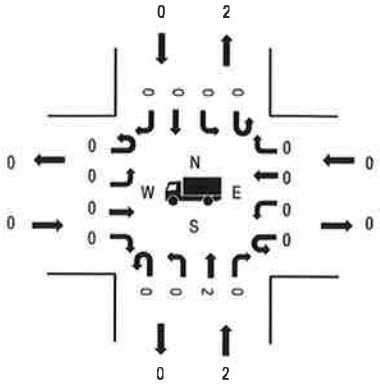
Location: 1 POWERLINE RD & MADISON ST PM
Date: Wednesday, January 13, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour

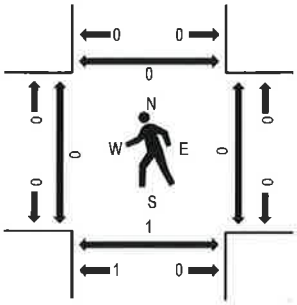
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.58
WB	0.0%	0.00
NB	1.8%	0.91
SB	0.0%	0.79
All	0.9%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	MADISON ST Eastbound				MADISON ST Westbound				POWERLINE RD Northbound				POWERLINE RD Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	1	0	0	0	0	0	0	0	2	12	0	0	0	12	2	29	228
4:05 PM	0	0	0	0	0	0	0	0	0	2	4	0	0	0	6	2	14	217
4:10 PM	0	0	0	0	0	0	0	0	0	1	9	0	0	0	10	2	22	223
4:15 PM	0	2	0	1	0	0	0	0	0	1	10	0	0	0	6	2	22	214
4:20 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	9	1	16	215
4:25 PM	0	1	0	0	0	0	0	0	0	0	13	0	0	0	9	0	23	221
4:30 PM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	6	1	11	213
4:35 PM	0	0	0	2	0	0	0	0	0	1	9	0	0	0	13	0	25	220
4:40 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	9	0	15	214
4:45 PM	0	0	0	1	0	0	0	0	0	4	5	0	0	0	5	1	16	209
4:50 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	4	0	13	216
4:55 PM	0	1	0	1	0	0	0	0	0	2	11	0	0	0	7	0	22	221
5:00 PM	0	0	0	0	0	0	0	0	0	2	6	0	0	0	8	2	18	216
5:05 PM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	11	1	20	
5:10 PM	0	0	0	1	0	0	0	0	0	2	6	0	0	0	4	0	13	
5:15 PM	0	0	0	1	0	0	0	0	0	2	7	0	0	0	12	1	23	
5:20 PM	0	0	0	0	0	0	0	0	0	1	10	0	0	0	8	3	22	
5:25 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	6	0	15	
5:30 PM	0	1	0	1	0	0	0	0	0	0	7	0	0	0	8	1	18	
5:35 PM	0	1	0	1	0	0	0	0	0	2	8	0	0	0	6	1	19	
5:40 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	10	
5:45 PM	0	1	0	1	0	0	0	0	0	0	11	0	0	0	8	2	23	
5:50 PM	0	1	0	2	0	0	0	0	0	1	7	0	0	0	6	1	18	
5:55 PM	0	1	0	0	0	0	0	0	0	2	7	0	0	0	6	1	17	
Count Total	0	13	0	12	0	0	0	0	0	26	187	0	0	0	182	24	444	
Peak Hour	0	7	0	5	0	0	0	0	0	14	95	0	0	0	96	11	228	

Location: 1 POWERLINE RD & MADISON ST PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	1	0	0	1
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	1	0	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	2	0	1	3	Count Total	0	0	0	0	0	Count Total	0	1	0	0	1
Peak Hour	0	2	0	0	2	Peak Hour	0	0	0	0	0	Peak Hour	0	1	0	0	1

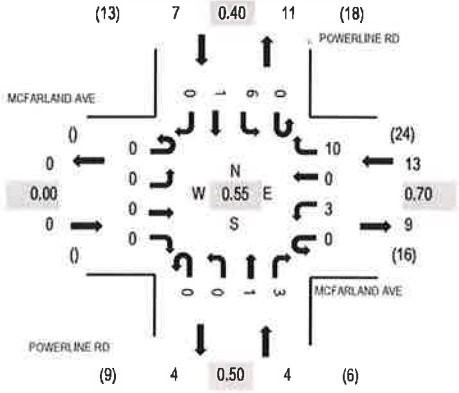
Location: 2 POWERLINE RD & MCFARLAND AVE PM

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

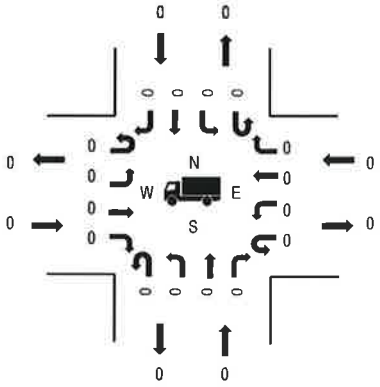
Location: 2 POWERLINE RD & MCFARLAND AVE PM
Date: Wednesday, January 13, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour

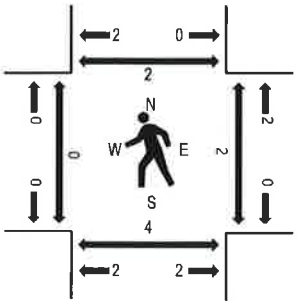
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.70
NB	0.0%	0.50
SB	0.0%	0.40
All	0.0%	0.55

Traffic Counts - Motorized Vehicles

Interval Start Time	MCFARLAND AVE Eastbound				MCFARLAND AVE Westbound				POWERLINE RD Northbound				POWERLINE RD Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	24
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
4:10 PM	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0	0	4	24
4:15 PM	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	5	20
4:20 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	19
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	22
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	24
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	23
4:55 PM	0	0	0	0	0	0	0	3	0	0	1	0	0	1	1	0	6	23
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4	
5:20 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	3	
5:35 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	4	
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
5:55 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	
Count Total	0	0	0	0	0	7	0	17	0	0	1	5	0	11	2	0	43	
Peak Hour	0	0	0	0	0	3	0	10	0	0	1	3	0	6	1	0	24	

Location: 2 POWERLINE RD & MCFARLAND AVE PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	2	2	2	6
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	2	0	0	2
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	0	1	0	1	Count Total	0	0	0	0	0	Count Total	0	4	2	3	9
Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0	Peak Hour	0	4	2	2	8

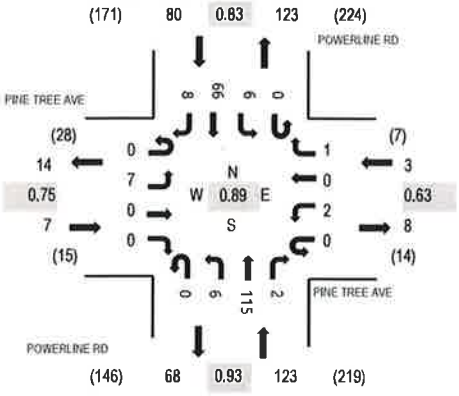
Location: 3 POWERLINE RD & PINE TREE AVE PM

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

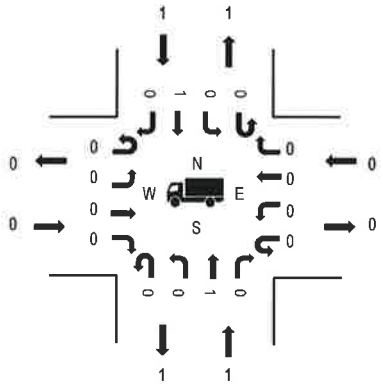
Location: 3 POWERLINE RD & PINE TREE AVE PM
Date: Wednesday, January 13, 2021
Peak Hour: 04:55 PM - 05:55 PM
Peak 15-Minutes: 05:20 PM - 05:35 PM

Peak Hour

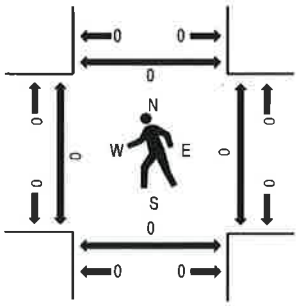
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.75
WB	0.0%	0.63
NB	0.8%	0.93
SB	1.3%	0.83
All	0.9%	0.89

Traffic Counts - Motorized Vehicles

Interval Start Time	PINE TREE AVE Eastbound				PINE TREE AVE Westbound				POWERLINE RD Northbound				POWERLINE RD Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	10	1	24	207
4:05 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	12	198
4:10 PM	0	0	0	2	0	1	0	0	0	1	9	0	1	0	4	2	20	205
4:15 PM	0	2	0	0	0	0	0	0	0	0	10	0	0	0	10	0	22	198
4:20 PM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	5	0	13	192
4:25 PM	0	1	0	0	0	0	0	1	0	0	10	0	0	2	6	1	21	202
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	1	9	198
4:35 PM	0	0	0	0	0	0	0	1	0	0	8	1	0	0	7	1	18	209
4:40 PM	0	0	0	0	0	0	0	1	0	1	4	0	0	1	9	1	17	206
4:45 PM	0	1	0	1	0	0	0	0	0	1	9	0	0	2	4	2	20	201
4:50 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	3	1	10	201
4:55 PM	0	1	0	0	0	0	0	1	0	2	12	0	0	0	4	1	21	213
5:00 PM	0	2	0	0	0	0	0	0	0	0	5	1	0	1	6	0	15	205
5:05 PM	0	1	0	0	0	0	0	0	0	0	7	0	0	0	10	1	19	
5:10 PM	0	0	0	0	0	0	0	0	0	1	9	0	0	0	3	0	13	
5:15 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	7	0	16	
5:20 PM	0	0	0	0	0	0	0	0	0	1	12	1	0	1	7	1	23	
5:25 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	1	6	1	17	
5:30 PM	0	0	0	0	0	2	0	0	0	1	10	0	0	2	4	1	20	
5:35 PM	0	0	0	0	0	0	0	0	0	0	11	0	0	1	3	0	15	
5:40 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	3	0	12	
5:45 PM	0	1	0	0	0	0	0	0	0	1	12	0	0	0	4	2	20	
5:50 PM	0	0	0	0	0	0	0	0	0	0	12	0	0	0	9	1	22	
5:55 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	1	13	
Count Total	0	12	0	3	0	3	0	4	0	9	207	3	1	11	140	19	412	
Peak Hour	0	7	0	0	0	2	0	1	0	6	115	2	0	6	66	8	213	

Location: 3 POWERLINE RD & PINE TREE AVE PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

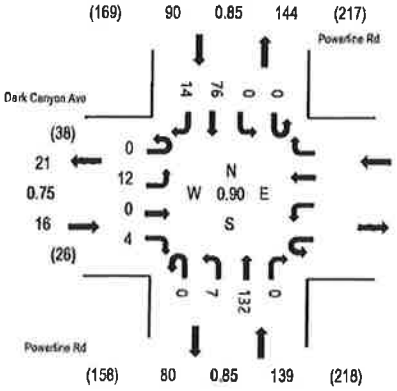
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	1	0	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	1	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	1	1	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	3	0	1	4	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	1	0	1	2	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

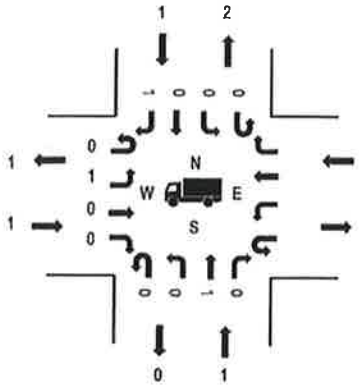
Location: Powerline Rd & Dark Canyon Ave PM
Date: Wednesday, March 4, 2020
Peak Hour: 04:40 PM - 05:40 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

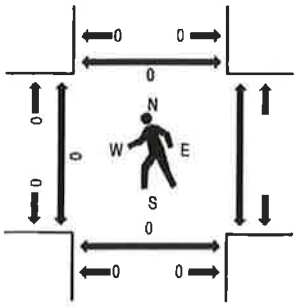
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.3%	0.75
WB		
NB	0.7%	0.85
SB	1.1%	0.85
All	1.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Dark Canyon Ave Eastbound				Westbound				Powerline Rd Northbound				Powerline Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0					0	0	6	0	0	0	10	1	17	218
4:05 PM	0	0	0	0					0	3	6	0	0	0	9	1	19	216
4:10 PM	0	0	0	0					0	0	6	0	0	0	6	0	12	214
4:15 PM	0	0	0	2					0	0	11	0	0	0	9	3	25	220
4:20 PM	0	0	0	2					0	0	7	0	0	0	12	0	21	223
4:25 PM	0	0	0	0					0	2	6	0	0	0	7	0	15	220
4:30 PM	0	3	0	0					0	1	4	0	0	0	6	1	15	225
4:35 PM	0	0	0	0					0	0	3	0	0	0	4	0	7	226
4:40 PM	0	0	0	1					0	1	8	0	0	0	9	0	19	245
4:45 PM	0	4	0	0					0	0	12	0	0	0	9	1	26	240
4:50 PM	0	0	0	0					0	0	13	0	0	0	5	1	19	224
4:55 PM	0	2	0	0					0	0	10	0	0	0	9	2	23	218
5:00 PM	0	2	0	0					0	1	5	0	0	0	3	4	15	
5:05 PM	0	2	0	0					0	1	8	0	0	0	6	0	17	
5:10 PM	0	0	0	0					0	2	9	0	0	0	6	1	18	
5:15 PM	0	0	0	1					0	0	17	0	0	0	10	0	28	
5:20 PM	0	0	0	0					0	0	12	0	0	0	3	3	18	
5:25 PM	0	1	0	1					0	0	12	0	0	0	5	1	20	
5:30 PM	0	1	0	0					0	1	12	0	0	0	2	0	16	
5:35 PM	0	0	0	1					0	1	14	0	0	0	9	1	26	
5:40 PM	0	0	0	0					0	1	8	0	0	0	3	2	14	
5:45 PM	0	0	0	2					0	1	5	0	0	0	2	0	10	
5:50 PM	0	0	0	1					0	1	8	0	0	0	3	0	13	
Count Total	0	15	0	11					0	16	202	0	0	0	147	22	413	
Peak Hour	0	12	0	4					0	7	132	0	0	0	76	14	245	

Appendix C

ODOT Crash Data Reports

ID_Sort

CRASH_ID	INT_ID	SER_NO	INVSTG_AGY_SHORT_DESC	CRASH_SPED_INVLV_FLG	ALCHL_INVLV_FLG	DRUG_INVLV_FLG	MJ_INVLV_FLG	SCHL_ZONE_IND	WRK_ZONE_IND	LANE RDWY DPRT CRASH FLG	UNLOCT FLG	CRASH_DT	CRASH_WK_DAY_CD	CRASH_HR_SHORT_DESC	CNTY_NM	CITY_SECT_NM	URB_AREA_SHORT_NM	HWY_NO
1805413	3	00536	CITY	0	0	0	0	0	0	N	FALSE	7/24/2018	3	5A	Umatilla		HERMSTON UA	002
1805413	3	00536	CITY	0	0	0	0	0	0	N	FALSE	7/24/2018	3	5A	Umatilla		HERMSTON UA	002
1595044	5	00668	COUNTY	0	0	0	0	0	0	N	FALSE	9/1/2014	2	10A	Umatilla			070
1657585	4	623	COUNTY	0	0	0		0	0	N	FALSE	42583	2	3P	Umatilla			

HWY_MED_NM	RDWY_NO	FC_CD	HWY_COMPNT_CD	HWY_COMPNT_SHORT_DESC	MLGE_TYP_CD	RD_CON_NO	LRS VAL	MP_NO	ST_NO	ST_NM	ISECT_ST_NO	ISECT_ST_NM	RD_CHAR_CD	RD_CHAR_SHORT_DESC	CMPSS_DIR_CD	CMPSS_DIR_FROM_CD
COLUMBIA RIVER	1	14	0	MN	0		000200100S00	182.38					1	INTER	9	
COLUMBIA RIVER	1	14	0	MN	0		000200100S00	182.38					1	INTER	9	
MCNARY	1	08	6	CN	0	1	0070AD100S00	4.98					1	INTER	3	
		7						3.57	1225	POWERLINE RD A			3	STRGHT	0	

ID_Sort

CMPSS_DIR_SHORT_DESC	IMPCT_LOC_CD	ISECT_TYP_SHORT_DESC	MEDN_TYP_SHORT_DESC	TURNG_LEG_QTY	LN_QTY	ISECT_REL_FLG	TRAF_CNTL_DEVICE_SHORT_DESC	OFF_RDWY_FLG	RNDABT_FLG	DRVWY_REL_FLG	WTHR_COND_SHORT_DESC	RD_SURF_SHORT_DESC	LGT_COND_SHORT_DESC	CRASH_TYP_SHORT_DESC	COLLIS_TYP_SHORT_DESC	CRASH_SVRTY_SHORT_DESC	CRASH_EVNT_1_CD	CRASH_EVNT_2_CD
CN	02	3-LEG		0		0	STOP SIGN	0	0	0	CLR	DRY	DAY	ANGL-OTH	TURN	PDO		
CN	02	3-LEG		0		0	STOP SIGN	0	0	0	CLR	DRY	DAY	ANGL-OTH	TURN	PDO		
E	05	CROSS		0		0	NONE	0	0	0	CLR	DRY	DAY	OVERTURN	NCOL	PDO	021	043
UN	3		NONE		2	1	NONE	0	0	0	CLR	DRY	DAY	OVERTURN	NCOL	INJ		

ID_Sort

CRASH_EVNT_3_CD	CRASH_CAUSE_1_CD	CRASH_CAUSE_2_CD	CRASH_CAUSE_3_CD	LAT DEG NO	LAT MINUTE NO	LAT SEC NO	LAT	LONGTD DEG NO	LONGTD MINUTE NO	LONGTD SEC NO	LONG	VHCL_ID	STRIKG_VHCL_FLG	VHCL_CODE_SEQ_NO	VHCL_TYP_SHORT_DESC	VHCL_USE_SHORT_DESC	TRLR_QTY	VHCL_OWNSHP_SHORT_DESC
	02			45	54	55.36	45.91537778	-119	21	23.98	-119.3566611	3402989	1	1	SEMI TOW	NONE	9	N/A
	02			45	54	55.36	45.91537778	-119	21	23.98	-119.3566611	3402990	0	2	PSNGR CAR	NONE	9	N/A
	11			45	51	56.08	45.86557778	-119	20	32.92	-119.3424778	3012587	1	1	SEMI TOW	NONE	2	PRVTE
	7			45	52	5.9	45.86830556	-119	20	34.69	-119.3429694	3129447	1	1	MTRCYCLE	NONE	0	PRVTE

VHCL_MVMNT_SHORT_DESC	VHCL_CMPSS_DIR_FROM_SHORT_DESC	VHCL_CMPSS_DIR_TO_SHORT_DESC	VHCL_ACTN_CD	VHCL_EVNT_1_CD	VHCL_EVNT_2_CD	VHCL_EVNT_3_CD	VHCL_CAUSE_1_CD	VHCL_CAUSE_2_CD	VHCL_CAUSE_3_CD	PARTIC_ID	STRIKG_PARTIC_FLG	PARTIC_VHCL_SEQ_NO	PARTIC_TYP_CD	PARTIC_TYP_SHORT_DESC	PARTIC_MVMNT_SHORT_DESC	PARTIC_CMPSS_DIR_FROM_SHORT_DESC	PARTIC_CMPSS_DIR_TO_SHORT_DESC	INJ_SVRTY_SHORT_DESC
TURN-L	S	W	000				00			3881445	0	1	1	DRVR				NONE
TURN-L	E	S	000				00			3881446	0	1	1	DRVR				NONE
TURN-L	N	E	006	021	043		11			3436964	0	1	1	DRVR				NONE
STRGHT	S	N	7				0			3568828	0	1	1	DRVR				INJB

ID_Sort

AGE_VAL	SEX_CD	DRVR_LIC_STAT_SHORT_DESC	DRVR_RES_SHORT_DESC	PARTIC_ACTN_CD	NON_MOTRST_LOC_SHORT_DESC	PARTIC_ERR_1_CD	PARTIC_ERR_2_CD	PARTIC_ERR_3_CD	PARTIC_EVNT_1_CD	PARTIC_EVNT_2_CD	PARTIC_EVNT_3_CD	PARTIC_CAUSE_1_CD	PARTIC_CAUSE_2_CD	PARTIC_CAUSE_3_CD	TOTAL_CRASHES	TOTAL_ROWS
00	9	UNK	UNK	000		000						00			3	8
00	9	UNK	UNK	000		000						00			3	8
40	1	OR-Y	OR<25	017		017						00			8	13
31	2	OR-Y	OR>25	17		43						7			16	18

Appendix D

Signal Warrant Worksheets

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	Powerline Road	Minor Street:	Madison Street
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1162	PM Peak Hour Volumes:	110

Warrant Used:

x 100 percent of standard warrants used

_____ 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,620	8,850	
Minor Street*	1,100	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,620	13,300	
Minor Street*	1,100	1,350	**No**
Combination Warrant			
Major Street	11,620	10,640	
Minor Street*	1,100	2,120	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	McFarland Avenue	Minor Street:	Madison Street
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	234	PM Peak Hour Volumes:	133

Warrant Used:

x 100 percent of standard warrants used

_____ 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	2,340	8,850	
Minor Street*	1,330	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	2,340	13,300	
Minor Street*	1,330	1,350	**No**
Combination Warrant			
Major Street	2,340	10,640	
Minor Street*	1,330	2,120	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	Powerline Road	Minor Street:	Tyler Avenue
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1097	PM Peak Hour Volumes:	61

Warrant Used:

x 100 percent of standard warrants used

_____ 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	10,970	8,850	
Minor Street*	610	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	10,970	13,300	
Minor Street*	610	1,350	**No**
Combination Warrant			
Major Street	10,970	10,640	
Minor Street*	610	2,120	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Existing Conditions

Major Street:	US 730	Minor Street:	Powerline Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1144	PM Peak Hour Volumes:	128

Warrant Used:

_____ 100 percent of standard warrants used
X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,440	6,200	
Minor Street*	1,280	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,440	9,300	
Minor Street*	1,280	950	**Yes**
Combination Warrant			
Major Street	11,440	7,440	
Minor Street*	1,280	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Background Conditions

Major Street:	US 730	Minor Street:	Powerline Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1822	PM Peak Hour Volumes:	367

Warrant Used:

_____ 100 percent of standard warrants used
X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	18,220	6,200	
Minor Street*	3,670	1,850	**Yes**
Condition B: Interruption of Continuous Traffic			
Major Street	18,220	9,300	
Minor Street*	3,670	950	**Yes**
Combination Warrant			
Major Street	18,220	7,440	
Minor Street*	3,670	1,480	**Yes**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	US 730	Minor Street:	Powerline Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1965	PM Peak Hour Volumes:	439

Warrant Used:

_____ 100 percent of standard warrants used
__X__ 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	19,650	6,200	
Minor Street*	4,390	1,850	**Yes**
Condition B: Interruption of Continuous Traffic			
Major Street	19,650	9,300	
Minor Street*	4,390	950	**Yes**
Combination Warrant			
Major Street	19,650	7,440	
Minor Street*	4,390	1,480	**Yes**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	Powerline Road	Minor Street:	I-82 SB Ramps
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	643	PM Peak Hour Volumes:	93

Warrant Used:

_____ 100 percent of standard warrants used

X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	6,430	6,200	
Minor Street*	930	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	6,430	9,300	
Minor Street*	930	950	**No**
Combination Warrant			
Major Street	6,430	7,440	
Minor Street*	930	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 20184 - McClanahan Summit TIS
Date: 3/11/2021
Scenario: Year 2040 Buildout Conditions

Major Street:	Powerline Road	Minor Street:	I-82 NB Ramps
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	605	PM Peak Hour Volumes:	128

Warrant Used:

_____ 100 percent of standard warrants used
X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	6,050	6,200	
Minor Street*	1,280	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	6,050	9,300	
Minor Street*	1,280	950	**No**
Combination Warrant			
Major Street	6,050	7,440	
Minor Street*	1,280	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Appendix E

Left Turn Lane Warrant Worksheets

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 1. Madison Street & Powerline Road
Date: 3/11/2021
Scenario: Existing Conditions - PM Peak Hour (NB)

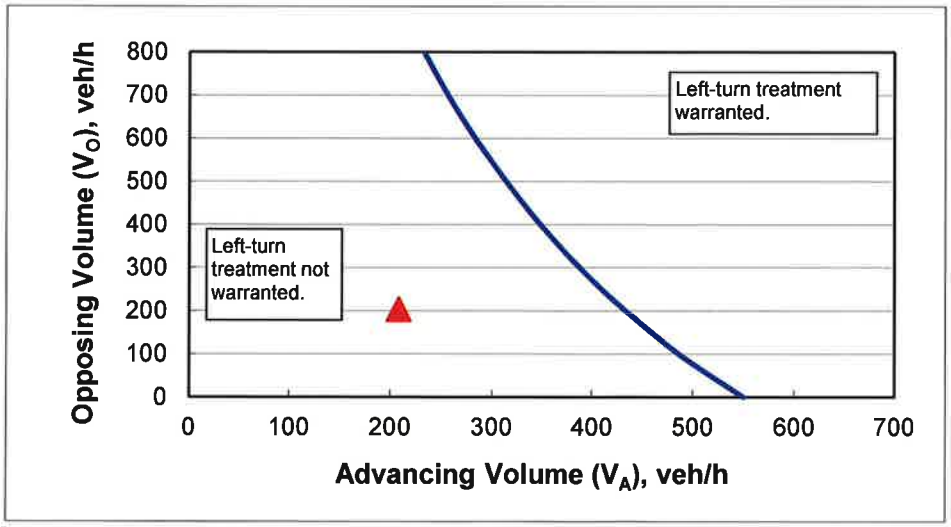
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	208
Opposing volume (V_O), veh/h:	204

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	431
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

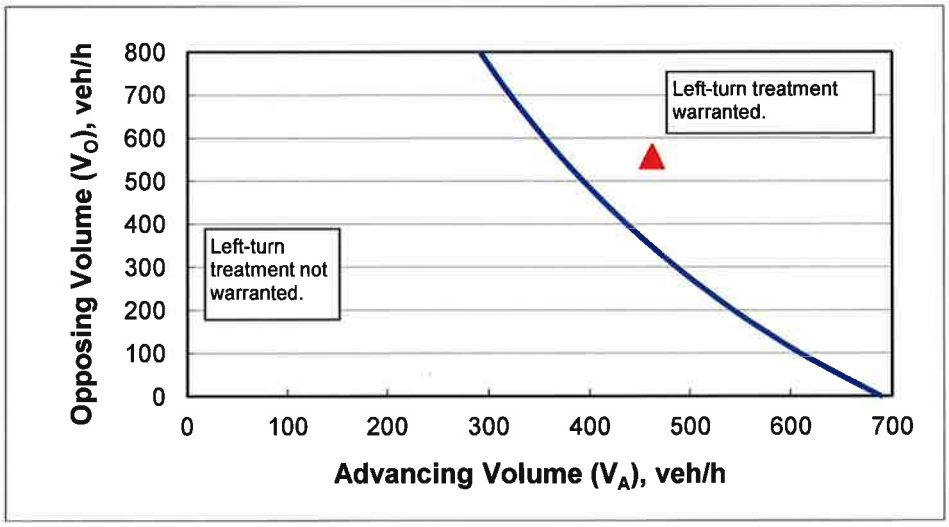
Project: 20184 - McClannahan Summit TIS
Intersection: 1. Madison Street & Powerline Road
Date: 3/11/2021
Scenario: 2040 Background - PM Peak Hour (NB)

2-lane roadway (English)
INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	462
Opposing volume (V_O), veh/h:	558

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	371
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 1. Madison Street & Powerline Road
Date: 3/11/2021
Scenario: 2040 Buildout - PM Peak Hour (NB)

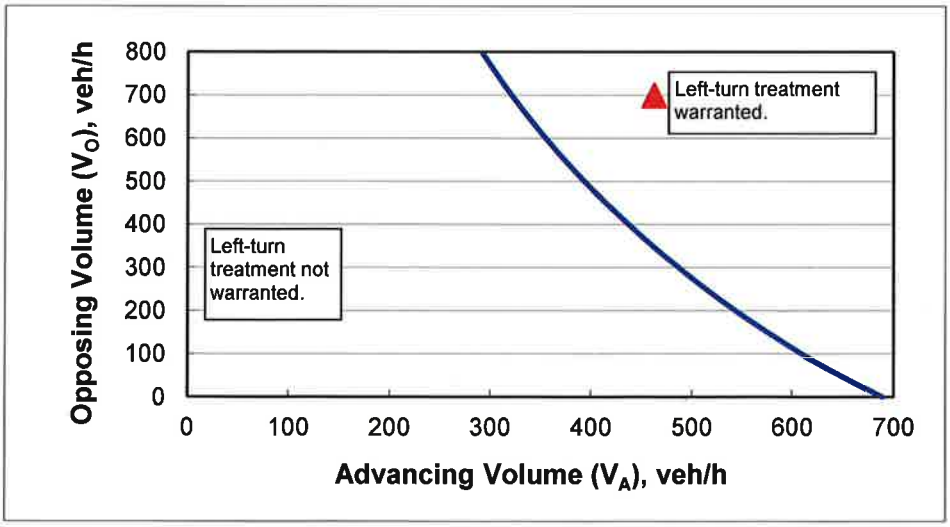
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	462
Opposing volume (V_O), veh/h:	700

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	321
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 2. Madison Street & McFarland Avenue
Date: 3/11/2021
Scenario: 2040 Buildout - PM Peak Hour (SB)

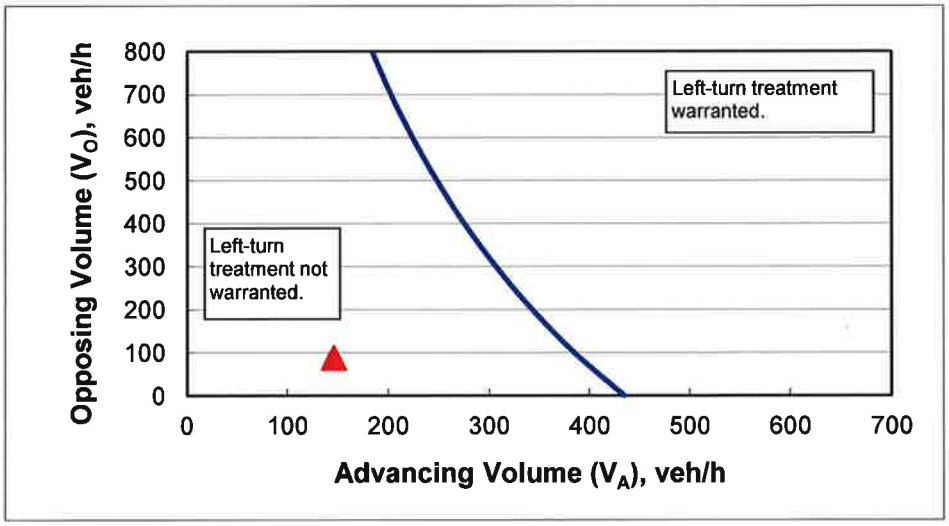
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	67%
Advancing volume (V_A), veh/h:	146
Opposing volume (V_O), veh/h:	88

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	390
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 3. Tyler Avenue & Powerline Road
Date: 3/11/2021
Scenario: Existing Conditions - PM Peak Hour (NB)

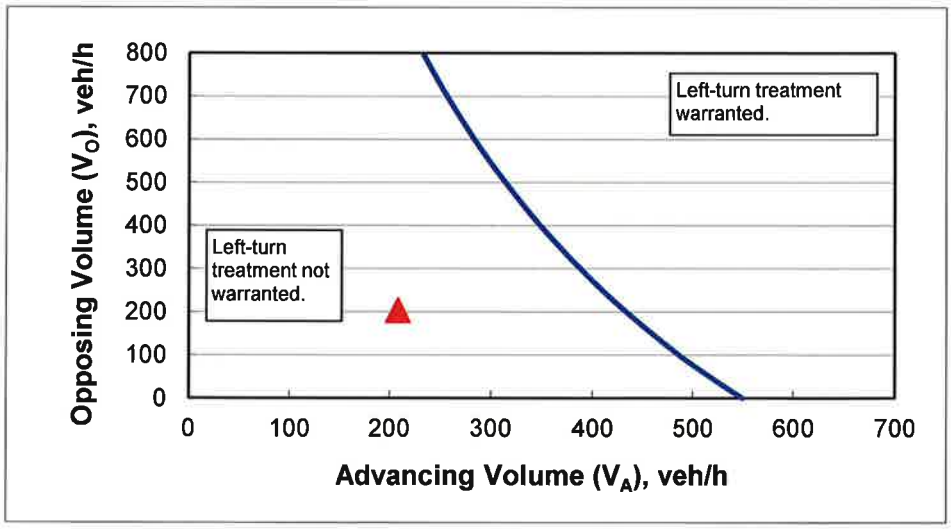
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	208
Opposing volume (V_O), veh/h:	204

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	431
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 3. Tyler Avenue & Powerline Road
Date: 3/11/2021
Scenario: 2040 Background - PM Peak Hour (NB)

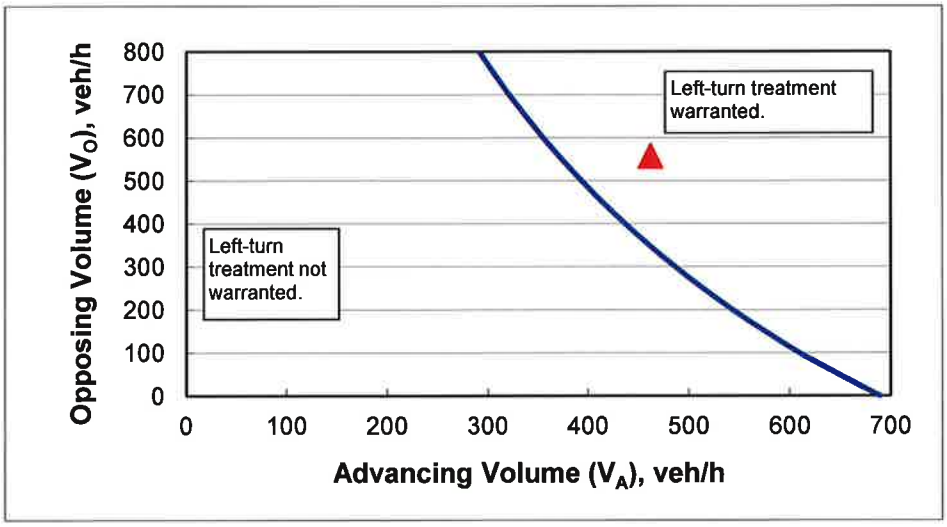
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	462
Opposing volume (V_O), veh/h:	558

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	371
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 3. Tyler Avenue & Powerline Road
Date: 3/11/2021
Scenario: 2040 Buildout - PM Peak Hour (NB)

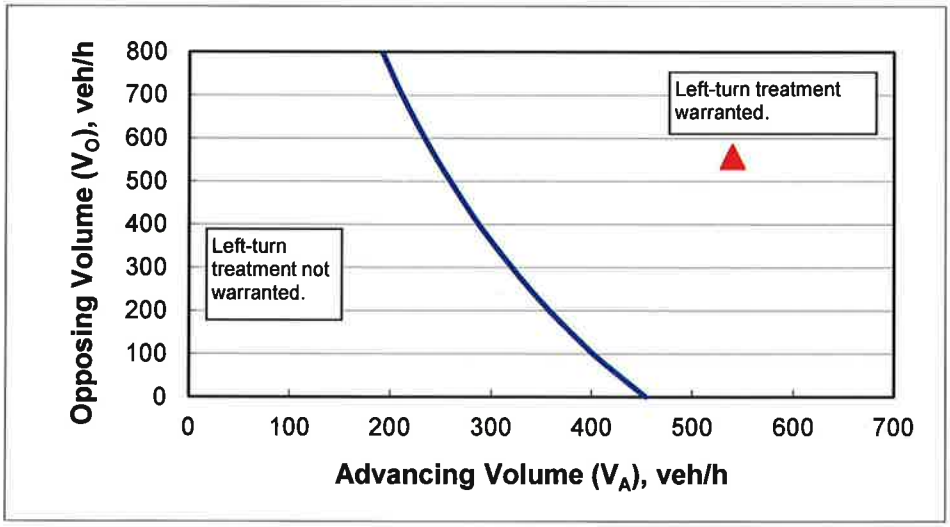
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	21%
Advancing volume (V_A), veh/h:	539
Opposing volume (V_O), veh/h:	558

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	244
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 5. Powerline Road & I-82 EB Ramps
Date: 3/11/2021
Scenario: 2040 Buildout - PM Peak Hour (NB)

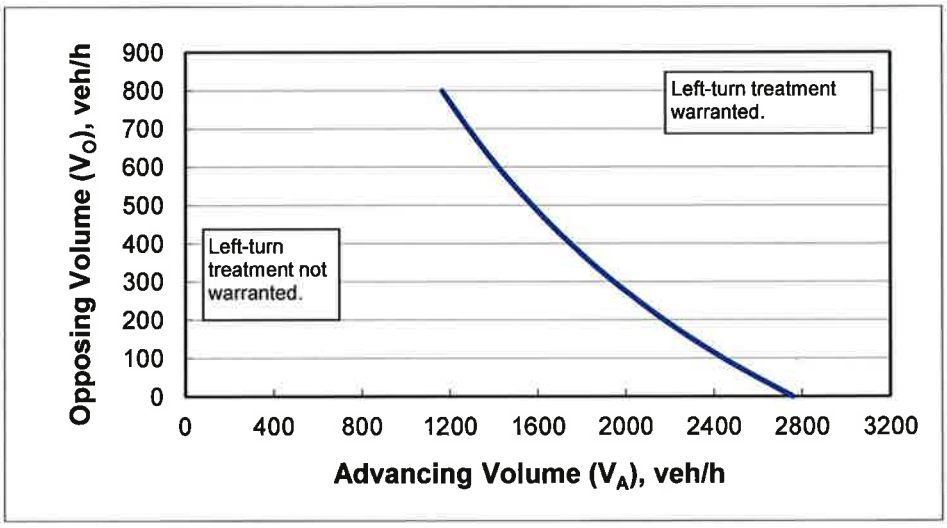
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	400
Opposing volume (V_O), veh/h:	243

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	2071
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 20184 - McClannahan Summit TIS
Intersection: 6. Powerline Road & I-82 WB Ramps
Date: 3/11/2021
Scenario: 2040 Buildout - PM Peak Hour (SB)

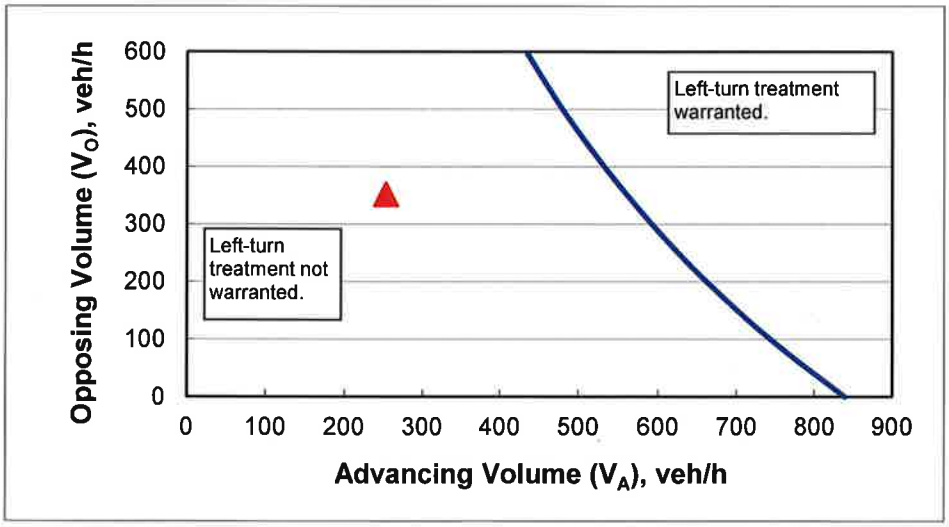
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	253
Opposing volume (V_O), veh/h:	352

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	560
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Appendix F

LOS Definition

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Appendix G

Capacity Worksheets

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	10	27	181	183	21
Future Vol, veh/h	13	10	27	181	183	21
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	15	11	31	206	208	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	488	220	232	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	268	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	543	825	1336	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	529	825	1336	-	-	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1336	-	627	-	-
HCM Lane V/C Ratio	0.023	-	0.042	-	-
HCM Control Delay (s)	7.8	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	19	2	6	11	2
Future Vol, veh/h	6	19	2	6	11	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	35	4	11	20	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	54	10	0	0	15	0
Stage 1	10	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	959	1077	-	-	1616	-
Stage 1	1018	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	947	1077	-	-	1616	-
Mov Cap-2 Maneuver	947	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	6.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1043	1616	-
HCM Lane V/C Ratio	-	-	0.044	0.012	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	10	27	181	183	21
Future Vol, veh/h	13	10	27	181	183	21
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	15	11	31	206	208	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	488	220	232	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	268	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	543	825	1336	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	529	825	1336	-	-	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1336	-	627	-	-
HCM Lane V/C Ratio	0.023	-	0.042	-	-
HCM Control Delay (s)	7.8	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	515	97	177	364	49	105
Future Vol, veh/h	515	97	177	364	49	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	55	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	585	110	201	414	56	119

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	695	0	1456	640
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	816	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	882	-	144	477
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	436	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	882	-	111	477
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	337	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	-	-	882	-
HCM Lane V/C Ratio	0.487	-	-	0.228	-
HCM Control Delay (s)	24.2	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	2.6	-	-	0.9	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↱			↰	
Traffic Vol, veh/h	27	1	6	0	0	0	0	143	56	5	145	0
Future Vol, veh/h	27	1	6	0	0	0	0	143	56	5	145	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	7	7	7	0	0	0	2	2	2	1	1	1
Mvmt Flow	30	1	7	0	0	0	0	161	63	6	163	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	368	399	163	-	0	0	224	0	0
Stage 1	175	175	-	-	-	-	-	-	-
Stage 2	193	224	-	-	-	-	-	-	-
Critical Hdwy	6.47	6.57	6.27	-	-	-	4.11	-	-
Critical Hdwy Stg 1	5.47	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.47	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.063	3.363	-	-	-	2.209	-	-
Pot Cap-1 Maneuver	622	531	869	0	-	-	1351	-	0
Stage 1	843	745	-	0	-	-	-	-	0
Stage 2	828	709	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	619	0	869	-	-	-	1351	-	-
Mov Cap-2 Maneuver	619	0	-	-	-	-	-	-	-
Stage 1	843	0	-	-	-	-	-	-	-
Stage 2	824	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	1351	-
HCM Lane V/C Ratio	-	-	0.059	0.004	-
HCM Control Delay (s)	-	-	10.9	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	13	36	426	530	28
Future Vol, veh/h	17	13	36	426	530	28
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	18	14	38	448	558	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1097	573	587	0	-	0
Stage 1	573	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	238	523	988	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	523	988	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	988	-	300	-	-
HCM Lane V/C Ratio	0.038	-	0.105	-	-
HCM Control Delay (s)	8.8	0	18.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	25	3	8	15	3
Future Vol, veh/h	8	25	3	8	15	3
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	26	3	8	16	3

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	42	7	0	0	11	0
Stage 1	7	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	974	1081	-	-	1621	-
Stage 1	1021	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	964	1081	-	-	1621	-
Mov Cap-2 Maneuver	964	-	-	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1050	1621	-
HCM Lane V/C Ratio	-	-	0.033	0.01	-
HCM Control Delay (s)	-	-	8.5	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	13	36	426	530	28
Future Vol, veh/h	17	13	36	426	530	28
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	18	14	38	448	558	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1097	573	587	0	-	0
Stage 1	573	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	238	523	988	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	523	988	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	988	-	300	-	-
HCM Lane V/C Ratio	0.038	-	0.105	-	-
HCM Control Delay (s)	8.8	0	18.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	223

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	232	436	483	150	289
Future Vol, veh/h	683	232	436	483	150	289
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	55	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	719	244	459	508	158	304

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	963	0	2267	841
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	1426	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	699	-	~ 45	366
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	223	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	699	-	~ 15	366
Mov Cap-2 Maneuver	-	-	-	-	~ 62	-
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	~ 76	-

Approach	EB	WB	NB
HCM Control Delay, s	0	9.2	$ 1135.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	137	-	-	699	-
HCM Lane V/C Ratio	3.373	-	-	0.657	-
HCM Control Delay (s)	$ 1135.3	-	-	19.4	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	44.5	-	-	4.9	-

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	86	1	8	1	322	0	0	171	28
Future Vol, veh/h	0	0	0	86	1	8	1	322	0	0	171	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	2	1	1	1	1	1	1
Mvmt Flow	0	0	0	91	1	8	1	339	0	0	180	29

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	536	550	339	209	0	-	-	-	0	
Stage 1	341	341	-	-	-	-	-	-	-	
Stage 2	195	209	-	-	-	-	-	-	-	
Critical Hdwy	6.42	6.52	6.22	4.11	-	-	-	-	-	
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	2.209	-	-	-	-	-	
Pot Cap-1 Maneuver	505	443	703	1368	-	0	0	-	-	
Stage 1	720	639	-	-	-	0	0	-	-	
Stage 2	838	729	-	-	-	0	0	-	-	
Platoon blocked, %					-			-	-	
Mov Cap-1 Maneuver	504	0	703	1368	-	-	-	-	-	
Mov Cap-2 Maneuver	504	0	-	-	-	-	-	-	-	
Stage 1	719	0	-	-	-	-	-	-	-	
Stage 2	838	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1368	-	516	-	-
HCM Lane V/C Ratio	0.001	-	0.194	-	-
HCM Control Delay (s)	7.6	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	1	8	0	0	0	0	267	74	7	240	0
Future Vol, veh/h	55	1	8	0	0	0	0	267	74	7	240	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	7	7	7	0	0	0	2	2	2	1	1	1
Mvmt Flow	58	1	8	0	0	0	0	281	78	7	253	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	587	626	253	-	0	0	359	0	0
Stage 1	267	267	-	-	-	-	-	-	-
Stage 2	320	359	-	-	-	-	-	-	-
Critical Hdwy	6.47	6.57	6.27	-	-	-	4.11	-	-
Critical Hdwy Stg 1	5.47	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.47	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.063	3.363	-	-	-	2.209	-	-
Pot Cap-1 Maneuver	464	394	774	0	-	-	1205	-	0
Stage 1	766	679	-	0	-	-	-	-	0
Stage 2	725	618	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	461	0	774	-	-	-	1205	-	-
Mov Cap-2 Maneuver	461	0	-	-	-	-	-	-	-
Stage 1	766	0	-	-	-	-	-	-	-
Stage 2	720	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	486	1205	-
HCM Lane V/C Ratio	-	-	0.139	0.006	-
HCM Control Delay (s)	-	-	13.6	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	100	13	36	426	530	170
Future Vol, veh/h	100	13	36	426	530	170
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	105	14	38	448	558	179

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1172	648	737	0	-	0
Stage 1	648	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	215	474	869	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	203	474	869	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	869	-	217	-	-
HCM Lane V/C Ratio	0.044	-	0.548	-	-
HCM Control Delay (s)	9.3	0	40	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	2.9	-	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	167	80	8	98	48
Future Vol, veh/h	8	167	80	8	98	48
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	176	84	8	103	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	345	88	0	0	92	0
Stage 1	88	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	656	976	-	-	1515	-
Stage 1	940	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	610	976	-	-	1515	-
Mov Cap-2 Maneuver	610	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	5.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	950	1515	-
HCM Lane V/C Ratio	-	-	0.194	0.068	-
HCM Control Delay (s)	-	-	9.7	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	58	113	426	530	28
Future Vol, veh/h	17	58	113	426	530	28
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	18	61	119	448	558	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1259	573	587	0	-	0
Stage 1	573	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	190	523	988	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	160	523	988	-	-	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	1.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	988	-	345	-	-
HCM Lane V/C Ratio	0.12	-	0.229	-	-
HCM Control Delay (s)	9.1	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-

Intersection	
Int Delay, s/veh	674

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	298	513	483	188	334
Future Vol, veh/h	683	298	513	483	188	334
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	55	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	719	314	540	508	198	352

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1033	0	2464	876
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	1588	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	657	-	~ 34	~ 350
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 185	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	657	-	~ 6	~ 350
Mov Cap-2 Maneuver	-	-	-	-	~ 29	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 33	-

Approach	EB	WB	NB
HCM Control Delay, s	0	15.8	$ 3196.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	70	-	-	657	-
HCM Lane V/C Ratio	7.85	-	-	0.822	-
HCM Control Delay (s)	$ 3196.6	-	-	30.7	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	63.2	-	-	8.7	-

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

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	86	1	8	1	399	0	0	177	66
Future Vol, veh/h	0	0	0	86	1	8	1	399	0	0	177	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	2	1	1	1	1	1	1
Mvmt Flow	0	0	0	91	1	8	1	420	0	0	186	69

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	643	677	420	255	0	-	-	-	0	
Stage 1	422	422	-	-	-	-	-	-	-	
Stage 2	221	255	-	-	-	-	-	-	-	
Critical Hdwy	6.42	6.52	6.22	4.11	-	-	-	-	-	
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	2.209	-	-	-	-	-	
Pot Cap-1 Maneuver	438	375	633	1316	-	0	0	-	-	
Stage 1	662	588	-	-	-	0	0	-	-	
Stage 2	816	696	-	-	-	0	0	-	-	
Platoon blocked, %					-			-	-	
Mov Cap-1 Maneuver	438	0	633	1316	-	-	-	-	-	
Mov Cap-2 Maneuver	438	0	-	-	-	-	-	-	-	
Stage 1	661	0	-	-	-	-	-	-	-	
Stage 2	816	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1316	-	450	-	-
HCM Lane V/C Ratio	0.001	-	0.222	-	-
HCM Control Delay (s)	7.7	0	15.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↱			↑	
Traffic Vol, veh/h	121	1	8	0	0	0	0	278	74	7	246	0
Future Vol, veh/h	121	1	8	0	0	0	0	278	74	7	246	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	7	7	7	0	0	0	2	2	2	1	1	1
Mvmt Flow	127	1	8	0	0	0	0	293	78	7	259	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	605	644	259	-	0	0	371	0	0
Stage 1	273	273	-	-	-	-	-	-	-
Stage 2	332	371	-	-	-	-	-	-	-
Critical Hdwy	6.47	6.57	6.27	-	-	-	4.11	-	-
Critical Hdwy Stg 1	5.47	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.47	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.063	3.363	-	-	-	2.209	-	-
Pot Cap-1 Maneuver	453	385	768	0	-	-	1193	-	0
Stage 1	762	675	-	0	-	-	-	-	0
Stage 2	716	611	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	450	0	768	-	-	-	1193	-	-
Mov Cap-2 Maneuver	450	0	-	-	-	-	-	-	-
Stage 1	762	0	-	-	-	-	-	-	-
Stage 2	711	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	462	1193	-
HCM Lane V/C Ratio	-	-	0.296	0.006	-
HCM Control Delay (s)	-	-	16	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0	-

HCM 6th Signalized Intersection Summary
4: Powerline Road & US 730

03/11/2021

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	683	298	513	483	188	334
Future Volume (veh/h)	683	298	513	483	188	334
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1647	1647	1620	1620	1700	1700
Adj Flow Rate, veh/h	719	282	540	508	198	317
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	6	6	0	0
Cap, veh/h	474	186	367	1128	131	210
Arrive On Green	0.42	0.42	0.24	0.70	0.23	0.23
Sat Flow, veh/h	1126	442	1543	1620	573	917
Grp Volume(v), veh/h	0	1001	540	508	516	0
Grp Sat Flow(s),veh/h/ln	0	1567	1543	1620	1493	0
Q Serve(g_s), s	0.0	50.5	28.5	16.7	27.5	0.0
Cycle Q Clear(g_c), s	0.0	50.5	28.5	16.7	27.5	0.0
Prop In Lane		0.28	1.00		0.38	0.61
Lane Grp Cap(c), veh/h	0	660	367	1128	342	0
V/C Ratio(X)	0.00	1.52	1.47	0.45	1.51	0.00
Avail Cap(c_a), veh/h	0	660	367	1128	342	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	34.8	45.8	8.1	46.3	0.0
Incr Delay (d2), s/veh	0.0	240.6	227.3	0.3	243.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	62.3	33.8	5.1	33.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	275.4	273.1	8.4	289.6	0.0
LnGrp LOS	A	F	F	A	F	A
Approach Vol, veh/h	1001			1048	516	
Approach Delay, s/veh	275.4			144.8	289.6	
Approach LOS	F			F	F	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		32.0	33.0	55.0		88.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		27.5	28.5	50.5		83.5
Max Q Clear Time (g_c+I1), s		29.5	30.5	52.5		18.7
Green Ext Time (p_c), s		0.0	0.0	0.0		3.4

Intersection Summary	
HCM 6th Ctrl Delay	224.9
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	105.1
Intersection LOS	F

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	1033	1048	550
Demand Flow Rate, veh/h	1075	1110	556
Vehicles Circulating, veh/h	572	200	748
Vehicles Exiting, veh/h	738	1104	899
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	203.9	44.2	35.4
Approach LOS	F	E	E

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	1075	1110	556
Cap Entry Lane, veh/h	770	1125	643
Entry HV Adj Factor	0.961	0.944	0.989
Flow Entry, veh/h	1033	1048	550
Cap Entry, veh/h	740	1062	637
V/C Ratio	1.396	0.986	0.864
Control Delay, s/veh	203.9	44.2	35.4
LOS	F	E	E
95th %tile Queue, veh	45	19	10

Intersection	
Intersection Delay, s/veh	89.4
Intersection LOS	F

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	1033	1048	550
Demand Flow Rate, veh/h	1075	1110	556
Vehicles Circulating, veh/h	572	200	748
Vehicles Exiting, veh/h	200	1104	899
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	203.9	4.8	35.4
Approach LOS	F	A	E

Lane	Left	Left	Bypass	Left
Designated Moves	TR	L	R	LR
Assumed Moves	TR	L	R	LR
RT Channelized			Free	
Lane Util	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	538	4.976
Entry Flow, veh/h	1075	572	1802	556
Cap Entry Lane, veh/h	770	1125	0.943	643
Entry HV Adj Factor	0.961	0.944	508	0.989
Flow Entry, veh/h	1033	540	1700	550
Cap Entry, veh/h	740	1062	0.299	637
V/C Ratio	1.396	0.508	0.0	0.864
Control Delay, s/veh	203.9	9.4	A	35.4
LOS	F	A	1	E
95th %tile Queue, veh	45	3		10

Intersection						
Int Delay, s/veh	633					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	298	513	483	188	334
Future Vol, veh/h	683	298	513	483	188	334
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	55	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	719	314	540	508	198	352

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1033	0	2464	876
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	1588	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	657	-	~ 34	~ 350
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 185	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	657	-	~ 6	~ 350
Mov Cap-2 Maneuver	-	-	-	-	~ 31	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 33	-

Approach	EB	WB	NB
HCM Control Delay, s	0	15.8	$ 3000.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	74	-	-	657	-
HCM Lane V/C Ratio	7.425	-	-	0.822	-
HCM Control Delay (s)	$ 3000.2	-	-	30.7	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	62.7	-	-	8.7	-

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

Intersection	
Int Delay, s/veh	218.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	298	513	483	188	334
Future Vol, veh/h	683	298	513	483	188	334
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	55	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	719	314	540	508	198	352

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1033	0	2464	876
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	1588	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	657	-	~ 34	~ 350
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 185	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	657	-	~ 6	~ 350
Mov Cap-2 Maneuver	-	-	-	-	~ 31	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 33	-

Approach	EB	WB	NB
HCM Control Delay, s	0	15.8	$ 1017.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	31	350	-	-	657	-
HCM Lane V/C Ratio	6.384	1.005	-	-	0.822	-
HCM Control Delay (s)	$ 2674.4	84.5	-	-	30.7	-
HCM Lane LOS	F	F	-	-	D	-
HCM 95th %tile Q(veh)	24	11.6	-	-	8.7	-

Notes

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

Intersection	
Int Delay, s/veh	234.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	298	513	483	188	334
Future Vol, veh/h	683	298	513	483	188	334
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	55	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	6	6	1	1
Mvmt Flow	719	314	540	508	198	352

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1033	0	2464	876
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	1588	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	657	-	~ 34	~ 350
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 185	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	657	-	~ 6	~ 350
Mov Cap-2 Maneuver	-	-	-	-	~ 29	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	~ 33	-

Approach	EB	WB	NB
HCM Control Delay, s	0	15.8	$ 1094.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	29	350	-	-	657	-
HCM Lane V/C Ratio	6.824	1.005	-	-	0.822	-
HCM Control Delay (s)	$ 2888.1	84.5	-	-	30.7	-
HCM Lane LOS	F	F	-	-	D	-
HCM 95th %tile Q(veh)	24.2	11.6	-	-	8.7	-

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

OTHER J-U-B COMPANIES

TECHNICAL MEMORANDUM

DATE: May 18, 2021

TO: Jacob Foutz, Associate Planner, City of Umatilla
Brandon Seitz, Community Development Director, City of Umatilla

CC:

FROM: Spencer D. Montgomery, Transportation Planner

SUBJECT: McClannahan Summit Subdivision Traffic Impact Analysis Review Comments

At your request J-U-B Engineers has reviewed the Traffic Impact Analysis for the McClannahan Summit TIA. We have the following comments:

- I checked the trip generation rates, the trip distribution percentages used and those seem to be in line with what should be expected with ITE Trip Generation Rates and recent studies in the area.
- I checked the math on the trip distribution, those all add up and seem appropriate.
- I checked that the numbers forecast and reported in the figures were indeed the numbers used and reported in the capacity analysis in the Appendix, those all check out.
- I agree with their assessment of signal warrant analysis and left turn lane analysis.
- I did not see that they did any analysis for right turn lanes. I believe that if one were performed for Powerline/Madison that it would show a southbound right turn lane would be needed at that intersection. Maybe because the speed limit is <40 it doesn't qualify for this analysis, however, using the same methodology used and reported in the Umatilla Residential Development TIA submitted a year ago this would fall way above the threshold since there is projected to be 170 southbound right turns at Madison Street with the development.) See next bullet for associated issue.
- The Powerline/Madison intersection has Level of Service (LOS) "E" for the Buildout Scenario. The study indicates that it is under County jurisdiction and therefore the LOS "E" is considered "marginally acceptable". This roadway is actually within the city limits and should be subject to City standard LOS "D". Accordingly this would require some mitigation. It is the eastbound approach that has a single lane which gets LOS "E". There are two potential mitigation alternatives. Typically an exclusive left turn lane or right turn lane would be added. This would improve the LOS, but under the assumptions of this study the resulting LOS would still be "E". In this case, because the volume is not evenly split for the eastbound approach, and is 100 left turns and 13 right turns, a left turn lane does not fully mitigate for the poor LOS. A better improvement is actually to add a southbound right turn since there are 170 of those vehicles as well and the right turn lane would help the eastbound approach to see appropriate gaps. This would also be consistent with the bullet above. See attached capacity analysis at this intersection.

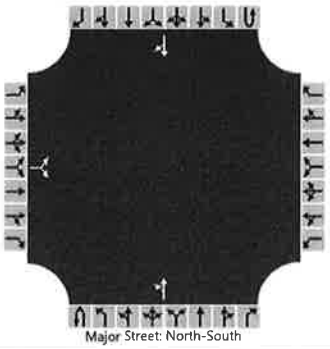
- On page 14 it indicates that both Tyler Avenue and Madison Street need northbound left turn lanes at Powerline Road. However in the Conclusions on page 22 it does not mention the Madison Street northbound left turn lane. Both intersections should have an exclusive northbound left turn lane added. I didn't run any calculations to see when they would fall above the curve, but given the recommendation below regarding Grant Street I would suggest that all of these off-site improvements be required with the start of Phase 4.
- Regarding secondary access to the site, there are several items in the City Design and Improvement Requirements that would support toa requirement of adding a secondary access which could be via construction of their connection to Grant Street. These include 11-4-2 STREETS – subsections A1, A3, A4, A7 as well as 11-4-3 BLOCKS.
- My recommendation is that with the start of Phase 2 that Grant Street connection west from it's current terminus be extended to connect to the McClannahan Summit subdivision at least as a gravel road to serve as secondary access for fire purposes. With the start of Phase 4 this connection should be paved to city standards. Perhaps some agreement with the school to provide an easement or dedicate the right-of-way can be arranged such that this developer can construct the road.

If you have any questions regarding this summary, or would like to discuss any other issues, please don't hesitate to contact me. (509) 783-2144

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	Powerline/Madison
Agency/Co.		Jurisdiction	Umatilla
Date Performed	4/16/2021	East/West Street	Madison Street
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM peak hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	McClanahan Summit		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		100		13						36	426				530	170
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			123							39						
Capacity, c (veh/h)			202							847						
v/c Ratio			0.61							0.05						
95% Queue Length, Q_{95} (veh)			3.5							0.1						
Control Delay (s/veh)			47.2							9.5						
Level of Service (LOS)			E							A						
Approach Delay (s/veh)		47.2								1.3						
Approach LOS		E														

HCS7 Two-Way Stop-Control Report

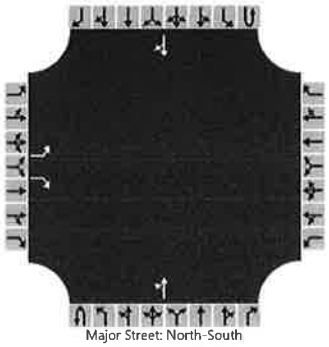
General Information

Analyst	Montgomery
Agency/Co.	
Date Performed	4/16/2021
Analysis Year	2040
Time Analyzed	PM peak hour
Intersection Orientation	North-South
Project Description	McClanahan Summit

Site Information

Intersection	Powerline/Madison
Jurisdiction	Umatilla
East/West Street	Madison Street
North/South Street	Powerline Road
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration		L		R						LT						TR
Volume (veh/h)		100		13						36	426				530	170
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

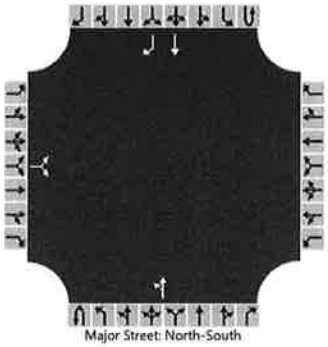
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		105		14						38						
Capacity, c (veh/h)		199		469						864						
v/c Ratio		0.53		0.03						0.04						
95% Queue Length, Q_{95} (veh)		2.7		0.1						0.1						
Control Delay (s/veh)		41.6		12.9						9.4						
Level of Service (LOS)		E		B						A						
Approach Delay (s/veh)		38.3								1.2						
Approach LOS		E														

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	Powerline/Madison
Agency/Co.		Jurisdiction	Umatilla
Date Performed	4/16/2021	East/West Street	Madison Street
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM peak hour-mitigated	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	McClanahan Summit		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	1
Configuration			LR							LT					T	R
Volume (veh/h)		100		13						36	426				530	170
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized														No		
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			119							38						
Capacity, c (veh/h)			242							864						
v/c Ratio			0.49							0.04						
95% Queue Length, Q_{95} (veh)			2.5							0.1						
Control Delay (s/veh)			33.5							9.4						
Level of Service (LOS)			D							A						
Approach Delay (s/veh)		33.5								1.2						
Approach LOS		D														

Planning in Oregon: Building Successful Communities

This class helps local governments, and those who work with them, carry out their planning programs in a knowledgeable, competent, and legal manner resulting in effective decisions. The class will cover:

- The history of planning in Oregon. Participants will gain not only a historical perspective of the Oregon planning program, but also an understanding of its structure, the roles and responsibilities, and the underlying philosophies. This all helps to effectively carry out a community's planning functions.
- Fundamental principles of long-range and current planning; the various elements of planning, why they exist, and how they relate to each other.
- The Comprehensive Plan, zoning code, subdivision ordinance, and how they all relate to each other.
- Types of planning applications, knowing a zone change from a variance
- How decisions are made; what's important and what's not; the role of the staff, planning commission, and elected decision-makers; and the world of quasi-judicial as opposed to legislative processes.
- Procedures, decorum, and protocol or public hearings and working with citizens.
- Creating an effective and respected planning process resulting in legally and politically sound decisions (hint: it ain't easy); the relevant legal framework for planning and decision-making.

Who Should Attend:

- City Councilors and County Commissioners
- Planning Commissioners
- Planning Directors and Planning Staff
- City Recorders and City Managers
- Other involved in any aspect of the planning process

About the Teacher

The workshop leader, John N. Morgan, has been teaching this class for over 12 years in communities all over Oregon with great success. He is a principal in the MorganCPS Group, providing long-range and current planning services and public administration assistance to many agencies and jurisdictions. He currently serves or recently served as the contract city planner for Manzanita, La Grande, Garibaldi, Nehalem, Aumsville, Millersburg, Yamhill, Troutdale, Cascade Locks, Sweet Home, and several other cities. John is a graduate of Willamette University and has more than 45 years of experience in Oregon planning and city management. John served as the leader of the Pacific Program. He is the founder and leader of the Chinook Institute for Civic Leadership and leads the annual Chinook Program, the premier public sector leadership training program in western North America.