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MEMORANDUM

Community Development

To: Lebanon Planning Commission
From: Kelly Hart, Community Development Director
Subject: Planning File No. PD-24-01, S-24-02

Date: April 9, 2024

I. BACKGROUND

Under consideration is a proposed Planned Development and tentative Subdivision application for a 122-lot, 9-tract subdivision with phased implementation for the property located on the south side of Crowfoot Road, east of Hillview Drive. The property does not currently have an assigned address. The Linn County Tax Assessor Map number is 12S 02W 23C, tax lot 4101. The subject property is 26.62 gross acres and is currently unimproved and utilized for agricultural purposes.

The property is in the southern portion of the Lebanon city limits in a partially developed neighborhood. To the north, west, and south of the site is rural residential property within the Lebanon Urban Growth Boundaries and the Linn County, Urban Growth Area-Urban Growth Management 10-acre Minimum (UGA-UGM-10) zoning district. To the north and west, properties are generally improved with residential dwellings on larger lots. To the east of the site is agricultural and rural residential property within the Lebanon City limits and the Residential Mixed Density zoning district. To the south is rural resource land outside of the Lebanon Urban Growth Boundary and in the Linn County, Farm/Forest (F/F) zoning district.

II. CURRENT REPORT

Under consideration are two separate land use actions: (1) Planned Development, and (2) Subdivision. The Planned Development application is required for larger residential projects over 25 acres, or when a project is a Subdivision of 25 or more lots and the applicant is requesting a multi-year phasing for implementation of the project (not to exceed 10 years). The Applicant is proposing a three-phase development with over 25 residential lots on a project area of over 25 gross acres, triggering the Planned Development application.

The Subdivision application is the proposal to divide the existing 26.62-acre parcel into 122 residential lots, including nine tracts of land not identified for development but to be held as part of the homeowner's association for the subdivision to preserve wetlands throughout the subdivision, and accommodate stormwater treatment. The remaining portion of the land in the project area will be dedicated to public streets and utilities.

The 122 residential lots proposed would range in size from 4,201 to 7,254 square feet with an average lot size of 5,362 square feet. Per Section 16.05.090, these lot sizes would

accommodate single-family detached dwellings, duplexes, zero-lot-line single-family dwellings, or townhomes. The proposed lot sizes are not large enough to accommodate apartments, triplexes, or cottage clusters.

The proposed lot widths would range from 44 feet to 60 feet. Section 16.05.090 (Table 16.05-7) of the Lebanon Development Code establishes the standards for minimum lot area and lot width for a standard lot based on residential dwelling type. The proposed subdivision generally follows the standards identified, however, as part of a Planned Development proposal, flexibility in development standards may be provided. As part of this proposal, the applicant is requesting minor deviations from the minimum standards, specifically:

a. Allow single-family detached dwellings and duplexes on interior lots with lot widths greater than 40 feet, but less than the minimum 50-foot width standard;
b. Allow all residential dwelling types (that would be eligible based on lot size) on corner lots greater than 40 feet but less than the minimum 60-foot width standard; and
c. Waive the additional 500 square foot requirement to the minimum lot size for corner lots.

Per the applicant's narrative, the purpose for the requested minor deviations from the development code standards is to allow for greater preservation of natural resources (i.e., wetlands), more housing options when the lots are developed, and overall open space.

As part of the application submittal, no dwelling development is proposed. Local roadways and public utilities to service the subdivision would be constructed as part of the subdivision proposal. For dwelling units, single-family dwellings and duplexes would be permitted outright, meaning if the applications were approved, once the public infrastructure was constructed and the subdivision plat was final, building permits would be able to be issued for either dwelling type on each lot created. The other dwelling types that may be eligible for development in the subdivision are zero-lot-line dwellings (single-family detached dwellings with one side of the dwelling sitting on a property line) and townhomes (attached single-family dwellings), and per Section 16.05.040 of the Development Code would be subject to an Administrative Review application.

The number of lots to be proposed for the subdivision was restricted based on the wetlands located on the site. A wetland delineation has been completed to identify the boundary of all wetland areas on the site and they have been noted on the site plan. In total, there are approximately 6.02 acres of wetlands on site. The vast majority of the wetlands are preserved on-site and maintained as tracts to be held as part of the homeowner's association for the subdivision. The Tentative Plat map provided shows the proposed wetland areas to be mitigated, with the vast majority associated with roadway improvements with only nine residential lots impacting wetland mitigation. If the subdivision is approved, an application to the Department of State Lands, and possibly the US Army Corps of Engineers will be required for the mitigation. Beyond the wetlands, the subject site is not located in any overlay zone.

For access, the Subdivision would front along Crowfoot Road, which is categorized as a minor arterial in the Transportation System Plan. A new north-south local roadway is proposed, which would connect to Crowfoot Road, and then run to the southern end of the project area. Along

the north-south spine, three cul de sacs and three east-west local roadways are proposed to provide legal access to each proposed lot, while designing the street system to extend to the east for possible future development potential. The roadway layout is also designed to meet the City's block length standards to the greatest extent while meeting Department of State Lands requirements for preserving wetlands in place to the greatest extent feasible. A small trail is also provided along the southern portion of the project area from the public roadway to the rear of the residential lots, along the wetland natural resource area, to a small recreation amenity provided for the subdivision, and then back to the public road.

The new local roadways are all designed to meet the Transportation System Plan standards to provide for two travel lanes, parking on both sides of the street, and landscape planters and sidewalks on both sides of the street.

Due to the size of the subdivision, to meet the Fire Code, secondary emergency access is required. This is provided approximately two-thirds down the property, just south of Tract E as identified on the provided tentative plat with a 20-foot driveway and 25-foot access easement to the east through Carroll Street (private street), onto Hillview Drive. This is a limited emergency access easement, not intended for regular daily trips, and would be restricted with bollards which could be removed by the Fire District in cases of emergency.

In terms of traffic impacts, based upon the 11th edition of the Institute of Transportation Engineers trip generation rates, single-family homes generate 9.43 vehicle trips per day and 0.94 trips during the peak PM traffic hour. The development will create 122 new vacant lots, each of which could be developed with a single-family dwelling unit. Construction of 122 single-family dwelling units would add about 1,150 new vehicle trips per day to the public street system. About 115 of those trips would occur during the peak p.m. traffic hour.

Based on the amount of traffic that could be generated from this subdivision, the City required a Traffic Impact Analysis (TIA) to evaluate the proposal and the impacts on the local street system to identify if any mitigation measures would be required. As part of the study, operational analysis was performed at the following intersections:

- Cascade Drive / Crowfoot Road (north corner)
- Crowfoot Road / Central Avenue (west corner)
- Crowfoot Road / Cascade Drive (east corner)
- Crowfoot Road / Proposed local street connection

The report also evaluated the following transportation issues:

- Existing 2024 land use and transportation system conditions within the site vicinity during the weekday AM and PM peak periods;
- Forecast year 2026 background traffic conditions during the weekday AM and PM peak periods, considering background growth and transportation improvements planned in the study area;
- Trip generation and distribution estimates for the proposed Crowfoot Subdivision; and

- Forecast year 2026 total traffic conditions during the weekday AM and PM peak period with the build-out of the subdivision.

The findings and recommendations of the Traffic Impact Analysis are as follows:

- The study intersections are forecast to meet the City of Lebanon and Linn County operating standards during the weekday AM and PM peak hours under existing and future traffic conditions.
- No capacity-based mitigation needs were identified at the study intersections.
- No safety-based mitigations were identified at the study intersections based on the crash analysis alone; however, the existing signage at Crowfoot Road / Central Avenue / Cascade Drive intersection could be modified as follows, subject to Linn County direction:
    - Cascade Drive/Crowfoot Road (north corner)
        - Replace the stop bar striping on the northbound Cascade Drive approach with triangular yield line markings, following County standards and the Manual on Uniform Traffic Control Devices (MUTCD).
        - Remove the stop sign and stop bar striping on the southbound approach.
        - Add yellow and white skip line striping on Crowfoot Road to emphasize the north-south through movements from Cascade Drive to Crowfoot Road, per County standards and the MUTCD.
    - Crowfoot Road/Central Avenue (west corner)
        - Add a stop sign and stop bar to the southbound Crowfoot Road approach, per County standards and the MUTCD.
    - Cascade Drive/Crowfoot Road (east corner)
        - Add a plaque to the existing eastbound Crowfoot Road approach stop sign that says, “Traffic from Left Does Not Stop” (W4-4aP), per County standards and the MUTCD.
        - Add a plaque to the northbound Cascade Drive approach stop sign that says, “Oncoming Traffic Does Not Stop” (W4-4bP), per County standards and the MUTCD.
        - Add a plaque to the existing westbound Crowfoot Road approach stop sign that says, “Traffic from Right Does Not Stop” (W4-4aP), per County standards and the MUTCD.
    - At the proposed site access roadway connection to Crowfoot Road, it is recommended that the future northbound approach be stop-controlled per City standards and the MUTCD in conjunction with site development.
    - A preliminary intersection sight distance measurement at the proposed access roadway connection to Crowfoot Road shall be included in the formal development application along with the proposed building footprint(s) and other above-ground structures including fences, monument signs, and landscaping.
    - To confirm adequate sight lines at the proposed access road intersection with Crowfoot Road, it is recommended that a final sight distance evaluation be performed post-construction and before site occupancy.

The TIA has been included in the record, and the developer-required improvements have been included as conditions of development if the project were to move forward. Linn County has been provided the recommendations from the TIA to upgrade the signage for the intersection.

For utilities, sanitary sewer, water, and storm drainage mains would be extended through Crowfoot Road to the subject site, and then public mains would be extended through the public rights-of-way to the edges of the property lines to service the subdivision and provide extension opportunity for future development.

Planned Development Proposal – Chapter 16.23 of the development code establishes the procedures for the planned development process. Specifically, the PD establishes a two-step process for consideration of the proposal:

- Step One – Public Hearing, review of preliminary design and program. The first step in the planned development process begins with a quasi-judicial public hearing conducted by the planning commission. This step reviews the preliminary PD design and program, including the overall design elements and mitigation plan, as well as all narratives, explanatory documents, and technical studies. An approval at this level establishes the general validity of the proposed design and program, and grants approval of the basic land use request involved in the planned development application.

- Step Two – Review of Final PD Design – Three Options. After the Planning Commission review for Step One and the quasi-judicial hearing, the Planning Commission shall identify the designated review process and authority for the implementation of the future phases. These review processes include:
    - Review by the planning official (Community Development Director) as a ministerial review (no further public notice)
    - Review by the planning official as an administrative review (with a public notice period)
    - Review by the planning commission in a subsequent public hearing procedure

As part of Step One of the process, the Planning Commission shall evaluate requirements for mitigation plans. Section 16.23.010.I identifies the overview for mitigation plans and establishes when mitigation plans are required or may be exempted.

The current project proposal triggers a Planned Development (PD) Permit as it is proposing a three-phase development with over 25 residential lots on a project area of over 25 gross acres. The development proposal is in full compliance with the development code, with approval of proposed minor modifications to the lot width and area which may be authorized with the Planned Development. The site is within a partially improved neighborhood with large-lot residential uses to the north and west side, agricultural uses to the east, and rural resource land outside the urban growth boundary to the south. The project site is within the urban growth boundary and intended for urbanization per the City's Comprehensive Plan. The City recently completed the extension of the Westside Interceptor Sewer Main project which brought sewer capacity and service to the vicinity for growth opportunity, and other utility services in the area able to be extended to the project site. Finally, with the Transportation Impact Analysis

conducted, and the mitigation measures included as conditions, there are no anticipated adverse impacts to the existing surrounding uses.

Impacts associated with the phasing of the project are limited to the intermittent construction activity that would occur on-site. Through the use of standard mitigation measures and best practices for construction (e.g., dust grates, watering down open dirt areas, storm drainage covers, construction hours, etc.), the impacts would be minimal and intermittent.

Section 16.23.010.I.4 of the LDC indicates that the Planning Commission, after weighing all the evidence, materials, and testimony, that a proposed PD can reasonably be expected to not generate adverse project impacts that need to be addressed by a formal mitigation plan, the Planning Commission may establish a condition of approval that a formal mitigation plan is not required and need not be submitted by the applicant as part of the final design phase.

Based on the information provided by the Applicant, and staff review, the anticipated impacts associated with the development would be addressed with the conditions of development included in this initial hearing review. As such, unless specific testimony is provided during the public hearing to identify specific impacts to be mitigated, staff recommends that the Planning Commission waive the requirement for a formal mitigation plan as part of the final decision process. In addition, based on the detail provided in the current application, and the type of use proposed, it is the staff's recommendation to establish the further review procedure as subject to a Ministerial Review for any land use permitting for dwelling types that are not already outright permitted.

III. CRITERIA AND FINDINGS – PRELIMINARY DECISION – PLANNED DEVELOPMENT

Section 16.23.040 of the LDC establishes the decision criteria and required findings for the preliminary planned development approval. Below is an analysis of the decision criteria and recommended findings:

A. The proposed Planned Development is in conformance with:

1. Basic decision criteria in this Chapter (e.g., Section 16.23.020.B)

   RECOMMENDED FINDING: Section 16.23.020.B.1 requires a minimum of one-acre site to be eligible for a Planned Development. The project area is approximately 26.62 acres, meeting the criteria. Section 16.23.020.B.2 requires compliance with applicable criteria as established in the Community Design Standards in Article Three of the Development Code.

   - Proposed Use: The proposed use is a residential subdivision with a possible mix of single-family detached, duplex, zero-lot-line, or townhome dwellings. Section 16.05.040 of the LDC authorizes all of these dwelling types as either outright permitted or subject to an administrative review. The Planned

Development Permit has been substituted as the required permit in compliance with Chapter 16.23 of the LDC.

- Location: The subject property is located on the south side of Crowfoot Road and identified as Linn County Assessor's Map No. 12S-02W-24C tax lot 4101. The site is unimproved and utilized for agricultural purposes. To the north, west, and south of the site is rural residential property within the Lebanon Urban Growth Boundaries and the Linn County, Urban Growth Area-Urban Growth Management 10-acre Minimum (UGA-UGM-10) zoning district. To the north and west, properties are generally improved with residential dwellings on larger lots. To the east of the site is agricultural and rural residential property within the Lebanon City limits and the Residential Mixed Density zoning district. To the south is rural resource land outside of the Lebanon Urban Growth Boundary and in the Linn County, Farm/Forest (F/F) zoning district.
- Site Size, Dimensions, and Topography: The site is approximately 26.62 acres in size and maintains a general rectangular shape. The site is relatively flat with an elevation of 75 feet to 71 feet, sloping from the east to west.
- Zoning: The property where the proposed development is located is zoned Residential Mixed Density (Z-RM). The purpose of the RM zoning district according to Section 16.06.020.A is to, "accommodate a wider variety of housing types and more intensive land use than the RL zone."
- Development Standards: Section 16.05.090 of the Lebanon Development Code identifies the minimum development standards to be applied. The 122 residential lots would range in size from 4,201 to 7,254 square feet with an average lot size of 5,362 square feet. Per Section 16.05.090, these lot sizes would accommodate single-family detached dwellings, duplexes, zero-lot-line single-family dwellings, or townhomes.

  The lot widths would range from 44 feet to 60 feet. Section 16.05.090 (Table 16.05-7) establishes the standards for minimum lot area and lot width for a standard lot based on residential dwelling type. The subdivision generally follows the standards identified, however, as part of a Planned Development, flexibility in development standards may be provided. The following minor deviations from the minimum standards are included in the PD:

  a. Allow single-family detached dwellings and duplexes on interior lots with lot widths greater than 40 feet, but less than the minimum 50-foot width standard;
  b. Allow all residential dwelling types (that would be eligible based on lot size) on corner lots greater than 40 feet but less than the minimum 60-foot width standard; and
  c. Waive the additional 500 square foot requirement to the minimum lot size for corner lots.

  The purpose of the requested minor deviations from the development code standards is to allow for greater preservation of natural resources (i.e.,

wetlands), more housing options when the lots are developed, and overall open space.
Building envelope, parking, and landscaping standards will all be reviewed as part of the building permit review.

- Access: findings regarding access and site development standards associated with the subdivision development are included in the subdivision findings and incorporated herein.

Section 16.23.020.B.3 requires periphery yards to be at least as deep as those required by the yard requirements of the underlying zone unless the Planning Commission finds that specific features of the development would mitigate as well as the specified yard requirements. The development is proposing to meet all yard requirements as established by the development code.

Section 16.23.020.B.4 requires lot coverage and building height to be no greater than the underlying zone unless approved by the Planning Commission. The development proposes to meet the standards of the underlying zone for height and lot coverage. This standard is met.

Section 16.23.020.B.5 identifies standards for open space. This development proposal provides open space at the southern portion of the property. A small trail is provided along the southern portion of the project area from the public roadway to the rear of the residential lots, along the wetland natural resource area, to a small recreation amenity provided for the subdivision, and then back to the public road. Inclusive of the natural features area of the wetlands, the area is almost two acres in size, exceeding the minimum area standards.

Section 16.23.020.B.6 identifies standards for subdivision lot sizes. This section identifies the Planning Commission may approve a reduction in the minimum area, width, depth, or frontage requirements, if the overall design and amenities of the proposed project outweigh any adverse impact that may result from the reductions. The City has adopted a Housing Production Strategy to encourage smaller lot subdivisions of this nature identifying the smaller lots do not create an adverse impact if the lots can still accommodate the required parking. Parking is not proposed to be reduced, as such, these standards have been met. In addition, with the preservation of the wetland areas, and the additional trail and recreational amenities within the subdivision, the project preserves natural areas and provides on-site amenities that would offset any impacts from the lot width and area reductions.

Section 16.23.020.B.7 identifies that the applicant may elect to develop the site in successive phases in a manner indicated in the Development Design Program, or the Planning Commission may require that development be done in stages if public facilities are not adequate to service the entire development initially. All public utilities and access are available to be extended to the site and can accommodate the development. The applicant is proposing a phased development with three phases and a full build-out to be completed within the maximum ten-year horizon authorized

by the Planned Development. Section 16.23.010.C.1 indicates that the Planning Commission may approve a schedule for developing a site in phases, but in no case shall the total period for all phases be greater than ten years without reapplying for a Planned Development approval. Based on the Applicant's phase proposal, the maximum buildout is anticipated to be within 10 years. This standard is met.

2. Standards for development in the underlying zones noted in Chapters 16.05-16.11, or as modified under the provisions in Subsection 16.23.010.F.2.

   RECOMMENDED FINDING: As indicated in Finding A.1 above, and in the findings for the subdivision application incorporated herein, the proposal meets the standards of the underlying zone, with the modifications requested. As such, this standard has been met.

3. Other applicable development requirements, such as parking, and access (see Community Design Standards, Article Three of the Development Code)

   RECOMMENDED FINDING: As indicated in Finding A.1 above and in the findings for the subdivision application incorporated herein, the proposal meets the standards of the underlying zone and other applicable development standards with the requested modifications. As such, this standard has been met.

B. Exceptions from the standards of the underlying zone may be warranted by the design and amenities incorporated into the Development Design and Program, provided there are no identified "negative impacts" or "hardships" to the surrounding neighborhood and/or the community as a whole after mitigation.

   RECOMMENDED FINDING: As part of the planned development, minor deviations from the minimum standards are requested, specifically:

   a. Allow single-family detached dwellings and duplexes on interior lots with lot widths greater than 40 feet, but less than the minimum 50-foot width standard;
   b. Allow all residential dwelling types (that would be eligible based on lot size) on corner lots greater than 40 feet but less than the minimum 60-foot width standard; and
   c. Waive the additional 500 square foot requirement to the minimum lot size for corner lots.

   The requested deviations from the standards of the RM zoning district are warranted since they will allow for greater preservation of on-site wetlands, open space, and through lot size averaging a wider array of housing options and price points.

   There are no known negative impacts of the proposed use on adjacent properties or the public. To the north and west of the subject property is residential development within the Lebanon Urban Growth Boundary with a Comprehensive Plan designation of Residential Mixed Density. To the east and south of the subject property is farmland within the

Lebanon city limits with a zone designation of Residential Mixed Density. The subject property is located entirely within the RM zoning district, which is intended to accommodate a wider variety of housing types and more intensive land use than the RL Zone. The Planned Development and Subdivision will implement the zoning, comprehensive plan, and housing production strategy goals by providing housing development at densities intended at urban standards that provide an array of housing opportunities including single-family detached, duplexed, zero-lot-line, and townhomes. As such, this criterion has been met.

C. The proposed Planned Development, or unit thereof, can be substantially completed within the approved timeline.

RECOMMENDED FINDING: According to LDC 16.23.010.C a phasing of development may be approved with a Planned Development application under three conditions: 1) the total time for completion of all phases cannot exceed ten years without reapplying for Planned Development approval; 2) approval of a phased Planned Development proposal requires that the public facilities required to serve each phase are constructed in conjunction with or before each phase; and 3) an application for phasing may be approved after the Planned Development approval as a modification to the approved plan, following the procedures for modifications. A multi-year phased development of the proposed subdivision is proposed. Included in the plan set is a phasing plan. Each phase will be dependent on market demand but is forecasted to be completed as follows: Phase 1 – 2027, Phase 2 – 2029, and Phase 3 – 2031. The timeline established complies with LDC 16.23.010.C.1. As shown on the plan set, the necessary public facilities required to serve each phase can reasonably be constructed in conjunction with or before the final platting of each phase. Compliance with LDC 16.23.010(C)(2) can be verified at the time of a building permit or before the issuance of an occupancy permit. As such, this criterion has been met.

D. The streets are adequate to support the anticipated traffic and the Planned Development will not overload the streets within or outside the Planned Development area.

RECOMMENDED FINDING: The findings for the subdivision application are incorporated herein.

E. The proposed utility and drainage facilities are adequate for the population densities and the type of development proposed and will not create a drainage or pollution problem within or outside the Planned Development area.

RECOMMENDED FINDING: Sanitary Sewer: According to LDC 16.16.030 adequate sanitary sewer infrastructure and service must be made available to serve each new development, and such facilities and service must comply with the City's Sanitary Sewer Facility Plan and applicable construction specifications. City utility maps show a 24-inch public sanitary sewer main in Crowfoot Road at the intersection of View Lane. A connection to the public sanitary sewer to and through the project site is proposed.

Water: According to LDC 16.16.030 adequate water infrastructure and service must be made available to serve each new development, and such facilities and services must comply with the City's Water System Facility plan and applicable construction specifications. City utility maps show an 8-inch public water main in View Lane at the intersection of Elderberry Street. An extension of the public water system to and through the project site is proposed.

Storm Drainage: According to LDC 16.16.040, the City may grant land use approval and issue a development permit when adequate provisions for stormwater runoff are or will be made available in compliance with the City's Storm Drainage Master Plan and all applicable local, state, and federal standards. All new site development must maintain pre-development peak historic stormwater discharge rates as per City standards. The application for a development proposal shall demonstrate through calculations acceptable to the City Engineer that this standard will be met by the proposed development. City utility maps show a 36-inch public storm drainage system in Crowfoot Road. A connection to the public storm drainage system in Crowfoot Road is proposed.

F. Section 16.23.040.B allows the Commission to establish conditions of approval for the development. Staff's recommended conditions are contained in Section V of this report.

Section 16.23.050 establishes the procedures for the second step of the process: The Final PD Design and Program. As noted, if the PD is approved, the Commission has the option to determine the review process and authority. Options include:

1. Option 1: Review by the Planning Official as a Ministerial Review.
2. Option 2: Review by the Planning Official as an Administrative Review.
3. Option 3: Review by the Planning Commission in a subsequent public hearing.

RECOMMENDED FINDING: Due to the minimal impacts associated with the proposed use as supported by the findings in previous and following sections, the Planning Commission authorizes Option 1, to review all subsequent actions associated with the Planned Development as a ministerial review by the Planning Official.

G. Section 16.23.030.D establishes Decision Criteria for Mitigation Plans for Planned Developments. Section 16.23.010.I.4 states, "If in Step One the Planning Commission determines, after weighing all the evidence, materials, and testimony presented by staff, the applicant, and other interested parties that a proposed PD can reasonably be expected to not generate adverse impacts that need to be addressed by a formal mitigation plan, and the Planning Commission establishes a condition of approval that the submittal of a formal mitigation plan is not required, the applicant need not submit such a plan as part of the Final Design and Program.

RECOMMENDED FINDING: Based on the testimony and evidence provided in the previous findings in this Section, the Planning Commission determines that a formal mitigation plan is not required.

IV. CRITERIA AND FINDINGS – SUBDIVISION

The Applicant is requesting consideration of a Subdivision application for the creation of a 122-lot, 9-tract housing subdivision including public improvements for new local roadways and utility extensions. Below is an analysis of the review criteria (Section 16.22.090 of the LDC) and recommended findings:

1. The proposed preliminary plat complies with the applicable Development Code Sections and adopted Master Plans. At a minimum, the provisions of this Chapter, and the applicable Chapters and Sections of Article Two (Land Use and Land Use/Development Zones) and Article Three (Community Development and Use Standards) of this Code shall apply. Where a variance is necessary to receive preliminary plat approval, the application shall also comply with the relevant Sections of Chapter 16.29.

   RECOMMENDED FINDING: According to Table 16.06-7, the development standards for the RM zone. Within the RM zone, the minimum lot size and lot width are 3,500 square feet and 40 feet for a single-family attached dwelling; 5,000 square feet and 50 feet for a single-family detached dwelling; and 5,000 square feet and 50 feet for a duplex.

   The proposal includes a preliminary plan to subdivide the ±26.74 -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 8,606 square feet and lot widths ranging in size from 44 feet to 60 feet.

   A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum lot area and width standards in the RM zoning district: A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum standards in the RM zoning district:

   - To allow single detached and duplex dwelling units development on interior lots greater than 40 feet but less than 50 feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
   - To allow all residential dwelling types on corner lots greater than 40 feet but less than 60 feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
   - To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

   Upon approval of the Planned Development application, the lots comply with the dimension requirements of the RM zone for the intended respective use found in Article Two. According to Table 16.05-2, single-family detached dwellings and duplexes are outright permitted uses whereas townhomes, zero lot line dwellings, and multiple family development are permitted with an Administrative Review. Setbacks and other development-specific standards found in Articles Two and Three will be evaluated upon the submittal of a building permit for a single-family detached dwelling or duplex and an Administrative Review for a townhome and/or zero lot line development.

In terms of access, LDC 16.13.030(A)(1) requires that all streets adjacent and interior to the new development be improved to City standards. As shown on the preliminary plat, the proposal includes a public street network consisting of the following: 1) a new street with a connection to Crowfoot Road that transverses the property generally to the north/south and ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead-end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

The proposed public streets will be built to full city standards as specified in Chapter 16.13 and conformance with Engineering Standards. Site access for each lot would be designed upon development to meet the driveway spacing and vision clearance requirements for compliance with Chapter 16.12, as such, the proposal conforms with Articles Two and Three.

2. The proposed plat name is not already recorded for another subdivision and satisfies the provisions of ORS Chapter 92 and the County Surveyor.

   RECOMMENDED FINDING: Per Oregon Revised Statue (ORS) 92.090, subdivision plat names are subject to the approval of the county surveyor. No preliminary subdivision plat will be approved which bears a name similar to or pronounced the same as, the name of any other division in the same county. Unless the land platted is contiguous to and platted by the same party that platted the subdivision bearing that name, or unless the party files and records the consent of the part that platted the contiguous subdivision bearing that name. All subdivision plats must continue the lot number and, if used, the block numbers of the subdivision plat of the same name last filed. The proposed subdivision plat named "Samantha Meadows" has been reserved for this site by the Linn County Surveyor; therefore, this criterion has been met.

3. The proposed streets, roads, sidewalks, bicycle lanes, pathways, utilities, and surface water management facilities are laid out to conform or transition to the plats of subdivisions and of partitions already approved for adjoining property as to width, general direction, and in all other respects. All proposed public improvements and dedications are identified on the preliminary plat.

   RECOMMENDED FINDING: The proposed preliminary plat will result in a 122-lot, 9-tract residential subdivision on the south side of Crowfoot Road. LDC 16.13.030(A)(1) requires that all streets adjacent and interior to new development be improved to City standards. Crowfoot Road is identified as an arterial road in the Transportation System Plan which would require a 75-foot right-of-way width. The existing right-of-way is 88 feet. Linn County is the road authority for Crowfoot Road and has identified conditions for roadway improvements on Crowfoot Road.
   As part of the subdivision, new public streets are proposed including 1) a new street with a connection to Crowfoot Road that transverses the property generally to the north/south and

ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead-end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

Findings for the Planned Development above and incorporated herein provide information on the utility infrastructure and extensions proposed to demonstrate compliance with these chapters. As such, the proposed subdivision meets this criterion.

4. All proposed private common areas and improvements (e.g., homeowners association property) are identified on the preliminary plat.

   RECOMMENDED FINDING: The common areas for the subdivision include nine tracts for entry monument signage, wetland preservation tracts, and community recreational amenities. An access easement is also depicted on the map for emergency secondary access. With the common areas depicted on the preliminary plat, this criterion has been met.

5. Evidence that all City, County, State, and Federal regulatory agencies identified or mapped special management areas have been accurately and effectively identified on the appropriate maps and plans submitted to the City for review.

   RECOMMENDED FINDING: There are no mapped special management areas on the subject property; therefore, the criterion is not applicable.

6. Evidence that improvements or conditions required by the City, road authority, Linn County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

   RECOMMENDED FINDING: all property dedications associated with the necessary road improvements have been depicted on the preliminary plat. All required road and utility improvements have been depicted on the preliminary plat and conditions have been incorporated to ensure all required improvements are included as part of the final plat. As such, this criterion has been met.

7. If any part of the site is located within a Special Area Plan or District, Overlay Zone, or previously approved Planned Development, it shall conform to the applicable regulations and/or conditions.

   RECOMMENDED FINDING: The property is not located within a Special Area Plan or Overlay Zone. Therefore, this standard does not apply to this application.

8. All lots shall comply with the lot area, setback, and dimensional requirements of the applicable land use zone (Chapters 16.05 – 16.10), and the standards of Chapter 16.12 (Subsection 16.12.030.K, Street Connectivity and Formation of Blocks).

RECOMMENDED FINDING: Within the RM zone, the minimum lot size and lot width are 5,000 square feet and 50 feet for a single-family detached dwelling or duplex development; 2,500 square feet and 20 feet for a townhouse development; 3,500 square feet and 40-foot for zero-lot-line housing; and 9,000 square feet and 60-feet for multiple-family and triplex development.

According to LDC 16.23.020(B)(6), the Planning Commission may approve a reduction in the minimum area, width, depth, and frontage requirements for subdivision lots in a PD, if the overall design and amenities of the proposed project outweigh any adverse impacts that may result from a reduction in the minimum area, width, depth, and frontage requirements for the lots.

The proposal includes a preliminary plan to subdivide the 26.74± -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 7,254 square feet and an average lot size of 5,362 square feet. Lot widths range in size from 44 feet to 60 feet.

A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow single detached and duplex dwelling units development on interior lots greater than 40 feet but less than 50 feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
- To allow all residential dwelling types on corner lots greater than 40 feet but less than 60 feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

Allowing these deviations from the development code standard allows for greater preservation of natural resources, more housing options when the lots are developed, and overall open space.

No development is proposed in association with the subdivision application. If the subdivision application is approved, each lot would be eligible for development of a single-family detached or duplex dwelling with approval of a building permit or a townhouse and zero lot line development with approval of an administrative review.

The block layout provisions in Chapter 16.12.030(K)(1)(c) state that blocks without pedestrian and bicycle connections through the block cannot exceed 600-800 feet in block length and 1,600-2,000 feet in block perimeter with exceptions to block lengths under LDC 16.12.030(K)(3).

Presently, the site has access to Crowfoot Road (County Road 717) to the northeast via a 60-foot-wide right-of-way dedication per PP 2012-28 and an unnamed, unimproved 25-foot-wide right-of-way to the northwest. As shown on the preliminary plat, the proposal includes a public street network consisting of the following: 1) a new street with a connection to Crowfoot Road that transverses the property generally to the north/south and ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead-end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

As stated in LDC 16.12.030.K.3, exceptions to the block length standards when existing development and/or geographic or natural features preclude meeting the established standards. In this case, private property and existing development preclude a through connection with adjacent public streets to the east and west of the subject property. Therefore, an exception to the block length standards is granted, and the criterion is met.

9. Setbacks shall be as required by the applicable land use zone (Chapter 16.05 – 16.10).

   RECOMMENDED FINDING: According to LDC Table 16.05-9: minimum setbacks in the RM zone are as follows: 10-foot front yard; 10/15-feet street side yard (Note: If front one-yard setback (Street or Street Side) is 15 feet, then the other can be less than 15 feet but not less than 10 feet. For irregularly shaped lots, the average setback for Street and Street Side Yards shall be 7.5 feet with no setback less than 5 feet); 5 feet side (interior) yard, and 10/20-feet to the rear yard. As shown on the preliminary plat, there is adequate area provided to accommodate future development conforming to the minimum setback requirements. Conformance will be reviewed upon development during the building permit review process. As such, this criterion has been met.

10. Each lot shall conform to the standards of Chapter 16.12 (Access and Circulation).

    RECOMMENDED FINDING: According to LDC 16.12.020.B.1 and LDC 16.12.030.L.1, each lot will abut a street for a minimum width of 14 feet which will allow for a minimum 12-foot-wide driveway. According to LDC 16.12.030.F.2 and LDC 16.12.030.J.4, access is from a public street. Each lot as shown on the preliminary plat complies with this requirement.

    The new local roadways are all designed to meet the Transportation System Plan standards to provide for two travel lanes, parking on both sides of the street, and landscape planters and sidewalks on both sides of the street.

    Due to the size of the subdivision, to meet the Fire Code, secondary emergency access is required. This is provided approximately two-thirds down the property, just south of Tract E as identified on the provided tentative plat with a 20-foot driveway and 25-foot access easement to the east through Carroll Street (private street), onto Hillview Drive. This is a

limited emergency access easement, not intended for regular daily trips, and would be restricted with bollards which could be removed by the Fire District in cases of emergency.

In terms of traffic impacts, based upon the 11th edition of the Institute of Transportation Engineers trip generation rates, single-family homes generate 9.43 vehicle trips per day and 0.94 trips during the peak PM traffic hour. The development will create 122 new vacant lots, each of which could be developed with a single-family dwelling unit. Construction of 122 single-family dwelling units would add about 1,150 new vehicle trips per day to the public street system. About 115 of those trips would occur during the peak p.m. traffic hour.

Based on the amount of traffic that could be generated from this subdivision, the City required a Traffic Impact Analysis (TIA) to evaluate the proposal and the impacts on the local street system to identify if any mitigation measures would be required. Based on the results of the TIA, the study intersections are forecast to meet the City of Lebanon and Linn County operating standards during the weekday AM and PM peak hours under existing and future traffic conditions. There are no capacity-based mitigation needs identified at the study intersections, and no safety-based mitigations were identified at the study intersections based on the crash analysis alone; however, the existing signage at Crowfoot Road / Central Avenue / Cascade Drive intersection could be modified to enhance safety. Conditions of development have been included to incorporate the recommended mitigation measures from the TIA. With the conditions of development, this criterion has been met.

11. Landscape or other screening may be required to maintain privacy for abutting uses. See Chapters 16.05 – 16.10 (Land Use Zones), and Chapter 16.15 (Landscaping, Street Trees, etc.).

    RECOMMENDED FINDING: The residential landscape improvement standards will be reviewed upon the development proposal. This criterion has been met.

12. In conformance with the Oregon Fire Code, a 20-foot-wide fire apparatus access drive shall be provided to serve all portions of a building that are located more than 150 feet from a public or private road or approved access drive. See Chapter 16.12 (Access and Circulation).

    RECOMMENDED FINDING: Based on the subdivision layout and probable building locations, all dwellings will be less than 150 feet from a public street. As shown on the preliminary plat, all lots will be accessible from a 58-foot-wide public street with a 36-foot-wide curb-to-curb width as well as a 20-foot-wide emergency accessway to be designed per the Oregon Fire Code, this criterion has been met.

13. Where a common drive is to be provided to serve more than one lot, a reciprocating access easement and maintenance agreement shall be recorded with the approved subdivision or partition plat.

    RECOMMENDED FINDING: There are no common drives proposed at this time. This criterion is not currently applicable.

14. All applicable engineering design standards for streets, utilities, surface water management, and easements shall be met.

    RECOMMENDED FINDING: Findings related to access and circulation are provided in Finding Nos. 3 and 8 above and incorporated here by reference. As shown in the preliminary utility plan, extensions of public facilities are proposed to serve the development. All plans will conform to City standards and be approved before platting the subdivision, this criterion has been met.

V. PUBLIC NOTIFICATION AND COMMENTS

A public notification for this project was issued on March 26, 2024. Three written public comments were received from members of the public before publishing the Planning Commission agenda and have been included as attachments. Comments were also received by the Fire District, Linn County Road Authority, Engineering Department, and Building Department and have been incorporated as conditions of development for the application.

Any public comments received before the hearing will be distributed to the Planning Commission and the Applicant and posted to the City's website as indicated in the Public Notice.

VI. CONCLUSION AND RECOMMENDED CONDITIONS FOR DEVELOPMENT

Staff finds the proposal complies with the decision criteria for a Planned Development and Subdivision, and recommends approval of the application subject to the adoption of the following Conditions of Development:

1. The Planning Department conditions include, but may not be limited to:

    a. All phases of the development as approved in the Preliminary Plan shall be completed within 10 years of the date of issuance of approval of the Planned Development.
    b. Based on the evidence provided, the Planning Commission determines that a formal mitigation plan is NOT required as part of this Planned Development.
    c. Any housing development proposed that is eligible without a variance application and reviewed for compliance under the preliminary planned development that is not an outright permitted use is subject to a Ministerial Review application.
    d. All fencing shall be installed in compliance with the development code and meet all necessary sight distance and clear vision requirements.
    e. A final partition plat, complying with provisions in ORS Chapter 92, shall be completed by a registered professional land surveyor and submitted to the City for approval.
    f. The final plat shall substantially conform to the proposal, comply with applicable requirements in the Lebanon Development Code, and be recorded within three years of the final date of approval.
    g. All necessary permits through the Department of State Lands, Department of Environmental Quality, and the Army Corps of Engineers shall be obtained for any

wetland mitigation necessary for development and the detention pond before issuance of city permits for construction.

h. A homeowner's association shall be established to maintain ownership and property taxes associated with the nine tracts and to maintain the storm detention systems, community recreation areas, and wetlands. The association shall be filed and recorded before the issuance of certificates of occupancy.

2. All requirements of the Lebanon Fire District shall be met, including but not limited to:

   a. Plans shall be submitted for review and approval by the Lebanon Fire Marshal that demonstrate full compliance with the Oregon Fire Code and local amendments. Lebanon Fire Marshal approval shall be obtained before issuance of building permits.

3. The Engineering Department conditions include, but may not be limited to:

   General

   a. All public improvements shall:
      (1) conform to the latest "City of Lebanon Standards for Public Improvements."
      (2) require completion of a Drawing Review Application and a Public Improvements Permit before beginning construction.
      (3) be designed by a professional engineer registered in the State of Oregon.
   b. All elevations shown on plans submitted to the City must be on the NAVD 88 vertical datum to provide compatibility with the City computer-aided mapping system.
   c. All private, onsite utilities must be reviewed and approved by the City Building Official.

   Transportation

   d. Provide a Geotech report including a minimum street section for wet and dry weather construction conditions.
   e. *Any off-site traffic improvements as determined by the TIA report will be the responsibility of the* developer *and will be required to be constructed with the development.*
   f. Construct City standard full depth half street improvements along Crowfoot Road.
   g. Provide City standard street trees in compliance with the City of Lebanon street tree policy.
   h. Driveway access for lot 26 shall be located as far to the southwest property line as possible.
   i. Fence locations for all corner lots will require intersection sight distance & clear vision design submitted for review and approval.
   j. Sidewalks, paths, and driveway approaches must comply with ADA requirements.
   k. Sidewalks adjacent to the detention ponds and tracts shall be constructed with public improvements.
   l. Provide City standard streetlights.
   m. Postmaster must approve cluster mailbox locations.
   n. Verify Republic Services approval for the location and turn around access to garbage and recycling containers.
   o. Developer responsible for fees associated with vacation existing Crowfoot right-of-way.

Water

p. Identify any on-site wells on the engineered drawings. Wells must be capped and abandoned according to state and county regulations before connection to the public water system.
q. The number and location of fire hydrants shall be approved by the Lebanon Fire Marshal. All new hydrants must be operational and accepted by the city before storage of combustible materials on site.
r. Water system improvements shall be extended through the development site to the edges of the property lines so that future extensions can continue.

Storm Drainage

s. The drainage system and grading plan shall be designed so as not to adversely impact drainage to or from adjacent properties. Storm drainage facilities must be designed and constructed to ensure historical rates of site discharge are not exceeded. Storm drain capacity shall be determined by the Rational Method for a 10-year event with a 15-minute minimum duration time using the curve (fig 5.3) in the master plan. A detailed design including engineering calculations shall be submitted as part of the site plan review.
t. With the engineering drawings, provide a grading plan for the sites that indicate existing and proposed elevations. Drainage improvements (ditches and or piping) may be required at the site boundaries to prevent adverse impacts. The engineering drawings must provide a detailed design (including calculations) of the drainage improvements and mitigation of any impacts to adjacent properties.
u. Maintenance responsibility for private stormwater detention systems shall be clearly established through subdivision Conditions, Covenants, and Restrictions on the subdivision plat or through property deed restrictions. The city does not accept maintenance reasonability for private stormwater systems or detention facilities.
v. Storm drain improvements shall be extended through the development site to the edges of the property line so that future extensions can continue.
w. Provide verification of Oregon DEQ NPDES permit issuance and all conditions of permit issuance before construction.
x. Any wetlands identified as being impacted by public improvements shall be mitigated before the final acceptance of public improvements.
y. Provide a construction erosion prevention plan.

Landscaping

z. Any landscaping proposed in the public right of way shall have a maximum mature height of no more than 24 inches above the street grade and at least 3 feet from any fire hydrant. All landscaping proposed in the yard setback areas adjacent to public streets shall have a maximum mature height of no more than 36 inches above the street grade.

VII. PLANNING COMMISSION ACTION

A. The Planning Commission may either:

1. Approve Subdivision S-24-02 and the Preliminary Planned Development PD-24-01 without modification and authorize Final Design and Program to be reviewed at the ministerial level by the planning official; or

2. Approve Subdivision S-24-02 and the Preliminary Planned Development PD-24-01 WITH modification and authorize Final Design and Program to be reviewed at the _____level [Ministerial Review, Administrative Review, or Quasi-Judicial hearing before the Planning Commission] adopting modified findings for the decision criteria and conditions of development; or

3. Deny Subdivision S-24-02 and the Preliminary Planned Development PD-24-01, specifying reasons why the proposal fails to comply with the decision criteria; and

4. Direct staff to prepare an Order of Decision for the Chair or Vice Chair's signature incorporating the adopted findings as determined by the Planning Commission.

April 5, 2024

Thomas and Rhonda Hensley
2200A N Hidden Valley Lane
Bloomfield, New Mexico 87413
505 632 9371
Owners of 685 Hillview Drive, Lebanon, Oregon

City of Lebanon
925 S. Main Street
Lebanon, Oregon 97355

Lebanon Planning Commission
Objection to granting PD-24-01 & S-24-02
Please read into the record at hearing.

Dear Planning Commission:

We are in receipt of the notice of public hearing of April 17, 2024, concerning our adjoining property, 4+ acres towards the south end of the proposed development. We request that the permit be denied and that the applicant propose lots no less that 2 acres each. This would afford 11 lots on 22 acres and be consistent with the neighborhood.

Damages suffered by 7 adjoining properties.

1) The quiet enjoyment of rural living which has been the case for properties on Hillview will be irreparably diminished.
2) The drainage plan does not continue past lot 78, leaving the 4 southern adjoining properties subject to the drainage from the development.
3) The plan shows a road dead ending on our property, giving easy access to crime that inevitably will follow the density of 5 or more dwellings per acre.
4) The density of 5 dwellings per acre is detrimental to the adjacent property owners.
5) There is no proposed 6 feet or more solid wall the entire length of the development which would shield current property owners from the increased noise.
6) The drainage ditch should be extended the entire length of the west side and a common area of 50 feet before each lot past the drainage ditch.

This proposal is indeed bad news for the adjacent property owners, who will suffer the consequences and not the profits. We request that the permit be denied.

Sincerely,

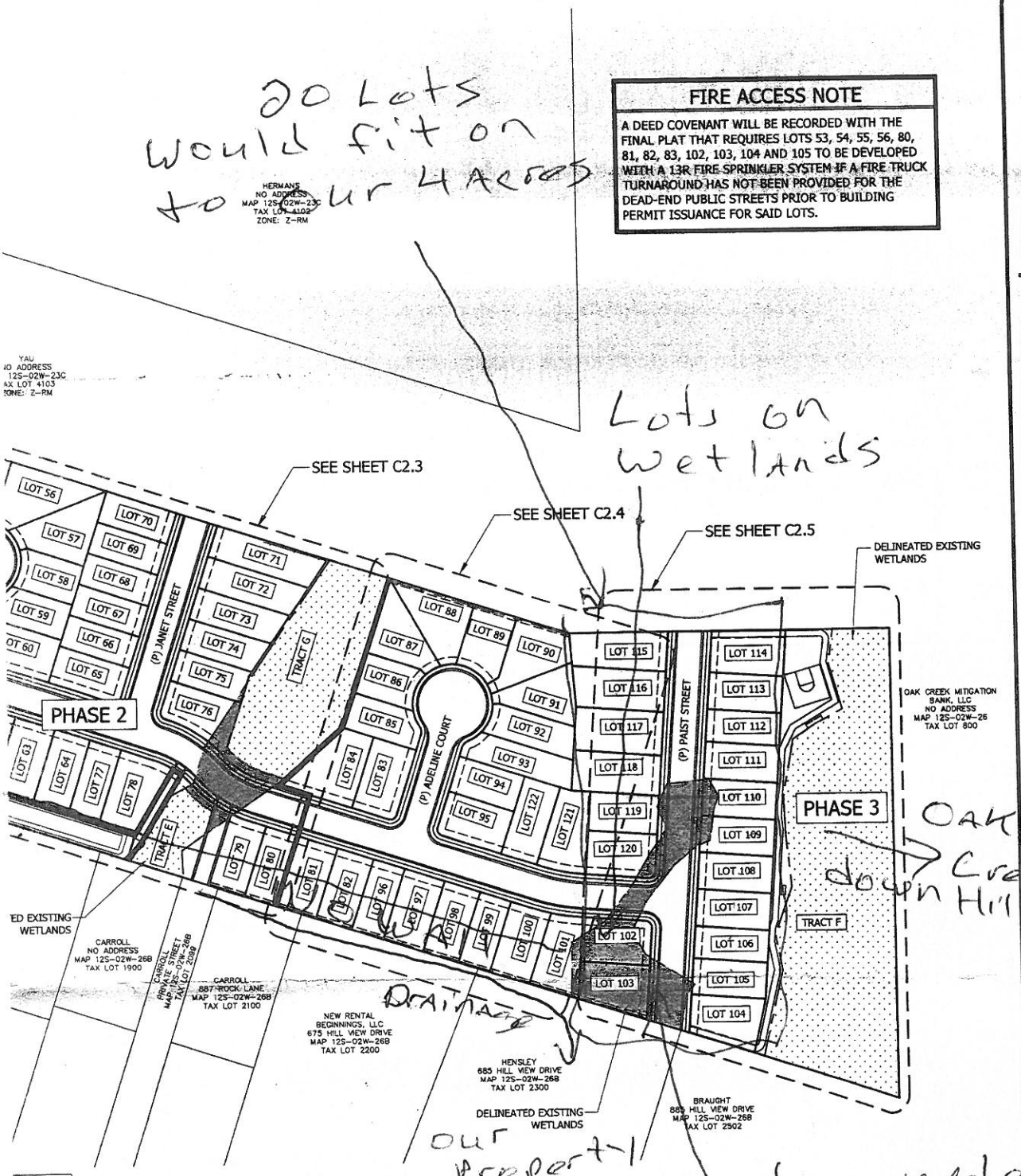
Thomas Hensley

Rhonda Hensley

20 Lots would fit on to our 4 Acres

FIRE ACCESS NOTE

A DEED COVENANT WILL BE RECORDED WITH THE FINAL PLAT THAT REQUIRES LOTS 53, 54, 55, 56, 80, 81, 82, 83, 102, 103, 104 AND 105 TO BE DEVELOPED WITH A 13R FIRE SPRINKLER SYSTEM IF A FIRE TRUCK TURNAROUND HAS NOT BEEN PROVIDED FOR THE DEAD-END PUBLIC STREETS PRIOR TO BUILDING PERMIT ISSUANCE FOR SAID LOTS.



Lots on Wetlands

Oak Creek down Hill

Our Property

Why does road end at our fence? Invites crime

PROJECT AREA SUMMARY

GROSS LAND AREA:	26.74± ACRES
TRACT A - SIGNAGE/LANDSCAPE:	0.04± ACRES
TRACT B - OPEN SPACE W/PRESERVED WETLANDS:	0.08± ACRES
TRACT C - STORMWATER TREATMENT & MAINTENANCE ACCESS:	1.30± ACRES
TRACT D - OPEN SPACE W/PRESERVED WETLANDS:	0.12± ACRES
TRACT E - OPEN SPACE W/PRESERVED WETLANDS:	0.20± ACRES
TRACT F - OPEN SPACE W/PRESERVED WETLANDS:	2.30± ACRES
TRACT G - OPEN SPACE W/PRESERVED WETLANDS:	0.82± ACRES
TRACT H - OPEN SPACE W/PRESERVED WETLANDS:	0.68± ACRES
TRACT I - OPEN SPACE W/PRESERVED WETLANDS:	1.01± ACRES
RIGHT-OF-WAY DEDICATION:	5.42± ACRES
NET LAND AREA:	14.77± ACRES

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

1 INCH
0 100'

PLAN REVISIONS	DATE

Sheet C2.0

SCALE: SEE BARSCALE

CLIENT:
PACIFIC NORTHWEST LAND CO., LLC
C/O MARK W. VUKANOVICH
4931 SW 76th AVE. PMB 360
PORTLAND, OREGON 97225
(541) 350-1060

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

TENTATIVE PLAT
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND GROWFOOT RD
DRAWN BY: MJM
CHECKED BY: BSV

Tammy Dickey

From: Taylor, Stephanie <staylor@co.linn.or.us>
Sent: Tuesday, April 9, 2024 7:28 AM
To: Tammy Dickey
Subject: RE: Notice of Public Hearing - April 17th Planning Commission Meeting

Good Morning Tammy,

RE: PD-24-01 & S-24-02 – Pacific Northwest Land Co., LLC – 12-2W-23C TL 4101

Comments from the Linn County Road Department:

Road Improvement permit and access permit will be required. Traffic Impact Analysis will be required. Please contact the Linn County Road Department with any questions.

Thanks,

Stephanie Taylor
Linn County Road Department
3010 Ferry Street SW
Albany, OR 97322
staylor@co.linn.or.us
(541) 967-3919

From: Tammy Dickey <tdickey@ci.lebanon.or.us>
Sent: Tuesday, March 26, 2024 1:02 PM
Subject: Notice of Public Hearing - April 17th Planning Commission Meeting

Please find the Public Notice for the April PC Meeting attached.

Tammy Dickey, CPT
Senior Development Technician

Tammy Dickey

From: Sam Waller <sam_waller88@hotmail.com>
Sent: Friday, April 5, 2024 4:01 PM
To: Kelly Hart
Subject: Crowfoot subdivision

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Caution! This message was sent from outside your organization.

Good afternoon,

I am writing this to oppose the new subdivision off of crowfoot. I am against this development for many reasons but the biggest reason right now is traffic. I have lived in the area my whole life and have seen a lot of growth. When driving through town at certain times of the day highway 20 can be backed up from the light on Walker to the light on Airport road. The town is growing faster than the infrastructure and is causing issues.

The number one traffic area of concern is the intersection of Crowfoot, Central and Cascade. I live off of this intersection and see near crashes almost daily. This intersection needs to be addressed (possibly with a round about) before adding new homes to the area as it gets backed up from just school traffic.

The other area of Concern is the South Main and Rock Hill intersection which is already a spot of frequent accidents due to low visibility and high traffic flow.

This town is not set up to handle the massive growth already seen in the last 15 years. The road system needs major improvements before more homes are considered. Again this is just my main concern with a new subdivision and I strongly oppose moving forward with this project.

Thanks,
Sam Waller

Tammy Dickey

From: saw556@protonmail.com
Sent: Thursday, April 4, 2024 9:24 AM
To: Kelly Hart
Subject: S-24-02 Crowfoot Road

Dear City Council Members,

I am writing to express my strong opposition to the proposed new subdivision that is planned for our city. As a long-time resident of this community, I have seen firsthand the negative impact that unchecked development can have on our environment, infrastructure, and quality of life.

First and foremost, the proposed subdivision would put a significant strain on our already overburdened infrastructure. Our roads are already congested, our schools are at capacity, and our public services are stretched thin. Adding hundreds of new homes to the area would only exacerbate these problems and make life more difficult for those of us who call this city home.

In addition, the proposed subdivision would drastically change the character of our community. Our city has a unique charm and character that sets it apart from other areas. Adding a large, cookie-cutter subdivision would homogenize our city and strip it of the qualities that make it special. We must preserve the character and identity of our community for the benefit of all residents.

I urge you to consider the long-term consequences of allowing this subdivision to move forward. We must prioritize smart, sustainable growth that benefits our community as a whole, rather than catering to the interests of developers. There are alternative solutions that would allow for responsible development while preserving the integrity of our city.

I implore you to listen to the concerns of myself and other residents who oppose this subdivision. Our voices matter, and we deserve to have a say in the future of our community. Please consider the impact that this development would have on our city and make the decision that is in the best interest of all residents.

Thank you for your attention to this matter.

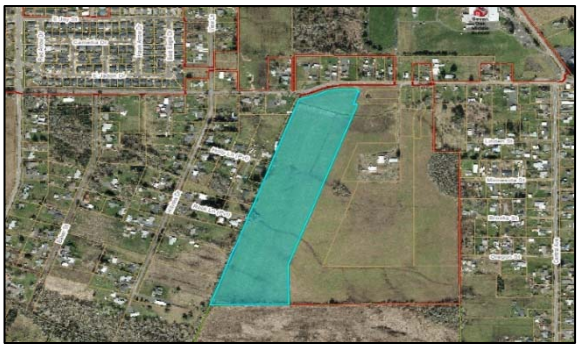
Sincerely,

James Smith

NOTICE OF PUBLIC HEARING
LEBANON PLANNING COMMISSION

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Lebanon Planning Commission on **April 17, 2024 at 6:00 p.m**. in the Santiam Travel Station located at 750 S 3rd Street, to afford interested persons and the general public an opportunity to be heard and give testimony concerning the following matter:

Planning Case No.:	PD-24-01 & S-24-02
Applicant:	Pacific Northwest Land Co., LLC
Location:	Crowfoot Road
Map & Tax Lot No.	12S02W23C 04101
Zoning:	Residential Mixed Density (Z-RM)
Request:	Planned Development and Subdivision
Decision Criteria:	Lebanon Development Code Chapters: 16.05, 16.20, 16.22 & 16.23



Request: The applicant is requesting approval of a 122-lot residential subdivision. The applicant is also requesting a Planned Development to allow for outright permitted middle housing dwelling types on all lots, along with minor deviations to the minimum lot size and lot width requirements and a request to waive the additional square footage requirement on corner lots.

Providing Comments: The City will be accepting public comment on this item in a number of ways to afford interested persons and the general public an opportunity to give testimony on the subject matter. Written and verbal testimony will be accepted upon issuance of this notice, **until 5:00pm on Tuesday, April 16, 2024**. Written testimony may be emailed to kelly.hart@lebanonoregon.gov or mailed to the City of Lebanon at 925 S. Main Street, Lebanon, OR 97355, or delivered and dropped in the white mailbox in front of City Hall.

The public is invited to either participate in person at the Santiam Travel Station or watch the meeting virtually on **April 17, 2024**.

If you wish to address the Commission under Public Comments or for a Public Hearing, click: https://zoom.us/meeting/register/tJ0scu6vrj0tG9KCm0rqJzPGAJVlkfp14i-y to register in advance for the meeting. You will receive a confirmation email containing information about joining the meeting. Attendees will need to register to receive the link to the meeting.

Please register ONLY if you wish to address the Commission. If you want to watch or listen to the meeting, please click this link to do so on YouTube: https://youtube.com/live/G6YlmYBu2O0

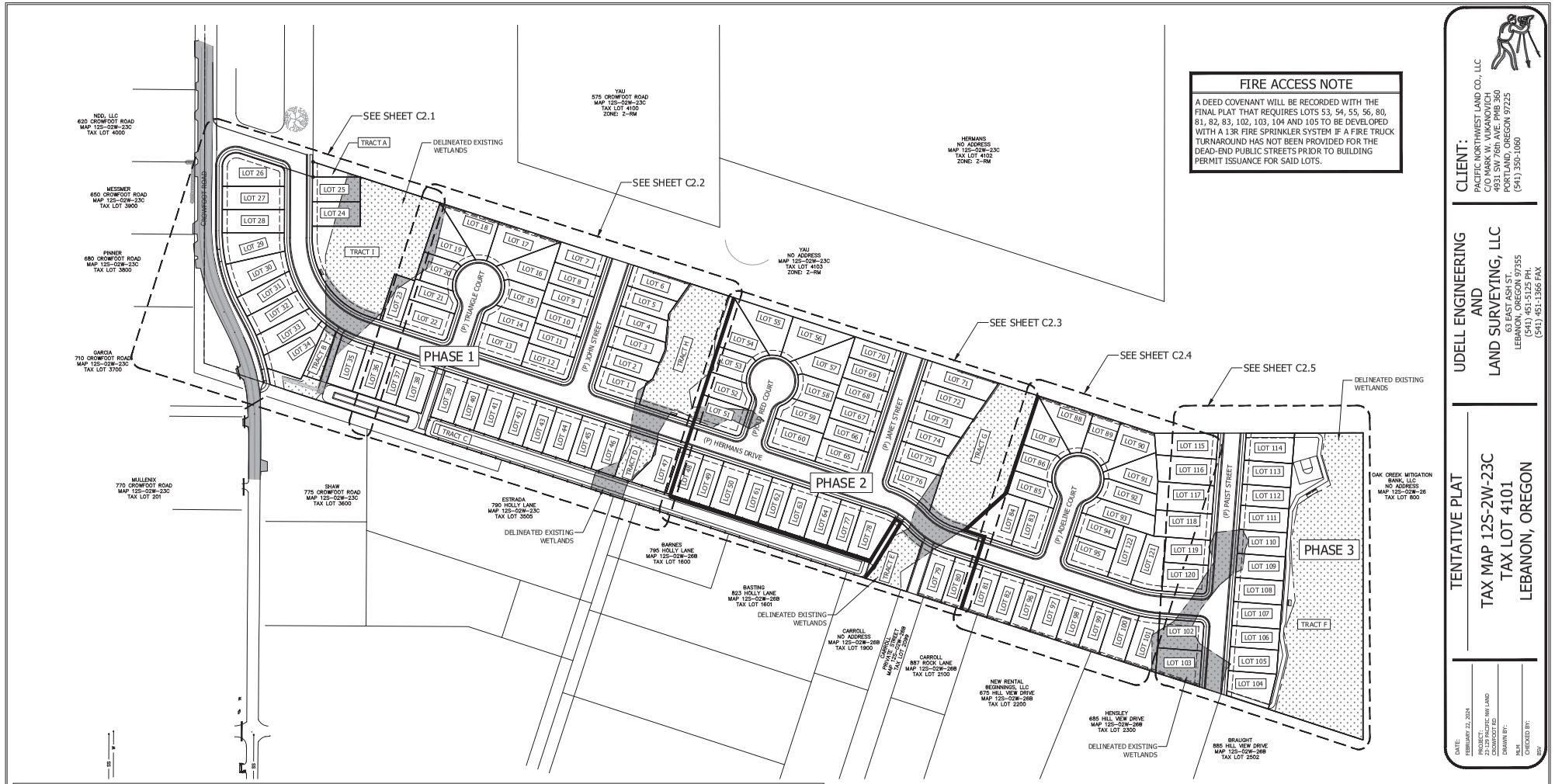
The agenda and application materials will be available for review on the City's website at https://www.lebanonoregon.gov/meetings seven days prior to the hearing.

CITIZENS ARE INVITED TO PARTICIPATE in the public hearing and give written or oral testimony as described above that address applicable decision criteria during that part of the hearing process designated for testimony in favor of, or opposition to, the proposal. If additional documents or evidence are provided in support of the application subsequent to notice being sent, a party may, prior to the close of the hearing, request that the record remain open for at least seven days so such material may be reviewed.

Appeals: Failure to raise an issue in the hearings, in person or by letter, or failure to provide sufficient specificity to afford the decision makers an opportunity to respond to the issue precludes appeal to the Land Use Board of Appeals based on that issue. Decisions of the Planning Commission may be appealed to the Lebanon City Council within 15 days following the date the Commission's final written decision is mailed. Only the applicant, a party providing testimony, and/or a person who requests a copy of the decision has rights to appeal a land use decision. The appeal must be submitted on the appeals form as prescribed by City Council with appropriate fee paid and must set forth the criteria issues that were raised which the applicant or party deems itself aggrieved. Please contact our office should you have any questions about our appeals process.

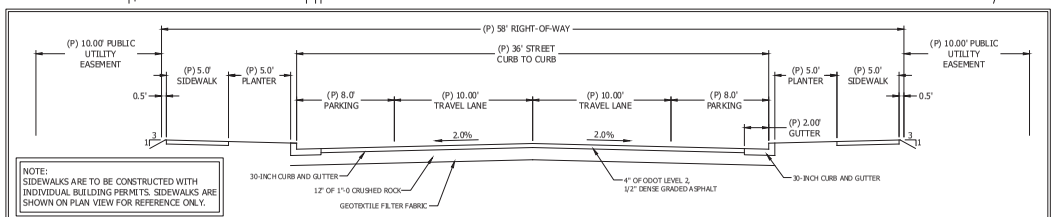
Obtain Information: A copy of the application, all documents and evidence relied upon by the applicant, and applicable criteria are available for inspection at no cost and will be provided at the cost of 25 cents per single-sided page. If you have questions or would like additional information, please contact City of Lebanon Community Development Department, 925 Main Street; phone 541-258-4906; email cdc@lebanonoregon.gov.

The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours before the meeting to 541-258-4906.



FIRE ACCESS NOTE

A DEED COVENANT WILL BE RECORDED WITH THE FINAL PLAT THAT REQUIRES LOTS 53, 54, 55, 56, 80, 81, 82, 83, 102, 103, 104 AND 105 TO BE DEVELOPED WITH A 13R FIRE SPRINKLER SYSTEM IF A FIRE TRUCK TURNAROUND HAS NOT BEEN PROVIDED FOR THE DEAD-END PUBLIC STREETS PRIOR TO BUILDING PERMIT ISSUANCE FOR SAID LOTS.



NOTE:
SIDEWALKS ARE TO BE CONSTRUCTED WITH INDIVIDUAL BUILDING PERMITS. SIDEWALKS ARE SHOWN ON PLAN VIEW FOR REFERENCE ONLY.

1 C2.0 TYPICAL STREET SECTION
NO SCALE

PROJECT AREA SUMMARY

GROSS LAND AREA:	26.74± ACRES
TRACT A - SIGNAGE/LANDSCAPE:	0.04± ACRES
TRACT B - OPEN SPACE W/PRESERVED WETLANDS:	0.08± ACRES
TRACT C - STORMWATER TREATMENT & MAINTENANCE ACCESS:	1.30± ACRES
TRACT D - OPEN SPACE W/PRESERVED WETLANDS:	0.12± ACRES
TRACT E - OPEN SPACE W/PRESERVED WETLANDS:	0.20± ACRES
TRACT F - OPEN SPACE W/PRESERVED WETLANDS:	2.30± ACRES
TRACT G - OPEN SPACE W/PRESERVED WETLANDS:	0.82± ACRES
TRACT H - OPEN SPACE W/PRESERVED WETLANDS:	0.68± ACRES
TRACT I - OPEN SPACE W/PRESERVED WETLANDS:	1.01± ACRES
RIGHT-OF-WAY DEDICATION:	5.42± ACRES
NET LAND AREA:	14.77± ACRES

2
1 INCH
0 100

PLAN REVISIONS	DATE

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

Sheet C2.0
SCALE: SEE BARSCALE

CLIENT:
PACIFIC NORTHWEST LAND CO., LLC
C/O MARK W. VUKANOVICH
4931 SW 76th AVE. PMB 360
PORTLAND, OREGON 97225
(541) 350-1060

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

TENTATIVE PLAT
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLH
CHECKED BY: BSV

PLANNED DEVELOPMENT & SUBDIVISION APPLCIATION

Submitted to:	City of Lebanon Planning Department 925 S. Main Street Lebanon, Oregon 97355
Property Owners:	Paist Family LLC; C/O Paist Janet Hermans Manager 13455 SE Beech Street Milwaukie, OR 97222
Applicant:	Mark Vukanovich on behalf of Pacific Northwest Land Co., LLC 23125 SW Boones Ferry Rd. Tualatin, OR 97062 (541) 350-1060 / markvukanovich@gmail.com
Applicant's Representative:	Udell Engineering and Land Surveying, LLC 63 E. Ash Street Lebanon, OR 97355 Contact: Laura LaRoque Email: laura@udelleng.com Phone: (541) 990-8661
Site Location:	Unassigned Address Parcel 1, Partition Plat 2012-28
Linn County Assessor's Map No.:	12S-02W-23C Tax Lot 4101
Site Size:	±26.74-acres
Existing Land Use:	Agricultural
Zone Designation:	Residential Mixed Density (Z-RM)
Comprehensive Plan Designation:	Residential Mixed Density (C-RM)
Surrounding Zoning:	North: UGA-UGM-10 South: Farm/Forest (F/F) East: RM West: UGA-UGM-10
Surrounding Uses:	North: Residential – Single Family South: Rural Resource East: Residential – Single Family / Farm West: Residential – Single Family

I. Executive Summary

Under consideration is a Tentative Subdivision Plat and Planned Development for "Hermans Farm" a proposed 122-lot, 9-tracts located southeast of Crowfoot Road and Hillview Drive intersection. The subject property does not have an assigned address but is identified as Linn County Tax Assessor Map No. 12S-02W-23C Tax Lot 4101. The property is approximately 26.74± gross acres (14.77± net acres) and unimproved.

The property is in the southeast portion of the Lebanon city limits. To the north, west, and south of the site is rural residential property within the Lebanon Urban Growth Boundaries and the Linn County, Urban Growth Area-Urban Growth Management 10-acre Minimum (UGA-UGM-10) zoning district. To the east of the site is agricultural and rural residential property within the Lebanon City limits and the Residential Mixed Density zoning district. To the south rural resource land outside of the Lebanon Urban Growth Boundary and in the Linn County, Farm/Forest (F/F) zoning district.

The proposal includes a preliminary plan to subdivide the 26.74± -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 7,254 square feet and an average lot size of 5,362 square feet. Lot widths range in size from 44 feet to 60 feet.

A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).
- To allow single detached and duplex dwelling units development on interior lots greater than 40-feet but less than 50-feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
- To allow all residential dwelling types on corner lots greater than 40-feet but less 60-feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

Allowing these deviations from the development code standard allows for greater preservation of natural resources, more housing options when the lots are developed, and overall open space.

No development is proposed in association with the subdivision application. If the subdivision application is approved, each lot would be eligible for development of a single detached dwelling or duplex dwelling unit as well as all middle housing dwelling types as outright permitted use.

In terms of access, LDC 16.13.030(A)(1) requires that all streets adjacent and interior to the new development be improved to City standards. As shown on the preliminary plat, the proposal includes a public street network consisting of the following: 1) a new street with a connection to

Crowfoot Road that transverses the property generally to the north/south and ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

For traffic analysis, based upon the 11th edition of the Institute of Transportation Engineers trip generation rates, single family homes generate 9.43 vehicle trips per day and 0.94 trips during the peak PM traffic hour. The development will create 122 new vacant lots, each of which could be developed with a single-family dwelling unit. Construction of 122 single family dwelling units would add about 1,150 new vehicle trips per day to the public street system. About 115 of those trips would occur during the peak p.m. traffic hour. A Traffic Impact Analysis (TIA) has been performed and is included as an enclosure. The Transportation System Plan does not identify any capacity or safety issues occurring along the street frontages of this subdivision.

For utilities, storm and water mains would be extended from Crowfoot Road right-of-way to the subject property. Upon extension of the mains, the new lots within the proposed subdivision would be able to connect laterals to the mains for separate utility service.

The following section provides a detailed analysis of how the proposal meets the development code.

II. Analysis of Development Code Criteria

Below is an analysis of the review criteria (Chapter 16.22 of the LDC) and findings:

A. Chapter 16.22 of the Lebanon Development Code (LDC) establishes the standards for reviewing partitions and subdivisions, with Sections 16.22.030 to 16.22.090 establishing specific requirements for submittal and review. The applicable provisions are outlined in the following Sections.

B. LDC 16.22.030(A)(B) establishes the general requirements for subdivisions, which includes a two-step review process requiring review and approval of both a preliminary and final plat. In addition to the land division requirements in Chapter 16.22, the proposal must comply with regulations regarding public works improvements, official maps or development plans, Development Code provisions, Fire District requirements, and similar regulations.

FINDINGS: This quasi-judicial review process addresses the requirements for preliminary plat approval. Upon preliminary plat approval, a final plat that conforms to provisions in LDC 16.22.070(B) will be submitted for ministerial review and approval.

C. LDC16.22.030(C) notes that subdividing a residential zone into large lots (i.e., greater than four times or 400 percent the minimum lot size allowed by the underlying land use zone), the City may require that the lots be of such size, shape, and orientation as to facilitate future re-division in accordance with the requirements of the land use district and this Code. To meet this requirement a re-division plan must be submitted.

FINDINGS: As shown on the preliminary plat, portions of the site are proposed to remain undeveloped. Undeveloped portions of the site will consist of 9 tracts: as outlined on the tentative plat and project area summary (see Sheet C2.0). Therefore, a re-division plan is not necessary. This standard is met.

D. LDC 16.22.030(D) establishes provisions for lot averaging, thereby allowing the creation of some lots below the minimum lot size. LDC 16.22.030(E) notes the proposal must comply with floodplain provisions.

FINDINGS: Within the RM zone, the minimum lot size and lot width is 5,000 square feet and 50-feet for a single-family detached dwelling or duplex development; 2,500 square feet and 20-feet for townhouse development; 3,500 square feet and 40-foot for zero-lot line housing; and 9,000 square feet and 60-feet for multiple-family and triplex development.

According to LDC 16.23.020(B)(6), the Planning Commission may approve a reduction in the minimum area, width, depth, and frontage requirements for subdivision lots in a PD, if the overall design and amenities of the proposed project outweigh any adverse impacts that may result from reduction in the minimum area, width, depth, and frontage requirements for the lots.

The proposal includes a preliminary plan to subdivide the 26.74± -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 7,254 square feet and an average lot size of 5,362 square feet. Lot widths range in size from 44 feet to 60 feet.

A Planned Development application has been submitted to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).
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- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

Allowing these deviations from the development code standard allows for greater preservation of natural resources, more housing options when the lots are developed, and overall open space.

No development is proposed in association with the subdivision application. If the subdivision application is approved, each lot would be eligible for development of a single-family detached or duplex dwelling with approval of a building permit or a townhouse and zero lot line development

with approval of an administrative review.

Based on FEMA's Flood Insurance Rate Map, #41043C0569G, dated September 29, 2010, the subject property is outside of the special flood hazard area and therefore, not subject to the Flood Plain Overlay Zone provisions of LDC 16.11.070.

E. LDC 16.22.040 indicates the applicant may request a pre-application meeting, as well as subsequent individual meetings, to review a subdivision.

FINDINGS: A pre-application meeting was conducted late-2023.

F. LDC 16.22.050 contains special transportation provisions and associated decision criteria. LDC 16.22.050(A) requires notification of the Oregon Department of Transportation (ODOT). The application submittal process includes agency notification even though the development does not impact a state highway. LDC 16.22.050(B) requires plans to address specific access related decision criteria, which are noted as follows:

1. LDC 16.22.050.B.1 - Driveway Access Placement: Driveway access shall be properly placed in relation to sight distance, driveway spacing, and other related considerations, including opportunities for joint and cross access.

   FINDINGS: According to LDC 16.12.020(B)(1)(2), a single parcel must abut a street for a minimum width of 14-feet including a minimum 12-foot-wide driveway. According to LDC 16.12.020(B)(2), two adjacent parcels must abut a street for a minimum of 24-feet with a minimum of 12-feet for each parcel that may include a shared 12-foot-wide driveway serving both.

   Per LDC 16.12.030(F)(2)(3), LDC 16.12.030.J.4, LDC 16.12.030(L)(1), single-family and duplex dwellings may be served by a minimum 24-foot-wide shared access easement with a minimum 12-foot-wide driveway provided a shared access easement and coordinated maintenance agreement is recorded.

   All lots are proposed to have greater than 14 feet of frontage on a public street and driveways improvements as outlined in LDC 16.12.020(B)(1)(2).

2. LDC 16.22.050(B)2 - Road/Street System and Building Access: The road/street system shall provide adequate access to the buildings for the appropriate users, such as residents, visitors, patrons, employees, service and delivery vehicles, and emergency vehicles.

   FINDINGS: The criterion including the term "adequate access" is not a clear and objective approval criterion as required by Oregon Revised Statue (ORS) 197.307(4) for needed housing (i.e., attached single-family and multi-family housing for owner and renter occupancy) as defined under ORS 197.303. Therefore, this criterion is not applicable.

3. LDC 16.22.050(B)(3) - Pedestrian and Bicycle Facilities: An internal system of sidewalks and/or pathways for pedestrians and bicyclists shall provide connections to both motor vehicle and bicycle parking areas, and entrances to the development and its buildings, as well as open space, recreational and other community facilities associated with the development. Streets

shall have sidewalks on both sides unless other configurations have been approved. Pedestrian and bicycle linkages shall connect to the peripheral street system.

FINDINGS: All lots will have frontage on, and/or direct access to, a public street with a connectivity to existing Crowfoot Road right-of-way. Shared and direct access to public rights-of-way provide connectivity from each of the development sites to abutting public sidewalk and bicycle linkages.

4. LDC 16.22.050.B.4 - Consistency with Transportation System Plan: All access shall be consistent with the access management standards of this Code, the City's Transportation System Plan, and the Lebanon/Linn County Urban Growth Management Agreement.

   FINDINGS: According to LDC 16.12.030.F, when vehicle access is required for development access must be provided by an alley, private street or shared driveway, or public street, and a minimum of 12 feet per lane is required. Access to proposed lots is via a 58-foot-wide public street with a 36-foot-wide curb-to-curb width.

   LDC 16.12.030.I states that one street access for single-family and two-family is typically but two access points may be permitted. All lots are proposed to be served by driveway improvements as outlined in LDC 16.12.020(B)(1)(2).

5. LDC 16.22.050.B.5 Conditions of Approval to Mitigate Significant Impacts or Effects on Transportation Facilities: In situations in which proposed land use actions may cause a significant negative impact or effect on a transportation facility, the Planning Commission may impose additional conditions for approval, such as:

   a) A Traffic Impact Analysis (or other traffic studies), if the City Engineer finds that the proposed development will have a significant negative impact or effect on the surrounding transportation network. (See Chapter 16.12, Subsection 16.12.010.B).

   b) The operator of the affected transportation facility shall receive notice of the proposed land use. Such operators may include, but are not limited to, the city, Linn County, the State (e.g., ODOT, Oregon Department of Aviation), and railroad companies. This notice shall include the applicant's full site plan submitted to the City and any traffic impact study or traffic counts, as well as the information noted in paragraph "a." immediately above.

   c) The determination of transportation impacts or effects and the scope of any impact study shall be coordinated with the Planning Official, the City Engineer, and the operator of the affected transportation facility.

   d) Dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed land use.

   e) Transportation-related improvements where the existing transportation system may be burdened by the proposed land use.

      FINDINGS: The development will generate enough trips to require submittal of a Trip

Generation Analysis or Traffic Impact Analysis (TIA). Kittelson and Associates' technical memorandum, dated February 14, 2024, is included as an enclosure, and incorporated herein by reference.

A trip generation estimate was prepared for the proposed development based on information provided in the standard reference, Trip Generation Manual, 11th Edition, published by the Institute of Transportation Engineers (ITE). ITE land use code 210 (Single-Family Detached Housing) was used as a basis for the estimate. General Urban/Suburban rates were used. Table 6 summarizes the estimates for the daily and weekday AM and PM peak hours.

Table 6 – Trip Generation Estimate

Land Use	ITE Code	Dwelling Units	Daily Trips	Weekday AM Peak Hour				Weekday PM Peak Hour			
				Rate	Total	In	Out	Rate	Total	In	Out
Single Family detached	210	122	1,150	0.70	85	21	64	0.94	115	72	43

The primary findings and recommendations of this study are summarized below.

- The study intersections are forecast to meet the City of Lebanon and Linn County operating standards during the weekday AM and PM peak hours under existing and future traffic conditions.
- No capacity-based mitigation needs were identified at the study intersections.
- No safety-based mitigations were identified at the study intersections based on the crash analysis alone; however, the existing signage at Crowfoot Road / Central Avenue / Cascade Drive intersection could be modified as follows, subject to Linn County direction.

No impacts to rails, aviation, or similar transportation facilities are anticipated with this development proposal.

G. LDC 16.22.060 notes that after a pre-application meeting and/or consultation, the applicant submits a subdivision application on the prescribed form.

FINDINGS: The application submittal included the necessary material consistent with this LDC 16.22.060.

H. LDC 16.22.070 establishes the procedural review process for subdivision applications. LDC 16.22.070(A)(2) requires preliminary subdivision applications to be processed as a quasi-judicial review with a hearing before the Planning Commission, while the final plat is reviewed by staff as a ministerial decision. Preliminary plat approval is valid for three years.

FINDINGS: As a subdivision and Planned Development, a quasi-judicial public hearing is required to be held before the Planning Commission in compliance with Section LDC 16.22.070(A)(2). All

subsequent provisions apply to the administration, review, or modification of an approved preliminary plat.

I. LDC 16.22.080 establishes the preliminary plat submittal requirements. The applicable provisions include:

1. LDC 16.22.080(A)(1)(2) requires submittal of public facilities and services study (including transportation facilities) and a traffic impact study.

   FINDINGS: Water, sanitary sewer, and storm are available to serve the development. As shown in the preliminary utility plan, all improvements will comply with City design requirements, and for storm drainage, not increase the level of storm runoff on adjacent properties.

   Findings regarding the requirements for a transportation impact study can be found under subsection 5, subsection e above and incorporated here by reference.

2. LDC 16.22.080(A)(3) lists additional information that will or may be required if applicable and warranted:

   a. LDC 16.22.080(A)(3)(a) - Correspondence from appropriate and applicable State and Federal Wetland regulatory agencies.

      FINDINGS: The U.S. Department of Interior, Fish and Wildlife Service National Wetland Inventory Map shows wetlands on the property. Therefore, correspondence from State and Wetland regulatory agencies is anticipated.

      LDC 16.22.080(A)(3)(b) - Correspondence from the County or ODOT if access is proposed to any facility under their jurisdiction.

      FINDINGS: The adjacent streets are under the City's jurisdiction therefore the provisions in this Section do not apply.

   b. LDC 16.22.080(A)(3)(c) - Correspondence from Oregon Department of Aviation if the proposed development is within the approach or noise impact overlay zones of the Lebanon State Airport.

      FINDINGS: According to Figures 16.11.020-1 to 16.11.020-3 the property is outside of the Airport's Airport Safety Zone (AS-OZ). Therefore, notice is not required to be provided to the Oregon Department of Aviation.

   c. LDC 16.22.080(A)(3)(d) - Documentation prepared by a licensed and qualified professional demonstrating that development proposed within a 100-year floodplain or floodway complies with appropriate FEMA, NFIP and City's Floodplain Regulations (see LDC 16.11.070 in Chapter 16.11 of this Code).

      FINDINGS: Based on FEMA's Flood Insurance Rate Map, #41043C0569G, dated September 29, 2010, the subject property is outside of the special flood hazard area and therefore, not subject to the Flood Plain Overlay Zone provisions of LDC 16.11.070.

d. LDC 16.22.080(A)(3)(e) - Documentation showing compliance with applicable Special Area Plans.

   FINDINGS: The property is not located within a "Special Area Plan".

e. LDC 16.22.080(A)(3)(f)- Documentation showing compliance with all applicable codes and requirements of the Lebanon Fire District.

   FINDINGS: Access and provisions for hydrants have been identified on preliminary plat that comply with Fire District requirements. The Fire District has received a copy of the application materials for review and comment.

f. LDC 16.22.080(A)(3)(g) - Documentation showing that the proposed land division will not violate any existing property restrictions of record including easements.

   FINDINGS: A title report and existing conditions plan sheet denoting known recorded easements has been submitted with this with this application.

g. LDC 16.22.080(A)(3)(h) - Documentation prepared by a licensed and qualified professional demonstrating that areas of soil cut, and fill will comply with erosion control and building code requirements.

   FINDINGS: Erosion control and building code requirements will be reviewed and approved as part of the site improvement and/or building permit review process.

h. LDC 16.22.080(A)(3)(i) - Documentation prepared by a licensed and qualified professional demonstrating that areas of geologic and/or of soils instability can be developed according to applicable City, State and Federal Environmental Standards.

   FINDINGS: The site is relatively flat and is not subject to the requirements of the Steep Slope Development Overlay Zone which are applicable to development in areas with steep slopes equal to or greater than 15 percent.

i. LDC 16.22.080(A)(3)(j) - Other information determined by the Planning Official and/or City Engineer. Upon the receipt or presentation of credible evidence, the City may require studies or exhibits prepared by qualified and/or licensed professionals to address specific site features or project impacts (e.g., noise, natural resources, environmental features, natural hazards, cultural/archeological, site stability, wetlands, hazmat assessments, etc.), in conformance with this Code, other State and/or Federal regulatory requirements.

   FINDINGS: No additional studies or exhibits were deemed necessary by City staff based on the development proposal.

j. LDC 16.22.080(B)(1)(2)(3) - Establish submittal requirements.

   FINDINGS: All necessary material for staff to proceed with the application has been submitted.

III. Subdivision Review Criteria

The City may approve, approve with conditions, or deny a preliminary plat based on the criteria contained in LDC 16.22.090(A)(B)(C). Provisions in LDC 16.22.090(A) include the following:

1. LDC 16.22.090(A)(1) - The proposed preliminary plat complies with the applicable Development Code Sections and adopted Master Plans. At a minimum, the provisions of this Chapter, and the applicable Chapters and Sections of Article Two (Land Use and Land Use/Development Zones) and Article Three (Community Development and Use Standards) of this Code shall apply. Where a variance is necessary to receive preliminary plat approval, the application shall also comply with the relevant Sections of Chapter 16.29.

   FINDINGS: According to Table 16.06-7, the development standards for the RM zone. Within the RM zone, the minimum lot size and lot width is 3,500 square feet and 40 feet for a single-family attached dwelling; 5,000 square feet and 50-feet for a single-family detached dwelling; 5,000 square feet and 50 feet for a duplex.

   The proposal includes a preliminary plan to subdivide the ±26.74 -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 8,606 square feet and lot width ranging in size from 44 feet to 60 feet.

   A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum lot area and width standards in the RM zoning district:

   - To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).
   - To allow single detached and duplex dwelling units development on interior lots greater than 40-feet but less than 50-feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
   - To allow all residential dwelling types on corner lots greater than 40-feet but less 60-feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
   - To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

   Upon approval of the Planned Development application, the lots comply with the dimension requirements of the RM zone for the intended respective use found in Article Two.

   According to Table 16.05-2, single family detached dwellings and duplexes are outright permitted uses whereas townhomes, zero lot line dwellings, and multiple family development are permitted with an Administrative Review. Setbacks and other development specific standards found in Article Two and Three will be evaluated upon the submittal of a building

permit for a single-family detached dwelling or duplex and Administrative Review for a townhome and/or zero lot line development.

In terms of access, LDC 16.13.030(A)(1) requires that all streets adjacent and interior to the new development be improved to City standards. As shown on the preliminary plat, the proposal includes a public street network consisting of the following: 1) a new street with a connection to Crowfoot Road that transverses the property generally to the north/south and ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

The proposed public streets will be built to full city standard as specified in Chapter 16.13 and in conformance with Engineering Standards. Site access for each lot would be designed upon development to meet the driveway spacing and vision clearance requirements for compliance of Chapter 16.12, as such, the proposal conforms with Articles Two and Three.

2. LDC 16.22.090(A)(2) - The proposed plat name is not already recorded for another subdivision and satisfies the provisions of ORS Chapter 92 and the County Surveyor.

   FINDINGS: The proposed subdivision plat name "Samantha Meadows" has been approved by the County Surveyor.

3. LDC 16.22.090(A)(3) - The proposed streets, roads, sidewalks, bicycle lanes, pathways, utilities, and surface water facilities are laid out to conform or transition to the plats of subdivisions and partitions already approved for adjoining property as to width, general direction and in all other respects. All proposed public improvements and dedications are identified on the preliminary plat.

   FINDINGS: All proposed public improvements and dedications are depicted in the provided plan set.

4. LDC 16.22.090(A)(4) - All proposed private common areas and improvements (e.g., homeowner association property) are identified on the preliminary plat.

   FINDINGS: All proposed improvements are depicted in the provided plan set.

5. LDC 16.22.090(A)(5) - Evidence that all City, County, State and Federal regulatory agency identified or mapped special management areas have been accurately and effectively identified on the appropriate maps and plans submitted to the City for review.

   FINDINGS: As noted, no special management areas were found in association to the subject site (see Existing Conditions, Sheet C01).

6. LDC 16.22.090(A)(6) - Evidence that improvements or conditions required by the City, road authority, Linn County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

FINDINGS: All public improvements will be located within the city rights-of-way and subject to City public works design and construction standards.

7. LDC 16.22.090(A)(7) - If any part of the site is located within a Special Area Plan or District, Overlay Zone, or previously approved Planned Development, it shall conform to the applicable regulations and/or conditions.

   FINDINGS: As noted above, the property is not located within a Special Area Plan or Overlay Zone. Therefore, this standard is not applicable to this application.

J. LDC 16.22.090(B) establishes the criteria for the layout of the subdivision and includes the following:

Criterion 1

LDC 16.22.090(B)(1) - All lots shall comply with the lot area, setback, and dimensional requirements of the applicable land use zone (Chapters 16.05 – 16.10), and the standards of Chapter 16.12 (Subsection 16.12.030(K), Street Connectivity and Formation of Blocks).

FINDINGS: Within the RM zone, the minimum lot size and lot width is 5,000 square feet and 50-feet for a single-family detached dwelling or duplex development; 2,500 square feet and 20-feet for townhouse development; 3,500 square feet and 40-foot for zero-lot line housing; and 9,000 square feet and 60-feet for multiple-family and triplex development.

According to LDC 16.23.020(B)(6), the Planning Commission may approve a reduction in the minimum area, width, depth, and frontage requirements for subdivision lots in a PD, if the overall design and amenities of the proposed project outweigh any adverse impacts that may result from reduction in the minimum area, width, depth, and frontage requirements for the lots.

The proposal includes a preliminary plan to subdivide the 26.74± -acre site into 122 residential lots and 9 tracts, along with an extension of seven public street segments. As proposed, the subdivision would include 122 lots with net lot areas ranging in size from 4,201 to 7,254 square feet and an average lot size of 5,362 square feet. Lot widths range in size from 44 feet to 60 feet.

A Planned Development application has been submitted to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).
- To allow single detached and duplex dwelling units development on interior lots greater than 40-feet but less than 50-feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
- To allow all residential dwelling types on corner lots greater than 40-feet but less 60-feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).

- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

Allowing these deviations from the development code standard allows for greater preservation of natural resources, more housing options when the lots are developed, and overall open space.

No development is proposed in association with the subdivision application. If the subdivision application is approved, each lot would be eligible for development of a single-family detached or duplex dwelling with approval of a building permit or a townhouse and zero lot line development with approval of an administrative review.

The block layout provisions in Chapter 16.12.030(K)(1)(c) state that blocks without pedestrian and bicycle connections through the block cannot exceed 600-800 feet in block length and 1,600-2,000 feet in block perimeter with exceptions to block lengths under LDC 16.12.030(K)(3).

Presently, the site has access to Crowfoot Road (County Road 717) to the northeast via a 60-foot-wide right-of-way dedication per PP 2012-28 and an unnamed, unimproved 25-foot-wide right-of-way to the northwest. As shown on the preliminary plat, the proposal includes a public street network consisting of the following: 1) a new street with a connection to Crowfoot Road that transverses the property generally to the north/south and ends with a T-shaped intersection; and 2) a new street located at the south portion of the subdivision transversing the property generally to the east/west with dead end terminations at the east/west property boundaries; 3) Three other new streets ending in cul-de-sacs; 4) a new street ending in a dead end termination at abutting property to the east. All proposed streets will be classified as local streets and will be improved to City standards.

As stated in LDC 16.12.030.K.3, exceptions to the block length standards when existing development and/or geographic or natural features preclude meeting the established standards. In this case, private property and existing development preclude a through connection with adjacent public streets to the east and west of the subject property. Therefore, an exception to the block length standards is requested in accordance with LDC 16.12.030.K.3.

Criterion 2

LDC 16.22.090(B)(2) - Setbacks shall be as required by the applicable land use zone (Chapters 16.05 – 16.10).

FINDINGS: According to LDC Table 16.05-9: minimum setbacks in the RM zone are as follows: 10-foot front yard; 10/15-feet street side yard (Note: If front one yard setback (Street or Street Side) is 15 feet, then the other can be less than 15 feet but not less than 10 feet. For irregularly shaped lots, the average setback for Street and Street Side Yards shall be 7.5 feet with no setback less than 5 feet); 5-feet side (interior) yard and 10/20-feet to the rear yard. As shown on the preliminary plat, there is adequate area provided to accommodate future development conforming to the minimum setback requirements. Conformance will be reviewed upon development during the building permit review process.

Criterion 3

LDC 16.22.090(B)(3) - Each lot shall conform to the standards of Chapter 16.12 (Access and Circulation).

FINDINGS: According to LDC 16.12.020.B.1 and LDC 16.12.030.L.1, each lot will abut a street for a minimum width of 14 feet which will allow for a minimum 12-foot-wide driveway. According to LDC 16.12.030.F.2 and LDC 16.12.030.J.4, access is from a public street.

Criterion 4

LDC 16.22.090(B)(4) - Landscape or other screening may be required to maintain privacy for abutting uses. See Chapters 16.05 – 16.10 (Land Use Zones), and Chapter 16.15 (Landscaping, Street Trees, etc.).

FINDINGS: Residential landscaping requirements for all lots will be reviewed upon development during the building permit review.

Criterion 5

LDC 16.22.090(B)(5) - In conformance with the Oregon Fire Code, a 20-foot-wide fire apparatus access road shall be provided to serve all portions of a building that are located more than 150 feet from a public or private road or approved access drive. See Chapter 16.12 (Access and Circulation).

FINDINGS: Based on the subdivision layout and probable building locations, all dwellings will be less than 150-feet from a public street. As shown on the preliminary plat, all lots will be accessible from a 58-foot-wide public street with a 36-foot-wide curb-to-curb width as well as a 20-foot-wide emergency accessway to be designed in accordance with the Oregon Fire Code.

Criterion 6

LDC 16.22.090(B)(6) - Where a common drive is to be provided to serve more than one lot, a reciprocating access easement and maintenance agreement shall be recorded with the approved subdivision or partition plat.

FINDINGS: It is acknowledged that the applicant and City staff must comply with these requirements prior to recordation of a final plat.

Criterion 7

LDC 16.22.090(B)(7) - All applicable engineering design standards for streets, utilities, surface water management, and easements shall be met.

FINDINGS: As shown in the preliminary utility plan, extensions of public facilities are proposed to serve the development. All plans will conform to City standards and be approved prior to platting the subdivision.

K. LDC 16.22.090(C) allows the City to establish conditions to carry out Code provisions and other applicable ordinances.

FINDINGS: Conditions of approval are not required as the proposed development complies with all applicable code provisions.

L. LDC 16.22.100 to 16.22.140 establish administrative procedures for recording plats, improvement agreements and bonding.

FINDINGS: It is acknowledged that the applicant and City staff must comply with these requirements prior to recordation of a final plat.

IV. Review Criteria (Planned Development Standards)

Below is an analysis of the review criteria (Chapter 16.23 of the LDC) and findings:

A. According to Lebanon Development Code (LDC) 16.06.040, Table 16.06-1, if the proposed development is characterized by two or more of the following characteristics, that land use application will be deemed a Major Land Use Action and processed as a Planned Development: 1) 5 or more acres in size; 2) includes multi-year phasing; 3) classified as a class III impact; and 4) projected demand on public infrastructure and City provided Utilities exceed actual or designed capabilities in Adopted Master Facilities Plans.

Finding: The proposed development is greater than 5 acres and includes multi-year phasing. Therefore, the application is deemed a Major Land Use Action and processed as a Planned Development.

B. The purpose of the Planned Development (PD) is to provide opportunities to create more desirable environments through the application of flexible and diversified land development standards under a professionally prepared comprehensive development plan (overall site design, maps, and drawings) and program (narrative and explanatory documents) (LDC 16.23.010(A)).

Finding: Approval of the requested Planned Development application for minor deviations from the minimum lot area and width standards in the RM zoning district will allow for greater preservation of on-site wetlands, open space, and through lot size averaging a wider array of housing options and price points.

C. A Planned Development may be established in combination with any underlying base zone. In cases of conflict between standards of the base zone and the Planned Development, the standards of the Planned Development may apply, provided the Planning Commission finds that an exception from the standard of the underlying zone is warranted by the design and amenity provisions in the Planned Development Design and Program, and there are no identified negative impacts to the surrounding neighborhood or the community as a whole after mitigation (LDC 16.23.010(B)).

Finding: A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).

- To allow single detached and duplex dwelling units development on interior lots greater than 40-feet but less than 50-feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
- To allow all residential dwelling types on corner lots greater than 40-feet but less 60-feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

Allowing these deviations from the development code standard allows for greater preservation of natural resources, more housing options when the lots are developed, and overall open space.

D. Phasing of development may be approved with the PD application, subject to the following standards and procedures. A phasing plan shall be submitted with the PD application.

   a. The Planning Commission may approve a time schedule for developing a site in phases, but in no case shall the total time period for all phases be greater than 10 years without reapplying for PD Approval.

   b. Approval of a phased PD proposal requires that the public facilities required to serve each phase are constructed in conjunction with or prior to each phase.

   c. An application for phasing may be approved after PD approval as a modification to the approved plan, in accordance with the procedures for modifications (Chapter 16.24) (LDC 16.23.010(C)).

   Finding: A phasing plan has been submitted in association with the Planned Development application.

E. Subdivision approvals are valid for three years. Preliminary Plats for subdivisions must be recorded within the approved time period. The City shall not grant a renewal or extension if planning approval has expired. Applicants must resubmit if their approval has expired (LDC 16.23.010(D) & 16.20.070(J)).

   Finding: A phasing plan has been submitted in association with the Planned Development application. If approved, these approval time periods will supersede those outlined in 16.20.070(J) which are intended for Tentative Subdivision Plats that do not include a Planned Development approval.

F. Development standards (such as Lot Size and Width, Heights) in LDC Article Two (LDC Chapters 16.05 – 16.11) and the Community Development and Use Standards of Article Three (LDC Chapters 16.12 – 16.19) may be modified [up to 25% of the standard] through the Planned Development review process without the need for a Variance. However, Industrial and Commercial uses, if not otherwise allowed in a Residential Zone, shall not be allowed as part of a Planned Development in a Residential Zone (LDC 16.23.010(F)(2)).

There are a number of reasons why the PD process may be desirable and applicable, such as: (1) the large area of the development; (2) sensitivity of the development area (e.g., steep slopes); (3) atypical ownership and/or management considerations; (4) magnitude of project impacts; (5) a need for greater procedural flexibility and diversity; and, (6) to permit development proposals not explicitly listed in this Code. A PD review can be voluntarily selected by an applicant, may be mandated by the provisions of this Code, or determined by the City as the most appropriate review process (LDC 16.23.010(F)(3)).

Finding: A Planned Development review has been requested by the applicant. The Planned Development is desirable due to the property size and wetland areas found on-site.

G. A PD may occur in any zone (LDC 16.23.010(F)(4)).

Finding: The project is eligible for a planned development since the subject property is within the Lebanon city limits and zoned RM.

H. The PD process is a two-step process, in which there are three options or alternative paths for the second step (LDC 16.23.010(F)(5)).

a. The First Option or path includes an initial Public Hearing and a subsequent Ministerial Review. If sufficient detail and sophistication of design are included in the initial or Preliminary Design and Program, a PD application may be approved with a Public Hearing before the Planning Commission, followed by a Ministerial Review by the Planning Official of the Final Design and Program that checks for compliance with conditions of approval established by the Planning Commission.

b. Second Option: Other PD applications that need further work and modification after the initial Public Hearing to meet the Planning Commission's conditions of approval may have their Final Design and Program reviewed for compliance by the Planning Official in an Administrative Review.

c. Third Option: Some PD applications may need major or extensive additional work and modification after the initial Public Hearing to meet the Planning Commission's conditions of approval; the Final Design and Program of such applications may be reviewed for compliance in a second Public Hearing before the Planning Commission.

Finding: Due to the minimal impacts associated with the proposed use as supported by the findings in this section, the applicant requests that the Planning Commission authorizes Option 1, to review all subsequent actions associated with the Planned Development as a ministerial review by the Planning Official.

I. If the Planning Commission determines, after weighing all the evidence, materials, and testimony presented by staff, the applicant, and other interested parties), that a proposed planned development can reasonably be expected to not generate adverse project impacts that need to be addressed by a formal mitigation plan, and the Planning Commission establishes as a condition of approval that the submittal of a formal mitigation plan is not required, the applicant need not submit such a plan as part of the Final Design and Program (LDC 16.23.010(I)(4)).

Finding: As supported by the below findings the proposed planned development can reasonably be expected to not generate adverse project impacts that need to be addressed by a formal mitigation plan. Therefore, the applicant requests that a formal mitigation plan not be included as a condition of approval.

J. The special planned development standards per LDC 16.23.020(B) are as follows:

a. The minimum size for a Planned Development is one (1) acre.

Finding: The subject property is approximately 26.74-acres in size.

b. The development plan (maps and drawings) and program (narrative and explanatory documents) shall present an organized arrangement of buildings, service facilities, open spaces and improvements such as recreation facilities and fencing to ensure compliance with all applicable criteria (e.g., see requirements of underlying zone, and other applicable development requirements, such as parking and access from "Community Design Standards," Article Three of this Development Code).

Finding: The application submittal includes a plan set and narrative that depicts and describes the development proposal and conformance with applicable development standards.

c. Periphery yards of a PD shall be at least as deep as those required by the yard requirements of the underlying zone, unless the Planning Commission finds that specific features of the proposed development would mitigate as well as the specified yard requirements vis-à-vis identified "negative impacts" to the surrounding neighborhood and/or the community as a whole after mitigation.

Finding: Yard is defined as an open space defined by required setbacks (i.e., between the setback line and respective property line) on a lot that is unobstructed from the ground upward, except as otherwise provided in this Code (LDC 16.32.020).

According to LDC Table 16.05-9: minimum setbacks in the RM zone are as follows: 10-foot front yard; 10/15-feet street side yard; 5-feet side (interior) yard and 10/20-feet to the rear yard. No deviations from minimum setback standards are required in association with this application.

Lots 35 – 64, 77, and 78 abut Tracts C. Tracts C is a 40-foot-wide buffer proposed lots from existing abutting development. Lots 104 - 114 abut Tract F. Tract F ranges from 141 feet to 194 feet in depth and buffer proposed lots from existing abutting development. All other periphery lots abut unimproved farmland that is within the Lebanon city limits and urban growth boundary.

Therefore, all periphery yards of the proposed lots will be at least as deep as those required by the yard requirements of the underlying zone and will not create any negative impacts to the surrounding neighborhood and/or community.

d. Lot coverage and building height shall be no greater than for the underlying zone unless the Planning Commission finds that an exception is warranted in terms of the design and amenities proposed in the total development, and there are no identified "negative impacts" to the surrounding neighborhood and/or the community as a whole after mitigation.

Finding: No deviation from maximum lot coverage and building height are requested. These standards will be evaluated in conjunction with a residential building permit.

e. Open space in a Planned Development means the land area to be used for scenic or open space recreational purposes within the development. a. Open space does not include street right-of-way, driveways, parking areas, required setbacks, or public service easements unless these areas have some special recreational design or purpose. b. Open space shall be adequately designed for the recreational and leisure use of the population occupying the Planned Development. c. Designated open space must be accessible and usable year-round. d. Before an area can be considered a designated open space it shall have the following required minimum dimensions and minimum area: (1) Length: 20 feet; (2) Width: 20 feet; and (3) shall have a minimum Area of 400 square feet. e. To the maximum extent possible, the open space plan shall demonstrate that natural features of the open space are preserved, and complimentary landscaping is provided. f. The ongoing provision and maintenance of designated and approved open space areas are a permanent obligation of the Basic Land Use approval of the Planned Development.

Finding: As shown on the preliminary plat, of the ±26.74-acre site, ±6.55-acres will consist of open space and preserved wetland area, which comply with the minimum dimensions and area standards. An agreement will be drawn up which restricts the development of these areas and outlines long term maintenance responsibilities.

f. The Planning Commission may approve a reduction in the minimum area, width, depth, and frontage requirements for subdivision lots in a PD, if the overall design and amenities of the proposed project outweigh any adverse impacts that may result from reduction in the minimum area, width, depth, and frontage requirements for the lots.

Finding: The requested deviations are minor in nature and will result in any adverse impacts. Regardless, the requested deviations will on balance enhance the overall development by increased preservation of wetland areas and common open space.

g. As noted in Subsection 16.23.010.C, the applicant may elect to develop the site in successive phases in a manner indicated in the Development Design and Program. b. In addition, the Planning Commission may require that development be done in stages if public facilities are not adequate to service the entire development initially.

Finding: As shown on the preliminary utility plans, public facilities are adequate to service the entire development initially. However, a phasing plan has been submitted in association with the Planned Development application.

K. LDC 16.23.040.A includes the following review criteria that must be met for a Planned Development application to be approved. Code criteria are written in **bold** and are followed by findings and conclusions.

Criterion 1

The proposed Planned Development is in conformance with the following: a) basic decision criteria in this Chapter (e.g., Section 16.23.020.B); b) Standards for development in the underlying zones noted Chapters 16.5 – 16.11, or as modified pursuant to the provision Subsection 16.23.010.F.2; c) Other applicable development requirements, such as parking, access.

1.1 Conformance with the basic decision criteria for a Planned Development LDC 16.23.020(B) is outlined above and incorporated herein by reference.

1.2 Conformance with the RM zoning district standards is outlined in Section III above and incorporated herein by reference.

1.3 Conformance with LDC 16.23.010(F)(2) - Modifications of Zoning Standards and Community Development and Use Standards is outlined above and incorporated herein by reference.

1.4 Conformance with all other applicable development requirements is outlined in Section III above and incorporated herein by reference.

Criterion 2

Exceptions from the standards of the underlying zone may be warranted by the design and amenities incorporated into the Development Design and Program and provided there are no identified "negative impacts" or "hardships" to the surrounding neighborhood and/or the community as a whole after mitigation.

2.1 A Planned Development application has been submitted for concurrent review to allow the following minor deviations from the minimum standards in the RM zoning district:

- To allow middle housing dwelling types in addition to single detached and duplex dwelling unit as outright permitted uses on all lots (see LDC Table 16.05-7, minimum lot area standards).
- To allow single detached and duplex dwelling units development on interior lots greater than 40-feet but less than 50-feet wide (see LDC Table 16.05-7, Single Family, not attached and Duplex minimum lot width standard).
- To allow all residential dwelling types on corner lots greater than 40-feet but less 60-feet wide (see LDC Table 16.05-7, Corner Lot (All Residential Above, minimum lot width standard).
- To waive the additional 500 square foot requirement for corner lots (see LDC Table 16.05-7, lot area note).

The requested deviations from the standards of the RM zoning district are warranted since they will allow for greater preservation of on-site wetlands, open space, and through lot size averaging a wider array of housing options and price points.

2.2 There are no known negative impacts of the proposed use on adjacent properties or the public.

2.3 To the north and west of the subject property is residential development within the Lebanon Urban Growth Boundary with a Comprehensive Plan designation of Residential Mixed Density. To the east and south of the subject property is farmland within the Lebanon city limits with a zone designation of Residential Mixed Density.

2.4 The subject property is located entirely within the RM zoning district, which is intended to accommodate a wider variety of housing types and more intensive land use than the RL Zone.

2.5 Approval of the requested Planned Development will allow for future development of the following housing types: single-family detached and duplex as well as middle housing dwelling types as an outright permitted use.

2.6 Future development of each of the proposed lots in compliance with applicable Code standards will be assured prior to development on the subject property through subsequent building or other permit processes.

Criterion 3

The proposed Planned Development, or a unit thereof, can be substantially completed within the approved timeline.

3.1 According to LDC 16.23.010.C a phasing of development may be approved with a Planned Development application under three conditions: 1) the total time period for completion of all phases cannot exceed ten years without reapply for Planned Development approval; 2) approval of a phased Planned Development proposal requires that the public facilities required to serve each phase are constructed in conjunction with or prior to each phase; and 3) an application for phasing may be approved after the Planned Development approval as a modification to the approved plan, in accordance with the procedures for modifications.

3.2 A multi-year phased development of the proposed subdivision is proposed. Included in the plan set is a phasing plan. Each phase will be dependent on market demand but forecasted to be completed as follows: Phase 1 – 2027, Phase 2 – 2029, and Phase 3 – 2031. The timeline established complies with LDC 16.23.010.C.1.

3.3 As shown on the plan set, the necessary public facilities required to serve each phase can reasonably be constructed in conjunction with or prior to final platting of each phase. Compliance with LDC 16.23.010(C)(2) can be verified at the time of a building permit or prior to the issuance of an occupancy permit.

3.4 Although not anticipated, LDC 16.23.010.C.3 provides for a modification process should any unanticipated obstacles pertaining to the rental market and/or construction process arise.

Criterion 4

The streets are adequate to support the anticipated traffic and the Planned Development will not overload the streets within or outside the Planned Development area.

4.1 Findings pertaining to the transportation provisions of LDC 16.12 and 16.14 are outlined in Section III above and incorporated herein by reference.

Criterion 5

The proposed utility and drainage facilities are adequate for the population densities and the type of development proposed and will not create a drainage or pollution problem within or outside the Planned Development area.

Sanitary Sewer

5.1 According to LDC 16.16.030 adequate sanitary sewer infrastructure and service must be made available to serve each new development, and such facilities and service must comply with the City's Sanitary Sewer Facility Plan, and applicable construction specifications.

5.2 City utility maps show a twenty-four-inch public sanitary sewer main in Crowfoot Road at the intersection of View Lane. A connection to the public sanitary sewer in Crowfoot Road is proposed with an offsite extension to and through the project frontage of Crowfoot Road. (see Attached Preliminary Utility Plan).

Water

5.3 According to LDC 16.16.030 adequate water infrastructure and service must be made available to serve each new development, and such facilities and service must comply with the City's Water System Facility Plan, and applicable construction specifications.

5.4 City utility maps show an 8-inch public water main in View Lane at the intersection of Elderberry Street. A connection to the public water system in View Lane is proposed and an offsite extension down View Lane with an eight-Inch and down Crowfoot Road with a twelve-inch public mainline. (see Attached Preliminary Utility Plan).

Storm Drainage

5.5 According to LDC 16.16.040, the City may grant land use approval and issue a development permit when adequate provisions for storm water runoff are or will be made available in compliance with the City's Storm Drainage Master Plan and all applicable local, state, and federal standards.

5.6 All new site development must maintain pre-development peak historic storm water discharge rates as per City standards. The application for a development proposal shall demonstrate through calculations acceptable to the City Engineer that this standard will be met by the proposed development.

5.7 City utility maps show an existing 36-inch public storm drainage on the north side of Crowfoot Road and west of View Lane. A connection to this 36-inch public storm drainage system in

Crowfoot Road is proposed and an offsite extension within Crowfoot Road to serve the proposed development. (see Attached Preliminary Drainage Plan).

V. Overall Conclusion

As proposed, applications for preliminary subdivision plat and planned development satisfies all applicable review criteria as proposed and outlined above.

VI. Enclosures

A. Subdivision Name Approval
B. Tentative Subdivision Plan Set
    1. Existing Conditions/Demo Plan, Sheet C1.0
    2. Tentative Plat, Sheet C2.0
    3. Enlarged Tentative Plat, Sheet C2.1
    4. Enlarged Tentative Plat, Sheet C2.2
    5. Enlarged Tentative Plat, Sheet C2.3
    6. Enlarged Tentative Plat, Sheet C2.4
    7. Enlarged Tentative Plat, Sheet C2.5
    8. Open Space Blow-Up, Sheet C2.6
    9. Open Space Blow-Up, Sheet C2.7
    10. Preliminary Grading and Drainage, Sheet C3.0
    11. Preliminary Grading and Drainage, Sheet C3.1
    12. Offsite Utility Improvements, Sheet C3.2
    13. Preliminary Utility Plan, Sheet C4.0
    14. Preliminary Utility Plan, Sheet C4.1
2. Transportation Impact Analysis, Kittleson and Associates, dated February 14, 2024

KITTELSON & ASSOCIATES
851 SW 6th Avenue, Suite 600
Portland, OR 97204
P 503.228.5230

Technical Memorandum

Project# 24995.17

February 14, 2024

To: Shana Olson, Project Manager
City of Lebanon
925 Main Street
Lebanon, OR 97355

From: Matt Hughart, Robert Olney, and Chris Brehmer, PE

CC: Ron Whitlatch, Lebanon Engineering Services Director

RE: Crowfoot Subdivision – Transportation Impact Analysis

SUMMARY

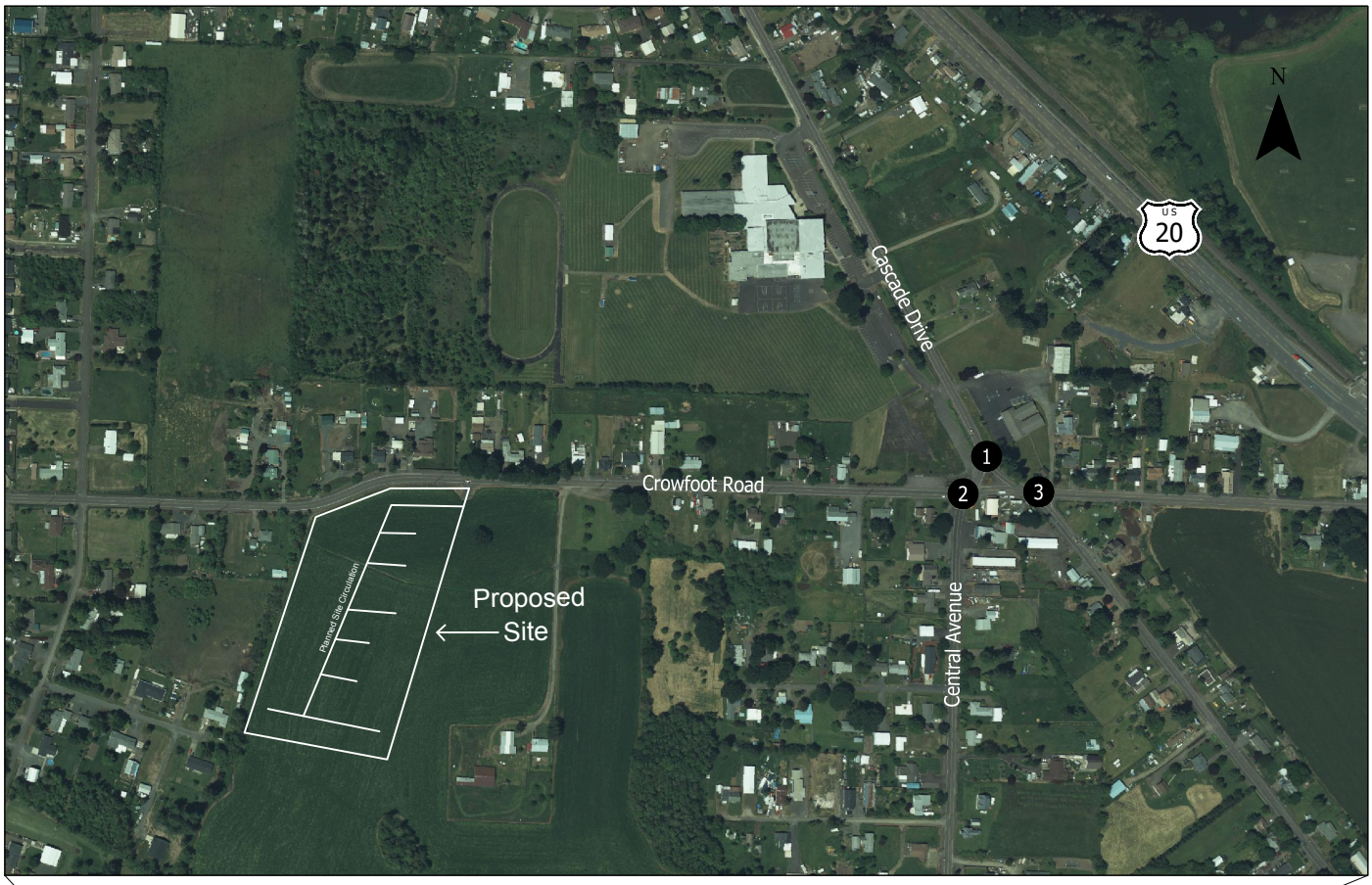
Pacific Northwest Land Co., LLC is proposing the development of a 122-unit residential subdivision on the southern edge of the City of Lebanon, herein referred to as the Crowfoot Subdivision. This memorandum documents the transportation impacts of the proposed subdivision. The following recommendations are identified for implementation in conjunction with site development:

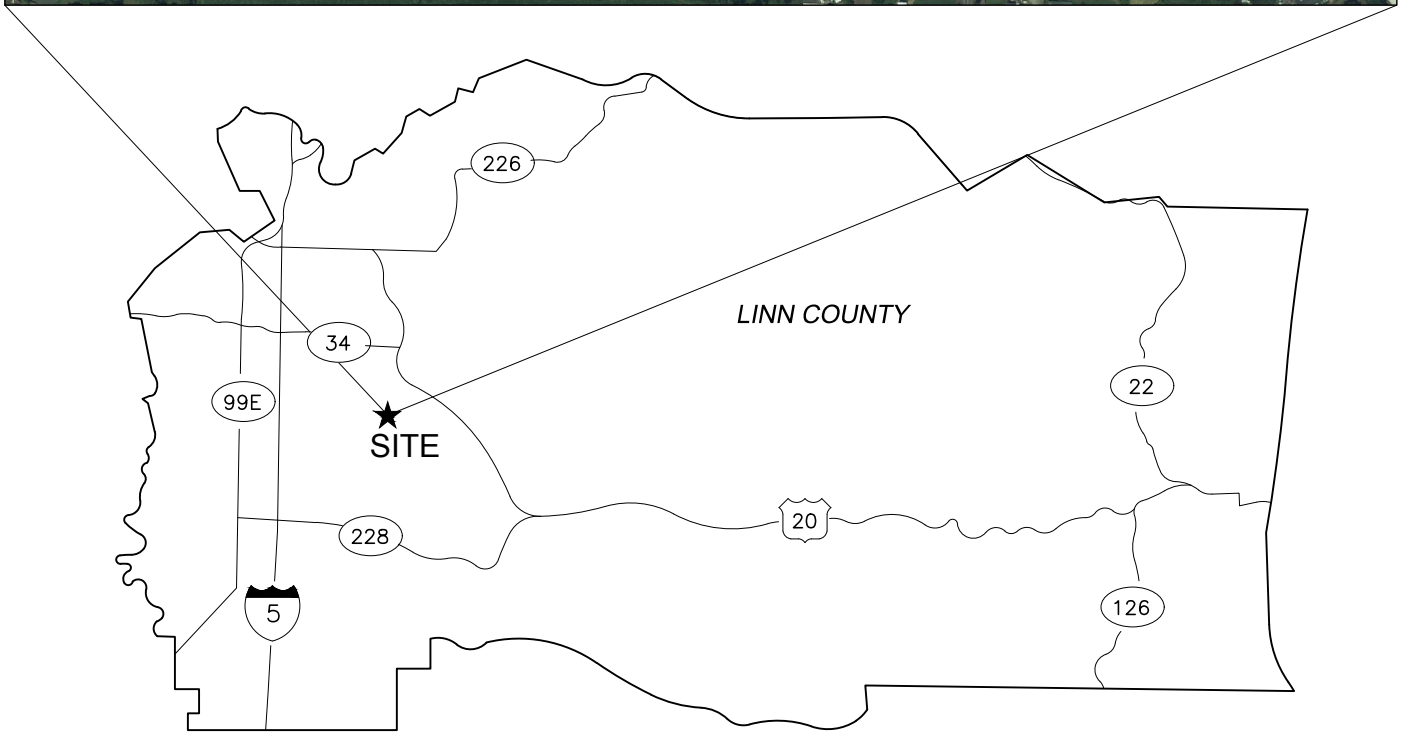
- Signing and striping modifications should be considered at the Crowfoot Road/Cascade Drive/Central Avenue intersection (as documented herein). The identified improvements will need to be coordinated with and approved by Linn County prior to implementation.
- A STOP (R1-1) sign shall be installed on the northbound site access road approach to Crowfoot Road in accordance with City standards and the *Manual on Uniform Traffic Control Devices* (MUTCD).
- A preliminary intersection sight distance measurement at the proposed access roadway connection to Crowfoot Road shall be included in the formal development application along with the proposed building footprint(s) and other above ground structures including fences, monument signs, and landscaping.
- A final sight distance evaluation shall be performed post construction and prior to site occupancy to certify that adequate intersection sight distance is provided at the proposed site access roadway connection to Crowfoot Road.

Additional details are provided herein.

INTRODUCTION

The proposed development is a 122-unit residential subdivision of detached single-family homes. Located at the southern edge of the City, access to the development will occur via a new local street connection to Crowfoot Road. The site location and vicinity are shown in Figure 1, and a site plan is shown in Figure 2.





Site Vicinity Map
Lebanon, Oregon

Figure 1

(##) - Study Intersections

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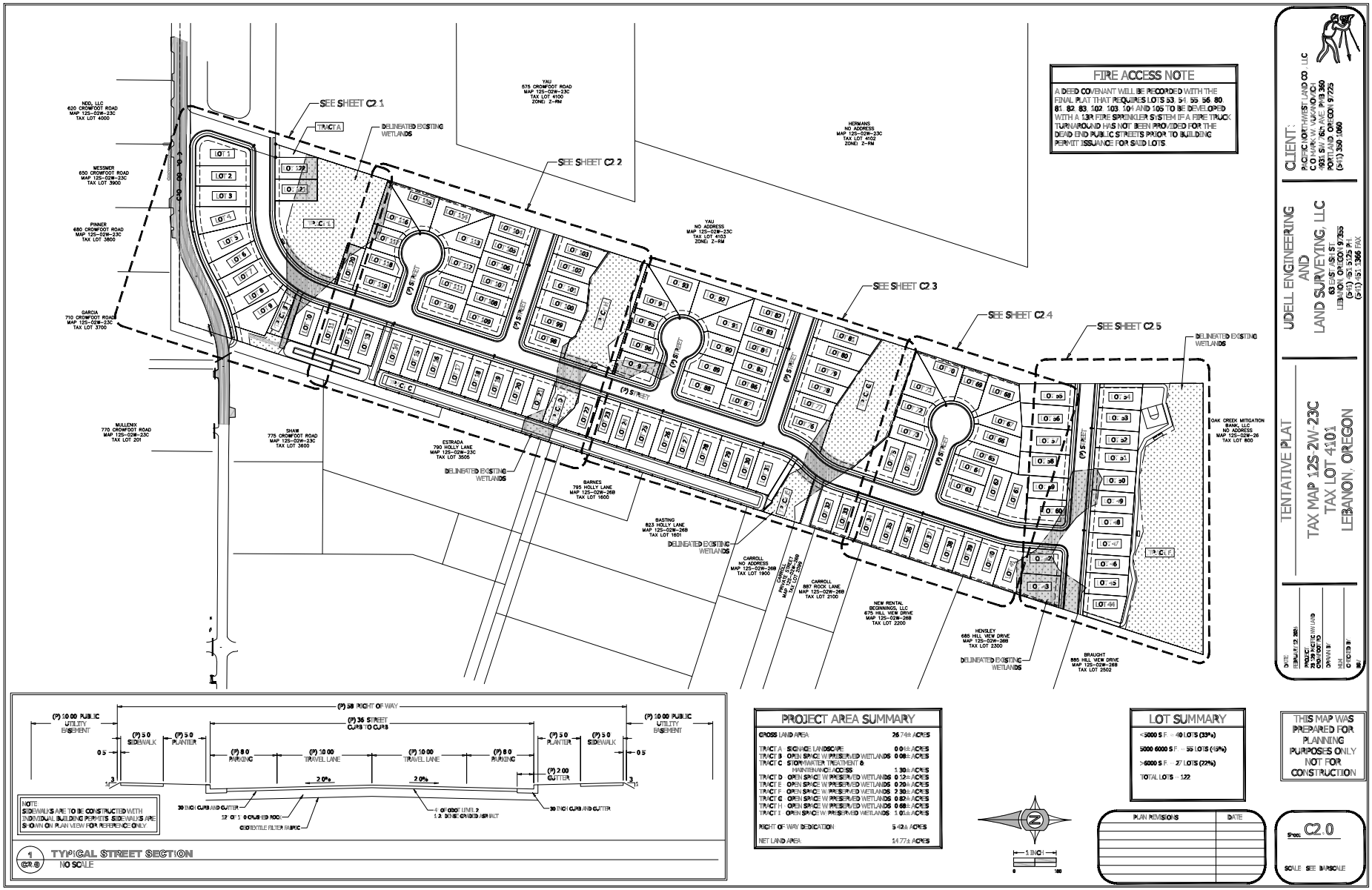

H:\24\24995 - Lebanon TIA Review\017 - Crowfoot Subdivision\dwg\24995_17_Crowfoot.dwg Feb 13, 2024 - 3:53pm - rolney Layout Tab: Proposed Site Plan

Proposed Site Plan
Lebanon, Oregon

Figure
2

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SCOPE OF THE REPORT

This report identifies the transportation-related impacts associated with the proposed Crowfoot Subdivision development and was prepared in accordance with the City of Lebanon Transportation Impact Study requirements. Per agreement with City staff, operational analyses were performed at the following study intersections:

1. Cascade Drive / Crowfoot Road (north corner)
2. Crowfoot Road / Central Avenue (west corner)
3. Crowfoot Road / Cascade Drive (east corner)
4. Crowfoot Road /Proposed local street connection

This report evaluates the following transportation issues:

- Existing 2024 land use and transportation system conditions within the site vicinity during the weekday AM and PM peak periods;
- Forecast year 2026 background traffic conditions during the weekday AM and PM peak periods, considering background growth and transportation improvements planned in the study area;
- Trip generation and distribution estimates for the proposed Crowfoot Subdivision;
- Forecast year 2026 total traffic conditions during the weekday AM and PM peak period with build-out of the subdivision; and
- Study recommendations.

Analysis Methodology

All operational analyses described in this report were performed in accordance with the procedures stated in the *Highway Capacity Manual* (HCM). The 7th Edition of the HCM was used to assess study intersection operations during the peak 15 minutes of the peak hour. The peak hour factor (PHF) was derived from the existing raw manual turning movement counts and applied uniformly over each scenario. The operations analysis presented in this report was completed using PTV Vistro analysis software.

Applicable Mobility Standards

Intersection operating targets adopted by the City of Lebanon are summarized below.

CITY OF LEBANON OPERATING STANDARDS

The City of Lebanon adopted the following mobility targets for all city-owned/maintained intersections.

- **Signalized, All-way Stop, or Roundabout Controlled Intersections**: The intersection as a whole must operate with a Level of Service (LOS) "E" or better and a volume to capacity (v/c) ratio not higher than 1.00 during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 PM and 6 PM during the spring or fall).
- **Two-way Stop and Yield Controlled Intersections**: All intersection approaches during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 PM and 6 PM during the spring or fall) shall operate with a v/c ratio not greater than 0.90.

LINN COUNTY OPERATING STANDARDS

Linn County adopted the following mobility targets for all county-owned/maintained intersections, including the Cascade Drive / Crowfoot Road / Central Avenue intersection.

- **Signalized, All-way Stop, or Roundabout Controlled Intersections**: The intersection as a whole must operate with a LOS "E" or better and a v/c ratio not higher than 0.85 during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4:00 PM and 6:00 PM during the spring or fall).
- **Two-way Stop and Yield Controlled Intersections**: All intersection approaches serving more than 20 vehicles during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4:00 PM and 6:00 PM during the spring or fall) shall operate with a LOS "E" or better and a v/c ratio not higher than 0.90. Mobility targets do not apply to approaches at intersections serving 20 vehicles or fewer during the peak hour.

EXISTING CONDITIONS

This section summarizes the existing characteristics of the transportation system and adjacent land uses in the vicinity of the proposed development, including an inventory of the existing multimodal transportation facilities and options, a summary of recent crash history, and an evaluation of existing intersection operations for motor vehicles at the study intersections.

Site Conditions and Adjacent Land Uses

The proposed Crowfoot Subdivision will be located at the southern edge of the city limits, to the south of Crowfoot Road, between Hillview Drive and Central Avenue. The parcel is zoned Residential Mixed Density. Most nearby parcels are also residential use, with some outside the Lebanon city limits.

Transportation Facilities

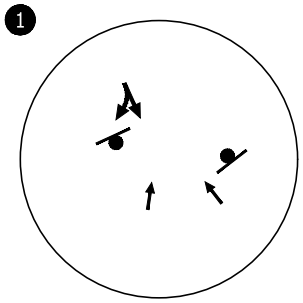
Table 1 summarizes the characteristics of roadways within the site vicinity. Figure 3 illustrates the existing lane configurations and traffic control devices at the study intersections.

Table 1 – Existing Transportation Facilities

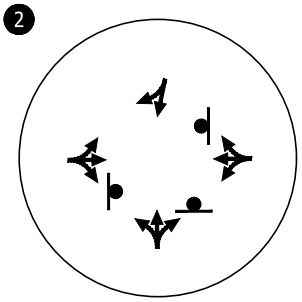
Roadway	Functional Classification[1]	Number of Lanes	Posted Speed (mph)	Sidewalks	Striped Bicycle Lanes	On-Street Parking
Crowfoot Road	Minor Arterial	2 lanes	35	No	No[2]	No[3]
Central Avenue	Collector	2 lanes	35	No	No	No
Cascade Drive	Collector	2 lanes	35-40	No	No	No

[1] Per the *City of Lebanon Transportation System Plan* (2019) and *Linn County Transportation System Plan*.
[2] The north side of Crowfoot Road has a wide paved shoulder that could be used for bicycle riding, but the shoulder is not formally striped or signed.
[3] There is no on-street parking on the paved cross-section, but some segments on the north side have an extended gravel shoulder where vehicles were observed to park.

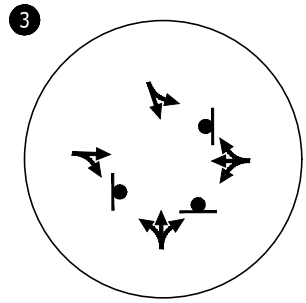
Crowfoot Road / Cascade Drive (north corner)



Crowfoot Road / Cascade Drive (west corner)



Crowfoot Road / Cascade Drive (east corner)



- STOP SIGN

Existing Lane Configurations & Traffic Control Devices
Lebanon, Oregon

Figure 3

CASCADE DRIVE/CROWFOOT ROAD/CENTRAL AVENUE INTERSECTIONS

The existing Cascade Drive/Crowfoot Road/Central Avenue intersection is formed by three separate intersections located near one another forming a triangular configuration as shown in Exhibit 1. All three intersections are currently owned/maintained by Linn County. At each intersection, there is at least one uncontrolled movement. These uncontrolled movements with the other three intersection legs operating as stop-controlled cannot be modeled using standard HCM-based operations techniques. As such, each intersection was analyzed as follows:

Exhibit 1 – Existing Cascade Drive/Crowfoot Road/Central Avenue Intersection

- Cascade Drive/Crowfoot Road (north corner)
  - The northbound Cascade Drive approach is currently signed as a yield movement. However, given the angle of the approach and the presence of a striped stop bar, it was analyzed as a stop-control movement given most vehicles were observed coming to a full or rolling stop during peak time periods as they yielded to northbound Crowfoot Road movements.
- Crowfoot Road/Central Avenue (west corner)
  - Despite the stop sign plaques indicating the intersection is a four-way stop, the southbound Crowfoot Road approach is an uncontrolled movement while all three other approaches are stop-controlled. For analysis purposes, the intersection was modeled as an all-way strop-controlled intersection.
- Crowfoot Road/Cascade Drive (east corner)
  - The southbound Cascade Drive approach is an uncontrolled movement while all three other approaches are stop-controlled. For analysis purposes, the intersection was modeled as an all-way stop-controlled intersection.

MULTI-USE FACILITIES

Crowfoot Road does not have sidewalks or designated bicycle lanes. Within the immediate site vicinity, Crowfoot Road has a 5-foot paved shoulder on the north side.

TRANSIT FACILITIES

There are no regular transit services in the southern end of the City. LINX Dial-A-Bus offers curb-to-curb service for the public within city limits. This service would be available to residents of the proposed Crowfoot Subdivision.

Intersection Crash History

The ODOT Crash Data System was queried to obtain crash records at the study intersections for the five-year period from January 1, 2017 to December 31, 2021 (we note that the 2022 data available from ODOT was deemed preliminary and subject to change at the time this report was prepared so it was not used). Table 2 summarizes the ODOT crash data. *Appendix A provides the ODOT crash report which provides more details on the reported crashes.*

Table 2 – Reported Crash History (January 1, 2017 – December 31, 2022)

Study Intersection	Crash Type					Severity			Total
	Angle	Turn	Read-End	Sideswipe	Other	PDO	Injury	Fatal	
Cascade Drive/Crowfoot Road (north corner)	0	0	0	0	0	0	0	0	***0***
Crowfoot Road / Central Avenue (west corner)	1	0	0	0	0	0	1	0	***1***
Crowfoot Road / Cascade Drive (east corner)	0	0	0	0	0	0	0	0	***0***

PDO = Property Damage Only

Intersection crash rates were calculated and compared to statewide crash rate performance thresholds following the analysis methodology presented in the ODOT *Analysis Procedures Manual (APM)*. Per the APM, intersections with crash rates that exceed the 90th percentile values shown in APM Exhibit 4-1 or with a crash rate that exceeds its critical crash rate should be flagged for further analysis. For this analysis, the critical crash rate was calculated and compared to the 90th percentile crash rates for urban stop-controlled intersections in 3- and 4-legged configurations (as appropriate). This is shown in Table 3.

Table 3 – Intersection Crash Rate Assessment

Study Intersection	Total Crashes	Observed Crash Rate	90th Percentile Crash Rate by Lane Type and Traffic Control	Observed Crash Rate >90th Percentile Crash Rate?
Cascade Drive/Crowfoot Road (north corner)	0	0.00	0.41	No
Crowfoot Road / Central Avenue (west corner)	1	0.15	0.41	No
Crowfoot Road / Cascade Drive (east corner)	0	0.00	0.41	No

CRASH DATA IMPLICATIONS

As shown in Table 3, the observed crash rates at the study intersections do not exceed the appropriate critical crash rates. A detailed review of the intersection crash data revealed the following characteristics:

- The crash reported at Crowfoot Road/Central Avenue was caused by a driver failing to yield right-of-way. Existing signage indicates to drivers at three approaches that there is a 4-way stop-control; in fact, the

southbound approach is not stop-controlled. The current sign configuration may cause some confusion to stopped drivers that are expecting conflicting movements from the southbound approach to also stop.

- While there were no reported crashes within the study period at the adjacent intersection at Crowfoot Road/Cascade Drive, the same signage condition exists.
- While not an intersection crash, one additional crash occurred along Crowfoot Road near the proposed site access. The section immediately to the west of the proposed site access includes a horizontal S-curve. One reported crash with a fixed object was caused by excessive speeds.

Based on a review of the crash data, there was no predominate crash type, time period, or consistency in the directionality of the movements involved in the crashes that suggest specific safety-based mitigation measures.

Existing Traffic Conditions

Vehicle turning movement, pedestrian and bicycle counts were conducted at the study intersections on January 9, 2024. On this date, local schools were in session and on normal start/stop times and the weather was fair. *Appendix B contains the count data summary sheets*.

EXISTING CONDITIONS

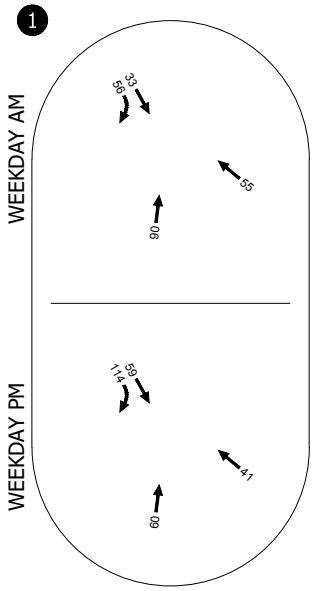
Table 4 summarizes the corresponding traffic operations during the weekday AM (7:20-8:20 AM) and PM (3:05-4:05 PM) peak hours. As shown in Table 4 and Figure 4 and detailed in *Appendix C* (which includes the existing conditions operations analysis worksheets), the study intersection operations satisfy applicable County standards during both the AM and PM peak hours under existing traffic conditions. Only the three existing intersections are shown; the expected intersection with the proposed site access will be analyzed in the total traffic conditions section. The 95th-percentile queues are under one vehicle length (25 feet) for all approaches at all intersections.

Table 4 – Existing Traffic Conditions

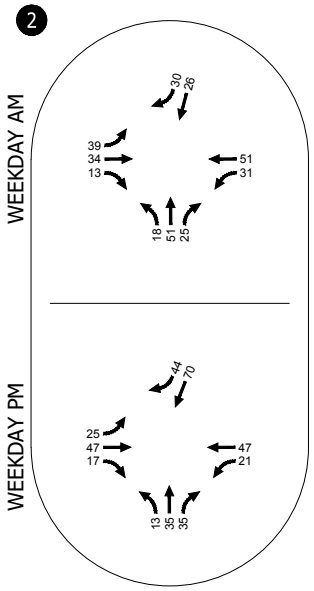
Intersection	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS
Cascade Drive / Crowfoot Road (north corner)	WB	0.10	10.2	B	EB	0.24	9.8	A
Crowfoot Road / Central Avenue (west corner)	-	0.16	8.2	A	-	0.16	8.1	A
Crowfoot Road / Cascade Drive (east corner)	-	0.13	7.7	A	-	0.13	7.8	A

Where: WB = westbound, EB = Eastbound

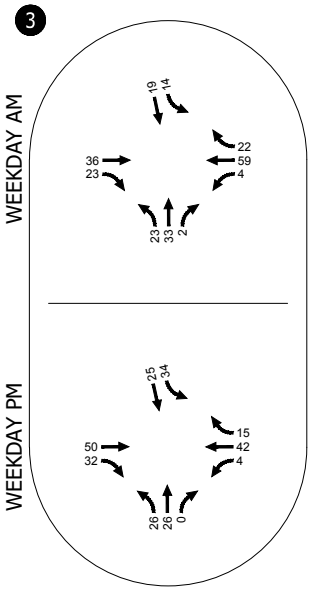
Crowfoot Road / Cascade Drive (north corner)



Crowfoot Road / Cascade Drive (west corner)



Crowfoot Road / Cascade Drive (east corner)



2024 Existing Traffic Conditions
Weekday AM and PM Peak Hours
Lebanon, Oregon

Figure 4

TRANSPORTATION ASSESSMENT

The transportation impact analysis identifies how the study intersections will operate in the year 2026 upon initial buildout and occupation of the Crowfoot Subdivision. This section of the report includes analysis of 2026 background traffic volumes and operations, an estimate of site-generated trips, and analysis of 2026 total traffic volumes and operations with the proposed Crowfoot Subdivision.

2026 Background Operational Analysis

Background traffic operations capture the expected performance of the transportation system in the future; the analysis incorporates projected regional growth, but excludes expected trips generated by the Crowfoot development. A two percent annual growth rate (consistent with the growth rates forecast in the Lebanon TSP and historical growth) was applied to the existing study intersection traffic volumes to reflect near-term growth on the local transportation network.

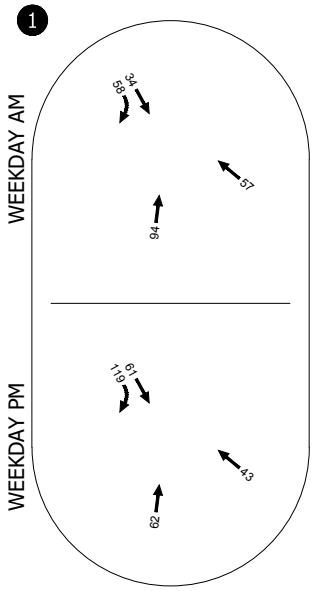
Table 5 and Figure 5 summarize the corresponding traffic volumes and operational analysis for the weekday AM and PM peak hours. As shown, all of the study intersections are expected to continue to satisfy the respective County standards under background conditions. *Appendix D includes the 2026 background conditions volumes and operations analysis worksheets.*

Table 5 – 2026 Background Traffic Conditions

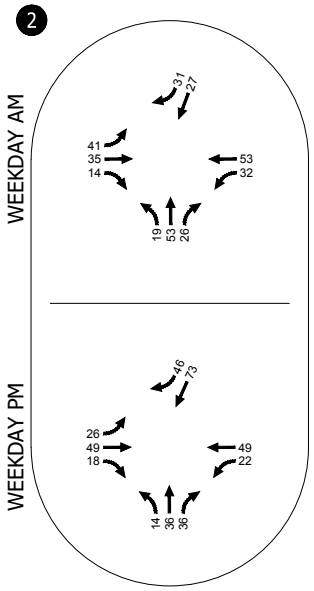
Intersection	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS
Cascade Drive / Crowfoot Road (north corner)	WB	0.10	10.2	B	EB	0.25	9.9	A
Crowfoot Road / Central Avenue (west corner)	-	0.17	8.2	A	-	0.17	8.1	A
Crowfoot Road / Cascade Drive (east corner)	-	0.13	7.7	A	-	0.13	7.8	A

Where: WB = westbound, EB = Eastbound

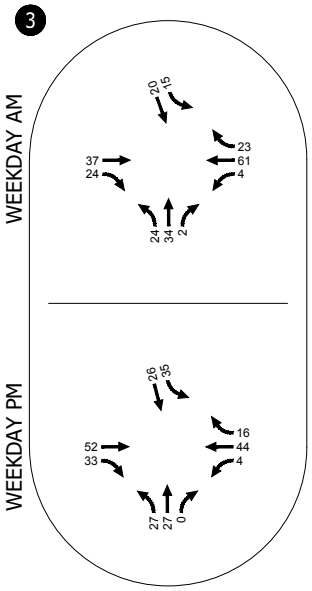
Crowfoot Road / Cascade Drive (north corner)



Crowfoot Road / Cascade Drive (west corner)



Crowfoot Road / Cascade Drive (east corner)



2026 Background Traffic Conditions
Weekday AM and PM Peak Hours
Lebanon, Oregon

Figure 5

Proposed Development Plan

The proposed Crowfoot Subdivision is expected to comprise 122 detached single-family homes. Access to the development is proposed via a new local street connection along the site's Crowfoot Road frontage at the north end of the development. For analysis purposes, this access is proposed to consist of a single shared-lane stop-controlled approach at Crowfoot Road. No other through connections are anticipated to be built, but the project will include local street stubs to connect to future infill development to the east and west of the site. Full build-out and occupancy of the proposed subdivision is expected in 2026.

TRIP GENERATION ESTIMATE

A trip generation estimate was prepared for the proposed development based on information provided in the standard reference, *Trip Generation Manual, 11th Edition,* published by the Institute of Transportation Engineers (ITE). ITE land use code 210 (Single-Family Detached Housing) was used as a basis for the estimate. General Urban/Suburban rates were used. Table 6 summarizes the estimates for the daily and weekday AM and PM peak hours.

Table 6 – Trip Generation Estimate

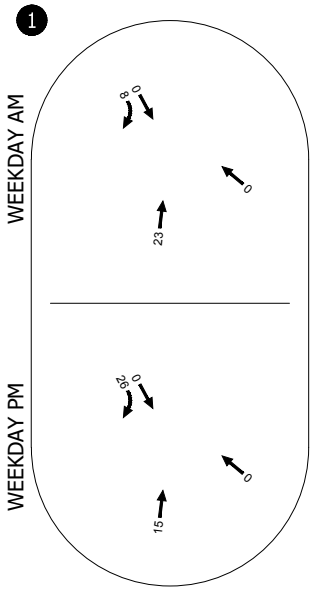
Land Use	ITE Code	Dwelling Units	Daily Trips	Weekday AM Peak Hour				Weekday PM Peak Hour			
				Rate	Total	In	Out	Rate	Total	In	Out
Single family detached	210	122	1,150	0.70	85	21	64	0.94	115	72	43

SITE TRIP DISTRIBUTION/TRIP ASSIGNMENT

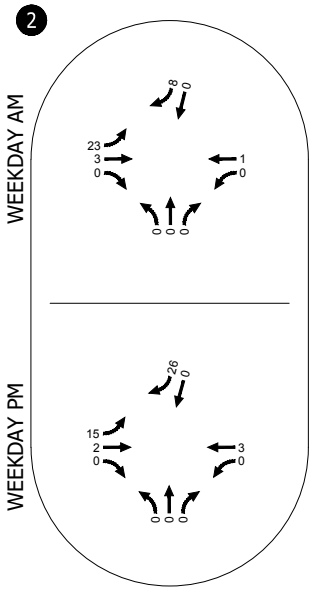
The site-generated trips shown in Table 6 were distributed onto the study area roadways based on a review of traffic patterns and the location of the site in relation to the major draws (schools, retail, employment centers) in the regional site vicinity. The trip distribution pattern and trip assignment is illustrated in Figure 6.

The majority of site-generated trips are expected to be oriented to/from the west of the site given Crowfoot Road's connections to S Main Road and that road's connections to other local and regional travel routes. The remaining site-generated trips are expected to be oriented to/from the east given the presence of nearby schools, retail centers, and US 20 (Santiam Highway).

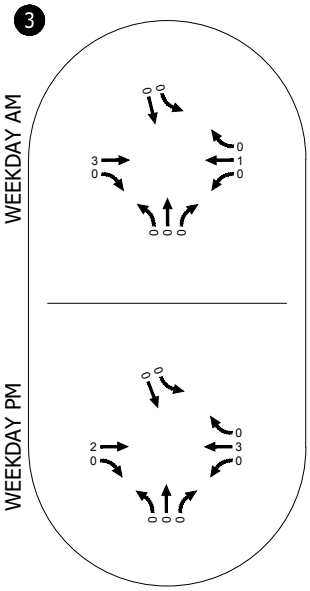
Crowfoot Road / Cascade Drive (north corner)



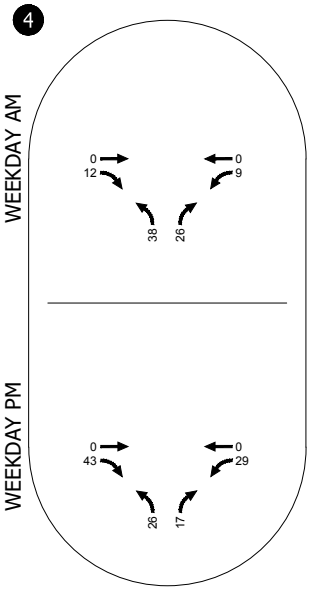
Crowfoot Road / Cascade Drive (west corner)



Crowfoot Road / Cascade Drive (east corner)



Crowfoot Road / Proposed Site Access



2026 Estimated Trip Generation and Distribution
Weekday AM and PM Peak Hours
Lebanon, Oregon

Figure 6

Year 2026 Total Traffic Conditions

The total traffic conditions analysis forecasts the operation of the study intersections with the inclusion of traffic generated by the proposed Crowfoot Subdivision. Total traffic conditions were determined by adding the estimated site-generated trips to the year 2026 background volumes for the weekday AM and PM peak hours.

Table 7 summarizes the corresponding operational analysis for the weekday AM and PM peak hours. As shown, all of the study intersections and the site access roadway are expected to satisfy the respective City and County standards under full buildout conditions.

Appendix E includes the 2026 total traffic volumes and operations analysis worksheets.

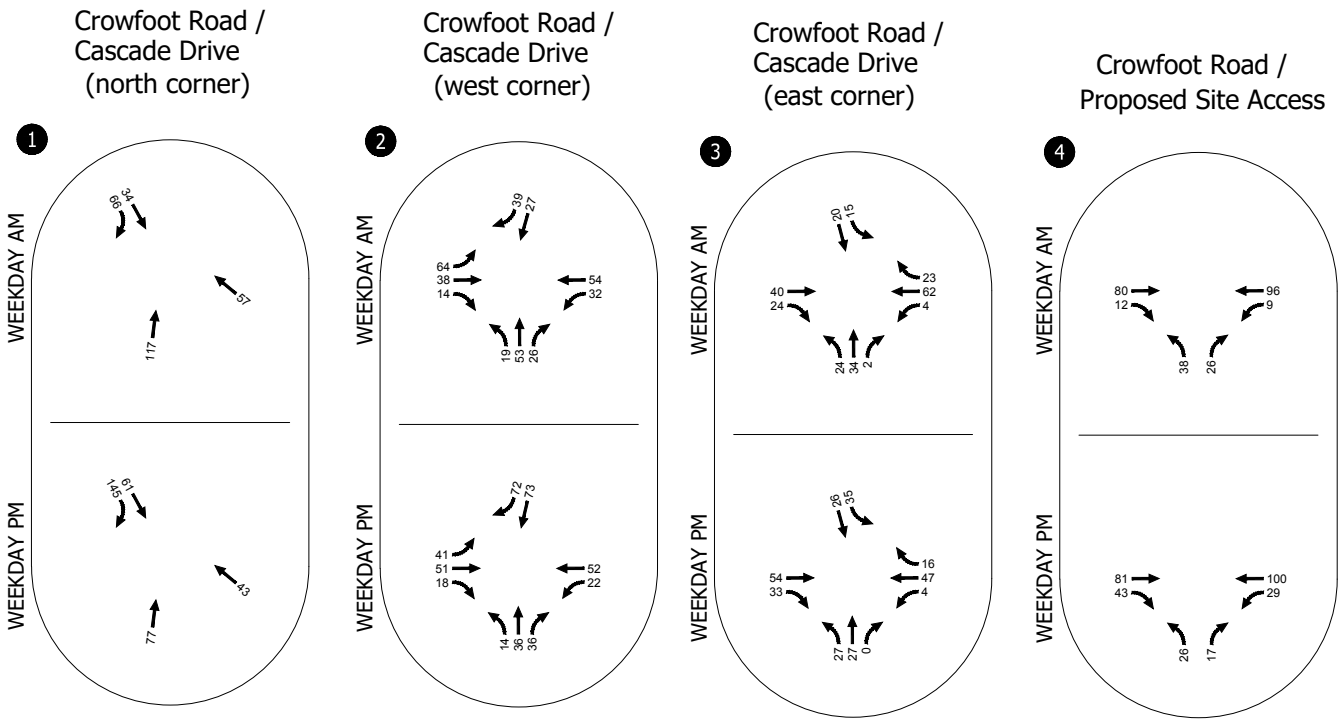
Table 7 – 2026 Total Traffic Conditions

Intersection	Weekday AM Peak Hour				Weekday PM Peak Hour			
	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS	Critical Approach	V/C Ratio	Approach Delay (sec)	Approach LOS
Cascade Drive/Crowfoot Road (north corner)	WB	0.10	10.5	B	EB	0.28	10.1	B
Crowfoot Road / Central Avenue (west corner)	-	0.21	8.5	A	-	0.21	8.4	A
Crowfoot Road / Cascade Drive (east corner)	-	0.14	7.7	A	-	0.13	7.8	A
Crowfoot Road / Proposed Site Access	NB	0.13	10.5	B	NB	0.09	10.7	B

Where: WB = westbound, EB = Eastbound, NB = Northbound

CASCADE DRIVE/CROWFOOT ROAD/CENTRAL AVENUE INTERSECTIONS

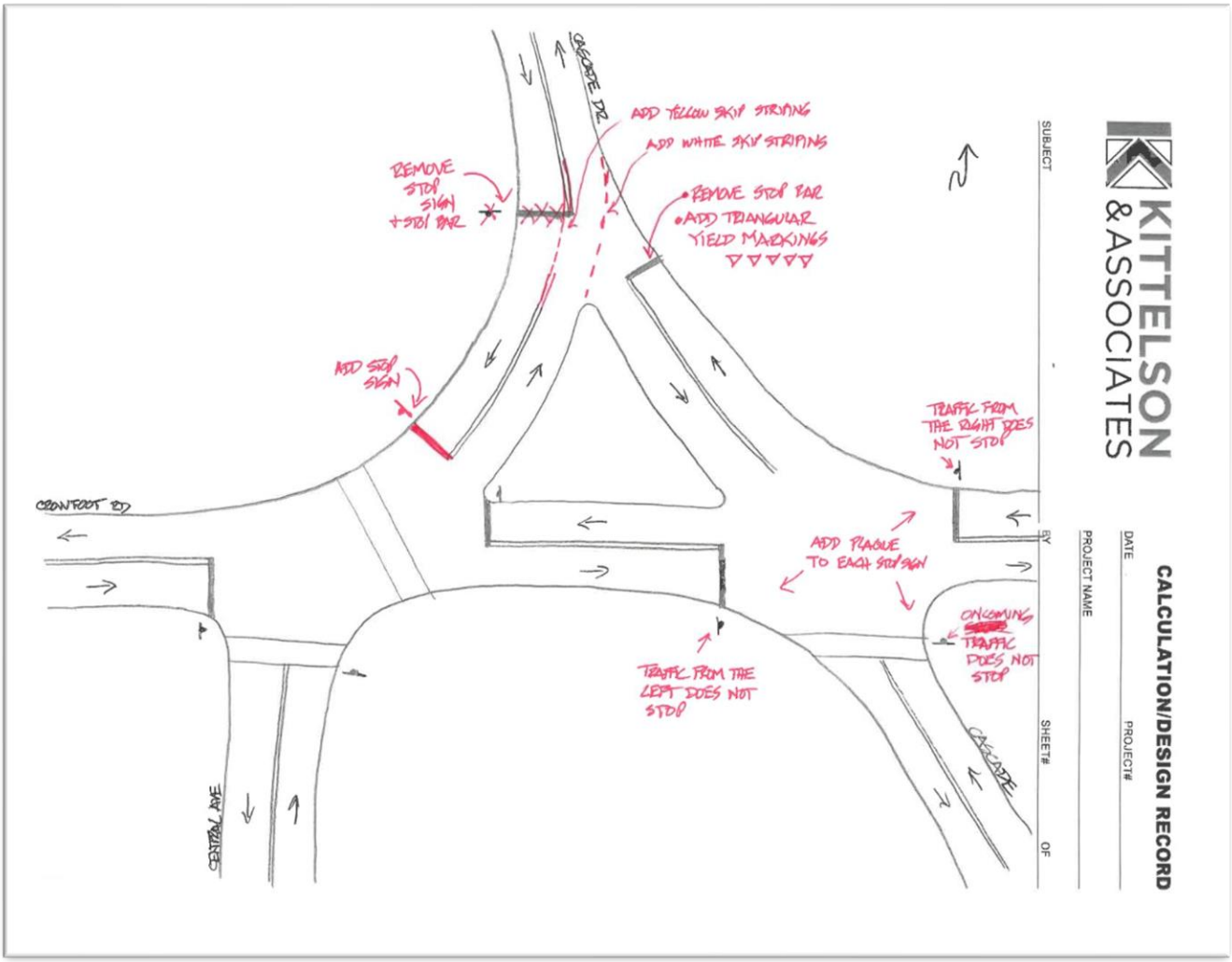
The City of Lebanon and Linn County Transportation System Plans have identified the need for long-term improvements at the Cascade Drive/Crowfoot Road/Central Avenue intersection. While the TSPs do not prescribe an exact improvement, a roundabout is mentioned as a possible improvement. Considering the relatively small transportation impact that the proposed Crowfoot Subdivision would have on the intersection and the continued acceptable operations, a complete reconstruction of the intersection as a condition of the development is not necessary. However, it is noted that the group of intersections do have some signing that is inconsistent with allowed traffic movements. To address these inconsistencies, City of Lebanon and Linn County could consider signing and striping modifications to address these inconsistencies regardless of the proposed subdivision. Based on field observations of traffic flow and a review of existing signing and striping, a potential set of modifications is described below and conceptually shown in Exhibit 2.



2026 Total Traffic Conditions
Weekday AM and PM Peak Hours
Lebanon, Oregon

Figure 7

Exhibit 2 - Conceptual Signing/Striping Modifications



- Cascade Drive/Crofoot Road (north corner)
  - Replace the stop bar striping on the northbound Cascade Drive approach with triangular yield line markings, in accordance with County standards and the MUTCD.
  - Remove the stop sign and stop bar striping on the southbound approach.
  - Add yellow and white skip line striping on Crowfoot Road to emphasize the north-south through movements from Cascade Drive to Crowfoot Road, in accordance with County standards and the MUTCD.
- Crowfoot Road/Central Avenue (west corner)
  - Add a stop sign and stop bar to the southbound Crowfoot Road approach, in accordance with County standards and the MUTCD.
- Cascade Drive/Crowfoot Road (east corner)
  - Add a plaque to the existing eastbound Crowfoot Road approach stop sign that says "Traffic from Left Does Not Stop" (W4-4aP), in accordance with County standards and the MUTCD.
  - Add a plaque to the northbound Cascade Drive approach stop sign that says "Oncoming Traffic Does Not Stop" (W4-4bP), in accordance with County standards and the MUTCD.
  - Add a plaque to the existing westbound Crowfoot Road approach stop sign that says "Traffic from Right Does Not Stop" (W4-4aP), in accordance with County standards and the MUTCD.

CROWFOOT ROAD LEFT-TURN CONSIDERATIONS

The Crowfoot Road intersection with the proposed site access roadway was evaluated to determine if a westbound left-turn lane is appropriate to accommodate future site-generated traffic volumes. The procedures used to determine the need for a left-turn lane were based on Harmelink left-turn lane criteria. Based on this analysis, it was determined that the volume-based criterion for a separate westbound left-turn lane on Crowfoot Road are not met.

PRELIMINARY SITE ACCESS ROADWAY SIGHT DISTANCE REVIEW

Intersection sight distance was preliminarily assessed at the proposed site access roadway to Crowfoot Road. At the proposed intersection, Crowfoot Road is relatively flat but does have a series of s-curves to the west that could limit sight distance for existing vehicles. While the preliminary site plan indicates the future lots will be sufficiently set back from Crowfoot Road so as to not interfere with sight lines, it is recommended that a final sight distance evaluation be performed post construction and prior to occupancy permits. In addition, it is recommended that the developer place and maintain all vegetation and other above ground signage on-site in a manner that provides adequate sight distance per City standards.

FINDINGS AND RECOMMENDATIONS

The primary findings and recommendations of this study are summarized below.

- The study intersections are forecast to meet the City of Lebanon and Linn County operating standards during the weekday AM and PM peak hours under existing and future traffic conditions.
- No capacity-based mitigation needs were identified at the study intersections.
- No safety-based mitigations were identified at the study intersections based on the crash analysis alone; however, the existing signage at Crowfoot Road / Central Avenue / Cascade Drive intersection could be modified as follows, subject to Linn County direction:
  - Cascade Drive/Crofoot Road (north corner)
    - Replace the stop bar striping on the northbound Cascade Drive approach with triangular yield line markings, in accordance with County standards and the MUTCD.
    - Remove the stop sign and stop bar striping on the southbound approach.
    - Add yellow and white skip line striping on Crowfoot Road to emphasize the north-south through movements from Cascade Drive to Crowfoot Road, in accordance with County standards and the MUTCD.
  - Crowfoot Road/Central Avenue (west corner)
    - Add a stop sign and stop bar to the southbound Crowfoot Road approach, in accordance with County standards and the MUTCD.
  - Cascade Drive/Crowfoot Road (east corner)
    - Add a plaque to the existing eastbound Crowfoot Road approach stop sign that says "Traffic from Left Does Not Stop" (W4-4aP), in accordance with County standards and the MUTCD.
    - Add a plaque to the northbound Cascade Drive approach stop sign that says "Oncoming Traffic Does Not Stop" (W4-4bP), in accordance with County standards and the MUTCD.
    - Add a plaque to the existing westbound Crowfoot Road approach stop sign that says "Traffic from Right Does Not Stop" (W4-4aP), in accordance with County standards and the MUTCD.
  - At the proposed site access roadway connection Crowfoot Road, it is recommended that the future northbound approach be stop controlled in accordance with City standards and the MUTCD in conjunction with site development.
  - A preliminary intersection sight distance measurement at the proposed access roadway connection to Crowfoot Road shall be included in the formal development application along with the proposed building footprint(s) and other above ground structures including fences, monument signs, and landscaping.
  - To confirm adequate sight lines at the proposed access road intersection with Crowfoot Road, it is recommended that a final sight distance evaluation be performed post construction and prior to site occupancy.

We trust this memorandum adequately addresses the traffic and circulation impacts associated with the proposed Crowfoot Subdivision. Please let us know if you have any questions regarding our analyses or need additional information.

APPENDIX

A. Crash Data
B. Traffic Count Data
C. 2024 Existing Traffic Conditions Worksheets and Volumes

D. 2026 Background Traffic Conditions Worksheets and Volumes
E. 2026 Total Traffic Conditions Worksheets and Volumes

Appendix A
Crash Data

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

CENTRAL AVE, MP -999.99 to 999.99, 01/01/2017 to 12/31/2022

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2017														
ANGLE	0	1	0	1	0	2	0	1	0	1	0	1	0	0
REAR-END	0	0	1	1	0	0	0	0	1	1	0	0	0	0
YEAR 2017 TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**0**
FINAL TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**0**

LINN COUNTY

CENTRAL AVE, MP -999.99 to 999.99, 01/01/2017 to 12/31/2022

1 - 2 of 2 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U I C O G N H R V L K	DATE / DAY / TIME / LAT	MILEPNT / DIST FROM / INTERSECT / LONG	COUNTY ROADS / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
01562	Y	N	N N	10/21/2017	2.00	CENTRAL AVE	ALLEY		N	N	RAIN	S-1TURN	01	NONE 9	STRGHT										01
COUNTY				SA			UN	(NONE)	UNKNOWN	N	WET	REAR		N/A	N -S									000	00
N				3P			03			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N				44 29 56.44	-122 53 25.83			(02)													UNK				
													02	NONE 9	TURN-R										
														N/A	N -W									019	00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																					UNK				
00511	N	N	N N	04/16/2017	2.23	CENTRAL AVE	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										02
NO RPT				SU	0		CN		STOP SIGN	N	DRY	ANGL		PRVTE	E -W									015	00
N				10A			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	57	M	OR-Y		000	000	00
N				44 30 29.44	-122 53 25.48																OR<25				
													02	NONE 0	STRGHT										
														PRVTE	S -N									015	00
														PSNGR CAR		01	DRVR	INJB	59	F	OR-Y		028	000	02
																					OR<25				
													02	NONE 0	STRGHT										
														PRVTE	S -N									015	00
														PSNGR CAR		02	PSNG	INJC	56	F			000	000	00

ID	Location	Collision Type						Severity		Total Crashes	90th Percentile Crash Rate	Observed Crash Rate	Does Observed Exceed 90th Rate?	
		Rear-end	Turning	Angle	Fixed	SS (O)	Ped	PDO	Injury					
1	Crowfoot Road / Proposed Site Access	0	0	0	0	0	0	0	0	0	0.29	0.00	No	✓
2	Crowfoot Road / Central Avenue	1	0	0	0	0	0	0	1	1	0.41	0.15	No	✓
3	Crowfoot Road / Central Avenue / Cascade Drive	0	0	0	0	0	0	0	0	0	0.41	0.00	No	✓

ID	Location	PM Peak					EST AADT	EST 5Y TEV	Crash Rate	Intersection Class	90th Percentile Rate
		Day one	Day Two	Day Three	AVG						
1	Crowfoot Road / Proposed Site Access				174		1740	3175500	0.00	Urban 3ST	0.293
2	Crowfoot Road / Central Avenue				354		3540	6460500	0.15	Urban 4ST	0.408
3	Crowfoot Road / Central Avenue / Cascade Drive				254		2540	4635500	0.00	Urban 4ST	0.408

PM Peak hour TEV from network tool

✓

$$Intersection\ Crash\ Rate\ per\ MEV = \frac{Annual\ Number\ of\ Crashes\ x\ 10^6}{(AADT)x\ (365\ days/year)}$$

The values shown in Exhibit 4-1 represent the 90th percentile crash rates from a study of 500 intersections in Oregon. The crash rates are grouped by rural/urban, signalized/unsignalized, and three-leg/four-leg intersections. Intersections with crash rates that exceed the 90th percentile values shown in the table should be flagged for further analysis. For more information on crash rates and using this table, see Section 4.3.4 Critical Crash Rate.

Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control

	Rural				Urban			
	3SG	3ST	4SG	4ST	3SG	3ST	4SG	4ST
No. of Intersections	7	115	20	60	55	77	106	60
Mean Crash Rate	**0.226**	**0.196**	**0.324**	**0.434**	**0.275**	**0.131**	**0.477**	**0.198**
Median Crash Rate	0.163	0.092	0.320	0.267	0.252	0.105	0.420	0.145
Standard Deviation	0.185	0.314	0.223	0.534	0.155	0.121	0.273	0.176
Coefficient of Variation	0.819	1.602	0.688	1.230	0.564	0.924	0.572	0.889
90th Percentile Rate	**0.464**	**0.475**	**0.579**	**1.080**	**0.509**	**0.293**	**0.860**	**0.408**

Source: Assessment of Statewide Intersection Safety Performance, FHWA-OR-RD-18, Portland State University and Oregon State University, June 2011, Table 4.1, p. 47.

Note: Traffic control types include
3SG (three-leg signalized),
3ST (three-leg minor stop-control),
4SG (four-leg signalized),
4ST (four-leg minor stop-control).

Appendix B
Traffic Count Data

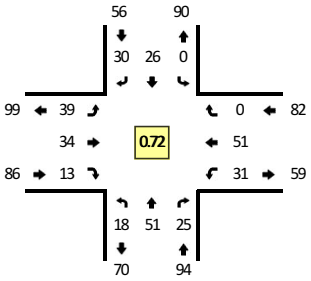
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

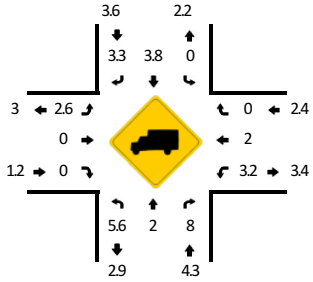
LOCATION: Cascade Dr/Central Ave -- Crowfoot Rd
CITY/STATE: Lebanon, OR

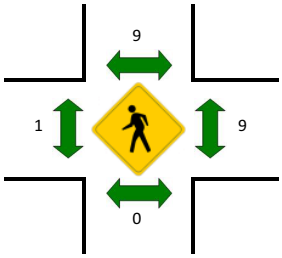
QC JOB #: 16377101
DATE: Tue, Jan 9 2024

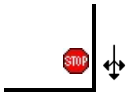
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

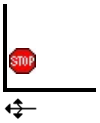


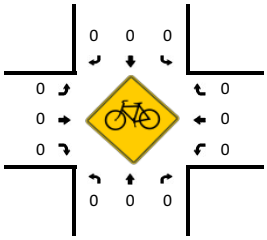
TRUE DATA TO IMPROVE MOBILITY

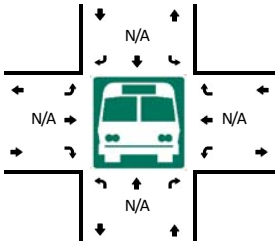


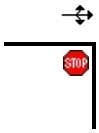


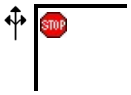


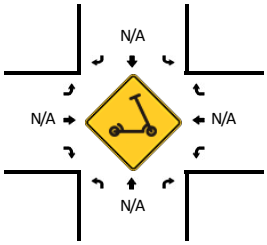












5-Min Count Period Beginning At	Cascade Dr/Central Ave (Northbound)				Cascade Dr/Central Ave (Southbound)				Crowfoot Rd (Eastbound)				Crowfoot Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	1	1	0	0	1	2	0	2	1	0	0	3	1	0	0	13	
7:05 AM	0	2	1	0	0	1	0	0	0	2	1	0	3	0	0	0	10	
7:10 AM	1	2	0	0	0	0	1	0	0	3	0	0	3	4	0	0	14	
7:15 AM	0	4	0	0	0	1	0	0	0	0	0	0	1	3	0	0	9	
7:20 AM	2	3	5	0	0	2	0	0	1	0	1	0	1	5	0	0	20	
7:25 AM	0	10	1	0	0	0	0	0	0	2	0	0	1	0	0	0	14	
7:30 AM	2	1	4	0	0	1	0	0	5	5	2	0	1	5	0	0	26	
7:35 AM	0	3	1	0	0	4	0	0	1	2	0	0	4	1	0	0	16	
7:40 AM	4	4	0	0	0	3	0	0	3	5	0	0	4	5	0	0	28	
7:45 AM	0	6	1	0	0	3	2	0	3	4	0	0	3	13	0	0	35	
7:50 AM	0	6	3	0	0	3	5	0	5	3	1	0	2	10	0	0	38	
7:55 AM	1	6	3	0	0	0	3	0	6	3	3	0	4	6	0	0	35	258
8:00 AM	3	1	0	0	0	4	9	0	7	2	2	0	5	4	0	0	37	282
8:05 AM	3	7	4	0	0	2	4	0	3	5	1	0	2	1	0	0	32	304
8:10 AM	3	2	0	0	0	1	2	0	4	0	0	0	1	0	0	0	13	303
8:15 AM	0	2	3	0	0	3	5	0	1	3	3	0	3	1	0	0	24	318
8:20 AM	1	0	2	0	0	0	1	0	0	2	0	0	1	0	0	0	7	305
8:25 AM	1	1	1	0	0	3	0	0	2	2	0	0	3	2	0	0	15	306
8:30 AM	0	1	1	0	0	2	0	0	0	1	0	0	1	2	0	0	8	288
8:35 AM	0	1	1	0	0	1	1	0	0	0	1	0	2	1	0	0	8	280
8:40 AM	0	4	2	0	0	1	0	0	0	0	0	0	2	2	0	0	11	263
8:45 AM	0	1	0	0	0	3	1	0	3	0	1	0	0	1	0	0	10	238
8:50 AM	2	1	1	0	0	1	0	0	1	0	0	0	1	2	0	0	9	209
8:55 AM	0	1	0	0	0	0	0	0	0	1	1	0	1	2	0	0	6	180

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	52	24	0	0	28	68	0	72	32	24	0	44	80	0	0	440
Heavy Trucks	4	4	0		0	4	0		0	0	0		0	4	0		16
Buses																	
Pedestrians		0				24				0				24			48
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: SB does not have a stop sign.

Report generated on 1/16/2024 2:32 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

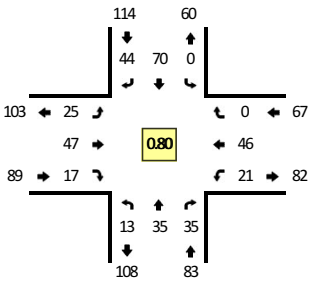
Type of peak hour being reported: Intersection Peak

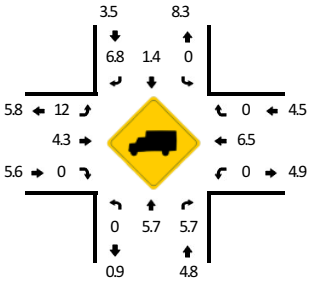
Method for determining peak hour: Total Entering Volume

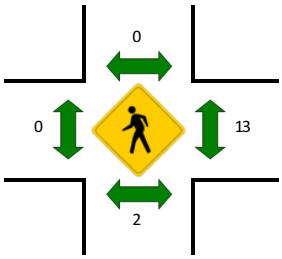
LOCATION: Cascade Dr/Central Ave -- Crowfoot Rd
CITY/STATE: Lebanon, OR

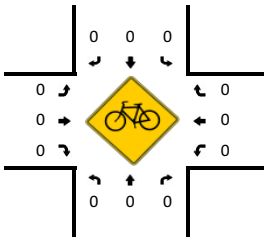
QC JOB #: 16377102
DATE: Tue, Jan 9 2024

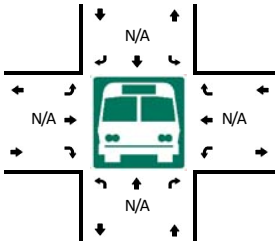
Peak-Hour: 3:05 PM -- 4:05 PM
Peak 15-Min: 3:35 PM -- 3:50 PM

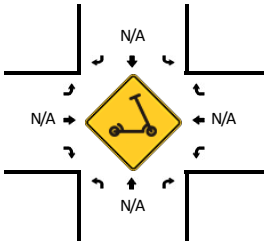












5-Min Count Period Beginning At	Cascade Dr/Central Ave (Northbound)				Cascade Dr/Central Ave (Southbound)				Crowfoot Rd (Eastbound)				Crowfoot Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	0	3	3	0	0	5	0	0	1	0	0	0	2	6	0	0	20	
3:05 PM	3	2	5	0	0	5	1	0	1	1	3	0	1	3	0	0	25	
3:10 PM	0	4	2	0	0	7	1	0	2	5	0	0	3	6	0	0	30	
3:15 PM	0	3	3	0	0	3	0	0	2	4	3	0	5	3	0	0	26	
3:20 PM	0	3	5	0	0	4	3	0	8	9	1	0	2	4	0	0	39	
3:25 PM	3	0	0	0	0	6	2	0	5	2	0	0	2	1	0	0	21	
3:30 PM	1	2	3	0	0	4	5	0	1	3	1	0	1	3	0	0	24	
3:35 PM	2	4	2	0	0	6	13	0	1	8	1	0	2	2	0	0	41	
3:40 PM	0	5	4	0	0	6	13	0	0	5	2	0	1	6	0	0	42	
3:45 PM	0	4	3	0	0	7	2	0	3	2	0	0	2	4	0	0	27	
3:50 PM	0	3	3	0	0	6	1	0	2	2	2	0	0	6	0	0	25	
3:55 PM	3	4	3	0	0	8	1	0	0	2	2	0	0	5	0	0	28	348
4:00 PM	1	1	2	0	0	8	2	0	0	4	2	0	2	3	0	0	25	353
4:05 PM	1	2	1	0	0	5	2	0	2	1	3	0	1	2	0	0	20	348
4:10 PM	1	1	5	0	0	2	0	0	2	1	3	0	2	1	0	0	18	336
4:15 PM	0	4	7	0	0	4	1	0	1	6	2	0	1	5	0	0	31	341
4:20 PM	1	3	0	0	0	2	2	0	2	2	1	0	5	3	0	0	21	323
4:25 PM	1	1	1	0	0	5	0	0	0	3	0	0	2	2	0	0	15	317
4:30 PM	0	3	0	0	0	2	4	0	4	5	0	0	1	0	0	0	19	312
4:35 PM	0	3	2	0	0	2	2	0	1	1	2	0	1	2	0	0	16	287
4:40 PM	0	4	2	0	0	4	2	0	2	3	0	0	1	1	0	0	19	264
4:45 PM	0	4	3	0	0	3	2	0	2	3	1	0	0	2	0	0	20	257
4:50 PM	0	3	3	0	0	5	0	0	1	3	0	0	1	3	0	0	19	251
4:55 PM	1	0	2	0	0	5	3	0	3	1	2	0	3	2	0	0	22	245
5:00 PM	0	3	3	0	0	2	2	0	0	5	0	0	2	2	0	0	19	239
5:05 PM	1	3	2	0	0	8	1	0	2	3	2	0	2	1	0	0	25	244
5:10 PM	1	4	2	0	0	7	3	0	2	1	0	0	0	4	0	0	24	250
5:15 PM	0	1	5	0	0	5	2	0	3	0	1	0	4	3	0	0	24	243
5:20 PM	0	1	2	0	0	6	2	0	2	2	1	0	1	4	0	0	21	243
5:25 PM	0	1	3	0	0	7	3	0	1	3	1	0	5	1	0	0	25	253
5:30 PM	0	5	3	0	0	4	4	0	0	0	0	0	6	3	0	0	25	259
5:35 PM	0	7	1	0	0	6	3	0	1	1	2	0	3	1	0	0	25	268
5:40 PM	2	3	2	0	0	4	3	0	0	2	1	0	1	1	0	0	19	268
5:45 PM	1	3	2	0	0	4	3	0	1	5	0	0	1	4	0	0	24	272
5:50 PM	0	2	5	0	0	8	1	0	0	2	0	0	3	2	0	0	23	276
5:55 PM	0	1	2	0	0	3	2	0	1	5	1	0	2	3	0	0	20	274

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	52	36	0	0	76	112	0	16	60	12	0	20	48	0	0	440
Heavy Trucks	0	4	8		0	0	12		0	8	0		0	4	0		36
Buses																	
Pedestrians		8				0				0				44			52
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	
Comments: SB does not have a stop sign.																	

Report generated on 1/16/2024 2:32 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

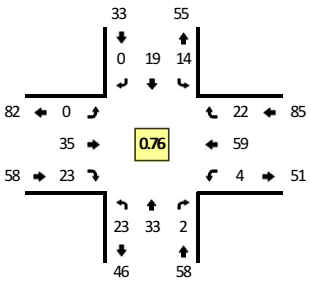
Type of peak hour being reported: Intersection Peak

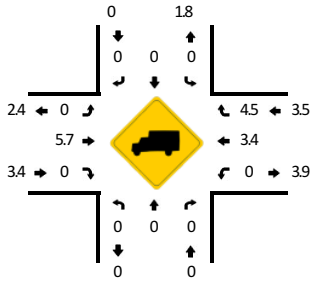
Method for determining peak hour: Total Entering Volume

LOCATION: Cascade Dr -- Crowfoot Rd
CITY/STATE: South Lebanon, OR

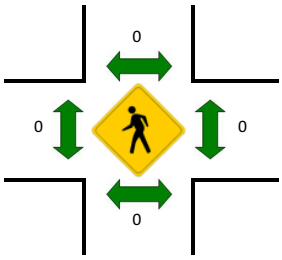
QC JOB #: 16377104
DATE: Tue, Jan 9 2024

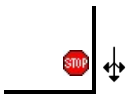
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

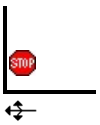


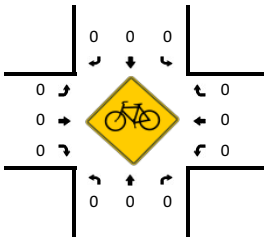


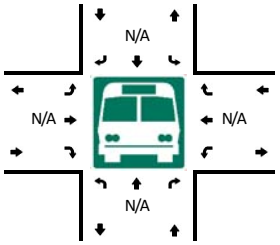
TRUE DATA TO IMPROVE MOBILITY

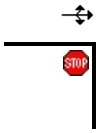


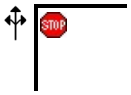


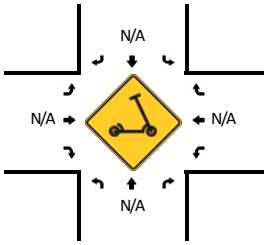












5-Min Count Period Beginning At	Cascade Dr (Northbound)				Cascade Dr (Southbound)				Crowfoot Rd (Eastbound)				Crowfoot Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	1	0	0	0	0	0	0	0	2	0	0	0	2	1	0	8	
7:05 AM	2	0	2	0	0	0	0	0	0	3	0	0	0	1	0	0	8	
7:10 AM	5	3	1	0	0	0	0	0	0	3	0	0	0	2	1	0	15	
7:15 AM	3	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	6	
7:20 AM	2	2	0	0	1	0	0	0	0	4	1	0	0	4	1	0	15	
7:25 AM	0	5	0	0	0	1	0	0	0	2	1	0	0	1	0	0	10	
7:30 AM	2	2	0	0	0	2	0	0	0	5	4	0	0	4	1	0	20	
7:35 AM	2	2	1	0	1	2	0	0	0	1	2	0	1	4	4	0	20	
7:40 AM	2	3	0	0	0	1	0	0	0	2	3	0	0	8	0	0	19	
7:45 AM	2	3	1	0	1	3	0	0	0	2	2	0	1	14	3	0	32	
7:50 AM	1	3	0	0	1	0	0	0	0	3	2	0	1	10	2	0	23	
7:55 AM	4	2	0	0	1	0	0	0	0	6	2	0	0	5	2	0	22	198
8:00 AM	4	4	0	0	1	0	0	0	0	2	0	0	0	5	4	0	20	210
8:05 AM	2	4	0	0	4	8	0	0	0	6	3	0	0	1	3	0	31	233
8:10 AM	1	2	0	0	4	2	0	0	0	0	0	0	1	0	2	0	12	230
8:15 AM	1	1	0	0	0	0	0	0	0	2	3	0	0	3	0	0	10	234
8:20 AM	0	1	0	0	0	0	0	0	0	3	2	0	0	1	0	0	7	226
8:25 AM	2	2	0	0	1	0	0	0	0	3	0	0	0	3	0	0	11	227
8:30 AM	1	2	0	0	0	0	0	0	0	2	0	0	0	2	1	0	8	215
8:35 AM	2	2	0	0	1	2	0	0	0	0	1	0	0	1	0	0	9	204
8:40 AM	2	2	0	0	1	1	0	0	0	2	0	0	0	2	2	0	12	197
8:45 AM	1	2	0	0	1	1	0	0	0	0	0	0	0	0	1	0	6	171
8:50 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	3	0	0	6	154
8:55 AM	1	2	0	0	0	0	0	0	0	0	1	0	0	2	0	0	6	138

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	32	4	0	12	12	0	0	0	44	24	0	8	116	28	0	308
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: SB does not have a stop sign.

Report generated on 1/16/2024 2:32 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

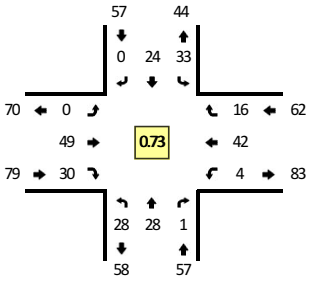
Type of peak hour being reported: Intersection Peak

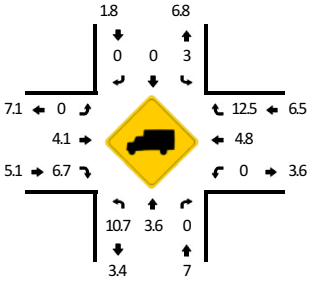
Method for determining peak hour: Total Entering Volume

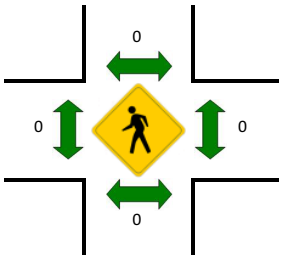
LOCATION: Cascade Dr -- Crowfoot Rd
CITY/STATE: South Lebanon, OR

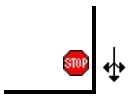
QC JOB #: 16377105
DATE: Tue, Jan 9 2024

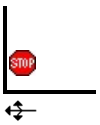
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:30 PM -- 3:45 PM

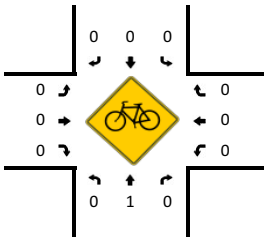


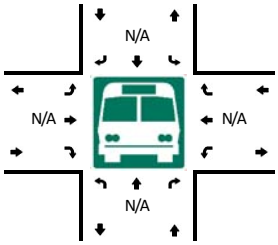


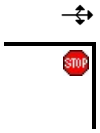


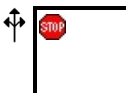


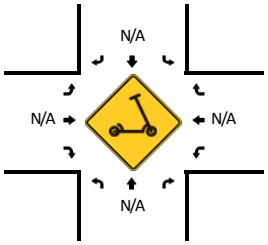












5-Min Count Period Beginning At	Cascade Dr (Northbound)				Cascade Dr (Southbound)				Crowfoot Rd (Eastbound)				Crowfoot Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	3	4	1	0	0	1	0	0	0	3	0	0	0	5	1	0	18	
3:05 PM	2	1	0	0	0	1	0	0	0	4	1	0	1	2	0	0	12	
3:10 PM	4	6	0	0	1	1	0	0	0	4	4	0	0	5	1	0	26	
3:15 PM	2	3	0	0	2	4	0	0	0	4	3	0	1	6	1	0	26	
3:20 PM	2	2	0	0	1	0	0	0	0	9	4	0	0	4	2	0	24	
3:25 PM	0	2	0	0	0	0	0	0	0	3	0	0	0	3	3	0	11	
3:30 PM	2	0	0	0	3	2	0	0	0	5	1	0	2	2	2	0	19	
3:35 PM	1	4	0	0	11	5	0	0	0	5	4	0	0	3	1	0	34	
3:40 PM	4	2	0	0	9	4	0	0	0	3	7	0	0	3	2	0	34	
3:45 PM	3	0	0	0	2	3	0	0	0	3	2	0	0	3	0	0	16	
3:50 PM	4	1	0	0	1	1	0	0	0	2	3	0	0	3	3	0	18	
3:55 PM	1	3	0	0	3	2	0	0	0	4	1	0	0	3	0	0	17	255
4:00 PM	1	2	0	0	1	2	0	0	0	4	2	0	0	5	0	0	17	254
4:05 PM	0	2	0	0	2	1	0	0	0	2	0	0	0	3	0	0	10	252
4:10 PM	4	3	1	0	0	2	0	0	0	3	3	0	0	1	0	0	17	243
4:15 PM	2	0	0	0	1	0	0	0	0	11	2	0	1	3	0	0	20	237
4:20 PM	2	1	1	0	1	3	0	0	0	2	0	0	1	6	1	0	18	231
4:25 PM	2	0	1	0	0	1	0	0	0	3	1	0	2	2	2	0	14	234
4:30 PM	1	1	0	0	1	1	0	0	0	5	0	0	1	0	0	0	10	225
4:35 PM	0	3	0	0	0	5	0	0	0	2	1	0	0	3	1	0	15	206
4:40 PM	1	1	0	0	0	0	0	0	0	4	1	0	0	1	2	0	10	182
4:45 PM	2	0	1	0	0	1	0	0	0	2	4	0	0	0	1	0	11	177
4:50 PM	1	1	0	0	1	4	0	0	0	6	0	0	1	3	0	0	17	176
4:55 PM	2	2	0	0	1	1	0	0	0	3	0	0	0	3	0	0	12	171
5:00 PM	0	2	0	0	0	1	0	0	0	3	4	0	0	4	0	0	14	168
5:05 PM	0	2	0	0	1	3	0	0	0	4	2	0	0	3	0	0	15	173
5:10 PM	1	5	0	0	1	1	0	0	0	2	1	0	0	3	0	0	14	170
5:15 PM	1	1	0	0	0	3	0	0	0	3	1	0	0	6	2	0	17	167
5:20 PM	1	1	0	0	3	4	0	0	0	4	0	0	0	4	1	0	18	167
5:25 PM	1	3	0	0	0	3	0	0	0	5	2	0	0	6	1	0	21	174
5:30 PM	2	2	0	0	0	5	0	0	0	3	0	0	0	6	0	0	18	182
5:35 PM	1	2	0	0	1	2	0	0	0	2	0	0	0	3	0	0	11	178
5:40 PM	1	2	0	0	1	0	0	0	0	2	0	0	0	1	0	0	7	175
5:45 PM	3	2	0	0	0	2	0	0	0	5	4	0	0	2	0	0	18	182
5:50 PM	0	1	0	0	0	1	0	0	0	5	2	0	0	5	0	0	14	179
5:55 PM	4	1	0	0	0	2	0	0	0	2	5	0	0	1	1	0	16	183

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	24	0	0	92	44	0	0	0	52	48	0	8	32	20	0	348
Heavy Trucks	4	0	0		0	0	0		0	8	8		0	0	4		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: SB does not have a stop sign.

Report generated on 1/16/2024 2:32 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 AM	0	4	2	0	2	0	0	0	0	0	0	0	0	0	8
Day Total															
Percent															
ADT 641															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	2	2	**1**	0	0	0	0	0	0	0	0	0	0	5
07:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
07:30 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	0	17
07:45 AM	0	**22**	**6**	0	1	0	0	0	0	0	0	0	0	0	**29**
08:00 AM	0	14	5	0	**4**	0	0	0	0	0	0	0	0	0	23
08:15 AM	0	3	5	0	2	0	0	0	0	0	0	0	0	0	10
08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
09:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	0	9
09:15 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
09:30 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
09:45 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
10:00 AM	0	6	1	0	0	0	0	**1**	0	0	0	0	0	0	8
10:15 AM	0	2	4	0	1	0	0	0	0	0	0	0	0	0	7
10:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
10:45 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
11:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
11:15 AM	0	4	5	0	2	0	0	0	0	0	0	0	0	0	11
11:30 AM	0	4	1	0	1	0	0	1	0	0	0	0	0	0	7
11:45 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
Day Total															
Percent															
ADT															
641															
AM Peak															
15-min Vol															
PM Peak															
15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
12:45 PM	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
01:00 PM	0	4	1	0	1	0	0	0	0	0	0	0	0	0	6
01:15 PM	0	5	2	0	1	0	0	0	0	0	0	0	0	0	8
01:30 PM	0	6	3	0	2	0	0	0	0	0	0	0	0	0	11
01:45 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
02:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
02:15 PM	0	6	5	0	1	0	0	0	0	0	0	0	0	0	12
02:30 PM	0	6	4	**1**	**4**	0	0	0	0	0	0	0	0	0	15
02:45 PM	0	13	5	0	3	0	0	0	0	0	0	0	0	0	21
03:00 PM	0	7	4	0	2	0	0	0	0	0	0	0	0	0	13
03:15 PM	0	**18**	**12**	1	4	0	0	0	0	0	0	0	0	0	**35**
03:30 PM	0	12	4	1	1	0	0	0	0	0	0	0	0	**1**	19
03:45 PM	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
04:00 PM	0	13	6	0	3	0	0	0	0	0	0	0	0	0	22
04:15 PM	0	12	4	0	1	0	0	0	0	0	0	0	0	0	17
04:30 PM	0	14	3	0	0	0	0	0	0	0	0	0	0	0	17
04:45 PM	0	14	1	0	4	0	0	0	0	0	0	0	0	0	19
05:00 PM	0	9	5	0	0	0	0	0	0	0	0	0	0	0	14
05:15 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
05:30 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	0	8
05:45 PM	0	12	0	0	1	0	0	0	0	0	0	0	0	0	13
Day Total															
Percent															
ADT 641															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
06:15 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
06:30 PM	0	6	6	0	0	0	0	0	0	0	0	0	0	0	12
06:45 PM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
07:00 PM	0	5	3	0	1	0	0	0	0	0	0	0	0	0	9
07:15 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
07:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	1	7
08:00 PM	0	6	3	0	0	0	0	0	0	0	0	0	0	0	9
08:15 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
08:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
08:45 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
09:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	0	5
09:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
09:30 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
09:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Day Total	0	443	139	4	51	0	0	2	0	0	0	0	0	2	641
Percent	0%	69.1%	21.7%	0.6%	8%	0%	0%	0.3%	0%	0%	0%	0%	0%	0.3%	
ADT 641															
AM Peak	12:00 AM	7:45 AM	7:45 AM	6:45 AM	8:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	7:45 AM
15-min Vol	0	22	6	1	4	0	0	1	0	0	0	0	0	0	29
PM Peak	12:00 PM	3:15 PM	3:15 PM	2:30 PM	2:30 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:30 PM	3:15 PM
15-min Vol	0	18	12	1	4	0	0	0	0	0	0	0	0	1	35

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
SPECIFIC LOCATION:
CITY/STATE: Lebanon, OR

QC JOB #: 16377103
DIRECTION: EB
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	0	443	139	4	51	0	0	2	0	0	0	0	0	2	641
Percent	0%	69.1%	21.7%	0.6%	8%	0%	0%	0.3%	0%	0%	0%	0%	0%	0.3%	

ADT
641

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
02:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
05:15 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Day Total															
Percent															
ADT 730															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	2	7
06:15 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
06:30 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
06:45 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
07:00 AM	0	6	0	1	1	0	0	0	0	0	0	0	0	0	8
07:15 AM	0	8	2	0	1	0	0	0	0	0	0	0	0	0	11
07:30 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	0	17
07:45 AM	0	23	7	0	6	0	0	1	0	0	0	0	0	0	37
08:00 AM	0	14	8	1	3	0	0	1	0	0	0	0	0	0	27
08:15 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
08:30 AM	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	2	3	0	1	0	0	0	0	0	0	0	0	0	6
09:00 AM	0	6	1	0	3	0	0	0	0	0	0	0	0	0	10
09:15 AM	0	4	5	0	4	0	0	2	0	0	0	0	0	0	15
09:30 AM	0	5	2	0	3	0	0	1	0	0	0	0	0	0	11
09:45 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	0	7
10:00 AM	0	7	2	0	4	0	0	0	0	0	0	0	0	0	13
10:15 AM	0	1	1	0	3	0	0	0	0	0	0	0	0	0	5
10:30 AM	0	6	1	0	0	1	0	0	0	0	0	0	0	0	8
10:45 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5
11:00 AM	0	3	3	0	1	0	0	0	0	0	0	0	0	0	7
11:15 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	0	5
11:30 AM	0	3	5	0	0	0	0	0	0	0	0	0	0	0	8
11:45 AM	0	5	3	0	2	0	0	0	0	0	0	0	0	0	10
Day Total															
Percent															
ADT 730															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	9	1	0	2	0	0	0	0	0	0	0	0	0	12
12:15 PM	0	5	1	0	2	0	0	0	0	0	0	0	0	0	8
12:30 PM	0	6	0	0	2	0	0	0	0	0	0	0	0	0	8
12:45 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	0	8
01:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
01:15 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
01:30 PM	0	6	3	0	1	0	0	0	0	0	0	0	0	0	10
01:45 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	0	11
02:00 PM	0	10	5	0	3	0	0	0	0	0	0	0	0	0	18
02:15 PM	0	8	6	0	3	0	0	0	0	0	0	0	0	0	17
02:30 PM	0	15	7	0	4	0	0	0	0	0	0	0	0	0	26
02:45 PM	0	13	4	0	1	0	0	**1**	0	0	0	0	0	0	19
03:00 PM	0	8	8	0	2	0	0	0	0	0	0	0	0	0	18
03:15 PM	0	10	0	0	2	0	0	0	0	0	0	0	0	0	12
03:30 PM	0	**20**	**13**	**1**	**9**	0	0	0	0	0	0	0	0	**1**	**44**
03:45 PM	0	13	3	0	5	0	0	1	0	0	0	0	0	0	22
04:00 PM	0	7	6	0	1	0	0	0	0	0	0	0	0	0	14
04:15 PM	0	8	4	0	2	0	0	0	0	0	0	0	0	0	14
04:30 PM	0	6	2	0	2	0	0	0	0	0	0	0	0	0	10
04:45 PM	0	7	5	0	1	0	0	0	0	0	0	0	0	0	13
05:00 PM	0	10	1	0	5	0	0	0	0	0	0	0	0	0	16
05:15 PM	0	13	1	0	1	0	0	0	0	0	0	0	0	0	15
05:30 PM	0	10	5	0	1	0	0	0	0	0	0	0	0	0	16
05:45 PM	0	8	6	0	2	0	0	0	0	0	0	0	0	0	16
Day Total															
Percent															
ADT 730															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
QC JOB #: 16377103
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Lebanon, OR
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	6	3	0	0	0	0	0	0	0	0	0	0	0	9
06:15 PM	0	3	3	0	1	0	0	0	0	0	0	0	0	0	7
06:30 PM	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
06:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:00 PM	0	5	3	0	1	0	0	0	0	0	0	0	0	0	9
07:15 PM	0	8	2	0	2	0	0	0	0	0	0	0	0	0	12
07:30 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
07:45 PM	0	7	1	0	1	0	0	1	0	0	0	0	0	0	10
08:00 PM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
08:15 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
08:30 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
08:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
09:15 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
09:30 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Day Total	0	436	175	3	104	1	0	8	0	0	0	0	0	3	730
Percent	0%	59.7%	24%	0.4%	14.2%	0.1%	0%	1.1%	0%	0%	0%	0%	0%	0.4%	
ADT 730															
AM Peak	12:00 AM	7:45 AM	8:00 AM	7:00 AM	7:45 AM	10:30 AM	12:00 AM	9:15 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM	7:45 AM
15-min Vol	0	23	8	1	6	1	0	2	0	0	0	0	0	2	37
PM Peak	12:00 PM	3:30 PM	3:30 PM	3:30 PM	3:30 PM	12:00 PM	12:00 PM	2:45 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:30 PM	3:30 PM
15-min Vol	0	20	13	1	9	0	0	1	0	0	0	0	0	1	44

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Crowfoot Road east of View Ln
SPECIFIC LOCATION:
CITY/STATE: Lebanon, OR

QC JOB #: 16377103
DIRECTION: WB
DATE: Jan 9 2024

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	0	436	175	3	104	1	0	8	0	0	0	0	0	3	730
Percent	0%	59.7%	24%	0.4%	14.2%	0.1%	0%	1.1%	0%	0%	0%	0%	0%	0.4%	

ADT 730

Comments:

Report generated on 1/15/2024 2:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Appendix C
Existing Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	90	0	0	0	0	0	33	56	0	55	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	3.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	90	0	0	0	0	0	33	56	0	55	0
Peak Hour Factor	1.0000	0.7400	1.0000	1.0000	0.7400	1.0000	1.0000	0.7400	0.7400	1.0000	0.7400	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	30	0	0	0	0	0	11	19	0	19	0
Total Analysis Volume [veh/h]	0	122	0	0	0	0	0	45	76	0	74	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.07	0.00	0.10	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.23	8.89	0.00	10.18	0.00
Movement LOS		A			A			B	A		B	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.44	0.00	0.32	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.01	11.01	0.00	7.96	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			9.39			10.18		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.96											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	18	51	25	0	26	30	39	34	13	31	51	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	2.00	8.00	2.00	4.00	3.00	3.00	0.00	0.00	3.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	51	25	0	26	30	39	34	13	31	51	0
Peak Hour Factor	0.7200	0.7200	0.7200	1.0000	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	18	9	0	9	10	14	12	5	11	18	0
Total Analysis Volume [veh/h]	25	71	35	0	36	42	54	47	18	43	71	0
Pedestrian Volume [ped/h]	0			9			1			9		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	802	884	794	806
Degree of Utilization, x	0.16	0.09	0.15	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.58	0.29	0.53	0.49
95th-Percentile Queue Length [ft]	14.53	7.24	13.14	12.30
Approach Delay [s/veh]	8.36	7.47	8.33	8.21
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.15			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	23	33	2	14	19	0	0	36	23	4	59	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	2.00	2.00	6.00	0.00	0.00	3.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	33	2	14	19	0	0	36	23	4	59	22
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	1.0000	1.0000	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	11	1	5	6	0	0	12	8	1	19	7
Total Analysis Volume [veh/h]	30	43	3	18	25	0	0	47	30	5	78	29
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	817	835	896	866
Degree of Utilization, x	0.09	0.05	0.09	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.31	0.16	0.28	0.44
95th-Percentile Queue Length [ft]	7.66	4.07	7.03	11.09
Approach Delay [s/veh]	7.86	7.55	7.39	7.77
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.096

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	60	0	0	0	0	0	59	114	0	41	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	9.00	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	60	0	0	0	0	0	59	114	0	41	0
Peak Hour Factor	1.0000	0.7600	1.0000	1.0000	0.7600	1.0000	1.0000	0.7600	0.7600	1.0000	0.7600	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	0	0	0	19	38	0	13	0
Total Analysis Volume [veh/h]	0	79	0	0	0	0	0	78	150	0	54	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.14	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.57	9.46	0.00	9.81	0.00
Movement LOS		A			A			B	A		A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.91	0.00	0.22	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.79	22.79	0.00	5.40	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			9.84			9.81		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.68											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	13	35	35	0	70	44	25	47	17	21	47	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	6.00	2.00	1.00	7.00	12.00	4.00	0.00	0.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	35	35	0	70	44	25	47	17	21	47	0
Peak Hour Factor	0.8000	0.8000	0.8000	1.0000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	11	0	22	14	8	15	5	7	15	0
Total Analysis Volume [veh/h]	16	44	44	0	88	55	31	59	21	26	59	0
Pedestrian Volume [ped/h]	2			13			0			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	822	876	785	815
Degree of Utilization, x	0.13	0.16	0.14	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.43	0.58	0.49	0.35
95th-Percentile Queue Length [ft]	10.82	14.55	12.27	8.70
Approach Delay [s/veh]	8.02	7.91	8.34	7.93
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.05			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.125

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	26	26	0	34	25	0	0	50	32	4	42	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	4.00	0.00	3.00	0.00	2.00	2.00	4.00	6.00	0.00	2.00	13.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	26	0	34	25	0	0	50	32	4	42	15
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	1.0000	1.0000	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	9	0	12	9	0	0	17	11	1	14	5
Total Analysis Volume [veh/h]	36	36	0	47	34	0	0	68	44	5	58	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	779	833	897	834
Degree of Utilization, x	0.09	0.10	0.12	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.30	0.32	0.43	0.33
95th-Percentile Queue Length [ft]	7.61	8.05	10.65	8.37
Approach Delay [s/veh]	8.09	7.79	7.59	7.80
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.79			
Intersection LOS	A			

Appendix D
2026 Background Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	94	0	0	0	0	0	34	58	0	57	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	3.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	94	0	0	0	0	0	34	58	0	57	0
Peak Hour Factor	1.0000	0.7400	1.0000	1.0000	0.7400	1.0000	1.0000	0.7400	0.7400	1.0000	0.7400	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	32	0	0	0	0	0	11	20	0	19	0
Total Analysis Volume [veh/h]	0	127	0	0	0	0	0	46	78	0	77	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.07	0.00	0.10	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.27	8.91	0.00	10.24	0.00
Movement LOS		A			A			B	A		B	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.00	0.34	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.36	11.36	0.00	8.38	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			9.42			10.24		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.96											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.171

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	19	53	26	0	27	31	41	35	14	32	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	2.00	8.00	2.00	4.00	3.00	3.00	0.00	0.00	3.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	53	26	0	27	31	41	35	14	32	53	0
Peak Hour Factor	0.7200	0.7200	0.7200	1.0000	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	18	9	0	9	11	14	12	5	11	18	0
Total Analysis Volume [veh/h]	26	74	36	0	38	43	57	49	19	44	74	0
Pedestrian Volume [ped/h]	0			9			1			9		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	797	878	789	802
Degree of Utilization, x	0.17	0.09	0.16	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.61	0.30	0.56	0.51
95th-Percentile Queue Length [ft]	15.32	7.60	14.02	12.87
Approach Delay [s/veh]	8.45	7.52	8.42	8.26
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.23			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.133

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	24	34	2	15	20	0	0	37	24	4	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	2.00	2.00	6.00	0.00	0.00	3.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	34	2	15	20	0	0	37	24	4	61	23
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	1.0000	1.0000	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	11	1	5	7	0	0	12	8	1	20	8
Total Analysis Volume [veh/h]	32	45	3	20	26	0	0	49	32	5	80	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	814	832	894	862
Degree of Utilization, x	0.10	0.06	0.09	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.33	0.18	0.30	0.46
95th-Percentile Queue Length [ft]	8.15	4.38	7.45	11.49
Approach Delay [s/veh]	7.91	7.58	7.43	7.82
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.71			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.099

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	61	0	0	0	0	0	61	119	0	43	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	9.00	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	61	0	0	0	0	0	61	119	0	43	0
Peak Hour Factor	1.0000	0.7600	1.0000	1.0000	0.7600	1.0000	1.0000	0.7600	0.7600	1.0000	0.7600	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	0	0	0	20	39	0	14	0
Total Analysis Volume [veh/h]	0	80	0	0	0	0	0	80	157	0	57	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.15	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.63	9.52	0.00	9.84	0.00
Movement LOS		A			A			B	A		A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.96	0.00	0.23	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.93	23.93	0.00	5.73	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			9.89			9.84		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.77											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.171

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	14	36	36	0	73	46	26	49	18	22	49	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	6.00	2.00	1.00	7.00	12.00	4.00	0.00	0.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	36	36	0	73	46	26	49	18	22	49	0
Peak Hour Factor	0.8000	0.8000	0.8000	1.0000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	11	0	23	14	8	15	6	7	15	0
Total Analysis Volume [veh/h]	18	45	45	0	91	58	33	61	23	28	61	0
Pedestrian Volume [ped/h]	2			13			0			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	814	871	781	812
Degree of Utilization, x	0.13	0.17	0.15	0.11

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.46	0.61	0.53	0.37
95th-Percentile Queue Length [ft]	11.41	15.37	13.13	9.20
Approach Delay [s/veh]	8.10	7.98	8.42	7.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.12			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.130

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	27	27	0	35	26	0	0	52	33	4	44	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	4.00	0.00	3.00	0.00	2.00	2.00	4.00	6.00	0.00	2.00	13.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	27	0	35	26	0	0	52	33	4	44	16
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	1.0000	1.0000	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	9	0	12	9	0	0	18	11	1	15	5
Total Analysis Volume [veh/h]	37	37	0	48	36	0	0	71	45	5	60	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	776	831	894	831
Degree of Utilization, x	0.10	0.10	0.13	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.34	0.45	0.35
95th-Percentile Queue Length [ft]	7.88	8.40	11.13	8.74
Approach Delay [s/veh]	8.13	7.82	7.62	7.84
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.82			
Intersection LOS	A			

Appendix E
2026 Total Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	117	0	0	0	0	0	34	66	0	57	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	3.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	117	0	0	0	0	0	34	66	0	57	0
Peak Hour Factor	1.0000	0.7400	1.0000	1.0000	0.7400	1.0000	1.0000	0.7400	0.7400	1.0000	0.7400	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	0	0	0	0	0	11	22	0	19	0
Total Analysis Volume [veh/h]	0	158	0	0	0	0	0	46	89	0	77	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.00	0.10	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	8.98	0.00	10.48	0.00
Movement LOS		A			A			B	A		B	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.35	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.61	12.61	0.00	8.75	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			9.51			10.48		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.65											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.208

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	19	53	26	0	27	39	64	38	14	32	54	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	2.00	8.00	2.00	4.00	3.00	3.00	0.00	0.00	3.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	53	26	0	27	39	64	38	14	32	54	0
Peak Hour Factor	0.7200	0.7200	0.7200	1.0000	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	18	9	0	9	14	22	13	5	11	19	0
Total Analysis Volume [veh/h]	26	74	36	0	38	54	89	53	19	44	75	0
Pedestrian Volume [ped/h]	0			9			1			9		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	778	863	776	792
Degree of Utilization, x	0.17	0.11	0.21	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.63	0.36	0.78	0.53
95th-Percentile Queue Length [ft]	15.77	8.91	19.46	13.17
Approach Delay [s/veh]	8.61	7.67	8.86	8.34
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.45			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.136

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	24	34	2	15	20	0	0	40	24	4	62	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	2.00	2.00	6.00	0.00	0.00	3.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	34	2	15	20	0	0	40	24	4	62	23
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	1.0000	1.0000	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	11	1	5	7	0	0	13	8	1	20	8
Total Analysis Volume [veh/h]	32	45	3	20	26	0	0	53	32	5	82	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	809	829	889	859
Degree of Utilization, x	0.10	0.06	0.10	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.33	0.18	0.32	0.47
95th-Percentile Queue Length [ft]	8.20	4.40	7.90	11.77
Approach Delay [s/veh]	7.94	7.60	7.48	7.85
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.74			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Crowfoot Road / Proposed Site Access

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Proposed Site Access		Crowfoot Rd		Crowfoot Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Proposed Site Access		Crowfoot Rd		Crowfoot Rd	
Base Volume Input [veh/h]	38	26	80	12	9	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	26	80	12	9	96
Peak Hour Factor	0.6400	0.6400	0.6400	0.6400	0.6400	0.6400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	10	31	5	4	38
Total Analysis Volume [veh/h]	59	41	125	19	14	150
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.04	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.03	9.63	0.00	0.00	7.50	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.45	0.45	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	11.31	11.31	0.00	0.00	0.59	0.59
d_A, Approach Delay [s/veh]	10.46		0.00		0.64	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.82					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Crowfoot / Cascade (north corner)

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.101

Intersection Setup

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Cascade Dr			Cascade Dr		
Base Volume Input [veh/h]	0	77	0	0	0	0	0	61	145	0	43	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	9.00	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	77	0	0	0	0	0	61	145	0	43	0
Peak Hour Factor	1.0000	0.7600	1.0000	1.0000	0.7600	1.0000	1.0000	0.7600	0.7600	1.0000	0.7600	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	25	0	0	0	0	0	20	48	0	14	0
Total Analysis Volume [veh/h]	0	101	0	0	0	0	0	80	191	0	57	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98	9.74	0.00	9.98	0.00
Movement LOS		A			A			B	A		A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14	1.14	0.00	0.24	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.50	28.50	0.00	5.90	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			10.11			9.98		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	7.71											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Crowfoot / Cascade (west corner)

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.208

Intersection Setup

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Ave			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	14	36	36	0	73	72	41	51	18	22	52	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	6.00	2.00	1.00	7.00	12.00	4.00	0.00	0.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	36	36	0	73	72	41	51	18	22	52	0
Peak Hour Factor	0.8000	0.8000	0.8000	1.0000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	11	0	23	23	13	16	6	7	16	0
Total Analysis Volume [veh/h]	18	45	45	0	91	90	51	64	23	28	65	0
Pedestrian Volume [ped/h]	2			13			0			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	795	869	759	805
Degree of Utilization, x	0.14	0.21	0.18	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.47	0.78	0.66	0.39
95th-Percentile Queue Length [ft]	11.73	19.57	16.52	9.75
Approach Delay [s/veh]	8.24	8.23	8.79	8.05
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.35			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Crowfoot / Cascade (east corner)

Control Type:	All-way stop	Delay (sec / veh):	7.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.133

Intersection Setup

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cascade Dr			Cascade Dr			Crowfoot Rd			Crowfoot Rd		
Base Volume Input [veh/h]	27	27	0	35	26	0	0	54	33	4	47	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	4.00	0.00	3.00	0.00	2.00	2.00	4.00	6.00	0.00	2.00	13.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	27	0	35	26	0	0	54	33	4	47	16
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	1.0000	1.0000	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	9	0	12	9	0	0	18	11	1	16	5
Total Analysis Volume [veh/h]	37	37	0	48	36	0	0	74	45	5	64	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	773	830	892	829
Degree of Utilization, x	0.10	0.10	0.13	0.11

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.34	0.46	0.37
95th-Percentile Queue Length [ft]	7.91	8.43	11.49	9.21
Approach Delay [s/veh]	8.15	7.83	7.66	7.87
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.85			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Crowfoot Road / Proposed Site Access

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Proposed Site Access		Crowfoot Rd		Crowfoot Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Proposed Site Access		Crowfoot Rd		Crowfoot Rd	
Base Volume Input [veh/h]	26	17	81	43	29	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	1.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	17	81	43	29	100
Peak Hour Factor	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	29	16	11	36
Total Analysis Volume [veh/h]	38	25	117	62	42	145
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.03	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	11.43	9.49	0.00	0.00	7.60	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.30	0.30	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	7.40	7.40	0.00	0.00	1.79	1.79
d_A, Approach Delay [s/veh]	10.66		0.00		1.71	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.31					
Intersection LOS	B					

LAND USE APPLICATION

PROPERTY INFORMATION	
Site Address(es): Unassigned Address	
Assessor's Map & Tax Lot No.(s): 12S-02W-23C Tax Lot 4101	
Comprehensive Plan Designation / Zoning Designation: C-RM/Z-RM	
Current Property Use: Unimproved	
Project Description:	
Tentative Subdivision Plat and Planned Development	

APPLICANT / PRIMARY CONTACT INFORMATION	
Applicant: Laura LaRoque; Udell Engineering & Land Surveying, LLC	Phone: (541) 990-8661
Address: 63 E. Ash Street,	Email: laura@udelleng.com
City/State/Zip: Lebanon, OR 97355	
I hereby certify that the statements, attachments, exhibits, plot plan and other information submitted as a part of this application are true; that the proposed land use activity does not violate State and/or Federal Law, or any covenants, conditions and restrictions associated with the subject property; and, any approval granted based on this information may be revoked if it is found that such statements are false.	
APPLICANT SIGNATURE	Date:

PROPERTY OWNER INFORMATION (IF DIFFERENT THAN ABOVE)	
Owner: Paist Family LLC C/O Paist Janet Hermans Mgr.	Phone:
Address: 13455 SE Beech Street	Email:
City/State/Zip: Milwaukie, OR 97222	
OWNER SIGNATURE Janet Hermans Paist, Mgr	Date: 3/22/2024

ADDITIONAL CONTACT INFORMATION	
Engineer / Surveyor: Brian Vandetta; Udell Engineering & Land Surveying, LLC	Phone: (541) 451-5125
Address: 63 E. Ash Street,	Email: brian@udelleng.com
City/State/Zip: Lebanon, OR 97355	

Architect: N/A	Phone:
Address:	Email:
City/State/Zip:	

Other: Mark Vukanovic; Pacific Northwest Land Co. LLC	Phone: (541) 350-1060
Address: 23125 SW Boones Ferry Rd.	Email: markvukanovich@gmail.com
City/State/Zip Tualatin, Oregon 97062	

REQUIRED SUBMITTALS

- [x] Application and Filing Fee
- [x] Narrative Describing the Proposed Development and addressing the Decision Criteria
  - LDC Article Two Land Uses and Land Use Zones
  - LDC Article Three Development Standards
  - LDC Article Four Review & Decision Requirements
  - LDC Article Five Exceptions to Standards (eg Variance, Non-Conforming Uses)
- [x] Site Plan(s) drawn to scale with dimensions, Include other drawings if applicable
- [x] Copy of current Property Deed showing Ownership, Easements, Property Restrictions

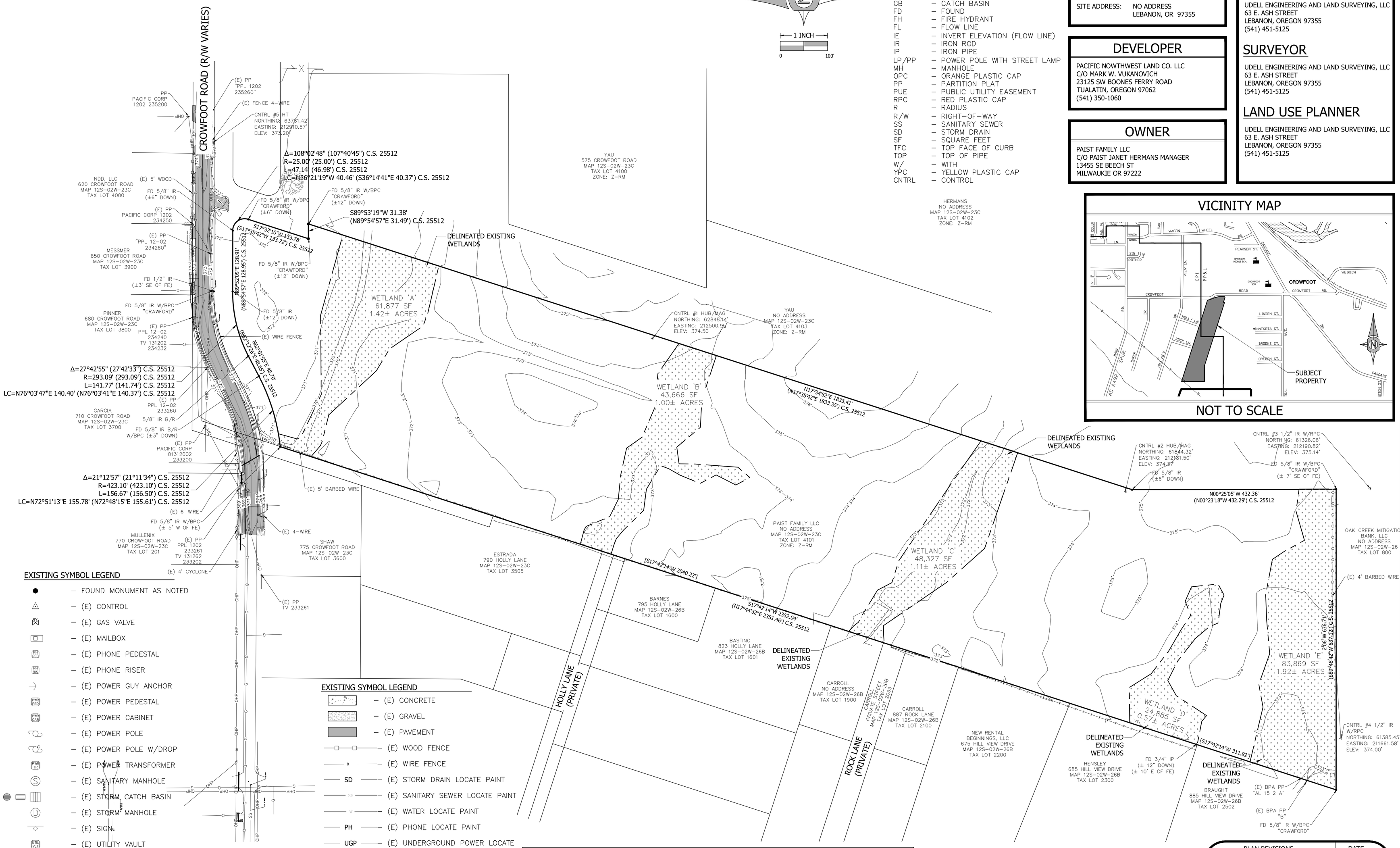
FOR OFFICE USE

***If more than one review process is required, applicant pays highest priced fee, then subsequent applications charged at half-price.**

	Land Use Review Process	Fee		Land Use Review Process	Fee
	Administrative Review	$750	X	Planned Development – Preliminary	$2,500
	Administrative Review (Planning Commission)	$1,500		Planned Development – Final (Ministerial)	$250
	Annexation	$2,500		Planned Development – Final (Administrative)	$750
	Code Interpretation	$250		Planned Development – Final (Quasi-Judicial)	$1,500
	Comprehensive Plan Map/Text Amendment	$2,500	X	Subdivision Tentative	$1,500
	Conditional Use	$1,500		Subdivision Final	$750
X	Fire District Plan Review	$100		Tree Felling Permit (Steep Slopes only)	$150 + $5/tree
	Historic Preservation Review or Register	Varies		UGB Amendment	Actual Cost
	Land Partition	$750		Variance (Class 1 – Minor Adjustment)	$250
	Ministerial Review	$250		Variance (Class 2 – Adjustment)	$750
	Non-Conforming Use/Development	$750		Variance (Class 3)	$1,500
	Property (Lot) Line Adjustment	$250		Zoning Map Amendment	$2,500

APPLICATION RECEIPT & PAYMENT

Date Received:	Date Complete:	Receipt No.:
Received By:	Total Fee:	**File No.:**



ABBREVIATIONS LEGEND

(E)	– EXISTING
CONC	– CONCRETE
CO	– CLEAN OUT
CS	– COUNTY SURVEY
CB	– CATCH BASIN
FD	– FOUND
FH	– FIRE HYDRANT
FL	– FLOW LINE
IE	– INVERT ELEVATION (FLOW LINE)
IR	– IRON ROD
IP	– IRON PIPE
LP/PP	– POWER POLE WITH STREET LAMP
MH	– MANHOLE
OPC	– ORANGE PLASTIC CAP
PP	– PARTITION PLAT
PUE	– PUBLIC UTILITY EASEMENT
RPC	– RED PLASTIC CAP
R	– RADIUS
R/W	– RIGHT-OF-WAY
SS	– SANITARY SEWER
SD	– STORM DRAIN
SF	– SQUARE FEET
TFC	– TOP FACE OF CURB
TOP	– TOP OF PIPE
W/	– WITH
YPC	– YELLOW PLASTIC CAP
CNTRL	– CONTROL

PROPERTY

TAX MAP: 12S-2W-23C
TAX LOT: 4101

SITE ADDRESS: NO ADDRESS
LEBANON, OR 97355

DEVELOPER

PACIFIC NOWTHWEST LAND CO. LLC
C/O MARK W. VUKANOVICH
23125 SW BOONES FERRY ROAD
TUALATIN, OREGON 97062
(541) 350-1060

OWNER

PAIST FAMILY LLC
C/O PAIST JANET HERMANS MANAGER
13455 SE BEECH ST
MILWAUKIE OR 97222

DESIGN TEAM

CIVIL ENGINEER

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 E. ASH STREET
LEBANON, OREGON 97355
(541) 451-5125

SURVEYOR

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 E. ASH STREET
LEBANON, OREGON 97355
(541) 451-5125

LAND USE PLANNER

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 E. ASH STREET
LEBANON, OREGON 97355
(541) 451-5125

VICINITY MAP

NOT TO SCALE

EXISTING SYMBOL LEGEND

- – FOUND MONUMENT AS NOTED
- – (E) CONTROL
- – (E) GAS VALVE
- – (E) MAILBOX
- – (E) PHONE PEDESTAL
- – (E) PHONE RISER
- – (E) POWER GUY ANCHOR
- – (E) POWER PEDESTAL
- – (E) POWER CABINET
- – (E) POWER POLE
- – (E) POWER POLE W/DROP
- – (E) POWER TRANSFORMER
- – (E) SANITARY MANHOLE
- – (E) STORM CATCH BASIN
- – (E) STORM MANHOLE
- – (E) SIGN
- – (E) UTILITY VAULT
- – (E) WATER FIRE HYDRANT
- – (E) WATER METER
- – (E) WATER VALVE

EXISTING SYMBOL LEGEND

- – (E) CONCRETE
- – (E) GRAVEL
- – (E) PAVEMENT
- – (E) WOOD FENCE
- x – (E) WIRE FENCE
- SD – (E) STORM DRAIN LOCATE PAINT
- SS – (E) SANITARY SEWER LOCATE PAINT
- W – (E) WATER LOCATE PAINT
- PH – (E) PHONE LOCATE PAINT
- UGP – (E) UNDERGROUND POWER LOCATE
- OHP – (E) OVERHEAD POWER
- GAS – (E) GAS LINE LOCATE
- TV – (E) TELEVISION LINE LOCATE

PROJECT VERTICAL DATUM -- NAVD 88

ALL ELEVATIONS ARE SHOWN ON THE VERTICAL DATUM OF NAVD 88. GPS WAS USED ON THE OREGON REAL-TIME GNSS NETWORK WITH REAL-TIME KINEMATIC CORRECTIONS, OREGON COORDINATE REFERENCE SYSTEM (OCRS) SALEM-ZONE WAS THE COORDINATE SYSTEM USED. ELEVATION WAS CONFIRMED BY CHECKING IN TO LINN COUNTY GPS CONTROL POINT 93137 LOCATED ON CROWFOOT ROAD. CONTRACTOR IS TO NOTIFY ENGINEER/SURVEYOR TWO WORKING DAYS PRIOR TO DISTURBING EXISTING SURVEY MONUMENT(S). SURVEYOR IS TO RESTORE PER COUNTY SURVEYOR REQUIREMENTS AND ORS 209.150.

THE LOCATION AND DESCRIPTIONS OF EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

PLAN REVISIONS	DATE

CLIENT:
PACIFIC NORTHWEST LAND CO., LLC
C/O MARK W. VUKANOVICH
4931 SW 76th AVE. PMB 360
PORTLAND, OREGON 97225
(541) 350-1060

UDELL ENGINEERING AND LAND SURVEYING, LLC
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

EXISTING CONDITIONS/DEMO PLAN
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

Sheet C1.0

SCALE: SEE BARSCALE

TENTATIVE PLAT

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND
CROWFOOT RD
DRAWN BY: MLM
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(541) 350-1060

THIS MAP WAS PREPARED FOR PURPOSES ONLY FOR PLANNING CONSTRUCTION NOT

PLAN REVISIONS	DATE

Sheet C2.0

SCALE: SEE BARSCALE

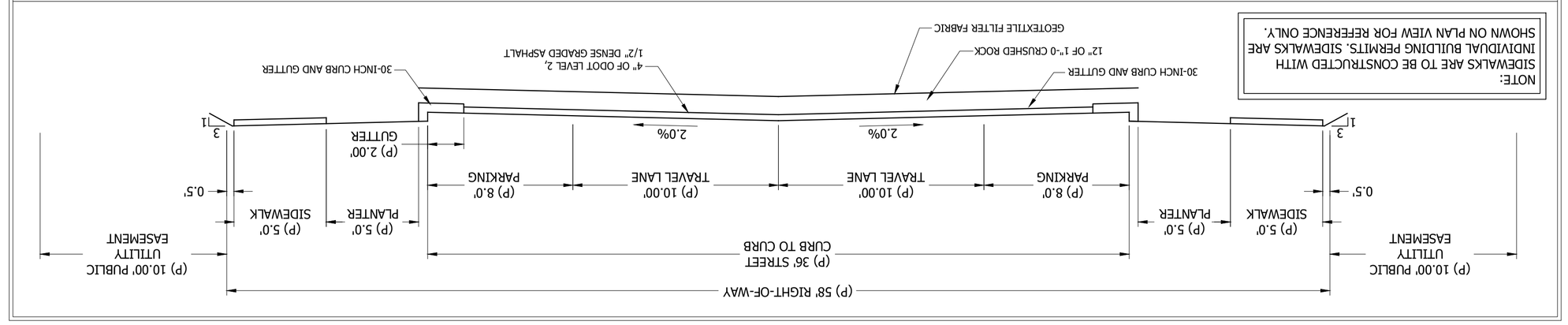
0 100'
1 INCH

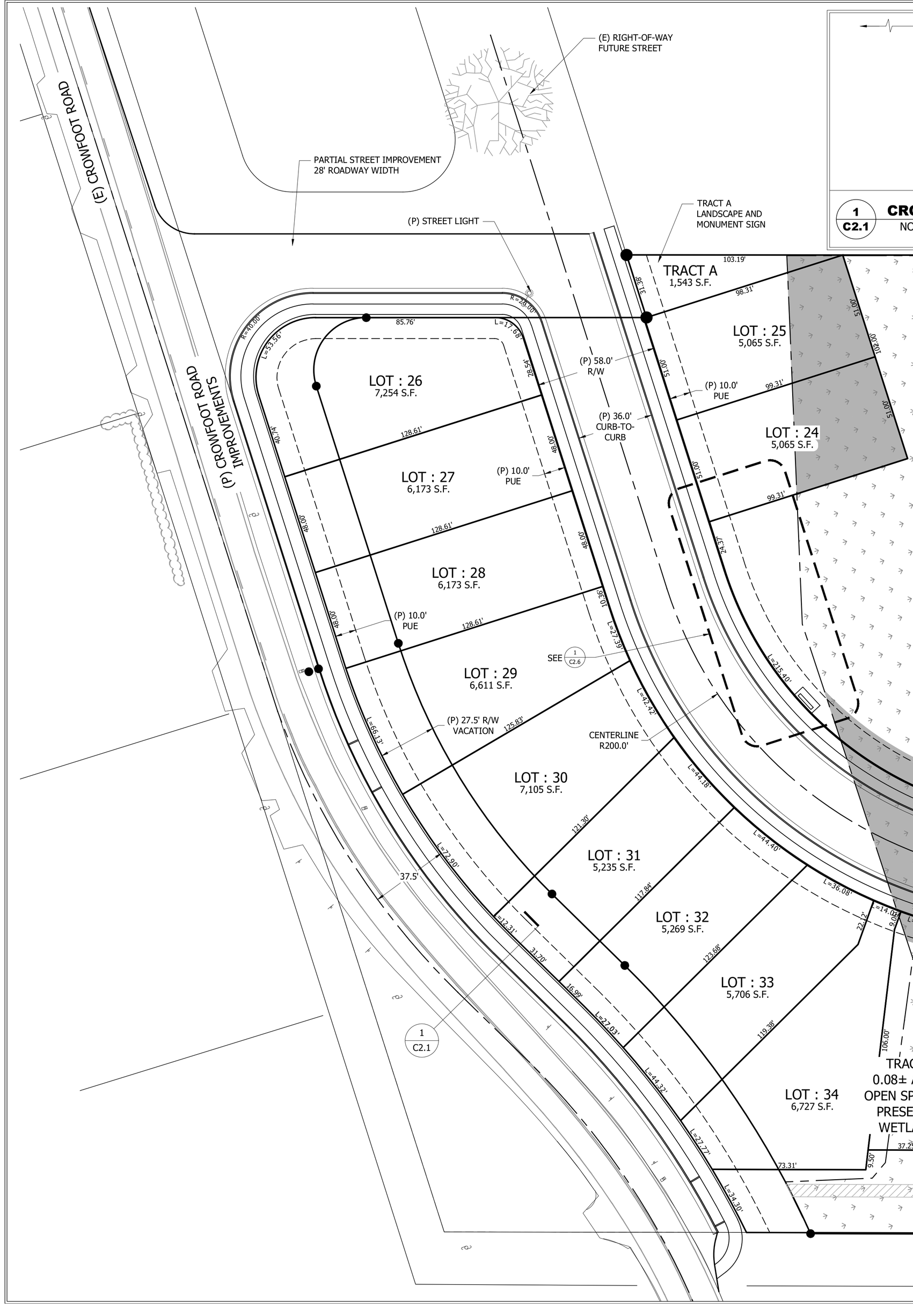
PROJECT AREA SUMMARY

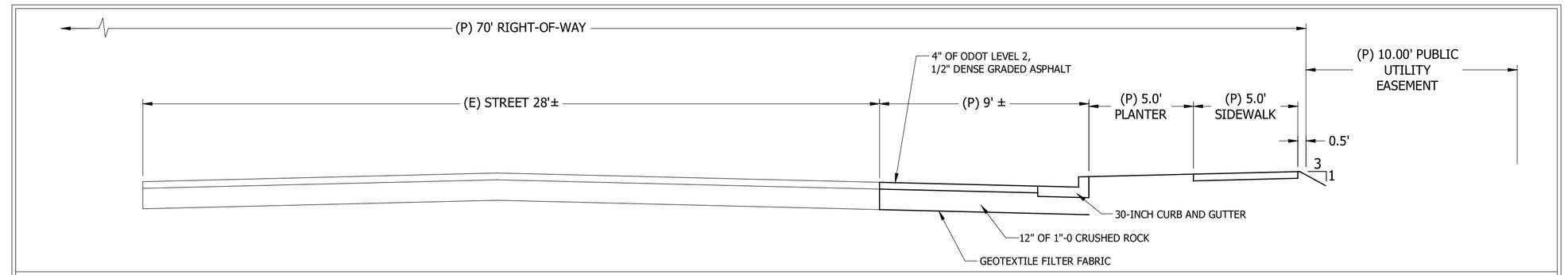
GROSS LAND AREA:	26.74± ACRES
TRACT A - SIGNAGE/LANDSCAPE:	0.04± ACRES
TRACT B - OPEN SPACE W/PRESERVED WETLANDS:	0.08± ACRES
TRACT C - STORMWATER TREATMENT & MAINTENANCE ACCESS:	1.30± ACRES
TRACT D - OPEN SPACE W/PRESERVED WETLANDS:	0.12± ACRES
TRACT E - OPEN SPACE W/PRESERVED WETLANDS:	0.20± ACRES
TRACT F - OPEN SPACE W/PRESERVED WETLANDS:	2.30± ACRES
TRACT G - OPEN SPACE W/PRESERVED WETLANDS:	0.82± ACRES
TRACT H - OPEN SPACE W/PRESERVED WETLANDS:	0.68± ACRES
TRACT I - OPEN SPACE W/PRESERVED WETLANDS:	1.01± ACRES
RIGHT-OF-WAY DEDICATION:	5.42± ACRES
NET LAND AREA:	14.77± ACRES

1 C2.0 **TYPICAL STREET SECTION**
NO SCALE

NOTE:
SIDEWALKS ARE TO BE CONSTRUCTED WITH INDIVIDUAL BUILDING PERMITS. SIDEWALKS ARE SHOWN ON PLAN VIEW FOR REFERENCE ONLY.







1/C2.1 **CROWFOOT ROAD SECTION**
NO SCALE

CLIENT:
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AND
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ENLARGED TENTATIVE PLAT
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C2.1

SCALE: SEE BARSCALE

ENLARGED TENTATIVE PLAT

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

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(541) 350-1060

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND
CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

THIS MAP WAS PREPARED FOR PURPOSES ONLY NOT FOR CONSTRUCTION

SCALE: SEE BARSCALE

Sheet C2.2

DATE	PLAN REVISIONS

1 INCH
0 30'

(P) HERMANS DRIVE

(P) JOHN STREET

(P) TRIANGLE CT

(P) WATER QUALITY SWALE

(P) STORMWATER DETENTION POND

(P) STORMWATER TREATMENT 40.0'

TRACT C 1.30± ACRES STORMWATER TREATMENT AND MAINTENANCE ACCESS

(P) 12.0' MAINTENANCE ACCESS

(P) 6.0' CYCLONE FENCE SURROUNDING DETENTION POND

DELINEATED EXISTING WETLANDS

TRACT D 0.12± ACRES OPEN SPACE W/ PRESERVED WETLANDS

TRACT H 0.68± ACRES OPEN SPACE W/ PRESERVED WETLANDS

(P) STREET LIGHT

(P) 10.0' PUE

(P) 58.0' R/W

(P) 36.0' CURB-TO-CURB

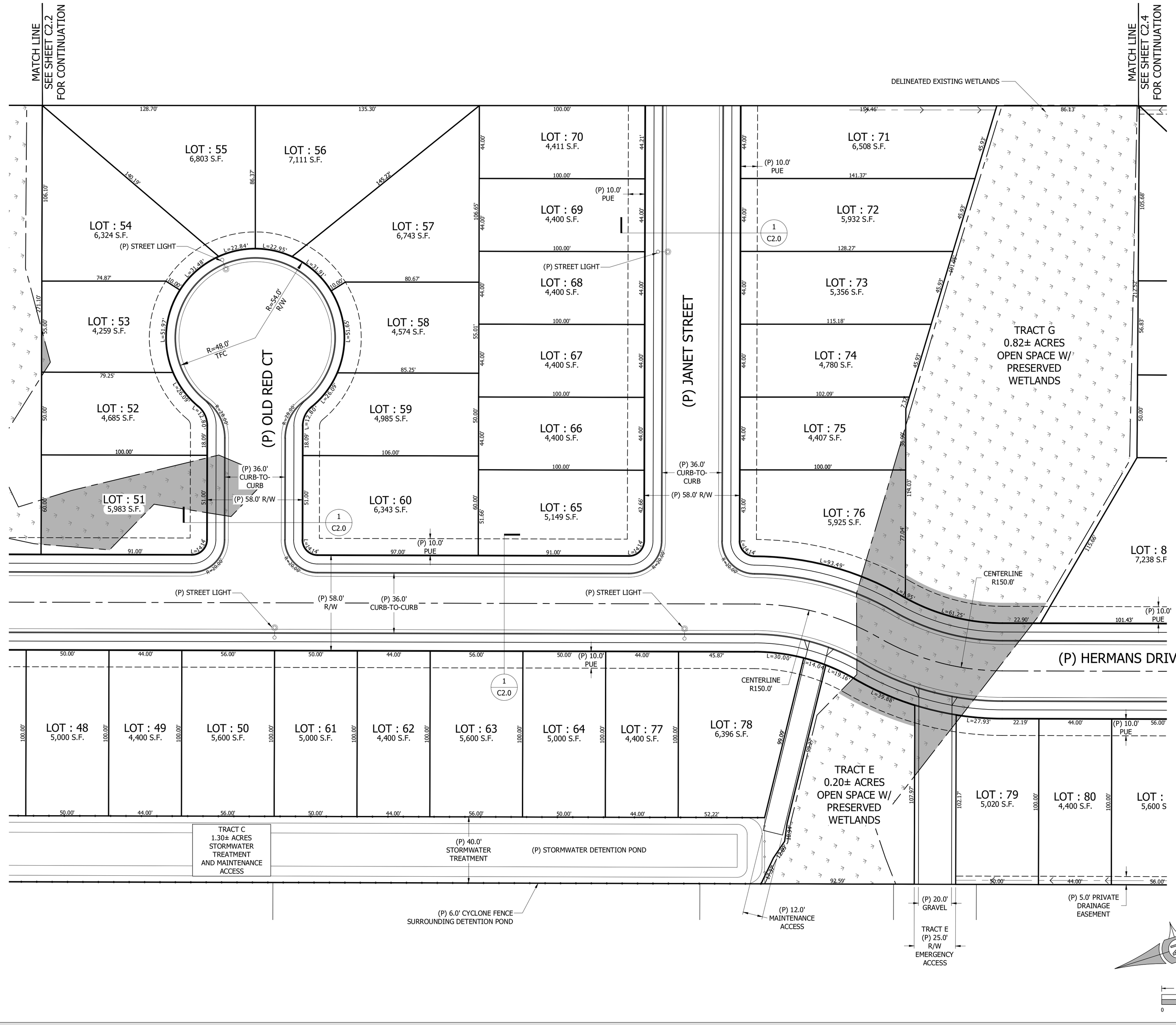
(P) 5.0' PRIVATE DRAINAGE EASEMENT

LOT : 1 5,067 S.F.
LOT : 2 4,884 S.F.
LOT : 3 5,041 S.F.
LOT : 4 4,746 S.F.
LOT : 5 4,572 S.F.
LOT : 6 5,115 S.F.
LOT : 7 4,411 S.F.
LOT : 8 4,400 S.F.
LOT : 9 4,400 S.F.
LOT : 10 4,400 S.F.
LOT : 11 4,400 S.F.
LOT : 12 5,012 S.F.
LOT : 13 6,343 S.F.
LOT : 14 4,465 S.F.
LOT : 15 4,906 S.F.
LOT : 16 6,854 S.F.
LOT : 17 7,003 S.F.
LOT : 18 6,699 S.F.
LOT : 19 6,442 S.F.
LOT : 20 4,552 S.F.
LOT : 21 4,201 S.F.
LOT : 22 5,983 S.F.
LOT : 23 4,400 S.F.
LOT : 36 5,000 S.F.
LOT : 37 4,400 S.F.
LOT : 38 5,600 S.F.
LOT : 39 5,000 S.F.
LOT : 40 4,400 S.F.
LOT : 41 5,600 S.F.
LOT : 42 5,000 S.F.
LOT : 43 4,400 S.F.
LOT : 44 5,600 S.F.
LOT : 45 5,000 S.F.
LOT : 46 5,200 S.F.
LOT : 47 5,778 S.F.
LOT 5,000

SEE C2.6

MATCH LINE SEE SHEET C2.3 FOR CONTINUATION

MATCH LINE SEE SHEET C2.1 FOR CONTINUATION



CLIENT:
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ENLARGED TENTATIVE PLAT

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

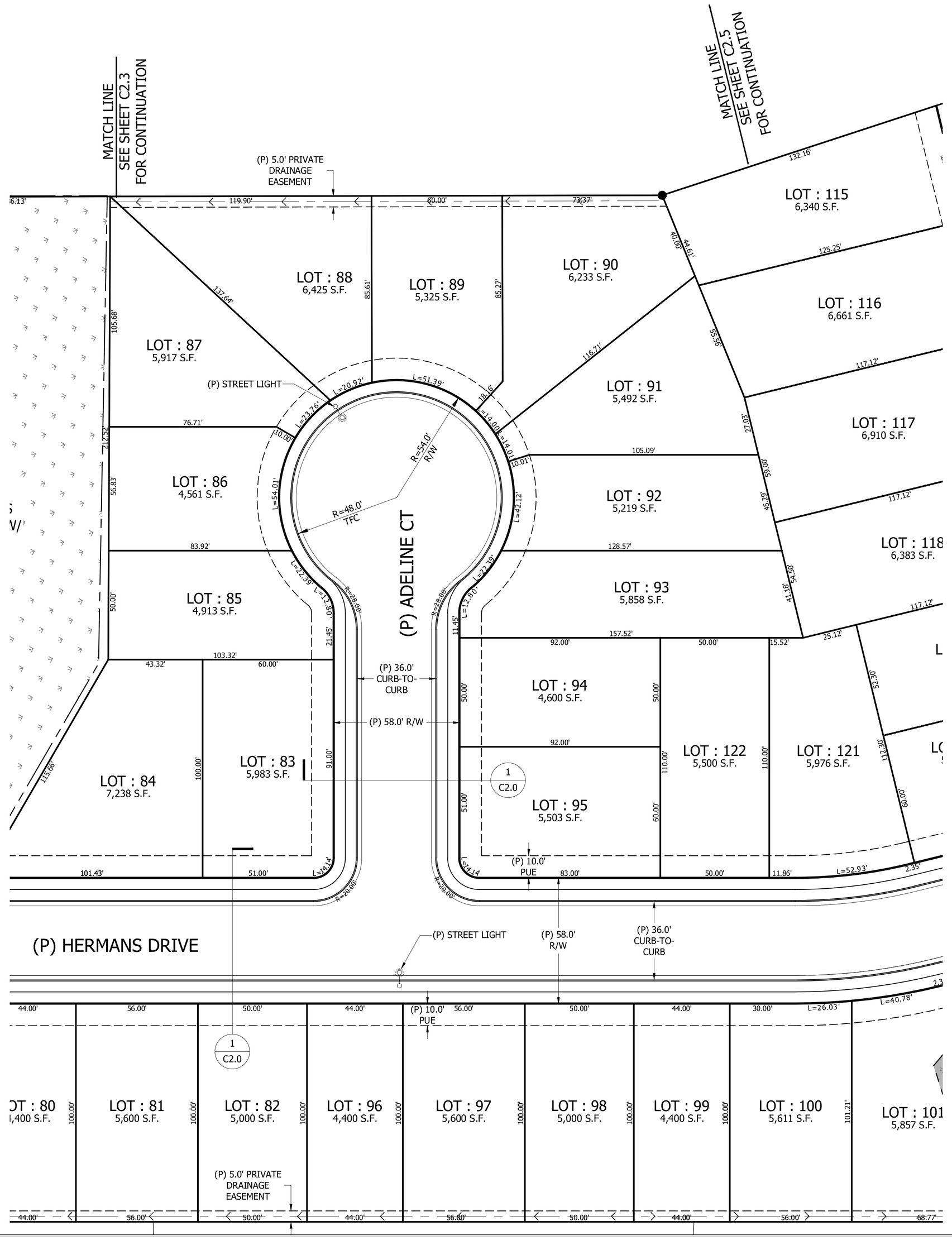
DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C2.3

SCALE: SEE BARSCALE



CLIENT:
PACIFIC NORTHWEST LAND CO., LLC
C/O MARK W. VUKANOVICH
4931 SW 76th AVE. PMB 360
PORTLAND, OREGON 97225
(541) 350-1060

UDELL ENGINEERING
AND
LAND SURVEYING, LLC
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

ENLARGED TENTATIVE PLAT

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

1 INCH
0 30'

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C2.4

SCALE: SEE BARSCALE

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ENLARGED TENTATIVE PLAT

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV

1 INCH
0 30'

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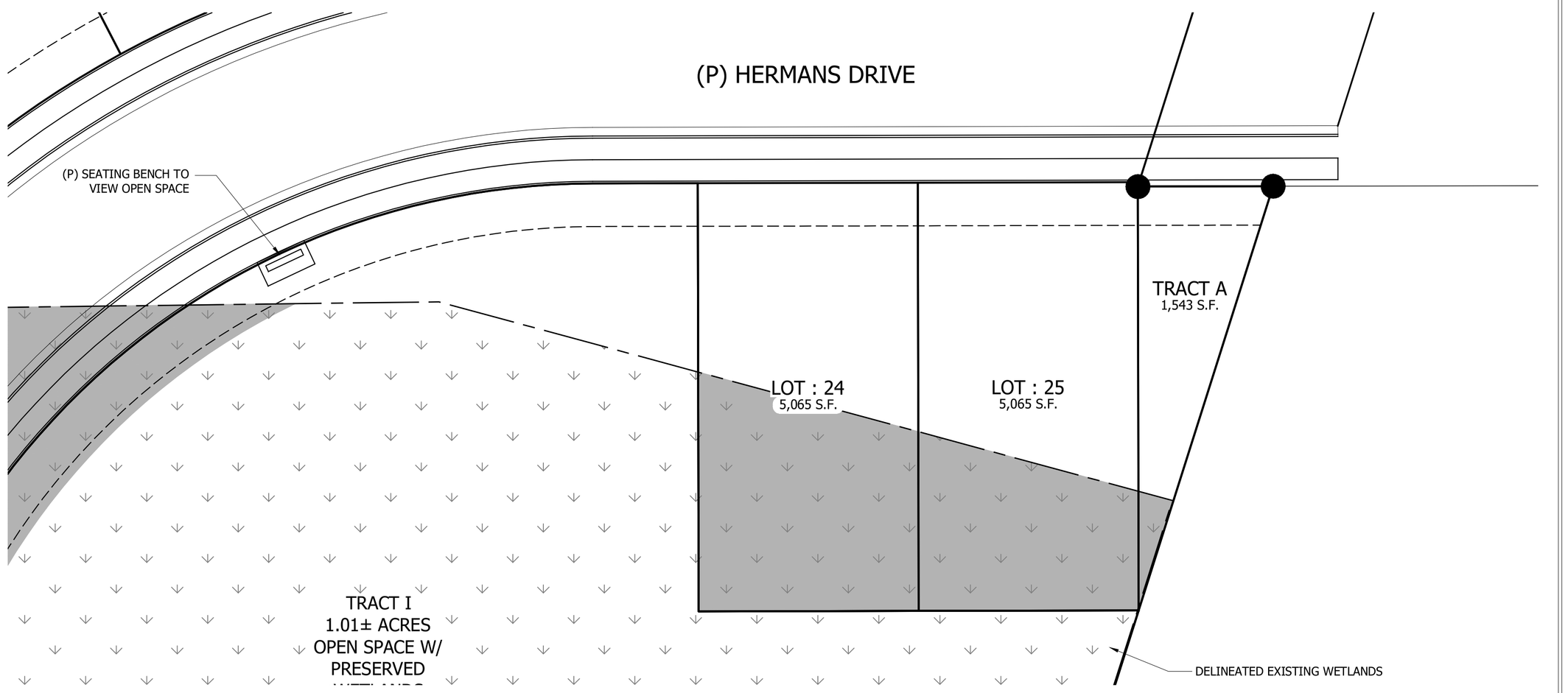
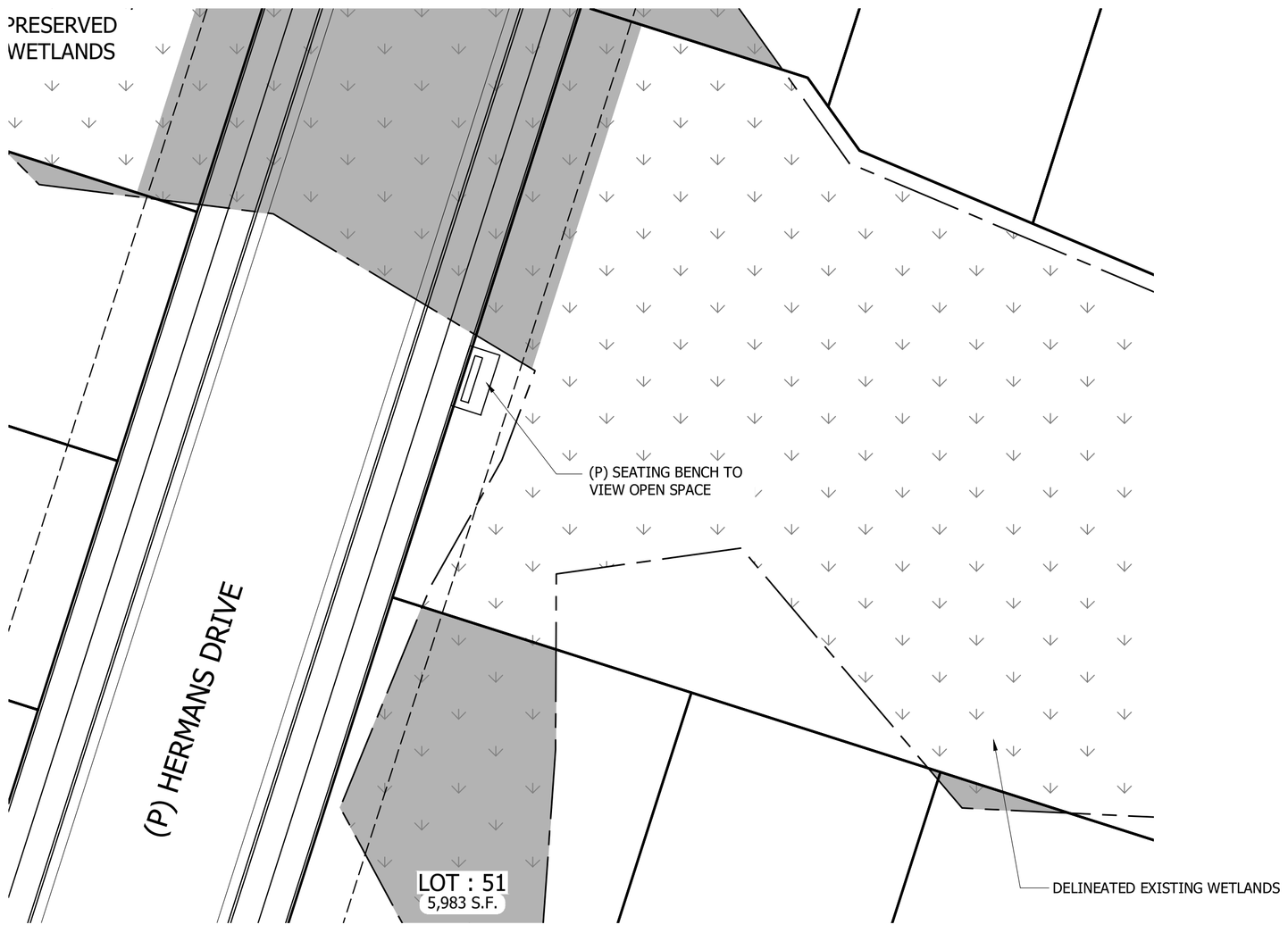
PLAN REVISIONS	DATE

Sheet C2.5

SCALE: SEE BARSCALE



1 C2.6 OPEN SPACE DETAIL



2 C2.6 OPEN SPACE DETAIL

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OPEN SPACE BLOW-UP

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
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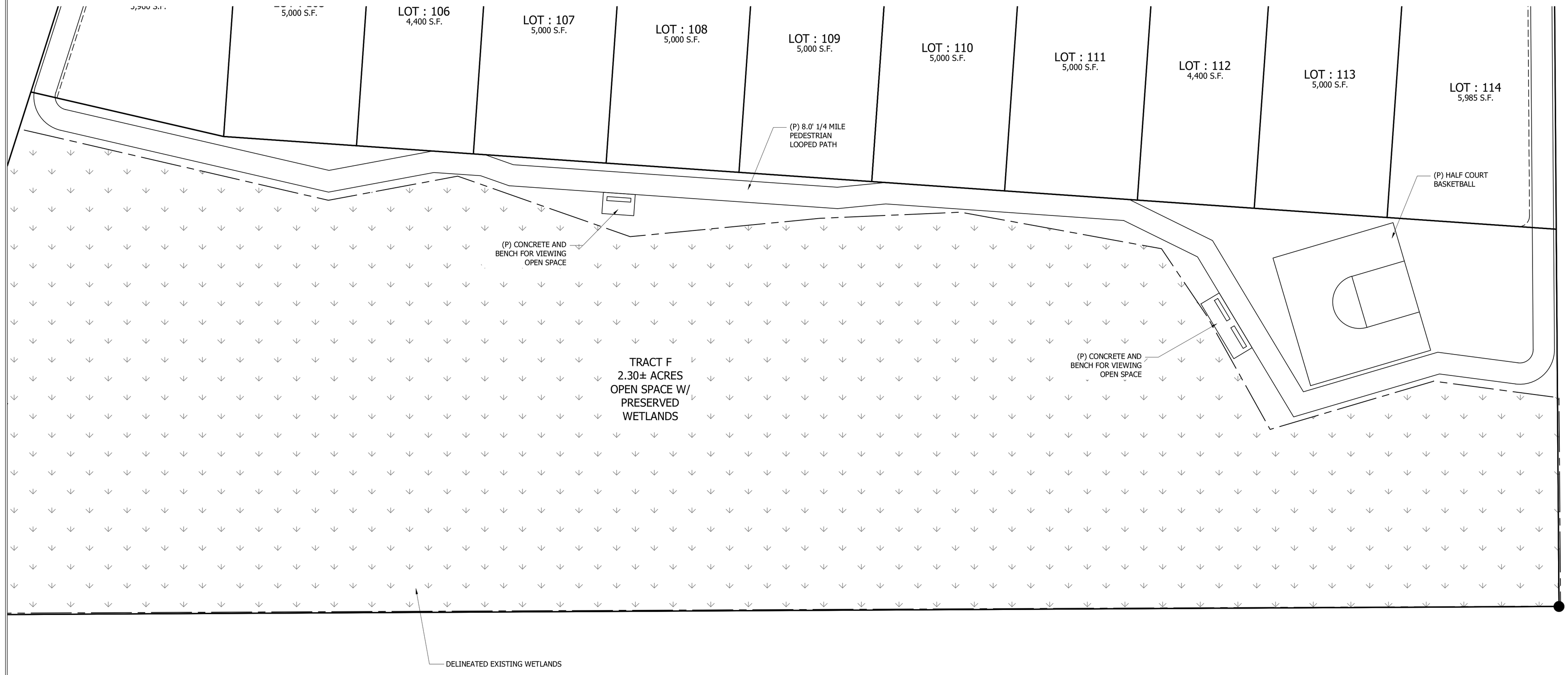
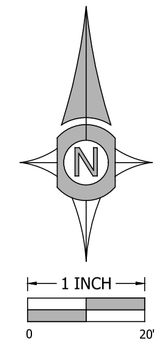
PLAN REVISIONS	DATE

Sheet C2.6

SCALE: SEE BARSCALE





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OPEN SPACE BLOW-UP

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
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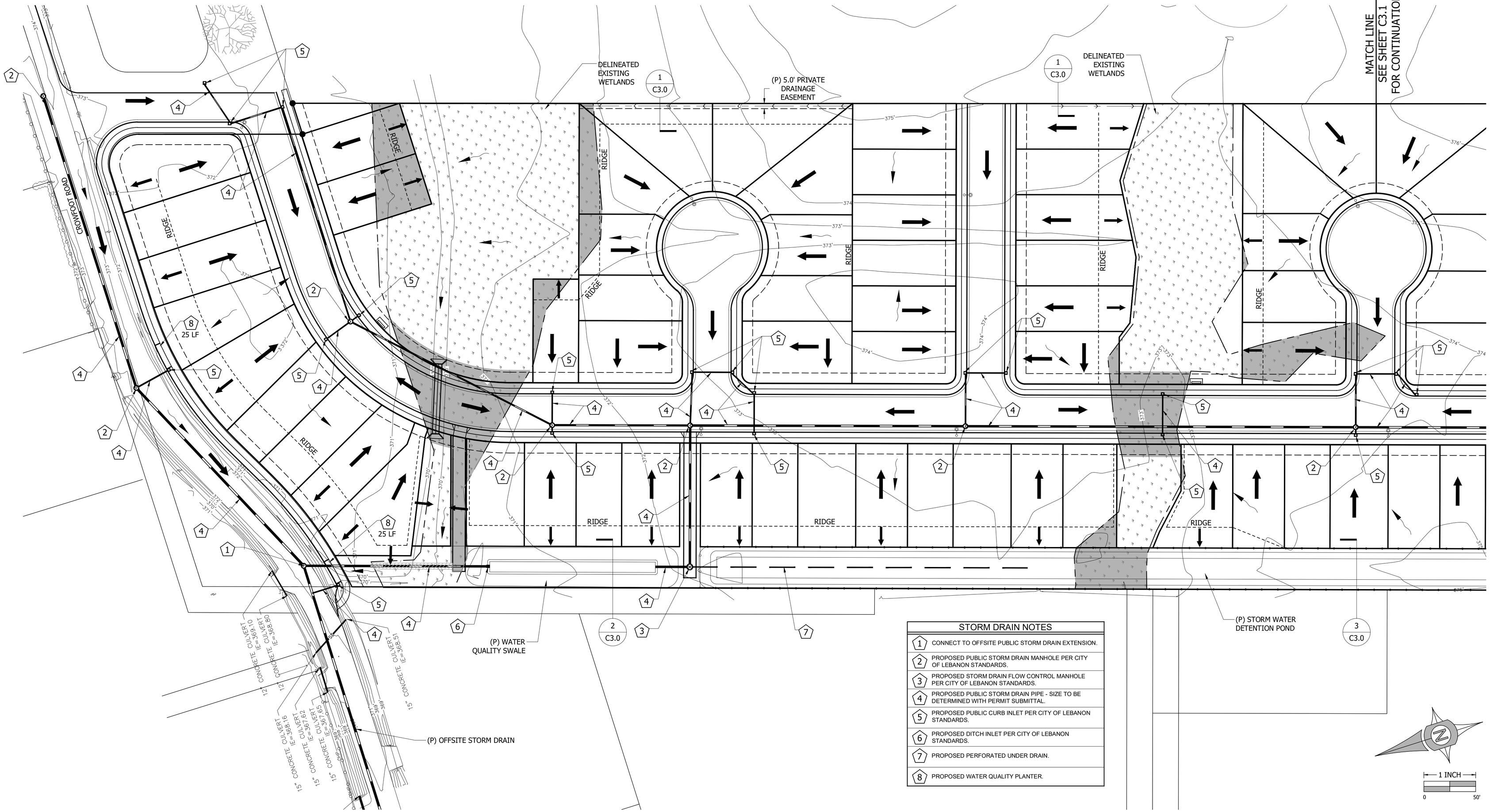
PLAN REVISIONS	DATE

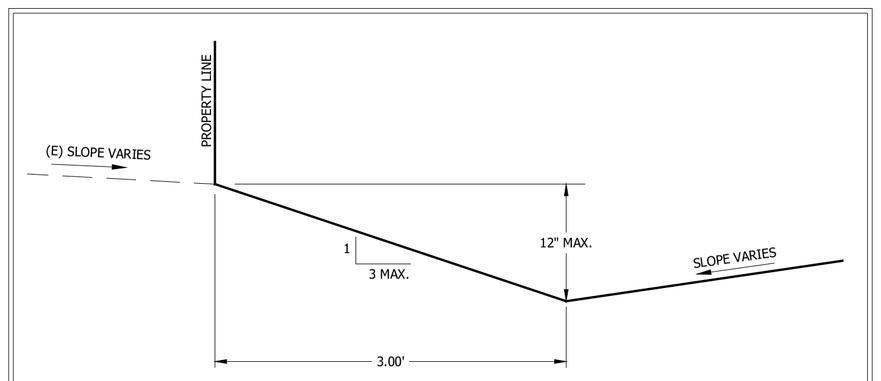
Sheet C2.7

SCALE: SEE BARSCALE

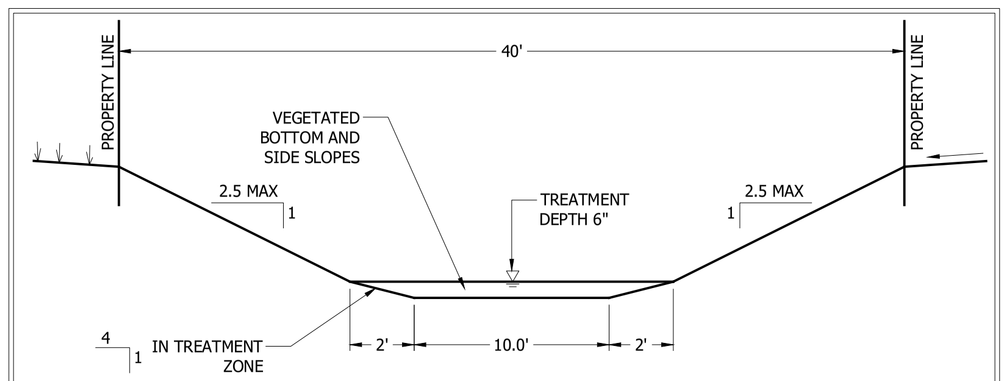


STORM DRAIN NOTES

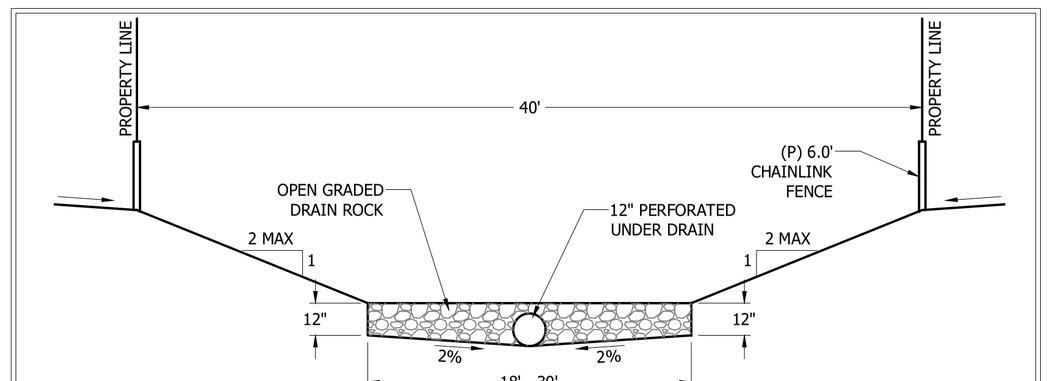
1	CONNECT TO OFFSITE PUBLIC STORM DRAIN EXTENSION.
2	PROPOSED PUBLIC STORM DRAIN MANHOLE PER CITY OF LEBANON STANDARDS.
3	PROPOSED STORM DRAIN FLOW CONTROL MANHOLE PER CITY OF LEBANON STANDARDS.
4	PROPOSED PUBLIC STORM DRAIN PIPE - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
5	PROPOSED PUBLIC CURB INLET PER CITY OF LEBANON STANDARDS.
6	PROPOSED DITCH INLET PER CITY OF LEBANON STANDARDS.
7	PROPOSED PERFORATED UNDER DRAIN.
8	PROPOSED WATER QUALITY PLANTER.



1 C3.0 SHALLOW PROPERTY LINE SWALE
NTS



2 C3.0 WATER QUALITY SWALE SECTION
NTS



3 C3.0 DETENTION POND SECTION
NTS

GRADING LEGEND

- 362 — EXISTING SURFACE CONTOUR ELEVATION
- EXISTING SURFACE DRAIN DIRECTION
- DESIGN SURFACE DRAIN DIRECTION
- HP - HIGH POINT
- LP - LOW POINT

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C3.0

SCALE: SEE BARSCALE

PRELIMINARY GRADING & DRAINAGE

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
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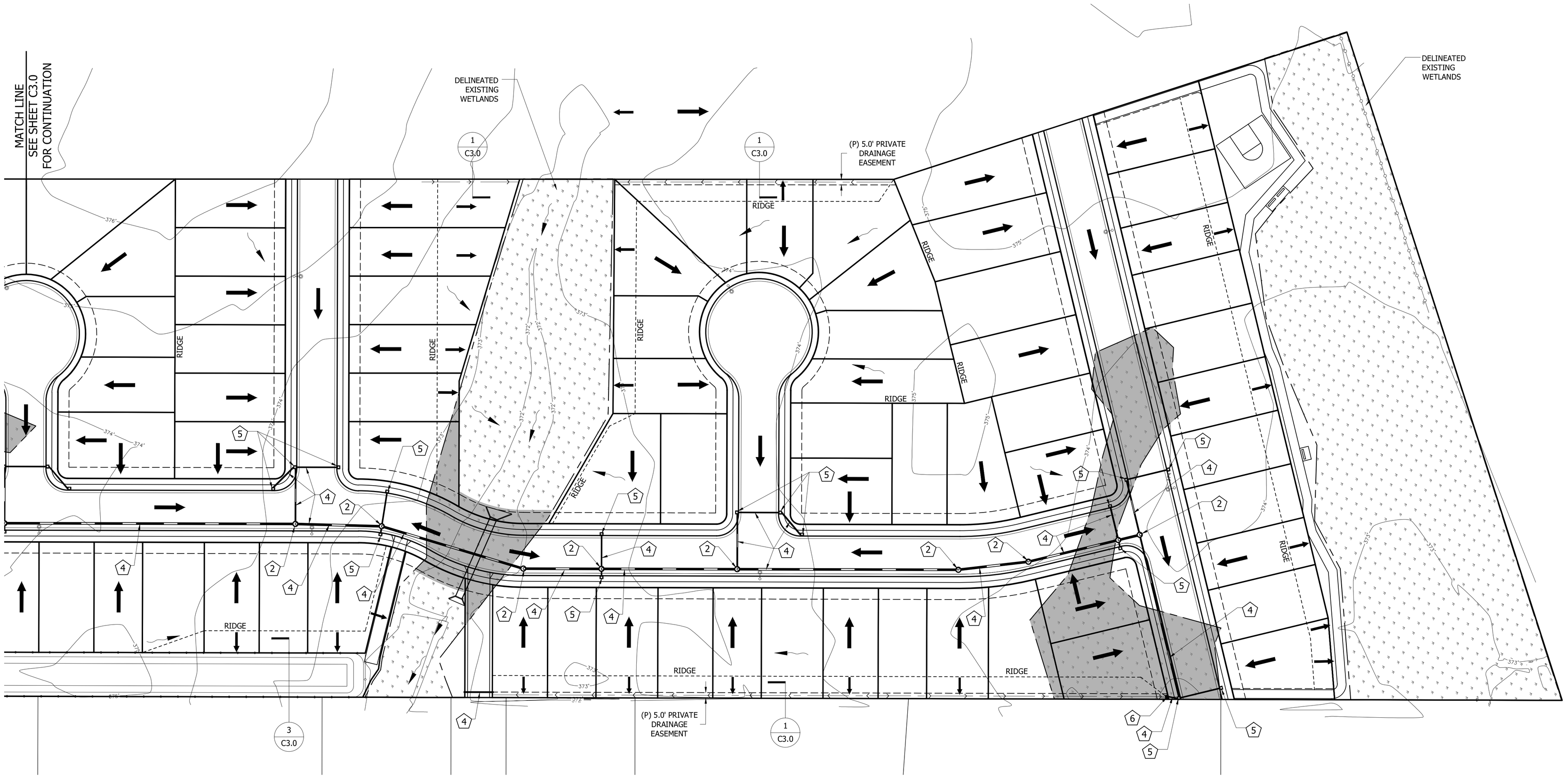

STORM DRAIN NOTES

1	CONNECT TO OFFSITE PUBLIC STORM DRAIN EXTENSION.
2	PROPOSED PUBLIC STORM DRAIN MANHOLE PER CITY OF LEBANON STANDARDS.
3	PROPOSED STORM DRAIN FLOW CONTROL MANHOLE PER CITY OF LEBANON STANDARDS.
4	PROPOSED PUBLIC STORM DRAIN PIPE - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
5	PROPOSED PUBLIC CURB INLET PER CITY OF LEBANON STANDARDS.
6	PROPOSED DITCH INLET PER CITY OF LEBANON STANDARDS.
7	PROPOSED PERFORATED UNDER DRAIN.
8	PROPOSED WATER QUALITY PLANTER.

GRADING LEGEND

- 362 - EXISTING SURFACE CONTOUR ELEVATION
- - EXISTING SURFACE DRAIN DIRECTION
- - DESIGN SURFACE DRAIN DIRECTION
- HP - HIGH POINT
- LP - LOW POINT

1 INCH
0 50'

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C3.1

SCALE: SEE BARSCALE

PRELIMINARY GRADING & DRAINAGE

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
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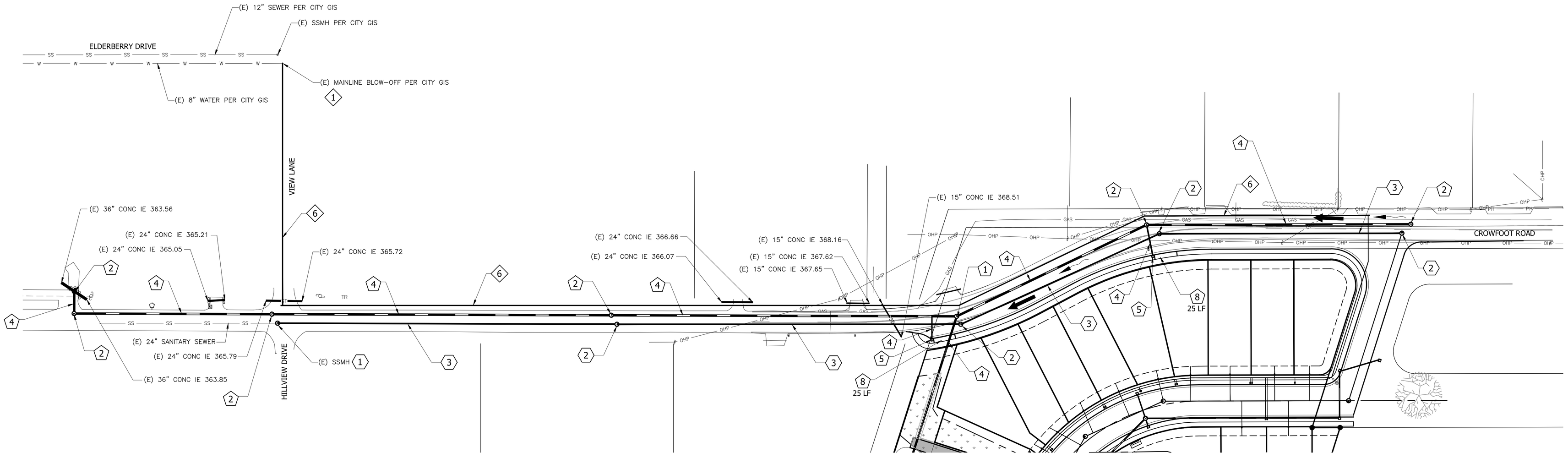

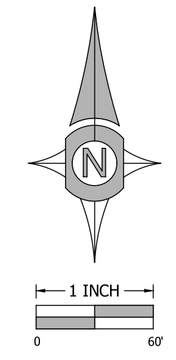

SANITARY SEWER NOTES

1. CONNECT TO EXISTING SANITARY SEWER PER CITY OF LEBANON STANDARDS.
2. PROPOSED 48-INCH SANITARY SEWER MANHOLE PER CITY OF LEBANON STANDARDS.
3. PROPOSED PUBLIC PVC SEWER PIPE PER CITY OF LEBANON STANDARDS - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
4. PROPOSED 4-INCH SANITARY SEWER LATERAL WITH PROPERTY LINE CLEAN-OUT PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.

WATER NOTES

1. CONNECT TO EXISTING PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
2. PROPOSED 8-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
3. PROPOSED WATER SERVICE PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.
4. PROPOSED MAINLINE BLOW-OFF PER CITY OF LEBANON STANDARDS.
5. PROPOSED PUBLIC FIRE HYDRANT ASSEMBLY.
6. PROPOSED 12-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.

STORM DRAIN NOTES

1. CONNECT TO OFFSITE PUBLIC STORM DRAIN EXTENSION.
2. PROPOSED PUBLIC STORM DRAIN MANHOLE PER CITY OF LEBANON STANDARDS.
3. PROPOSED STORM DRAIN FLOW CONTROL MANHOLE PER CITY OF LEBANON STANDARDS.
4. PROPOSED PUBLIC STORM DRAIN PIPE - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
5. PROPOSED PUBLIC CURB INLET PER CITY OF LEBANON STANDARDS.
6. PROPOSED DITCH INLET PER CITY OF LEBANON STANDARDS.
7. PROPOSED PERFORATED UNDER DRAIN.
8. PROPOSED WATER QUALITY PLANTER.

THIS MAP WAS PREPARED FOR PLANNING PURPOSES ONLY NOT FOR CONSTRUCTION

PLAN REVISIONS	DATE

Sheet C3.2

SCALE: SEE BARSCALE

CLIENT:
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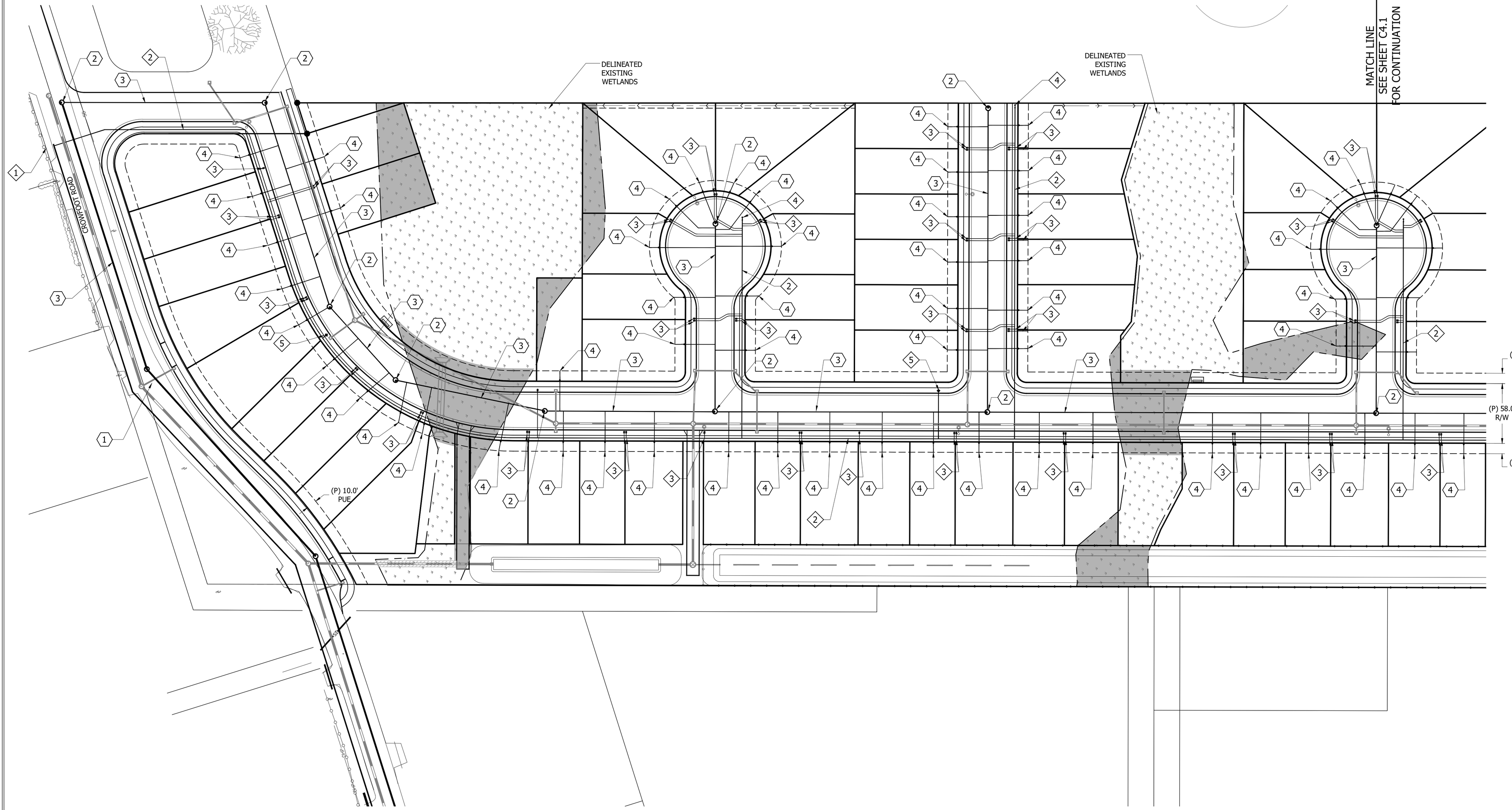
OFFSITE UTILITY IMPROVEMENTS
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
CHECKED BY: BSV



SANITARY SEWER NOTES	
1	CONNECT TO EXISTING SANITARY SEWER PER CITY OF LEBANON STANDARDS.
2	PROPOSED 48-INCH SANITARY SEWER MANHOLE PER CITY OF LEBANON STANDARDS.
3	PROPOSED PUBLIC PVC SEWER PIPE PER CITY OF LEBANON STANDARDS - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
4	PROPOSED 4-INCH SANITARY SEWER LATERAL WITH PROPERTY LINE CLEAN-OUT PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.

WATER NOTES	
1	CONNECT TO EXISTING PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
2	PROPOSED 8-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
3	PROPOSED WATER SERVICE PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.
4	PROPOSED MAINLINE BLOW-OFF PER CITY OF LEBANON STANDARDS.
5	PROPOSED PUBLIC FIRE HYDRANT ASSEMBLY.
6	PROPOSED 12-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.

FRANCHISED UTILITY NOTE

FRANCHISED UTILITIES WILL BE INSTALLED UNDERGROUND TO EACH LOT IN THE PROVIDED PUE. INCLUDING:

* NW NATURAL GAS
* COMMUNICATIONS
* POWER

N

1 INCH

0 50'

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PLAN REVISIONS	DATE

Sheet C4.0

SCALE: SEE BARSCALE

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PRELIMINARY UTILITY PLAN

TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
DRAWN BY: MLM
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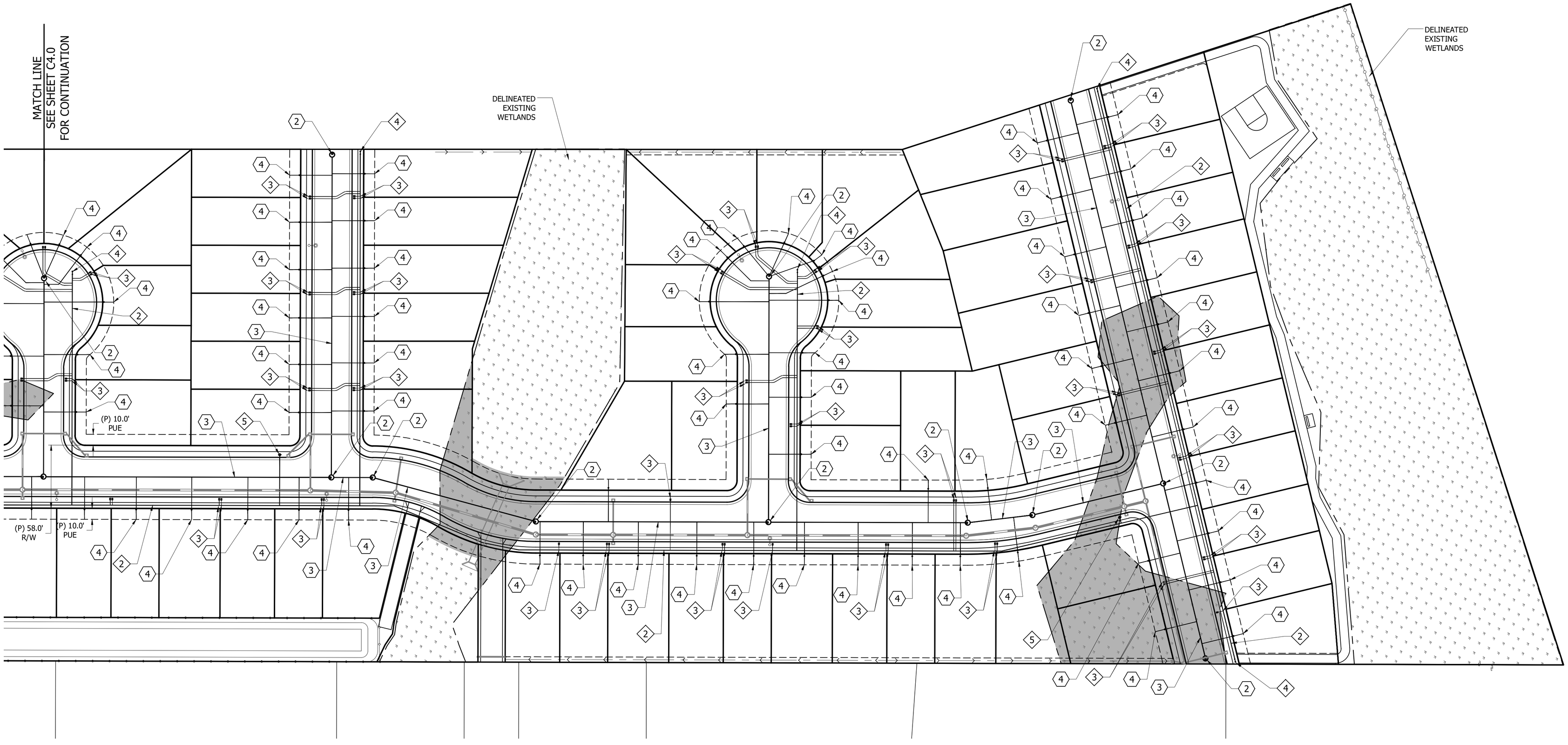

SANITARY SEWER NOTES	
1	CONNECT TO EXISTING SANITARY SEWER PER CITY OF LEBANON STANDARDS.
2	PROPOSED 48-INCH SANITARY SEWER MANHOLE PER CITY OF LEBANON STANDARDS.
3	PROPOSED PUBLIC PVC SEWER PIPE PER CITY OF LEBANON STANDARDS - SIZE TO BE DETERMINED WITH PERMIT SUBMITTAL.
4	PROPOSED 4-INCH SANITARY SEWER LATERAL WITH PROPERTY LINE CLEAN-OUT PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.

WATER NOTES	
1	CONNECT TO EXISTING PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
2	PROPOSED 8-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.
3	PROPOSED WATER SERVICE PER CITY OF LEBANON STANDARDS. EXTEND TO PUE.
4	PROPOSED MAINLINE BLOW-OFF PER CITY OF LEBANON STANDARDS.
5	PROPOSED PUBLIC FIRE HYDRANT ASSEMBLY.
6	PROPOSED 12-INCH PUBLIC WATERLINE PER CITY OF LEBANON STANDARDS.

FRANCHISED UTILITY NOTE

FRANCHISED UTILITIES WILL BE INSTALLED UNDERGROUND TO EACH LOT IN THE PROVIDED PUE. INCLUDING:

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* COMMUNICATIONS
* POWER

1 INCH
0 50'

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PLAN REVISIONS	DATE

Sheet C4.1

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PRELIMINARY UTILITY PLAN
TAX MAP 12S-2W-23C
TAX LOT 4101
LEBANON, OREGON

DATE: FEBRUARY 22, 2024
PROJECT: 23-129 PACIFIC NW LAND CROWFOOT RD
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