WESTERN UNIVERSITY OF HEALTH SCIENCES

LEBANON CAMPUS PLANNED DEVELOPMENT

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Project Summary

In 2022, Western University of Health Sciences launched a Campus Framework Study to envision the development of a new campus on 110 acres in Lebanon, Oregon.

PLANNED DEVELOPMENT

This 2026 Oregon Campus Planned Development was created in collaboration with University leadership, faculty, staff, students, and local community partners. It provides a long-term vision for the campus while serving as a foundation for immediate development efforts that span the 10 years for this Planned Development Application.

The site, formerly home to a plywood plant, was generously donated to WesternU by the Heatherington Foundation. The Planned Development outlines a flexible framework to guide land use, physical development, and infrastructure planning of the site. Additionally, it provides recommendations for parking, specifying the number of parking stalls needed and their distribution across the site.

This Planned Development is looking at the first three buildings that can be built over the next ten years. This vision is informed by current conditions influencing campus growth, with the understanding that these conditions may change over time.

Existing Site Aerial

Statement Detailing Development Proposal

16.23.020 A.1

The Planned Development for Western University of Health Sciences' new Lebanon, Oregon campus outlines a physical framework for developing the 110-acre site along the South Santiam River.

REINFORCE COMMUNITY & PROTECT OPEN SPACE

The Campus Framework anticipates a total build-out of up to 500,000 Gross Square Feet (GSF) to meet future needs. The 10-year Planned Development proposes three buildings, totaling approximately 177,000 sq. ft. of floor area as indicated on the following figure showing the 10-year development plan. This development will support approximately 520 students. Drawings P102, P102A, P201, and P202 indicate conceptually the access, parking and public infrastructure to support this initial development. Campus buildings are concentrated in the northeast corner of the site, formerly occupied by a plywood factory. This area forms the Savanna Commons, envisioned as the social and restorative heart of the campus. Designed to emulate the meandering course of a river, the Savanna Commons provides diverse spaces for gathering, celebration, and reflection.

The campus is divided into four development areas:

> Amenity Precinct

> Interprofessional Precinct

> College Precinct

> Service Precinct

Each precinct is assigned a target GSF, offering a flexible planning framework that accommodates building adjacencies and programmatic needs. This approach allows the campus to adapt dynamically to evolving opportunities and demands,

The University's landscape development integrates a series of exterior open spaces with the campus's architectural and ecological context. These spaces connect to key site features, including the Old Mill Trail, South Santiam River, elevated rail line, Ridgeway Butte to the east, and distant hills to the south.

This development creates a cohesive sequence of open spaces connected by pedestrian paths, shaping the identity of University's campus. The open spaces vary in size, scale, and function, providing distinct relationships to buildings and precincts. Together, these elements create a vibrant, integrated, and purpose-driven campus environment.

(NEXT PAGE):
Proposed Development Site Plan Key

LANDSCAPE

- **A. South Savanna Meadow (South Meadow)**
- **B. North Savanna Meadow (North Meadow)**
- **C. Savanna Commons (The Quad)**
- **D. Oak Grove (The Grove)**
- **E. River Forest and Old Mill Trail**
- **F. West Woodland (Parking)**
- **G. East Milton Street Entry**
- **H. East Grant Street Entry**
- **I. Entry Plaza**
- **L. Event Area**

INTERPROFESSIONAL PRECINCT

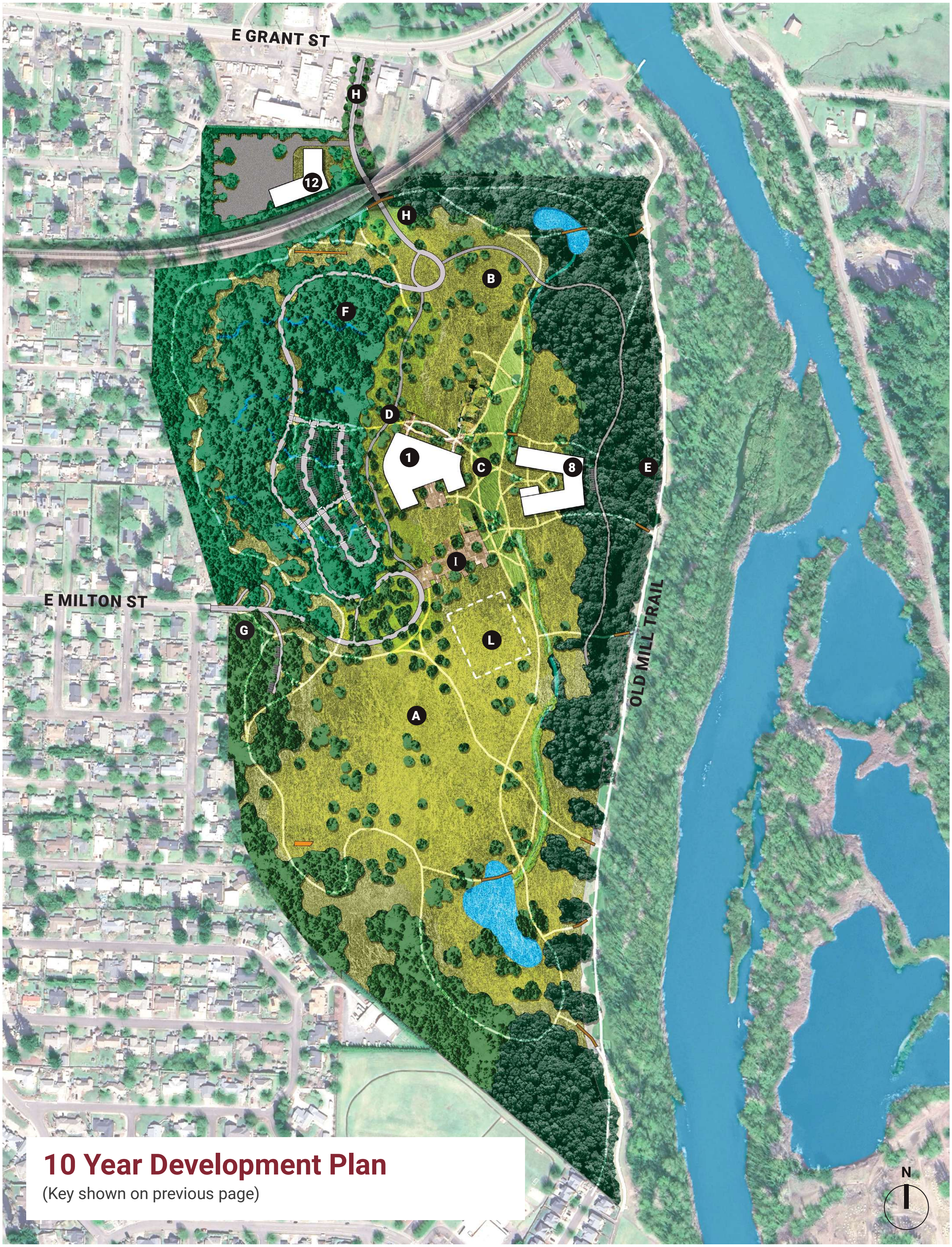
1. **Student Commons**

COLLEGE PRECINCT

8. **College of Osteopathic Medicine of the Pacific Northwest and College of Behavioral Health**

SERVICE PRECINCT

12. **Facilities and Maintenance**



10 Year Development Plan

(Key shown on previous page)

General Submittal Requirements Planned Development

Project Schedule

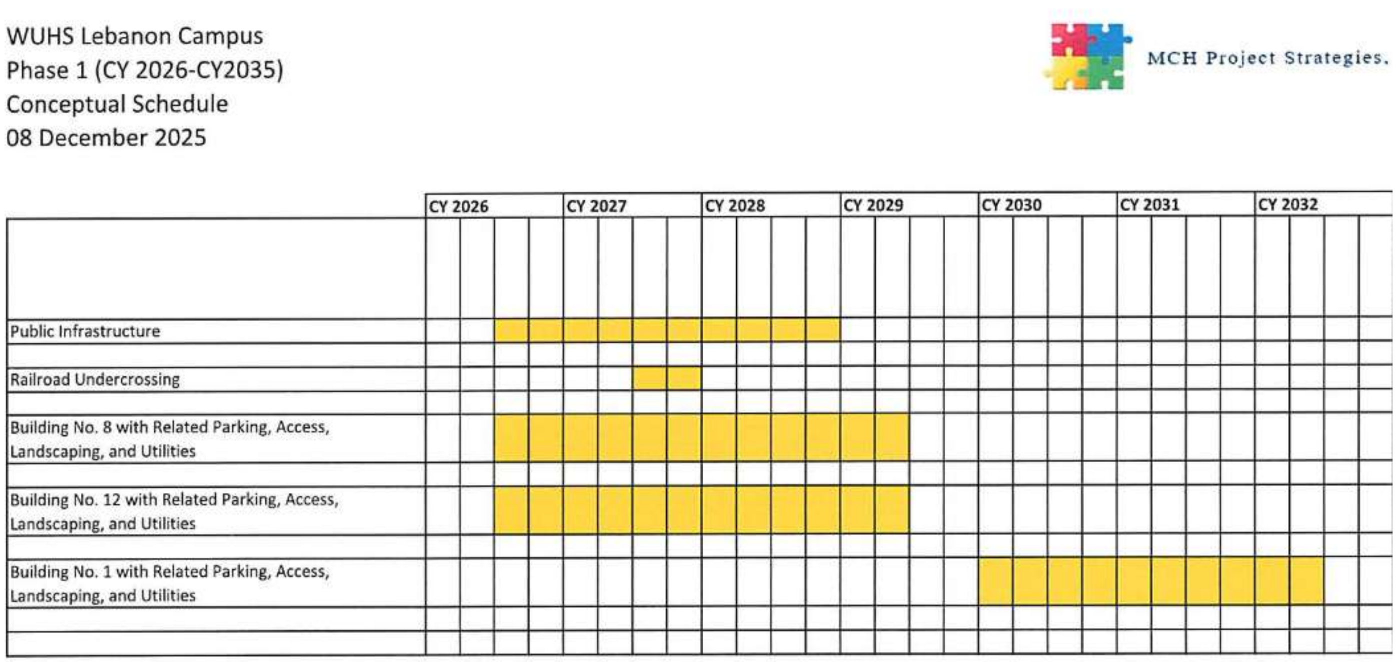
16.23.020 A.2

The development of the Planned Development will take place over a period of 30 years. For the purposes of this Planned Development application, we will be focusing on the first 10 years of development. During this time, infrastructure and open space as well as 3 buildings will be constructed. See the following Phase 1 (10 Year) Development schedule for the anticipated project timeline.

Long Term Ownership

16.23.020 A.3

The property is owned by WesternU Oregon LLC and will remain under the ownership of WesternU Oregon, LLC, however it will be managed by Western University of Health Sciences. No land division is anticipated thus the whole property remains under single ownership. The leasing of land or facilities to an outside entity in furtherance of Western University of Health Sciences' medical education mission is possible, but not currently contemplated.



Studies 16.23.020 A.4

Traffic Study

A Traffic Impact Analysis, dated December 5, 2025, for the Phase 1 (10-Year) Development of the campus was prepared by Kittleson & Associates. The Scope of Work for this study was directed and approved by City Engineering Staff. The recommendations from the study are reiterated below. Please particularly note the 1st and 2nd recommendations.

> The study intersections are forecast to meet the City of Lebanon 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.

> Conceptual signing and striping modifications were identified for implementation at the E Milton Street / S Williams Street intersection to address historical crash patterns. Subject to City concurrence, we recommend refinement and implementation of the conceptual changes by the City regardless of the proposed development.

> It is recommended that the City of Lebanon continue to monitor queuing conditions at the intersection of E Grant Street with the proposed primary campus access, as well as at the E Grant Street / E Williams Street intersection through future campus expansion land use applications.

> The City and WesternU are encouraged to collaboratively explore long-term opportunities /visions for the E Grant Street campus access. These activities could assess whether treatments that are not necessarily needed to address operational deficiencies may still improve the intersection. Visioning/planning for potential future treatments has the potential to help facilitate enhanced campus access and local land use planning as both the City and campus grow and adjacent parcels change use over time.

The complete Traffic Impact Analysis is included in the appendix.

Environmental Studies

WesternU Oregon Property LLC and the State of Oregon Department of Environmental Quality have entered into a Consent Order for Prospective Purchaser Agreement. This order is recorded in the Linn County records under M-2025-00964.

“The purpose of the order is (a) to protect public health, safety, and welfare in accordance with applicable provisions of ORS 465.200 through 465.420, and the regulations promulgated thereto, and (b) to facilitate productive reuse of property; and (c) to provide WesternU Oregon Property LLC with protection from potential liabilities in accordance with applicable law.”

“The terms of the order include remedial design and remedial action responsibilities stated as – WesternU Oregon Property LLC will perform the remedial investigation, remedial design and remedial action for the Property in accordance with a DEQ-approved work plan yet to be determined as detailed in the Scope of Work (“SOW”), attached to this Consent Order as Exhibit C, and the terms and schedules yet to be determined in a DEQ-approved work plan.”

The preparation of an “approved work plan” is on-going. The completion of this plan and its approval by DEQ will be required prior to beginning any construction activities on the property.

Wetlands

A copy of the wetlands delineation approved by Oregon Department of State Lands, under Case No. WD#2024-0052, dated July 25, 2024, is included in the appendix. Drawing P102B shows the relationship of the delineated wetlands to the phase 1 development.

The applicant is preparing a Joint Fill Application, to the Army Corps of Engineers and the Department of State Lands, to permit the filling of the wetlands impacted by the phase 1 development.

Archaeology

A cultural resource survey of the property was completed by Archaeological Investigations Northwest Inc. in April 2024. A summary of the findings and recommendations are stated below.

> The project area has a low probability for the presence of a significant archaeological resource.

> A scatter of objects dating to the 1960s and 1970s may need to be inventoried and evaluated as an archaeological site if the project has a federal nexus.

> There is unlikely to be a historic district in the surrounding neighborhood.

> Archaeological monitoring if excavation should occur where the Lebanon Lumber Mill buildings stood.

> Project work should proceed subject to an archaeological resource inadvertent discovery plan.

A copy of the survey is included in the appendix.

Geotechnical Investigation

A geotechnical reconnaissance of the site was conducted by Foundation Engineering, Inc. in April 2018. The conclusions and recommendations from that report are summarized as follows:

1. The site is suitable for the planned development of a medical school main campus.

2. Conventional shallow foundations {i.e., spread footings and continuous wall footings) should be suitable to support the proposed buildings. However, mitigation of the existing site fill will be required (see below)..

3. Most of the site contains fill consisting predominantly of granular soil (sandy gravel with cobbles) interbedded with some shallow layers of silt. In general, most of the existing site fill should be suitable for re-use as site fill beneath new structures and pavements, re-processing of the site fill (i.e., excavation, sorting to remove unsuitable debris, and re-compaction in lifts) will be required beneath buildings. Re-processing may not be required under pavements.

However, soft or wet silt will require drying before it can be re-compacted. Where present, organic-rich topsoil or silt will have to be stripped from beneath building areas and hauled from the site or re-used in landscape areas.

At some locations, CES has indicated the granular soil may have low-level (non-DEQ issue) hydrocarbon contamination. At those locations, some blending and re-testing may be required as part of the re-processing of the existing site fill.

4. Aerial photographs indicate the western portion of the site was used as a log pond. This area was also the previously designated as a Landfill Area in the PES report. The fill in TP-3, TP-6, and TP-9 included wood debris, bark, logs, and concrete debris, materials consistent with log pond backfill. Therefore, the western portion of the site will have a higher probability of containing unsuitable materials or fill requiring re-processing.

Additional explorations will be required to better define the extent and depth of unsuitable fill in the above-referenced area, and to determine if any other log ponds were similarly filled. Mitigation options include avoiding development of these areas, limiting construction over the fill to pavements and accepting the risk of some future settlement, or excavation and replacement of the unsuitable materials with an engineered fill.

Preliminary comments by CES suggest the log pond backfill contains low-levels of hydrocarbon contamination. Therefore, if this material is excavated, it will require disposal in a landfill (presumably at the Coffin Butte Landfill).

5. Existing AC pavements, PCC slabs and footings will have to be removed prior to site development. However, properly processed (e.g., crushed) AC and PCC may be re-used onsite as general site fill outside of building areas.

6. Imported granular fill (typically, 1 1/2 or 1-inch minus, well graded, clean crushed gravel or crushed rock) will be required to construct building pads under structures and serve as base rock under pavements. Suitable crushed gravel or crushed quarry rock should be available at nearby rock quarries and gravel pits.

A copy of this report is also included in the appendix.

Preliminary Mitigation Plan

16.23.020 A.5

It is not expected that the development of the Santiam River site for the purposes of the Western University of Health Sciences campus will pose adverse project impacts, but rather will introduce amenities and restorative landscape features that will improve upon the Lebanon community urban fabric.

OPERATING AND/OR TRAFFIC NOISE

Western University of Health Sciences does not anticipate any operating noise extending beyond the boundaries of the property. Any events requiring amplified sound will obtain the appropriate permits and will be limited to a specified number of days per year.

Although traffic to the property will increase compared to current conditions, on-site traffic-calming measures will be implemented to ensure safe and orderly circulation. All delivery and loading activities will occur at the Facilities and Maintenance building (No. 12) and yard primarily North of the railroad. Loading at each main campus building will be need specific, and take place along the service drive at the back of each building.

The campus is designed as a pedestrian-oriented environment; therefore, vehicular traffic will be limited to arrival, departure, and parking only. Delivery and access related activity is typical or less than many of the commercial, industrial or public uses allowed in the mixed use zone.

VIBRATION

Western University of Health Sciences does not anticipate any activities occurring on campus that would cause vibration for adjacent properties.

GLARE

Western University of Health Sciences does not anticipate any of their buildings causing glare on adjacent properties. Site lighting will be night sky compliant.

HEAT

Western University of Health Sciences does not anticipate any of their buildings causing heat on adjacent properties.

ELECTROMAGNETIC INTERFERENCE

Western University of Health Sciences does not anticipate any of their buildings causing electromagnetic interference on adjacent properties.

SMOKE

Western University of Health Sciences does not anticipate any of their buildings causing smoke on adjacent properties.

WATERBORNE CONTAMINATES

Western University of Health Sciences plans to capture and filter stormwater on site. Sanitary waste will connect to the City of Lebanon sewer system.

AIRBORNE PARTICULATES

Western University of Health Sciences does not anticipate any activities on campus generating any new airborne particulates.

ATMOSPHERIC, SOIL, OR WATER CONTAMINANTS

Western University of Health Sciences does not anticipate any medical education activities on campus generating any new atmospheric, soil or water contaminants. The campus will adhere to any mitigation plan from the previous use contaminants set out by the Oregon DEQ.

At sometime in the future, to facilitate the continuation and advancement of the medical education activities and WesternU's mission on the campus, should any new equipment be required that could discharge atmospheric, soil or water contaminants, all required State and Federal permits will be obtained prior to bringing it online.

Additional Detailed Information

16.23.020 A.6

See Conditional Use section of this application.

Additional Design and Program Elements

16.23.020 A.7

Additional Elements Of The Plan

(1) PARKS, PLAYGROUNDS, RECREATIONAL FACILITIES, TRAILS AND OPEN SPACES

See Conditional Use section of this application for information on trails and open spaces.

(2) PROPOSED METHOD OF SOLID WASTE DISPOSAL

Typical household solid waste collection, recycling, and disposal in the City of Lebanon is provided by Republic Services. Western University of Health Sciences will coordinate with Republic Services to provide these services for the campus. WesternU emphasizes recycling as a part of their daily operations.

Through the university's research and laboratory functions limited amounts of medical waste are generated. That waste which may include medical sharps and chemical waste products are collected by a third party vendor licensed by State and Federal authority to handle, transport, and dispose of such materials.

(3) PROPOSED METHOD FOR PROVISIONS OF WATER AND SEWAGE DISPOSAL

Water to campus for consumption and fire protection will be provided by an extension of the city's water distribution system through the campus as shown conceptually on Drawing P201.

Sewage collection and treatment will be provided by an extension of the City of Lebanon's wastewater collection infrastructure as shown conceptually on Drawing P202.

The water and wastewater engineering reports included in the appendix document the sizing of the infrastructure extensions, plus with respect to wastewater – the capacity of existing facilities to receive the campus discharges, and with respect to water the capacity to provide sufficient fire flow.

(4) PROPOSED METHOD FOR THE HANDLING OF SURFACE WATER DRAINAGE

Surface water drainage is proposed to be collected, treated, and retained on-site through a green infrastructure network throughout the campus. This network will establish native vegetation, drainage pathways, and permeable landscape features to slow and reduce runoff, mimic natural hydrology, filter pollutants and support biodiversity.

The design and construction of these facilities will occur incrementally as needed to support each development project and phase. The design approach will include facilities such as raingardens, vegetated swales, regenerative surface drainage facilities, retention basins, parking lot buffers, and permeable hardscapes. All facilities will be designed to comply with the city's Storm Drainage Master Plan dated October 2022 with the goal of "not creating any new discharges to the Santiam River".

Stormwater facility plans will be submitted with each building permit, site plan review, and/or public improvement review application.

(5) PROPOSED GRADING PATTERNS

Grading patterns will be project specific and coordinated with project specific geotechnical investigations and with the surface water drainage designs discussed above. Grading plans will be submitted with each building permit, site plan review and/or public improvement review application.

(6) A SHADOW PROJECTION, FOR DEVELOPERS INCORPORATING SOLAR DESIGN FEATURES

Shadow projections, if required, will be submitted with each separate building permit application. Conceptually the north-south linear orientation of the campus and the proposed east-west building separations facilitates solar access to all the buildings.

Additional Elements Of The Program

(1) PROPOSED OWNERSHIP PATTERNS

The property will remain under the sole ownership of WesternU Oregon Property LLC.

(2) OPERATION AND MAINTENANCE PROPOSAL, SUCH AS CONDOMINIUM, CO-OP, OR HOMEOWNERS ASSOCIATION

The operation and maintenance of the privately owned improvements on the property will be the responsibility of Western University of Health Sciences.

(3) COMMERCIAL FACILITIES SUCH AS SHOPPING, COMMUNITY FACILITIES SUCH AS SCHOOLS OR PARKS

Within the 10 year time frame of this application, the program for the property will be two academic buildings for Western University of Health Sciences and a service building to support those buildings and the property as a whole. Vehicular, bicycle and pedestrian circulation paths will be accommodated according to the plan. Parking will also be provided. No commercial support facilities are anticipated

(4) A STATEMENT REGARDING THE ENERGY IMPACTS OF THE PROPOSED DEVELOPMENT

Projects will be energy efficient and meet Oregon Energy Code. WesternU intends for all projects to be sustainable but design will be balanced with project priorities the campus is developed.

(5) A STATEMENT REGARDING THE NOISE IMPACTS OF THE PROPOSED DEVELOPMENT.

WesternU does not anticipate noise impacts during normal daily operation of the campus. Any events requiring amplification will solicit necessary permits.

(6) TABLES SHOWING THE TOTAL NUMBER OF ACRES AND THE PERCENTAGE OF THE TOTAL AREA THAT IS DESIGNATED FOR EACH TYPE OF USE INCLUDING EACH DWELLING TYPE, OFF-STREET PARKING, STREETS, PARKS, PLAYGROUNDS, SCHOOLS, OPEN SPACES AND SO ON AS SHOWN ON THE DEVELOPMENT PLAN.

Off Street parking: 2.6 Acres - 2.3%

Private Streets: 2.15 Acres - 1.9%

Service Streets: .9 Acres - .8%

Open Space: 100 Acres - 90%

Academic Buildings: 1.8 Acres - 1.6%

Service Buildings and Yard: 2.5 Acres - 2.2%

Total Campus: 111.5 Acres

(7) TABLES SHOWING THE OVERALL DENSITY OF THE PROPOSED RESIDENTIAL DEVELOPMENT AND SHOWING DENSITY BY DWELLING TYPES AND ANY PROPOSALS FOR THE LIMITATION OF DENSITY.

Not Applicable

(8) DRAFTS OF APPROPRIATE RESTRICTIVE COVENANTS, INCLUDING THOSE REGARDING THE MAINTENANCE OF LANDSCAPE AND DRAFTS OF DOCUMENTS PROVIDING FOR THE MAINTENANCE OF ANY COMMON OPEN SPACE, OR REQUIRED DEDICATIONS OR RESERVATIONS OF PUBLIC OPEN SPACE AND OF ANY DEDICATIONS OF DEVELOPMENT RIGHTS.

As the property will remain under one ownership with a single responsible party for operations and maintenance there is no need for covenants, conditions, and restrictions against the property. There are no proposed or required dedications or reservations of public open space.

(9) A TIMETABLE INDICATING WHEN UTILITY AND DRAINAGE FACILITIES INTENDED TO SERVE THE DEVELOPMENT ARE TO BE INSTALLED. IF THE DEVELOPMENT IS TO BE CONSTRUCTED IN STAGES THE TIMETABLE SHALL REFLECT THIS.

The conceptual schedule on page 10 indicates the anticipated time of public infrastructure design and construction. Drawings P200, P201, and P202 indicate the anticipated phasing and limits of public infrastructure.

(10) TIMETABLE OF THE DEVELOPMENT, INCLUDING EXPECTED STARTING DATES, PROJECTION OF COMPLETION TIME AND PROJECT PHASING, IF ANTICIPATED.

The conceptual schedule on page 10 indicates the anticipated time frame for the design and construction of the Phase 1 (10-Year) buildings. The overall phasing of the campus construction is shown on Drawing P101

(11) METHOD OF PUBLIC IMPROVEMENTS FINANCING, IF ANY.

All public infrastructure will be paid for by Western University of Health Sciences. No local public financing is anticipated.

Special PD Development Standards

16.23.020 B

1. MINIMUM SITE SIZE

The site of the Western University of Health Sciences is larger than the minimum required for a Planned Development of one (1) acre.

2. COMPLIANCE WITH APPLICABLE CRITERIA

The underlying zone of the site is the Multi-use zone.

The design is in compliance with the applicable criteria from the Public Use in a Multi-Use zone in Chapter 16.10.

The Development Standards in Table 16.10-7 will be adhered to.

Lot Area, Width Depth, Coverage: There shall be no requirement.

Clear Vision Area: A clear vision area shall be maintained at public streets and private streets, and a 20 foot triangle shall be maintained at intersections.

Other Required Conditions: All service repair, processing or storage will be screened from the residential zone by a site-obscuring fence.

3. DEPTH OF PERIPHERY YARDS

For this Planned Development , the area of building structures on the campus are at least 20 feet from any property line.

4. LOT COVERAGE AND BUILDING HEIGHT

The underlying zone of Public Use in a Mixed Use Zone does not have any requirements for lot coverage and building height.

5. OPEN SPACE

a. The Open Space in the Planned Development does not include right of way, driveways, parking, setbacks or public easements.

b. The Open Spaces are designed for recreational and leisure use for the occupants of the Planned Development

c. The Open Space is accessible and usable year-round.

d. The Open Space in the Planned Development meets the minimum area required of 20 feet x 20 feet and 400 square feet.

e. The natural features of the Open Space are preserved or restored and complimentary landscape is provided.

6. SUBDIVISION LOT SIZES

The Planned Development will not be subdivided. This criteria is not applicable.

7. REQUIRED PHASING

The Planned Development will be constructed in phases. The first phase of construction will provide one academic building and one facilities building. Within the 10 year timeframe of this application, one additional academic building will be constructed.

The proposed phasing is shown on drawing PD1.

16.23.040.A Decision Criteria

PLANNED DEVELOPMENT

1.The proposed development is in conformance with:.

a. The basic decision criteria of 16.23.020.B are addressed previously.

b. The cumulative information provided by the response to the applicable criteria from LDC Chapters 16.06, 16.10, 16.21, and 16.23 submitted herewith demonstrate the proposed development complies with the criteria associated with a public use, “Universities”, in the mixed use zone.

c. The community development standards of LDC Chapters 16.12 - 16.19 are addressed conceptually in these application materials. With future project applications for site plan review, public improvement drawing and specification review, building permit review, and sign review these development standards will be addressed specifically under the City’s standard procedures for permitting.

2. No exceptions to the standards of the underlying “Mixed-Use” zone are proposed in this application. There are no unanticipated or adverse impacts created by the “University” use which will not be mitigated by the exceptionally large setbacks from adjacent residential uses and by the significant landscaping and landscape restoration which will occur on the site.

3. The proposed development is phased to provide reasonable time frames for fund raising and capital accumulation to assure that the improvements proposed in each phase can be substantially completed.

4. The Traffic Impact Study included in the appendix demonstrates the public street system has the capacity to serve the proposed development.

5. The water and sanitary sewer engineering reports included in the appendix demonstrate the public utility infrastructure has the capacity to serve the proposed development. Surface water drainage is proposed to be collected, treated, and retained on-site through a green infrastructure network throughout the campus. This network will establish native vegetation, drainage pathways, and permeable landscape features to slow and reduce runoff, mimic natural hydrology, filter pollutants and support biodiversity. The design and construction of these facilities will occur incrementally as needed to support each development project and phase.

16.23.040.B Conditions of Approval

The applicant concurs that the Planning Commission may impose conditions of approval that are determined to be necessary to assure the proposed development meets the planned development decision criteria.

WESTERN UNIVERSITY OF HEALTH SCIENCES

LEBANON CAMPUS CONDITIONAL USE

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General Submittal Requirements CU

16.21.050 A

Public Facilities and Services Impact Study

16.21.050 A.1

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Dedication of Real Property

16.21.050 A.3

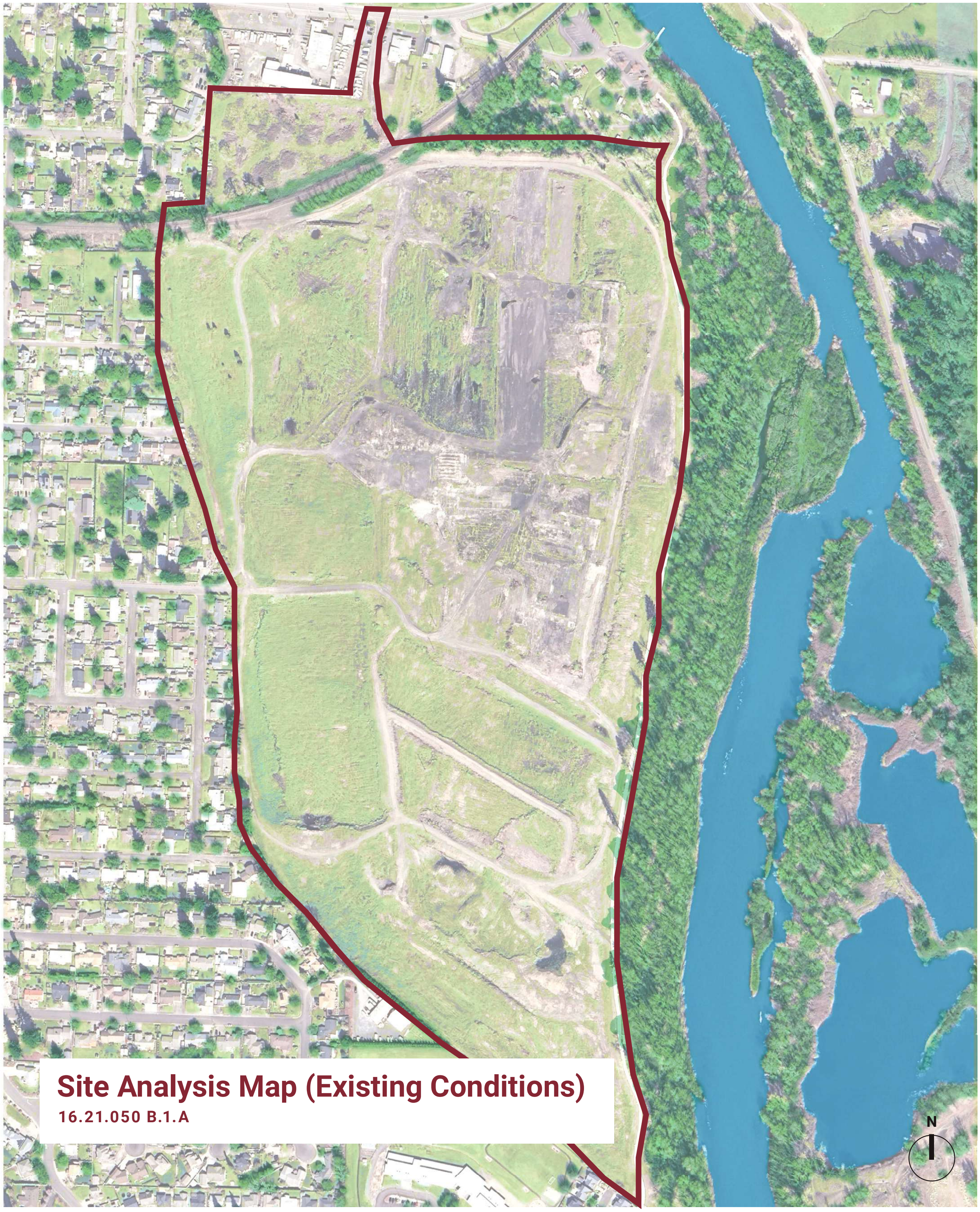
Dedication of real property to the city is only anticipated to occur for the purpose of a public street extension between E. Grant Street and the railroad to provide access to E. Grant Street. Drawing P102A indicates the typical area of dedication for public street improvements to accommodate the Phase 1 (10-Year) development. This section of proposed public street is included in the 2018 Transportation System and designated as a collector street to serve the applicant's property. As the applicant's property is not intended to be divided for other mixed use zone uses, -the proposed street right-of-way dedication stops at the railroad right-of-way.

This public street extension between E. Grant Street and the railroad will also serve adjacent properties not owned by the applicant. These are properties which could be subdivided in the future and this street could provide access.

Drawing P102A also indicates an area of right-of-way reservation. This area would be reserved for dedication should future development on the campus create sufficient trip generation to require a left turn lane onto E. Grant Street.

Specific Submittal Information Requirements for a Conditional Use Hearing

16.21.050 B



Site Analysis Map (Existing Conditions)

16.21.050 B.1.A

Site Analysis

16.21.050 B.1

b. Site topographic contours are shown on Drawing P1OO.

c. Site slopes greater than 15% are identified on Drawing P1OO.

d. Public utility extensions, public and private streets, access drives and sidewalks are shown on Drawings on P200, P201, P202, and P210. Pedestrian and bicycle trails and pathways are indicated on the graphics on pages and hereafter.

Public utility easements and public street right-of-way dedications will be made to the city based upon final approved designs for each. All easement and dedication widths and areas shall comply with the respective applicable city engineering standards.

e. Existing land uses are shown on page and Drawing P1OO. The property is vacant.

f. The FEMA maps included in the appendix show the mapped 100-year floodplain where located in proximity to the applicant's property (TLIOOO). The mapped 100-year floodplain may encroach slightly on the northern and eastern boundaries of the property but such encroachments are well outside the area proposed for building development. These maps also indicate the potential for 500-year flood in the southerly portion of the property where only trails, pathways, and storm water facilities are planned.

There are no mapped geological hazards on the property. The geotechnical reconnaissance included in the appendix address existing site and soil conditions.

g. Drawing P1OOC indicates the location of delineated wetlands on the property along with the location of non-wetland open waterways.

There is no known wildlife on the property which requires protection.

h. Drawing P1OO shows the existing site conditions. There are no existing structures, large rock outcroppings or canals on the property.

i. Drawing P1OOC shows the location of existing ditches.

i. Per the Cultural Resources Survey included in the appendix, there is a low probability of a significant archaeological resource on the site. This study does recommend archaeological observation during construction within the area shown on Drawing P1OOB.

j. There is no vegetation in the Phase 1 development area which meets or exceeds the 12" diameter for deciduous trees or the 18" diameter for evergreen trees.

k. All drawings and exhibits include north arrows and scales when appropriate. The contact information for the owner and applicant is included on the application form submitted herewith.

I. The contact information for the project team is also included on the application form.

m. We believe the existing conditions information provided adequately addresses the required site analysis for a conditional use.

16.21.050.B.2.A-E.,F.(7)

a. The development site, Phase 1 (10-year) is shown on page 26 and Drawing P102. The Phasing Plan and the Conceptual Long Term Development Plan are shown on Drawing P1O1.

The property boundaries, boundary dimensions and gross land area are shown on the ALTA/NSPS Land Title Survey included in the appendix.

b. There are no significant features on the property. Over time it is expected the remnants of foundations associated with the past mill related uses on the property will be removed to make way for the building, utility infrastructure, parking, and green space Improvements anticipated to support a thriving medical education campus.

c. The existing site features to be modified under Phase 1 are indicated on Drawing P102B.

d. The locations of all public and private streets, access drives, and fire lanes are shown on Drawing P200. The typical sections on Drawings P210 and P211 show the proposed dimensions of each.

e. The proposed structures with conceptual footprints, and conceptual parking layouts are shown on page building setbacks from property lines are significantly greater than the minimum required setbacks in the mixed use zone.

Existing and backbone utility extensions are shown on Drawings P201 and P202. Building specific utility connections will be provided with future building permit drawings.

f. (7) Support facilities related to campus access and generally related to campus security will be submitted as needed with each future building permit application. Access drives for services, waste disposal, recycling and internal campus deliveries are shown on page 28.

16.21.B.2.G-N.

g. Access drives for services, waste disposal, recycling and internal campus deliveries are shown on page 28 and Drawings P101 and P102.

Significant truck and trailer deliveries and loading are expected to occur at building 12 from the E. Grant Street collector street. From building 12, deliveries will be proportioned and distributed by smaller vehicles to individual buildings.

h. Specific designs for outdoor spaces, common areas, plazas, outdoor seating, and similar amenities will be submitted with each building permit application.

i. Specific designs and photometrics for outdoor or site lighting will be submitted with each building permit application. All outdoor lighting will be shielded to prevent light trespass onto adjacent properties. The general orientation of the site development to the northerly and easterly areas of the site minimizes the potential for any light trespass on the adjacent residential properties.

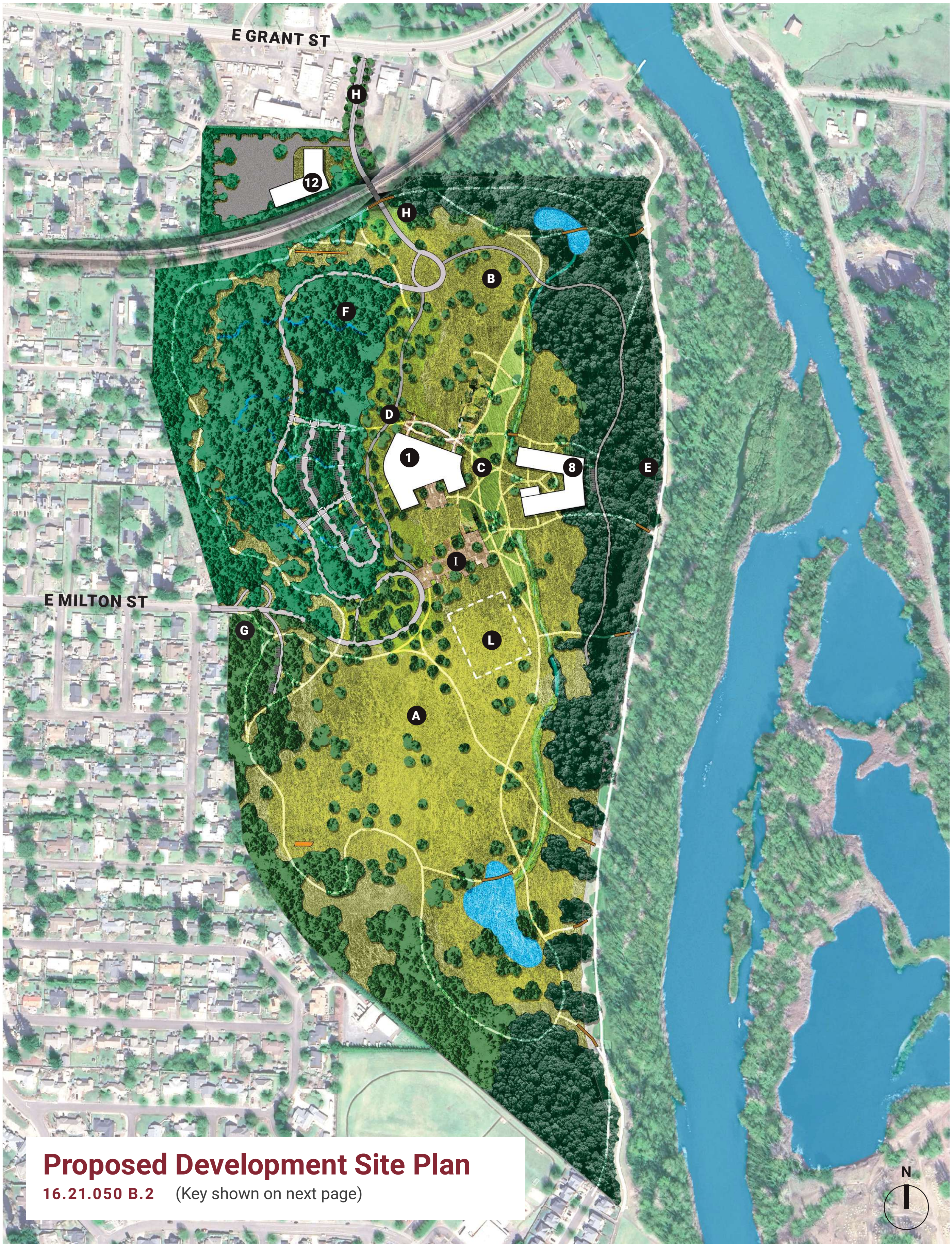
j. The location of mailboxes will be determined with future building permit applications. It is expected that mail deliveries will be made to building 12 where it will be separated and distributed to individual buildings by staff.

k. The name of the project designer will be included with each building permit application.

l. The opportunity for any public transportation related facilities and routes which include the WUHS Lebanon Campus will be coordinated with Linx Transit, the current transit provider for the City of Lebanon.

m. All campus signage will be submitted for planning and permitting review at a later date in accordance with LDC Chapter 16.18. Such submittals may be separate or concurrent with a building permit application.

n. Locations of existing and proposed fire hydrants are shown on Drawing P201. Fire department turnarounds as proposed are also shown on Drawing P201.



Proposed Development Site Plan

16.21.050 B.2 (Key shown on next page)

16.21.50.B.2.f. (1)(4) Off Street Parking

Near-Term Parking

(PREVIOUS PAGE):
Proposed Development Site Plan Key

LANDSCAPE

A. South Savanna Meadow (South Meadow)
B. North Savanna Meadow (North Meadow)
C. Savanna Commons (The Quad)
D. Oak Grove (The Grove)
E. River Forest and Old Mill Trail
F. West Woodland (Parking)
G. East Milton Street Entry
H. East Grant Street Entry
I. Entry Plaza
L. Event Area

INTERPROFESSIONAL PRECINCT

1. Student Commons

COLLEGE PRECINCT

8. College of Osteopathic Medicine of the Pacific Northwest and College of Behavioral Health

SERVICE PRECINCT

12. Facilities and Maintenance

OFF STREET PARKING

PARKING

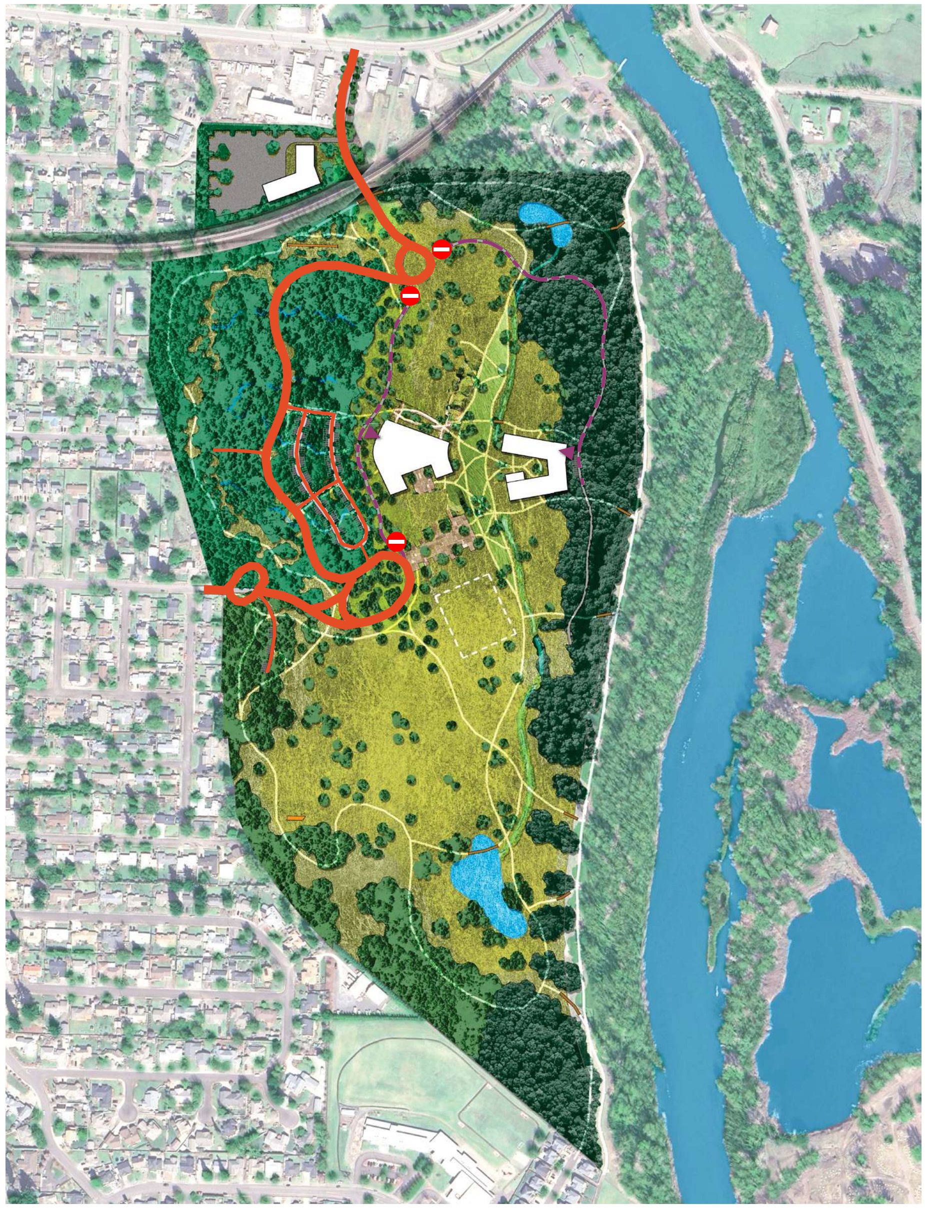
To support a vision of less cars on campus, vehicle storage (parking) and roadways have been designed to be located at the campus perimeter, separate from the day-to-day activities of campus life. This design emphasizes the experience of nature as part of the arrival sequence.

Parking stalls and wheel stops will be designed and dimensioned per Lebanon City Standards as a minimum. ADA stalls will be provided at all required locations and will be designed and dimensioned as required by code.

16.21.50.B.2.f. (2)(3) Internal Circulation Motor Vehicles

Vehicular Routes

- Roadway
- Parking Circulation
- Service Roadway/ Fire Access
- Gate/Controlled Access
- Service Entry and Electric Service Vehicle Charging



Near-Term Vehicular Circulation

Internal Vehicular Circulation

Vehicular access to campus is provided through two primary entrances: East Milton and East Grant Streets. These entrances are linked by a narrow, winding roadway intentionally designed to discourage high speeds and cut-through traffic. This design also enhances the driver's experience by integrating the roadway with the surrounding woodland environment, creating a sense of connection to the campus's natural setting.

EAST MILTON STREET ACCESS

East Milton Street serves as the campus' current access point and will remain an entry point. Its history gives it critical importance as a gateway and identity marker for the campus. From this entrance, there are views of Ridgeway Butte and the South Savanna, enhancing the sense of arrival.

The public right-of-way may be extended slightly into the site to accommodate a turnaround for fire trucks and service vehicles. This configuration ensures functional access while contributing to the campus's aesthetic and operational goals.

EAST GRANT STREET ACCESS

The entry from East Grant Street is located between an existing RV storage lot and a commercial office building. This entrance will require significant landscaping and signage improvements to establish the campus's tone and identity. Its use is contingent on the approval and construction of the railroad underpass, which will provide essential connectivity.

Similar to the East Milton Street access, the public right-of-way may be extended slightly beyond the underpass, incorporating a turnaround for fire trucks and service vehicles.

SERVICE ROADS

In addition to the main access routes, secondary service roads run north to south, providing required fire and service access to all campus buildings. These roads also serve accessible parking stalls, ensuring compliance with accessibility requirements. They are designed primarily for day-to-day pedestrian use as well as by electric service carts, with charging stalls conveniently located near building service entrances.

The service roads are not intended for general use by the campus community and are to be shared with bicycles and those with ADA parking passes.

16.21.50.B.2.f. (2)(3)(5)(6) Internal Circulation Pedestrian

Near-Term Pedestrian Circulation

Pedestrian Circulation

The campus is designed as a pedestrian-focused environment while accommodating the need for vehicle access. The primary goal is to separate vehicular circulation from pedestrian movement, ensuring a safe and seamless experience for walkers.

Pedestrian entry points from East Milton Street, East Grant Street, and the Old Mill Trail are thoughtfully designed to create an inviting campus entrance that prioritizes pedestrians, setting the tone for a walker-centered experience.

If entering the campus by personal car or bike, visitors are guided to designated parking areas, leaving their bikes and vehicles behind to embrace a pedestrian-centered experience.

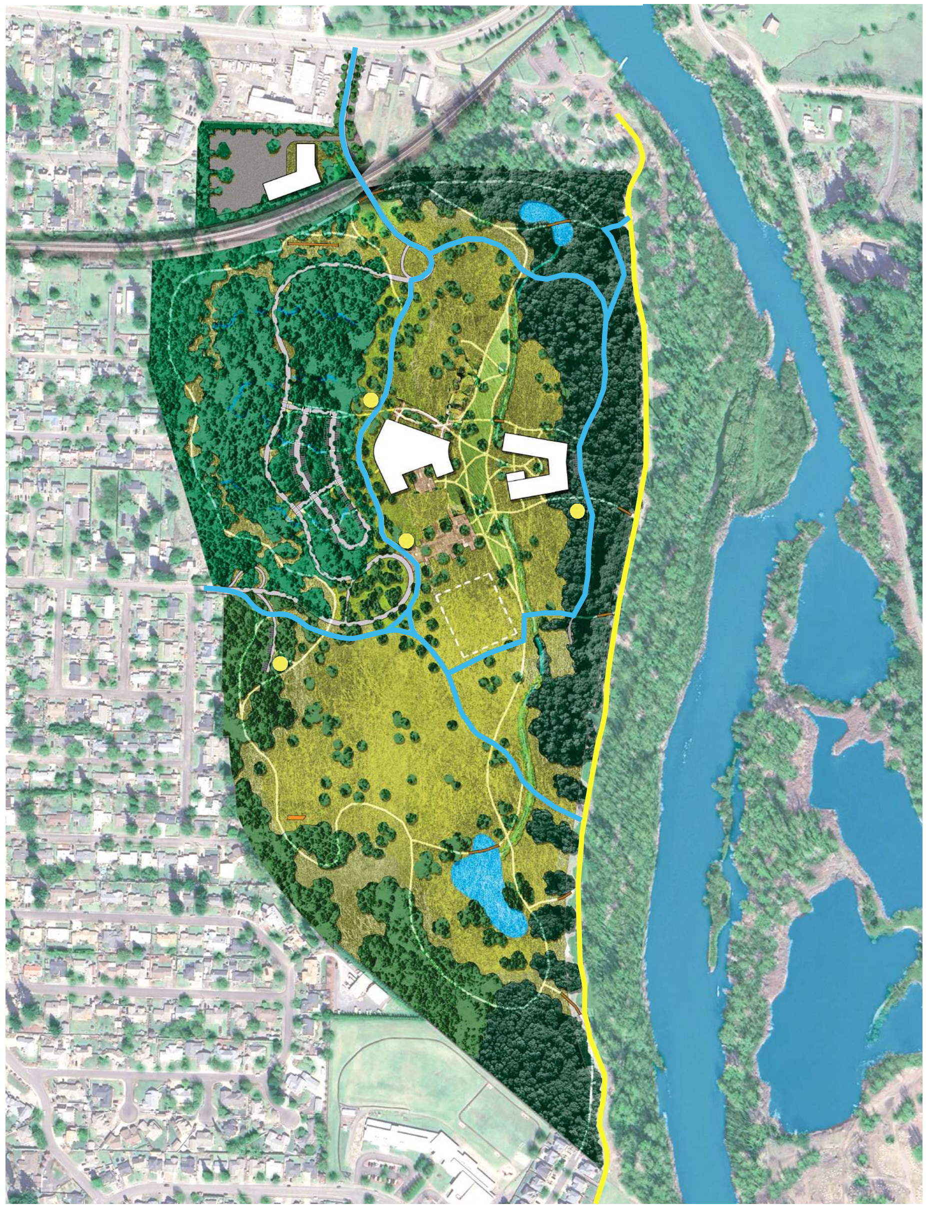
From the parking areas, a network of pathways weaves through the natural woodland, offering an immersive journey that leads to the Savanna Commons—a vibrant central gathering space. Here, walkways intersect and connect, encouraging movement, interaction, and community engagement while reinforcing the campus's pedestrian-first ethos. The walkways are thoughtfully designed with varying widths and paving materials, tailored to accommodate differing levels of foot traffic and enhance the overall pedestrian experience.

Where roadways intersect with pedestrian walkways, the design emphasizes pedestrian priority. Raised crosswalks extend the visual and tactile continuity of the walkways, interrupting the roadway paving to signal the need for vehicles to yield to pedestrians. This design element not only enhances safety but also reinforces the campus's commitment to a pedestrian-friendly environment. All walkways are required to be designed to accessible standards and link to designated accessible parking locations throughout the campus.

16.21.50.B.2.f. (2)(3)(6) Internal Circulation Bicycles

BICYCLE ROUTES

- Bicycle Routes
- Bicycle Parking
- Old Mill Trail



Near-Term Bicycle Circulation

Given the campus's commuter nature, bicycle commuting is actively encouraged and thoughtfully integrated into the Campus. Safety and convenience for bicyclists are prioritized through designated bike routes that, in some areas, share walking paths within a widened cross-section.

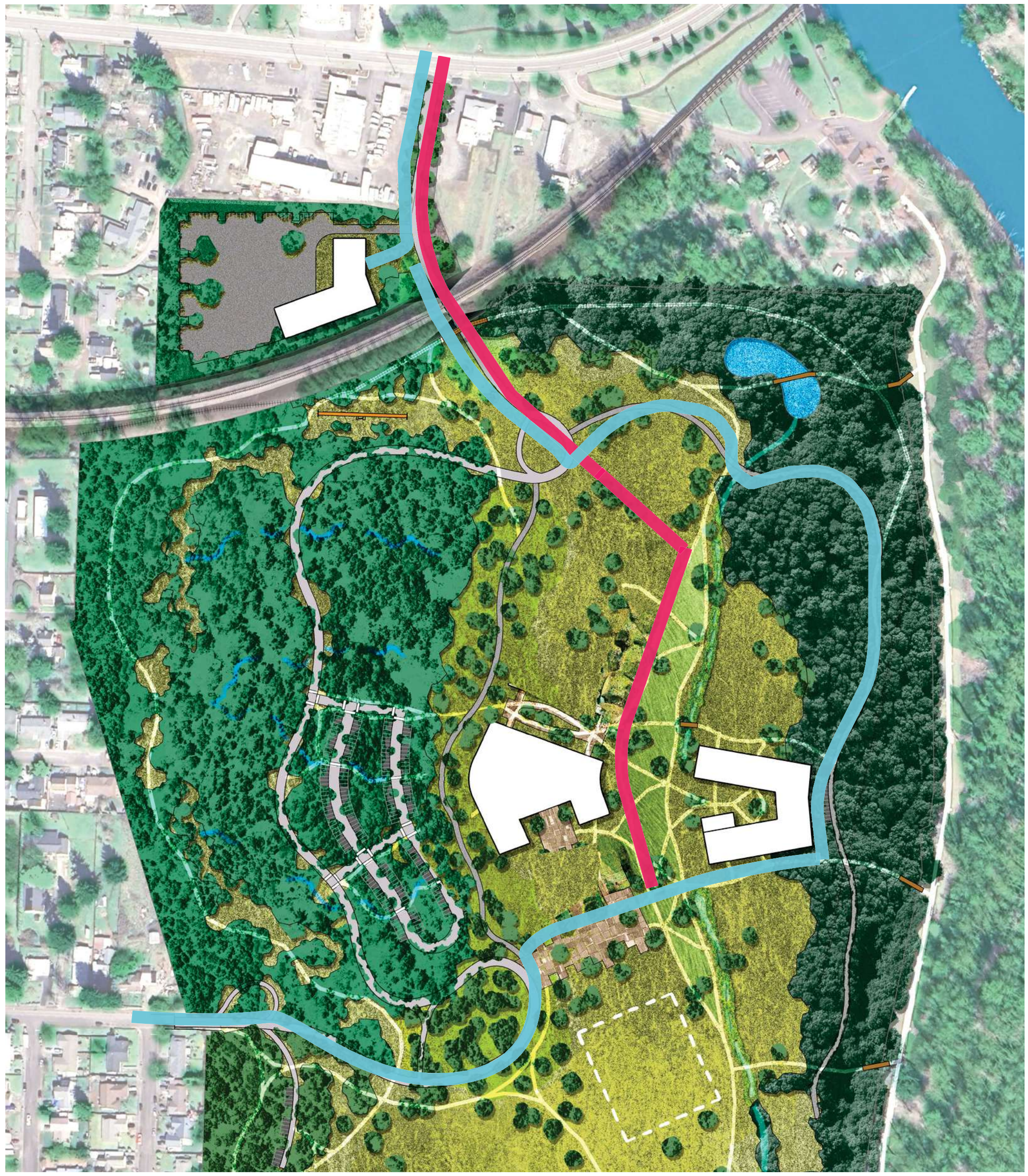
The shared pathways include clearly marked lanes for both pedestrians and cyclists to ensure safe and efficient use. In other areas, bicycles share limited-access roadways with service vehicles.

The roadways lead cyclists to covered, secure parking areas conveniently located near campus destinations, alongside accessible parking stalls for cars. Once cyclists reach these secondary entry points, they transition seamlessly into the pedestrian circulation system described in the previous section.

The Old Mill Trail, a key bicycle route in Lebanon, plays a central role in the campus's bicycle circulation design. Connecting the campus to the Old Mill Trail is a priority, particularly by enhancing bicycle access from the Trail to East Milton Street. This connection strengthens regional mobility and aligns the campus with broader community infrastructure.

To preserve the natural experience of the Trail System, bicycles will not be permitted on most pedestrian-only trails. These paths are reserved for walkers and runners to enjoy the tranquility of nature, supporting wildlife and promoting a slower, more reflective pace.

Domestic Water Sanitary Sewer



Utilities:
Water and Sanitary Sewer

- Water
- Sanitary Sewer

Long-Term Bird's Eye Massing

16.21.050.3 Architectural Drawings

The campus is designed to emphasize and feature the beauty of the landscape.

The campus design reflects the institution's values and dedication to educational excellence, emphasizing seamless integration with the surrounding region. Choices for buildings, landscapes, and circulation should be contextually driven, enhancing the campus's cohesive character and overall quality while maintaining a consistent identity and material palette.

The site's history as a former timber yard will be referenced through modern construction techniques using wood as primary building material. Incorporating heavy timber for structure not only promotes sustainability but also honors the area's heritage.

MASSING

The architecture of the new campus will take cues from the history and context of the site. To respect the scale of the town of Lebanon, buildings will be built within the height and story restrictions of the city, with a goal of limiting to two stories in height. This will ensure that the scale of the buildings feels appropriate for the site and will reflect the scale of the mill buildings that previously occupied the site. The two-story height also ensures that there is roof area to potentially house photo-voltaic panels to power each building.

Along the Savanna Commons, the buildings' second floor will overhang the first floor to create covered walkways.

16.21.050.3 Architectural Drawings

Long Term View: Savanna Commons

BUILDING MATERIALS

Various wood product mills have operated on this site along the South Santiam River throughout its long history. The economy of the Lebanon area maintains a strong connection to the timber industry with several mills headquartered within 50 miles of the site. The new WesternU campus will continue this connection to the timber industry and support the local economy by utilizing wood structures and materials.

The main structure of the campus buildings will be determined with each individual project, with a preference towards mass timber construction. Mass timber products like mass plywood panels (MPP), cross-laminated timber (CLT), and glue-laminated beams are structural materials that also have a strong sustainability commitment. Mass timber products sequester carbon and will reduce WesternU's overall embodied carbon footprint.

The first buildings constructed on campus will establish the foundational palette and patterns that define the campus's tone and character. To maintain a cohesive identity, it is recommended that the material palette remain consistent over time.

While building technologies and forms may evolve, the use of uniform materials will create visual and thematic unity across the campus. Features such as metal sloped roofs, abundant glazing, and wood siding in natural colors and textures will reinforce a sense of harmony with the surrounding environment while showcasing a distinctive Pacific Northwest architectural style.

Specific building elevations, roof pitches, materials and floor plans will be submitted with each project's permit application as we move into the future.

Long Term View: Milton Street Entrance

Long-Term View: Parking Entry

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16.21.050.4 Preliminary Grading Plan

Vegetated Swales/Green Corridor

Grading and Stormwater - General
Stormwater from the high point of the capped Savanna Commons drains south to the South Wetland Pool of the South Savanna Meadow. As one of the largest stormwater landscapes on site, the South Wetland Pool captures and filters significant volumes of stormwater before draining east towards the Santiam River.

Grading Plans - Project Specific
grading plans will be submitted with each application for building permit, for site plan review, or for public improvement permit review. To be relevant, each grading plan shall consider and be coordinated with project specific geotechnical investigations; site specific environmental mitigation; site and project specific stormwater quantity and quality measures; and the relationship of the project improvements to the future improvements to be developed on the property. The majority of this information is technical in nature and not required nor available as a component of this application.

(NEXT PAGE):
Landscape Plan Key

LANDSCAPE

A. South Savanna Meadow (South Meadow)
B. North Savanna Meadow (North Meadow)
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INTERPROFESSIONAL PRECINCT

1. Student Commons

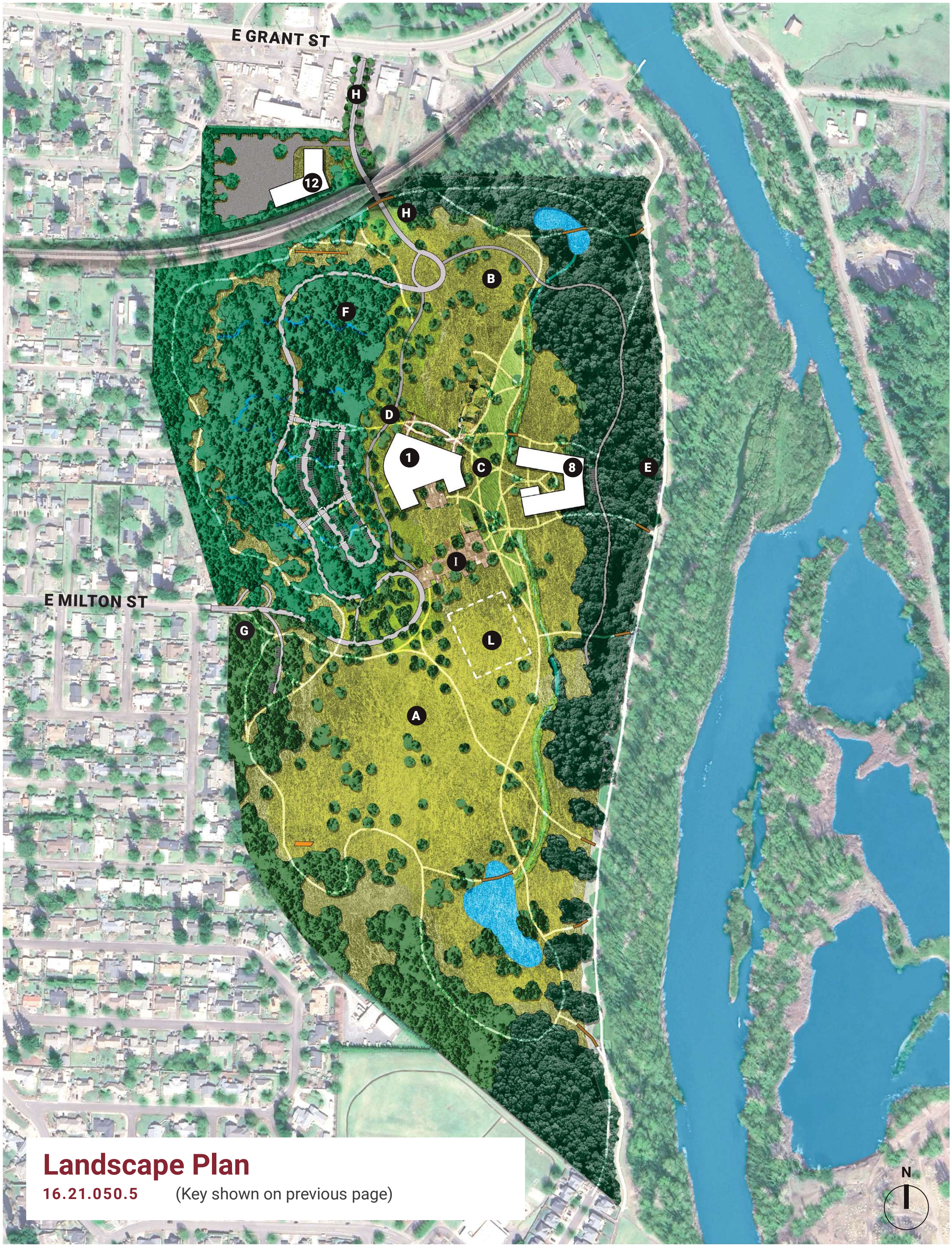
COLLEGE PRECINCT

8. College of Osteopathic Medicine of the Pacific Northwest and College of Behavioral Health

SERVICE PRECINCT

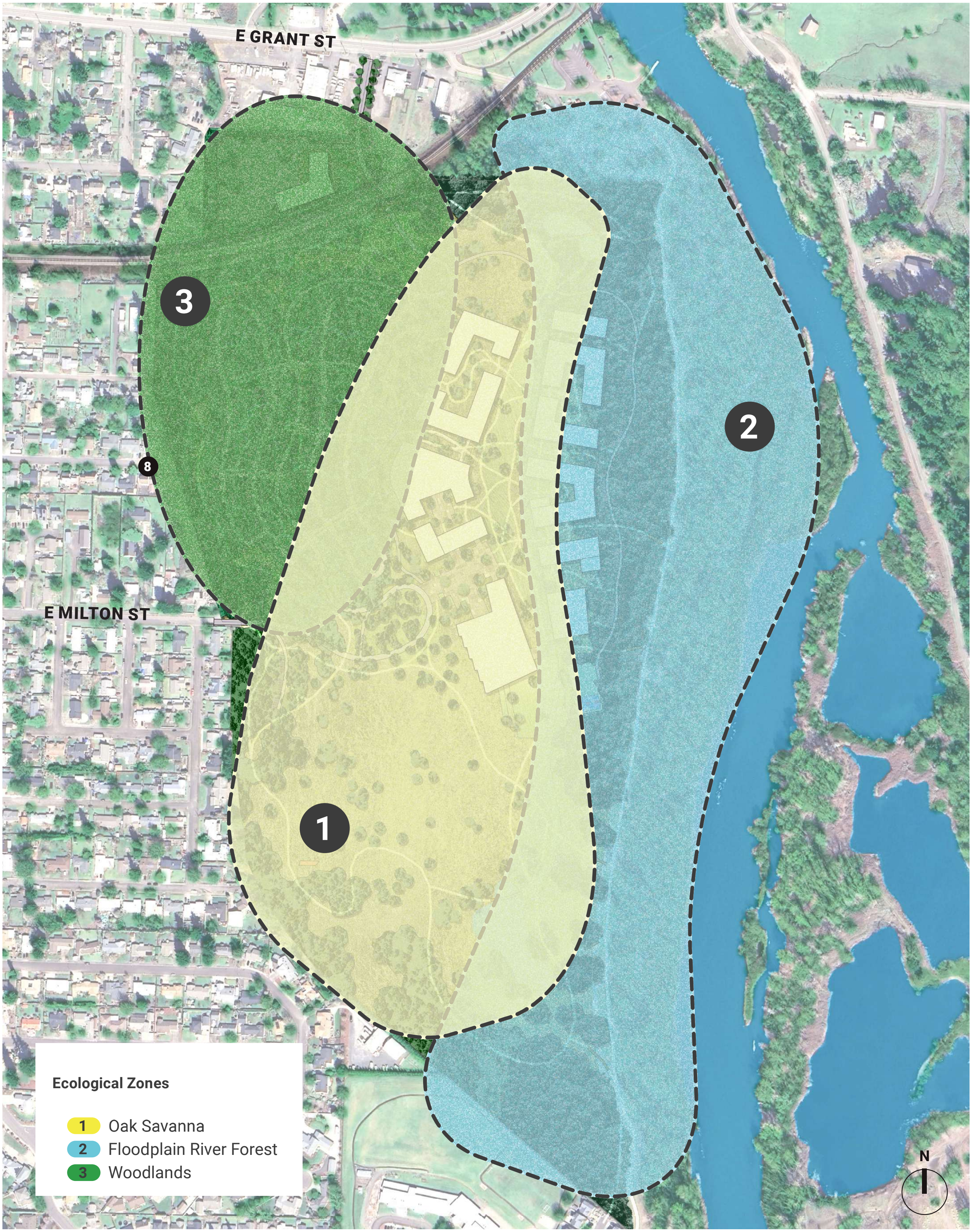
12. Facilities and Maintenance

16.21.050.5 Landscape Plan



Landscape Plan

16.21.050.5 (Key shown on previous page)


E GRANT ST
E MILTON ST
3
8
2
1
Ecological Zones
1 Oak Savanna
2 Floodplain River Forest
3 Woodlands
N

Specific plant selections, fencing details, and outdoor spaces will be proposed with each individual project submission. For the purposes of this application, we've provided an overview of our conceptual intent and approach to the campus landscape design.

The landscape character of each open space is determined by its location within the different ecological zones of the site, including Savanna, Oak Grove, River Forest, and Woodland areas. In this way a limited vocabulary of campus open space types can provide a wide range of experiences and textures. These native landscape ecologies ground the campus in the Willamette Valley of the Pacific Northwest. Cultivating a sense of place promotes a deeper sense of connection to landscape for the campus population.

The campus is characterized by three focus areas, as delineated in the figure on the opposite page and described in the following pages.

Oak Savanna

The Savanna is the largest area of open space and is the campus heart.

The area includes the North and South Savanna Meadows located at the ends of campus, the Oak Grove which stretches along the northeastern edge of parking and through the southeastern edge of campus, and the Savanna Commons which serves as the central open space that connects the various campus precincts.

The Savanna is a large-scale restoration of uninterrupted native savanna grassland with patches of oak woodland native to the Willamette Valley of the Pacific Northwest. Through the restoration, biodiversity and habitat for native plants and animals are increased. In addition, the post-industrial campus benefits from the strong phytoremediation ability of the Savanna ecology.

Campus Precincts are developed on the North half of the campus to focus new development on areas with the most historic degradation and in need of capping, minimizing disturbance on existing native landscapes with potential to be further restored. The Interprofessional and Amenity Precincts are nestled within the Savanna uplands.

OAK GROVE

The robust woodlands of the Oak Grove, a restored native oak savanna ecology, weave along the western edge of the Savanna.

The under-story of the Oak Grove consists of restored savanna grasslands and shrubs that blanket the entirety of the Savanna Focus Area. Scattered oak trees characterize the Oak Grove, offering a distinct structural and spatial quality to the campus. Covering the area between the Parking area and the western campus Precincts, the landscape offers moments of relaxation as one parks their vehicle and enters the active center of campus. Sculptural oak trunks and branches create distinct and majestic moments. Its canopy creates dappled shade with pockets of light as well as seasonal interest. Open sightlines and safety are supported through the spaced-out oak trees.

The density of oak trees increases towards the southwestern edge of the campus, providing both a continuous stretch of habitat and a vegetated, visual and auditory buffer along the adjacent neighborhood. The different gradient of trees in the Savanna contribute to a diversity of habitat types. The Savanna hosts and celebrates oak trees which have rich habitat value, offer shelter, and serve as food sources for an incredible range of species.

SOUTH SAVANNA MEADOW:

Restoration

The South Savanna Meadow encompasses the southern half of the campus which is focused on the long-term native landscape restoration of the largely undeveloped open space. Hugged by the riparian River Forest to the east and Oak Grove to the west, the South Savanna Meadow is a place to appreciate the rich and overlapping ecotones of the Santiam River watershed.

Entry from East Milton Street

Statuesque oak trees of the Oak Grove mark the entry from East Milton Street, immediately welcoming one into the campus environment. Passage through this native woodland ecology immerses and grounds one to the campus landscape. The softly winding entry drive moves through picturesque stands of oaks which opens up to the view of the Butte to the west and Savanna grasslands down valley, creating a sense of calm arrival.

Public Open Space

The open space and network of walking trails for physical and mental wellness is a public amenity not only for campus students, staff, and faculty but also to the neighbors and community groups of Lebanon. Through this offering, Western University of Health Sciences exemplifies its principle of supporting wellness from the scale of the individual to the campus, neighborhood and region.

Programming

Passive programming in the South Savanna Meadow consists of a network of trails, viewpoints, and overlooks that coexists with the planting and habitats. The trails of differing lengths and durations are laid out with educational signage to feature aspects of the site's industrial history and ecological restoration of the grasslands, oak and riparian woodlands, and wetlands.

SAVANNA COMMONS:

The Savanna Commons is the central open space and social heart of campus, which will eventually be framed by the buildings of the Interprofessional, Amenity, and College Precincts, similar to a traditional quad. The planting consists of a mixture of flexible lawn spaces, meadow-like grasslands, and loosely scattered groves of native trees for shade.

Programming is more active here and is scaled to host multiple class gatherings and college-wide events. Informal activities such as field sports, Frisbee, study, and lounging are encouraged.

Entry Plaza

The Entry Plaza is the formal entry to campus. The Entry Plaza is often used for prospective student tours, campus wide events, pre-functions, and a welcoming entry for visitors coming from nearby visitor parking.

The Entry Plaza is scaled to accommodate larger crowds, including those attending ceremonies, however, it also remains comfortable in scale for daily, lower traffic use. Healthy, plant massing contributes to the shaping of spaces that are pleasant to occupy. Native planting with four season interest and lush, shade trees help to create a sensorial place.

The area is paved to provide flexible use, including information booths, campus emblem, signage, and a variety of furnishings such as benches and movable tables and chairs. The materiality of the Entry Plaza respond to surrounding facades to create engaging spatial conditions and views in and out of buildings.

Drop-off Area

The entry way from Milton Street delivers pedestrians and vehicles, including single, ride-shares and shuttles, to the drop-off area at the head of the Entry Plaza. The drop-off area is scaled generously for easy arrival and departure. A canopy offers shelter in inclement weather for those waiting for pick-up. Signature paving acts as a safety measure to make this area more legible for both drivers and pedestrians, as well as signals arrival to the campus.

View Terrace

The View Terrace is located on the sunny, south edge of the Savanna Commons. Unobstructed by structures and topographically lifted, there is a sense of grand prospect and open views down towards the South Savanna Meadow. The terraced, flexible lawn space is a venue to host spill out activity, as well as other outdoor school-related or community gatherings and events. As an open space that receives radiant southern sunshine year-round, it is an ideal location for everyday lounging, socializing, and respite.

NORTH SAVANNA MEADOW:

Entry from East Grant Street

The entry way from East Grant Street is an experience of diving down beneath the elevated railway, crossing the new entry and lifting back up into WesternU's North Savanna Meadow, which serves as a welcoming gateway into the campus. The entry road offers a roundabout as well as directs vehicles to the Parking area. Two service routes branch from the roundabout to the west and east, to service the western Interprofessional and Amenity Precincts through the Oak Grove, and the eastern College Precinct through the River Forest.

Circulation infrastructure is laid out in the North Savanna Meadow to optimize the entry experience, flowing with the gentle topography and minimizing fragmentation of the landscape to preserve the continuous and undulating quality of the meadow. The seasonal, native grasses and forbs act as a dynamic and textured backdrop to the grand, open views down valley through the Savanna Commons.

SAVANNA GRASSLANDS PLANTS
(CLOCKWISE FROM TOP LEFT)

> Camas Lily
> Tufted Hairgrass
> California Oatgrass
> Sedges
> Oregon White Oak

FLOODPLAIN FOREST PLANTS
(CLOCKWISE FROM TOP LEFT)

- Douglas Fir
- Big Leaf Maple
- Black Cottonwood
- Oregon Ash
- Alder

Floodplain River Forest

Western University of Health Sciences' campus sits on the historic floodplains of the Santiam River.

Rivers are not a demarcated line, but a dynamic system with associated ecologies. The site has been historically changed and controlled for industrial production, reducing the presence of the Santiam River. The campus has great potential to restore the eastern riparian River Forest and associated habitats to support native flora and fauna, aligning with the larger campus principle to restore relationships to the native ecologies of the Santiam River's realm. In doing so, it strengthens Western University of Health Sciences' identity as a waterfront place and instills inspiration for the campus community in seeing the positive impact they have to not only the wellness of individuals but also to the greater environment.

The existing plant community of the riparian forest is enriched and thickened, to expand the ecosystem. Cool, seasonally wet landscapes characteristic of the adjacent Santiam River woodlands are used. At the site scale, stormwater is graded and directed towards the low points of the North and South Wetland Pools, which are nestled within the seasonally wetter grounds of the north and south ends of the River Forest.

Campus-Public Connection
Pedestrian paths from the College Precinct connect to the existing Old Mill Trail, through the restored River Forest. Connections to the Old Mill Trail tie the campus into the larger fabric of Lebanon and improve access to the public experience of the waterfront. Expanding the River Forest ecology fully immerses the Old Mill Trail in riparian woodlands and allows the public to access the health benefits of forest bathing.

COLLEGE PRECINCT

Individual college buildings are aligned along the eastern edge of the campus, providing equitable access to both the Savanna Commons and the River Forest adjacent to the Old Mill Trail. Each college building features a yard for intimate outdoor activities, while its location at the eastern edge of the campus reinforces the unique identities of each college, deepening relationships within the disciplines.

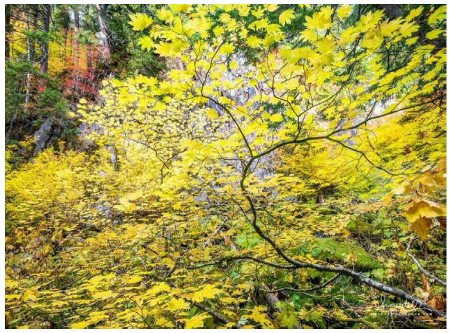
Sports Courts
The Sports Courts promote mental and physical health as a place to be active outdoors while immersed in the campus' unique riparian environment. Tucked into the verdant River Forest, users are embraced by the sights and sounds of the Santiam River. The benefits are offered to the neighborhood as an amenity close to the public Old Mill Trail. The specific types of sports courts to be featured can be decided through further community engagement.

Woodlands

Parking
The Woodlands weaves through the Parking area in stormwater planters, reducing the overall impervious surface area of the lots while acting as an integrated stormwater strategy. The planted area is composed of fast growing and water-loving riparian, deciduous trees with under-story suited for stormwater filtration and absorption.

The landscape provides a sense of arrival. From the moment one steps out of their car, they are bathed in the sensorial delights of a native woodland. The Woodlands also acts as a visual and auditory buffer for the adjacent neighborhood.

Service Precinct
Located on a 4.5-acre parcel north of the rail line, the Service Precinct consolidates facilities offices, trade shops, and material storage—both indoors and outdoors—into one comprehensive zone. This area is easily accessible by delivery trucks from East Grant Street and is separated from the main campus to avoid disrupting day-to-day activities. The service building will be the first structure visitors encounter from East Grant Street, necessitating thoughtful design of its east façade and landscaping facing the northern entry.



WOODLAND PLANTS

> Vine Maple
> Sword Fern
> Oregon Grape
> Western Columbine
> Pacific Ninebark

16.21.050.6

SIGNAGE DETAIL DRAWINGS

Signage detail drawings will be submitted with each building project.

16.21.050.7

DEED AND USE RESTRICTIONS AND OTHER ENCUMBRANCES

As the property will remain under one ownership with a single responsible party for operations and maintenance there is no need for covenants, conditions, and restrictions against the property. There are no proposed or required dedications or reservations of public open space. No use restrictions, supplementing the public uses allowed in the mixed use zone per LDC 16.06.080, are anticipated.

16.21.050.8

TRAFFIC IMPACT ANALYSIS

A Traffic Impact Analysis, dated December 5, 2025, for the Phase 1 (10-Year) Development of the campus was prepared by Kittleson & Associates. The Scope of Work for this study was directed and approved by City Engineering Staff. The complete Traffic Impact Analysis is included in the appendix.

16.21.050.9

NARRATIVE

The applicable decision criteria for conditional use are addressed hereafter.

16.21.050.10

PHASING PLAN

See Drawing P101.

16.21.050.11

OTHER INFORMATION

The applicant concurs that the Planning Official may request additional studies or exhibits to satisfy the conditional use application criteria however, the applicant believes that sufficient studies and exhibits have been provided to support the requested approvals.

16.21.060.A Decision Criteria

1. USE CRITERIA

a. The cumulative information provided by the responses to the applicable criteria from LDC Chapters 16.06, 16.10, 16.21, and 16.23 submitted herewith demonstrate the proposed development complies with the criteria associated with a public use, "Universities", in the mixed use zones.

b. The requested quantitative information, topography, utility, and traffic studies are submitted herewith in the narrative, graphic, and appendix sections. All demonstrate compliance with LDC criteria. The potential nuisance characteristics of the "University" development are mitigated by the significant setbacks from all property lines and the proposed landscape and open space enhancements which will occur over time as the campus develops.

c. The application proposes mitigations including – significant building setbacks from all property lines; landscape and open space re-vegetation to return portions of the property to its historical (pre-mill) vegetative condition; and, to provide a network of public access trails through the property. All of these mitigations supplement the existing LDC Code Standards to compensate for any negative impacts the development may have on adjacent properties. The applicant acknowledges that the Planning Commission may require other mitigations through Conditions of Approval if deemed necessary.

d. The water and sanitary sewer engineering reports included in the appendix demonstrate the public utility infrastructure has the capacity to serve the proposed development. The Traffic Impact Study also included in the appendix demonstrates the public street system has the capacity to serve the proposed development.

e. There are no prior or current applicable land use approvals on the property.

f. There are no existing structures on the property, thus no upgrading is required.

g. There are no existing uses on the property, the property is vacant.

2. COMMUNITY DEVELOPMENT STANDARDS

The community development standards of LDC Chapters 16.12 – 16.19 are addressed conceptually in these application materials. With future project applications for site plan review, public improvement drawing and specification review, building permit review, and sign review these development standards will be addressed specifically under the City's standard procedures for permitting.

B. CONDITIONS OF APPROVAL

The applicant concurs that the Planning Commission may impose conditions of approval that are determined to be necessary to assure the proposed development meets the Conditional Use decision criteria.

C. ADDITIONAL TRANSPORTATION ACCESS-RELATED ISSUES

1. Access placement criteria: The Traffic Impact Study confirms the proposed E. Milton Street and E. Grant Street connections are appropriate for the proposed development.

2. Road/Street system and building access: Drawings P200, P210, and P211 show graphically the access to and through the development site. This access complies with transportation system plan, fire code, and parking standards for students, faculty, staff, service and delivery vehicles and emergency vehicles.

3. Pedestrian and bicycle facilities: Drawings P200, P201, and P210 also show graphically the proposed bicycle and pedestrian linkages to and through the development site.

4. Consistency with the Transportation System Plan: The findings from the Traffic Impact Study included in the appendix documents that access and access management standards are consistent with the Development Code and the Transportation System Plan.

Use Criteria

Criteria of the Public Use in Mixed Use Zone LDC Chapters 16.06, 16.10

BUILDING AND YARD SETBACKS

16.10.100 Front/Street Yard Setback: 10 Feet except when abutting a residential zone. 15 Feet when abutting a residential zone.

Side and Rear Yard Setback: None, except when abutting a lot in a residential zone, then the structure setback shall be a minimum of 10 feet.

The area of building structures on the campus are much greater than 15 feet from any property line.

LOT AREA , DIMENSIONS, COVERAGE

16.10.100 Lot Area, Width Depth, Coverage: There shall be no requirement

DENSITY AND FLOOR AREA

There is no requirement in 16.06 or 16.10.

BUILDING HEIGHT

There is no requirement in 16.06 or 16.10

BUILDING ORIENTATION

There is no requirement in 16.06 or 16.10

CLEAR VISION AREA

16.10.100 A clear vision area shall be maintained as provided in Section 16.12.030.H and a 20 foot triangle at intersections. Street-Private Access Easement. The clear vision area for street-access easement intersections shall be 10 feet along the access easement from its intersection with the street right-of-way and 20 feet along the street right-of-way at the point of intersection with the access easement.

The campus layout as proposed complies with this requirement with a clear area at the Street-Private access easement. There will be 10 feet clear along the access easement from the intersection with the public right of way and 20 feet clear along the public right of way. Compliance will be verified at the time of application for Site Plan review and Public Improvement Drawing and Specification Review

OTHER REQUIRED CONDITIONS

16.10.100 All service, repair, processing or storage on property abutting or across the street from a lot in a residential zone shall be conducted wholly within an enclosed building unless screened from the residential zone by an approved site-obscuring fence or wall.

The service building and yard will be screened by a fence where abutting residential zone property.

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Drawings

FOR LAND USE PURPOSES ONLY
DRAWING STATUS: DATE:
PRELIMINARY
SUBMITTED 01/09/26
BID SET
PERMIT SET
CONST. SET
No. REVISION: DATE:
DEVCO engineering inc. Corvallis Oregon (541) 757-8991
245 NE CONIFER, P.O. BOX 1211 CORVALLIS, OR 97339 WWW.DEVCOENGINEERING.COM
© COPYRIGHT 2025 DEVCO ENGINEERING, INC. ALL RIGHTS RESERVED.
PROJECT: WUHS LEBANON CAMPUS
PROJECT LOCATION: 800 E. MILTON STREET 1280 E. GRANT STREET
CLIENT: WESTER UNIVERSITY OF HEALTH SCIENCES
SHEET TITLE: EXISTING CONDITIONS
JOB NO. 19413
DRAWN BY: DEVCO
DRAWING: P100
SCALE: 1" = 150'
0 37.5 75 150 300
SCALE IN FEET
HATCH LEGEND
(E) GRAVEL
(F) PORTLAND CEMENT CONRETE
(E) ASPHALT CONCRETE PAVEMENT
(E) SLOPES 15% OR GREATER
LEGEND
(E) EXISTING
(N) NEW
EGAS EXISTING GAS
EIRRG EXISTING IRRIGATION
EPOWR EXISTING POWER
ESSWR EXISTING SANITARY SEWER
ESTEM EXISTING STEAM AND RETURN
ESTRM EXISTING STORM DRAIN
ECOMM EXISTING TELECOMMUNICATIONS
ECABL EXISTING TV CABLE
EWATR EXISTING WATER
GAS NEW GAS
IRRG NEW IRRIGATION
POWR NEW POWER
SSWR NEW SANITARY SEWER
STRM NEW STORM DRAIN
COMM NEW TELECOMMUNICATIONS
CABL NEW TV CABLE
WATR NEW WATER
EXISTING IMPROVEMENTS
NEW IMPROVEMENTS
FUTURE IMPROVEMENTS
EXISTING PROPERTY LINE
EXISTING IRON PIPE OR ROD
EXISTING EASEMENT
EXISTING RIGHT-OF-WAY
EXISTING BUILDINGS
EXISTING BUILDING OVERHANG
CENTERLINE
SAWCUT LINE
CLR APPROXIMATE CLEARING LIMITS
EXISTING DECIDUOUS TREE
EXISTING EVERGREEN TREE
EXISTING SHRUB
FENCE
DITCH FLOW LINE
SANITARY SEWER MANHOLE
STEAM AND RETURN MANHOLE
STORM DRAIN MANHOLE
TELECOMMUNICATIONS MANHOLE
GAS VALVE
WATER VALVE, AIR RELEASE VALVE
WATER METER, GAS METER
FIRE HYDRANT
FIRE DEPARTMENT CONNECTION
HOSE BIB
IRRIGATION SPRINKLER HEAD
CATCH BASIN
CURB INLET
CLEAN OUT
RAIN DRAIN
THRUST BLOCK
STREET LIGHT, PARKING LOT LIGHT
LANDSCAPE LIGHT
UTILITY POLE
UTILITY VAULT
ELECTRICAL PEDESTAL
TRANSFORMER
CABLE PEDESTAL
TELECOMMUNICATIONS PEDESTAL
SIGN
MAILBOX
249 EXISTING CONTOUR
252 NEW CONTOUR
BENCH MARK
XXX.XX EXISTING SPOT ELEVATION
XXX.XX XXX.XX EXISTING TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) EXISTING FINISH ELEV.(IE=FLOW LINE)
XXX.XX XXX.XX DESIGN TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) DESIGN FINISH (IE=FLOW LINE)
EOH-POWR
ESSWR
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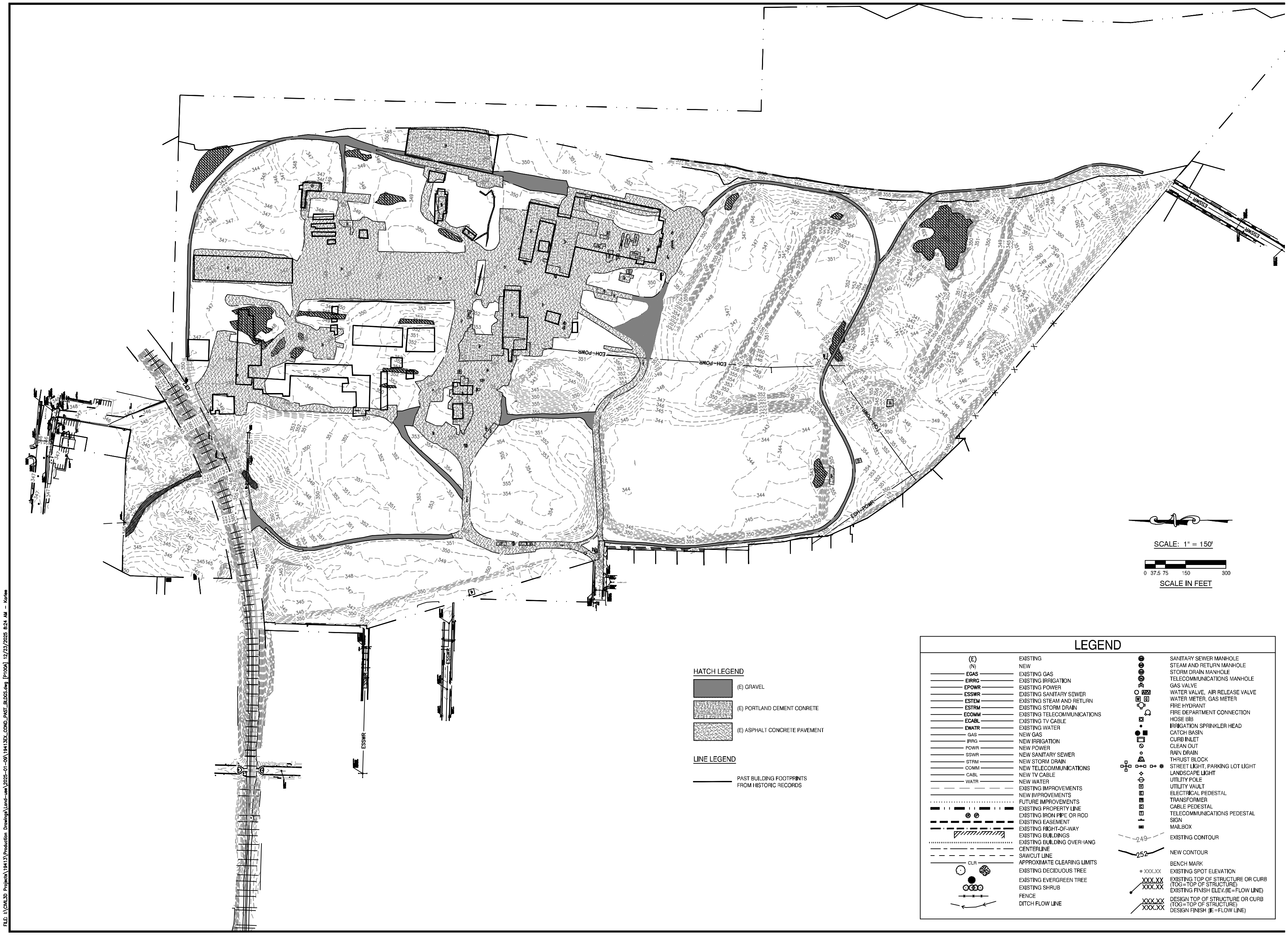

LEGEND

(E)	EXISTING		SANITARY SEWER MANHOLE
(N)	NEW		STEAM AND RETURN MANHOLE
EGAS	EXISTING GAS		STORM DRAIN MANHOLE
EIRRG	EXISTING IRRIGATION		TELECOMMUNICATIONS MANHOLE
EPOWR	EXISTING POWER		GAS VALVE
ESSWR	EXISTING SANITARY SEWER		WATER VALVE, AIR RELEASE VALVE
ESTEM	EXISTING STEAM AND RETURN		WATER METER, GAS METER
ESTRM	EXISTING STORM DRAIN		FIRE HYDRANT
ECOMM	EXISTING TELECOMMUNICATIONS		FIRE DEPARTMENT CONNECTION
ECABL	EXISTING TV CABLE		HOSE BIB
EWATR	EXISTING WATER		IRRIGATION SPRINKLER HEAD
GAS	NEW GAS		CATCH BASIN
IRRG	NEW IRRIGATION		CURB INLET
POWR	NEW POWER		CLEAN OUT
SSWR	NEW SANITARY SEWER		RAIN DRAIN
STRM	NEW STORM DRAIN		THRUST BLOCK
COMM	NEW TELECOMMUNICATIONS		STREET LIGHT, PARKING LOT LIGHT
CABL	NEW TV CABLE		LANDSCAPE LIGHT
WATR	NEW WATER		UTILITY POLE
	EXISTING IMPROVEMENTS		UTILITY VAULT
	NEW IMPROVEMENTS		ELECTRICAL PEDESTAL
	FUTURE IMPROVEMENTS		TRANSFORMER
	EXISTING PROPERTY LINE		CABLE PEDESTAL
	EXISTING IRON PIPE OR ROD		TELECOMMUNICATIONS PEDESTAL
	EXISTING EASEMENT		SIGN
	EXISTING RIGHT-OF-WAY		MAILBOX
	EXISTING BUILDINGS	249	EXISTING CONTOUR
	EXISTING BUILDING OVERHANG		
	CENTERLINE	252	NEW CONTOUR
	SAWCUT LINE		
CLR	APPROXIMATE CLEARING LIMITS		BENCH MARK
	EXISTING DECIDUOUS TREE	XXX.XX	EXISTING SPOT ELEVATION
	EXISTING EVERGREEN TREE	XXX.XX / XXX.XX	EXISTING TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) EXISTING FINISH ELEV.(IE=FLOW LINE)
	EXISTING SHRUB		
	FENCE	XXX.XX / XXX.XX	DESIGN TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) DESIGN FINISH (IE=FLOW LINE)
	DITCH FLOW LINE		

HATCH LEGEND

- (E) GRAVEL
- (E) PORTLAND CEMENT CONRETE
- (E) ASPHALT CONCRETE PAVEMENT

LINE LEGEND

- PAST BUILDING FOOTPRINTS FROM HISTORIC RECORDS

FOR LAND USE PURPOSES ONLY

DRAWING STATUS	DATE:	No.	REVISION:	DATE:
☐ PRELIMINARY		△		
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DEVCO engineering inc.
Corvallis Oregon
(541) 757-8991
245 NE CONIFER, P.O. BOX 1211
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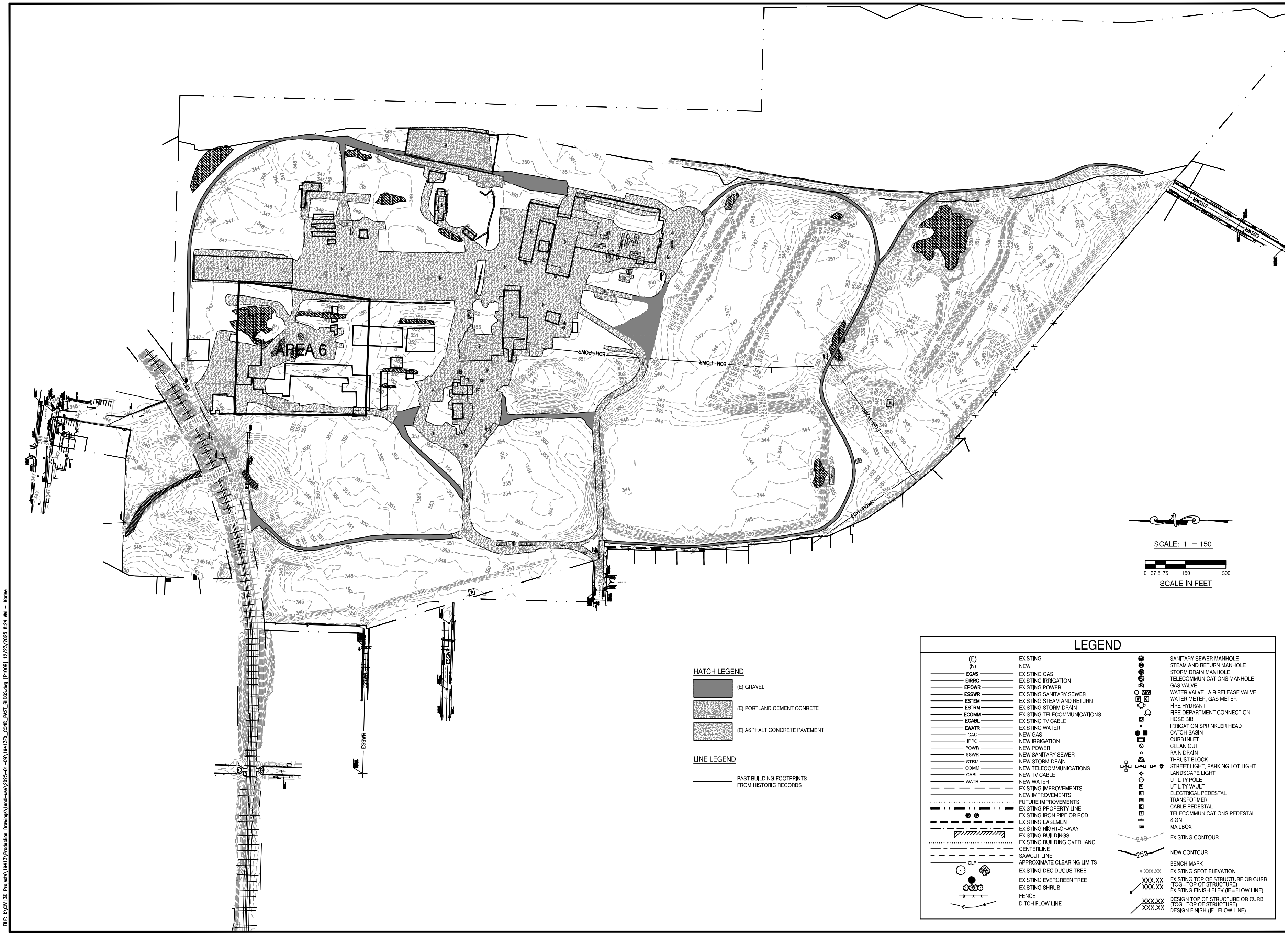
WWW.DEVCOENGINEERING.COM

PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTER UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
EXISTING CONDITIONS WITH PAST BUILDING FOOTPRINTS FROM HISTORIC RECORDS

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P100A

FILE: I:\CIVIL3D Projects\19413\Production Drawings\Land-use\2025-01-09\19413EX_COND_PAST_BLDGS.dwg [P100A] 12/23/2025 8:24 AM - Karlee



LEGEND

(E)	EXISTING		SANITARY SEWER MANHOLE
(N)	NEW		STEAM AND RETURN MANHOLE
EGAS	EXISTING GAS		STORM DRAIN MANHOLE
EIRRG	EXISTING IRRIGATION		TELECOMMUNICATIONS MANHOLE
EPOWR	EXISTING POWER		GAS VALVE
ESSWR	EXISTING SANITARY SEWER		WATER VALVE, AIR RELEASE VALVE
ESTEM	EXISTING STEAM AND RETURN		WATER METER, GAS METER
ESTRM	EXISTING STORM DRAIN		FIRE HYDRANT
ECOMM	EXISTING TELECOMMUNICATIONS		FIRE DEPARTMENT CONNECTION
ECABL	EXISTING TV CABLE		HOSE BIB
EWATR	EXISTING WATER		IRRIGATION SPRINKLER HEAD
GAS	NEW GAS		CATCH BASIN
IRRG	NEW IRRIGATION		CURB INLET
POWR	NEW POWER		CLEAN OUT
SSWR	NEW SANITARY SEWER		RAIN DRAIN
STRM	NEW STORM DRAIN		THRUST BLOCK
COMM	NEW TELECOMMUNICATIONS		STREET LIGHT, PARKING LOT LIGHT
CABL	NEW TV CABLE		LANDSCAPE LIGHT
WATR	NEW WATER		UTILITY POLE
	EXISTING IMPROVEMENTS		UTILITY VAULT
	NEW IMPROVEMENTS		ELECTRICAL PEDESTAL
	FUTURE IMPROVEMENTS		TRANSFORMER
	EXISTING PROPERTY LINE		CABLE PEDESTAL
	EXISTING IRON PIPE OR ROD		TELECOMMUNICATIONS PEDESTAL
	EXISTING EASEMENT		SIGN
	EXISTING RIGHT-OF-WAY		MAILBOX
	EXISTING BUILDINGS	249	EXISTING CONTOUR
	EXISTING BUILDING OVERHANG		
	CENTERLINE	252	NEW CONTOUR
	SAWCUT LINE		
CLR	APPROXIMATE CLEARING LIMITS		BENCH MARK
	EXISTING DECIDUOUS TREE	XXX.XX	EXISTING SPOT ELEVATION
	EXISTING EVERGREEN TREE	XXX.XX / XXX.XX	EXISTING TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) EXISTING FINISH ELEV.(IE=FLOW LINE)
	EXISTING SHRUB		
	FENCE	XXX.XX / XXX.XX	DESIGN TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE) DESIGN FINISH (IE=FLOW LINE)
	DITCH FLOW LINE		

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☐ CONST. SET		△		

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PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTER UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
AREA REQUIRING FURTHER ARCHEOLOGICAL STUDY DURING CONSTRUCTION

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P100B

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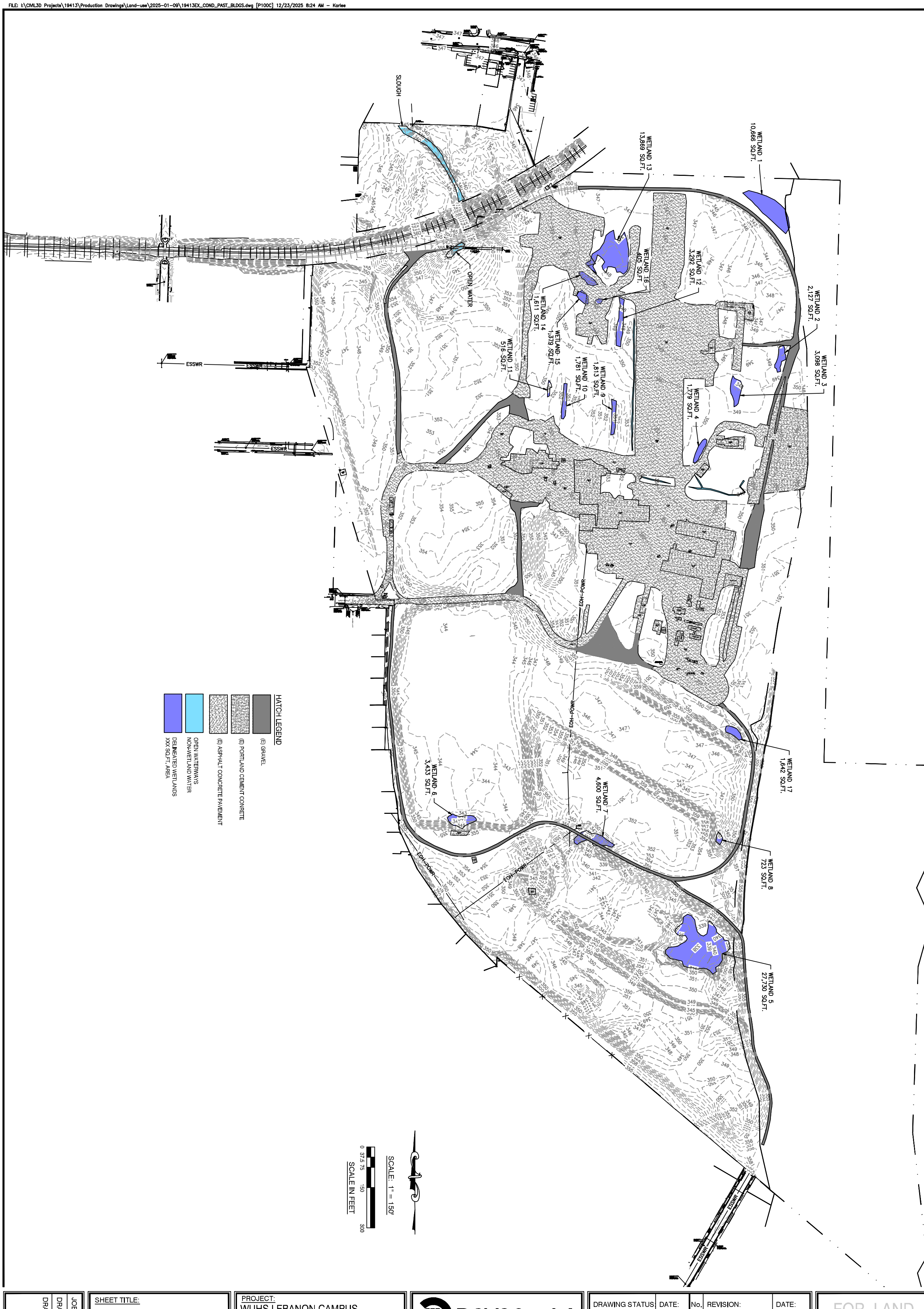

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JOB NO.	19413
DRAWN BY:	DEVCO
DRAWING:	P100C

SHEET TITLE:
DELINEATED WETLANDS

PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTER UNIVERSITY OF
HEALTH SCIENCES

DEVCO engineering inc.
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CAPITAL IMPROVEMENT PROGRAM AND PHASING HATCH LEGEND

CY 2026 ⟶ CY 2035 PHASE 1

CY 2036 ⟶ CY 2045

CY 2046 ⟶ CY 2055

FUTURE

(X) BUILDING NO.

SEE DRAWING P102 FOR PHASE 1 (10-YEAR) DEVELOPMENT DETAIL
SEE DRAWINGS P200, P201, AND P202 FOR PUBLIC INFRASTRUCTURE PHASING

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☐ PRELIMINARY		△		
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PROJECT:
WUHS LEBANON CAMPUS

PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET

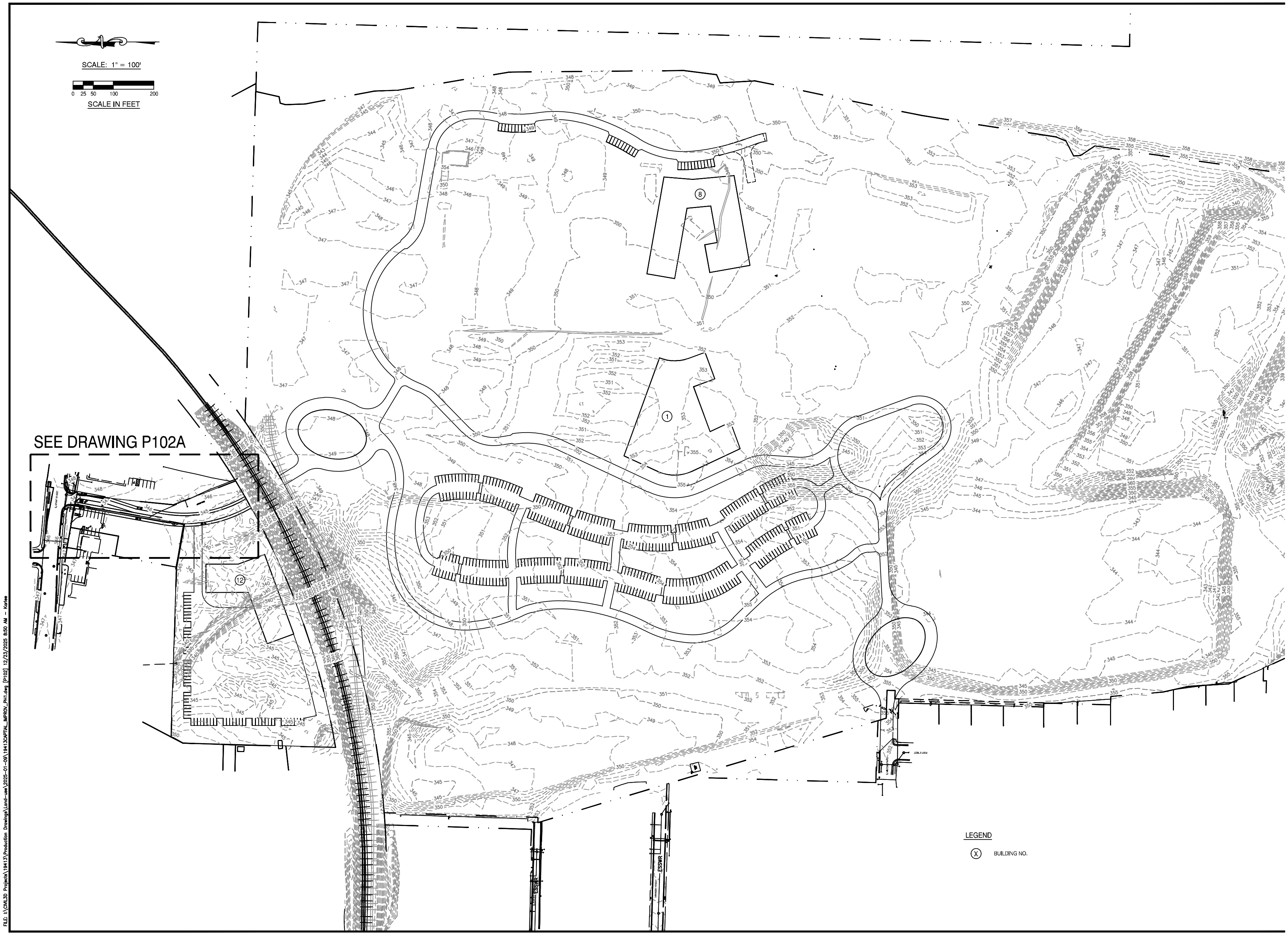
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
LONG TERM
CAPITAL IMPROVEMENT
PROGRAM

JOB NO. 19413

DRAWN BY: DEVCO

DRAWING:
P101



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☒ SUBMITTED	01/09/26
☐ BID SET	
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245 NE CONIFER, P.O. BOX 1211
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PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
PHASE 1 (10-YEAR) CAPITAL IMPROVEMENT PROGRAM

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P102

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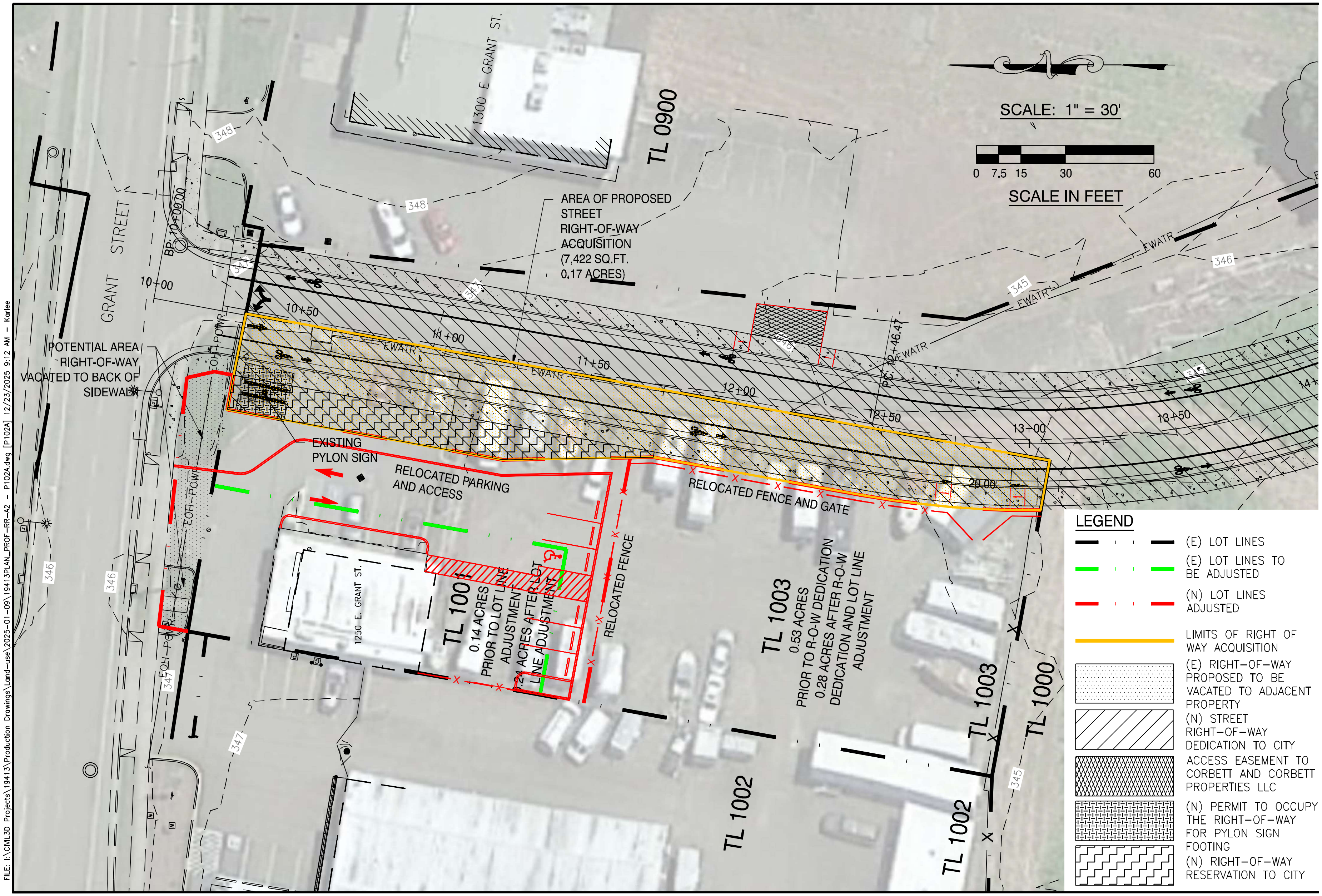

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☐ PERMIT SET	
☐ CONST. SET	

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PROJECT: WUHS LEBANON CAMPUS
PROJECT LOCATION: 800 E. MILTON STREET 1280 E. GRANT STREET
CLIENT: WESTERN UNIVERSITY OF HEALTH SCIENCES

JOB NO. 19413
DRAWN BY: DEVCO
SHEET TITLE: GRANT ST. INTERSECTION
DRAWING: P102A

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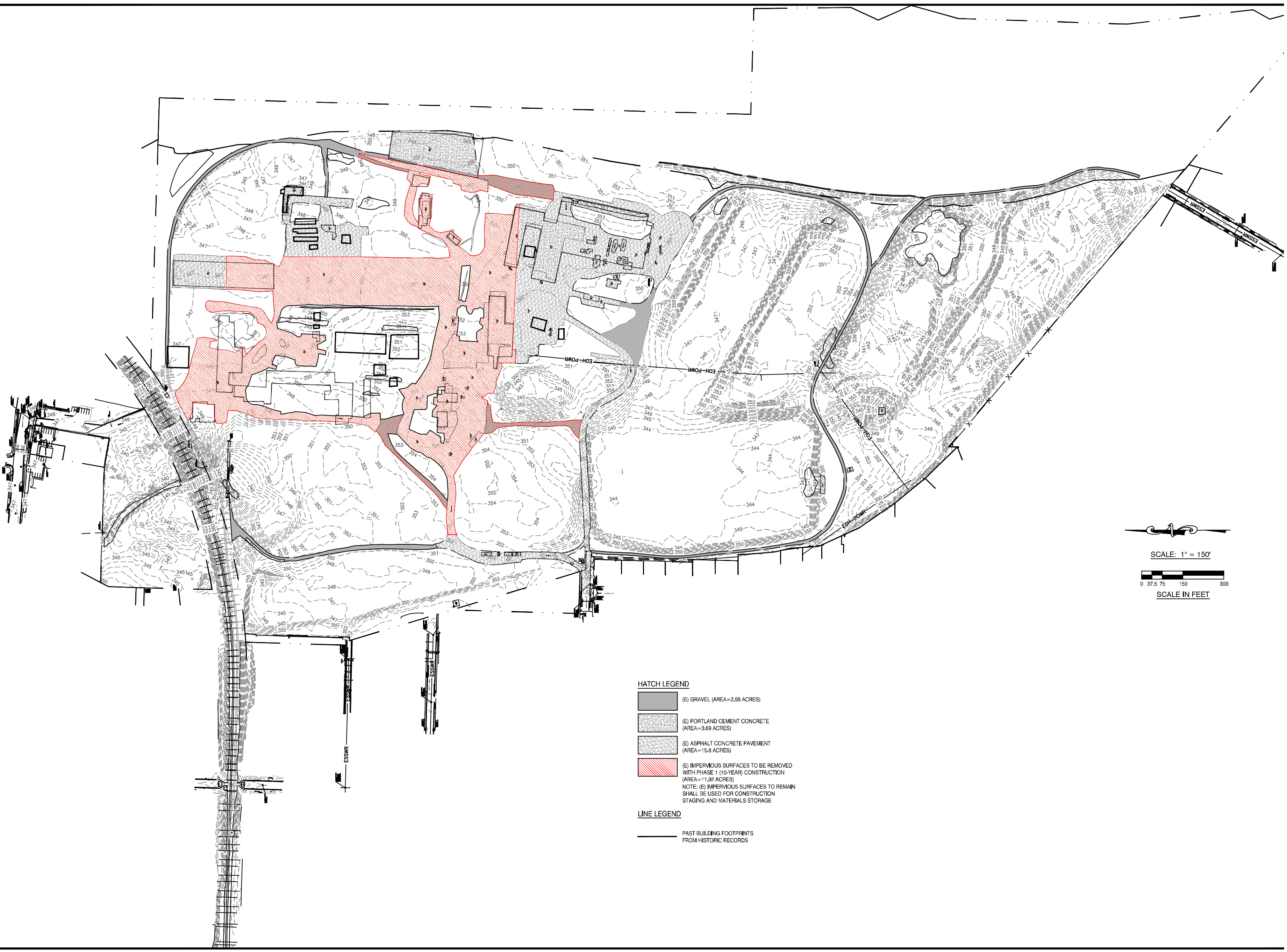

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☐ CONST. SET		△		

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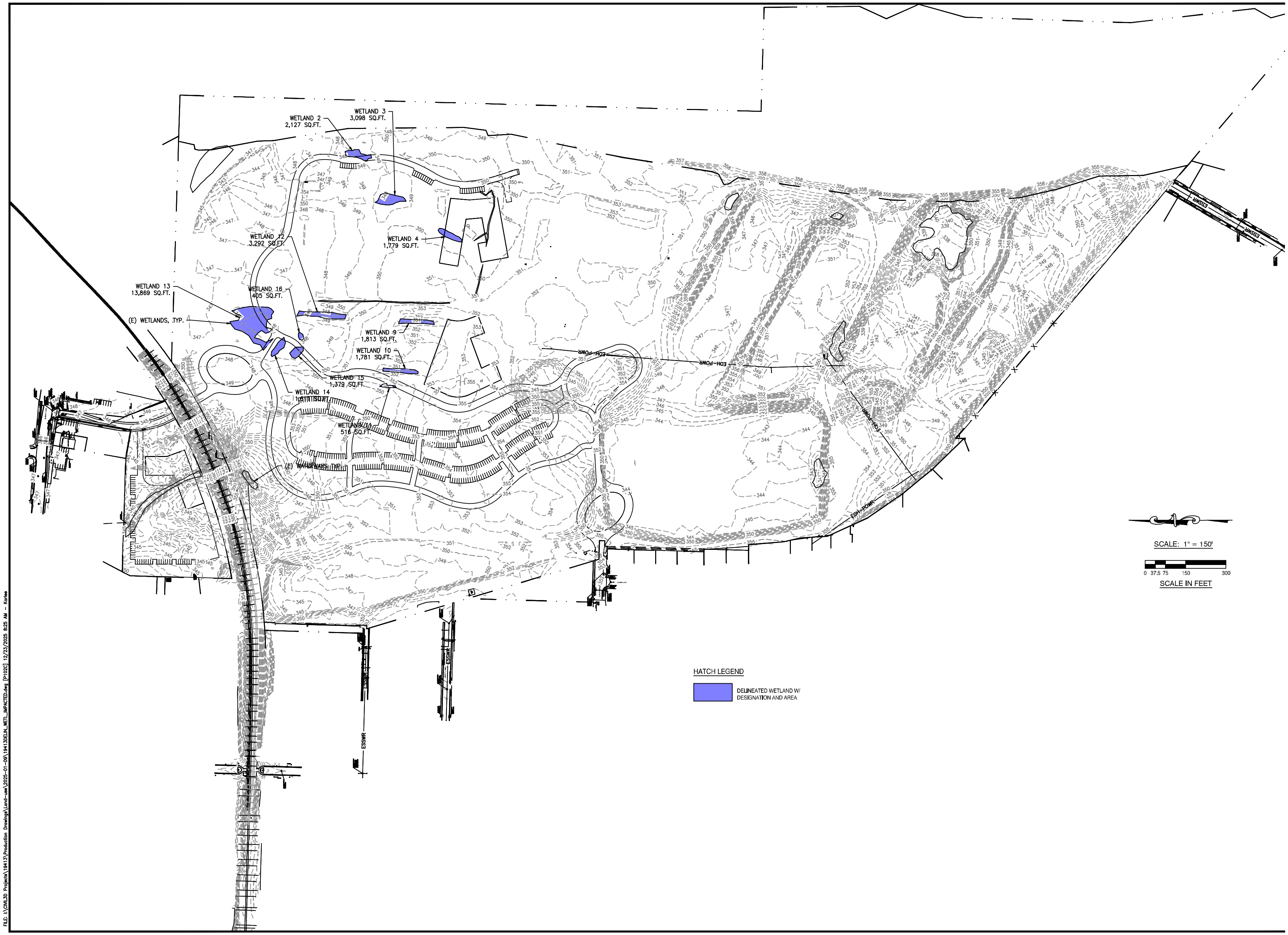
PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
EXISTING IMPERVIOUS SURFACES TO BE REMOVED WITH PHASE 1

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P102B



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CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET1280
E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF
HEALTH SCIENCES

SHEET TITLE:
DELINEATED WETLANDS
IMPACTED BY PHASE 1
IMPROVEMENTS

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P102C

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☐ CONST. SET		△		
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CORVALLIS, OR 97339
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PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
CONCEPTUAL PARKING, STREET, AND ACCESS PLAN

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P200

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		△		

DEVCO engineering inc. Corvallis Oregon (541) 757-8991
245 NE CONIFER, P.O. BOX 1211
CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
CONCEPTUAL PUBLIC WATERLINE PLAN

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P201

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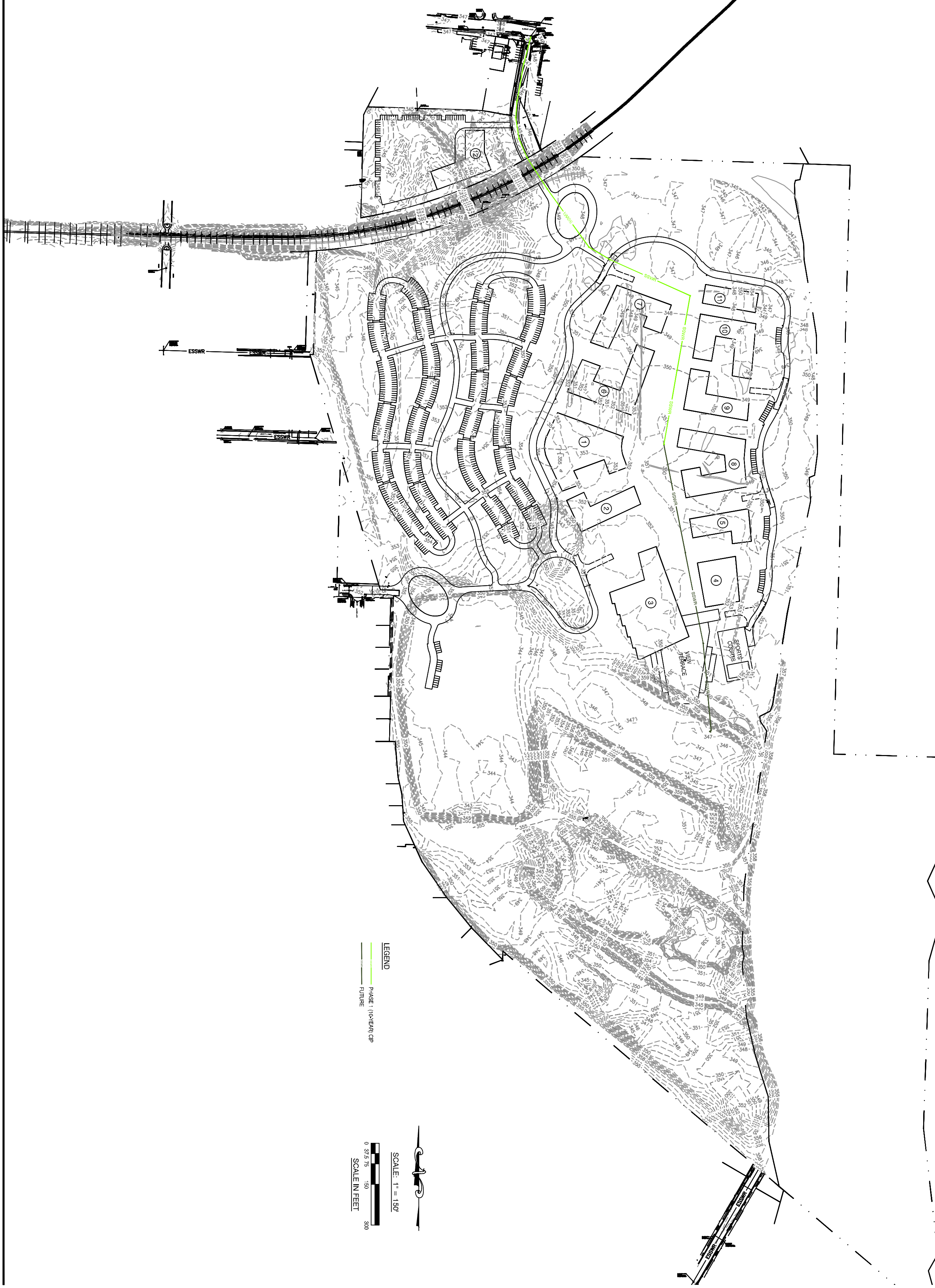

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☒ SUBMITTED	01/09/26	△		
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☐ PERMIT SET		△		
☐ CONST. SET		△		
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JOB NO. 19413
DRAWN BY: DEVCO
DRAWING: P202

SHEET TITLE:
CONCEPTUAL PUBLIC SANITARY SEWER PLAN

PROJECT:
WUHS LEBANON CAMPUS

PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET

CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

DEVCO engineering inc.
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245 NE CONIFER, P.O. BOX 1211
CORVALLIS, OR 97339
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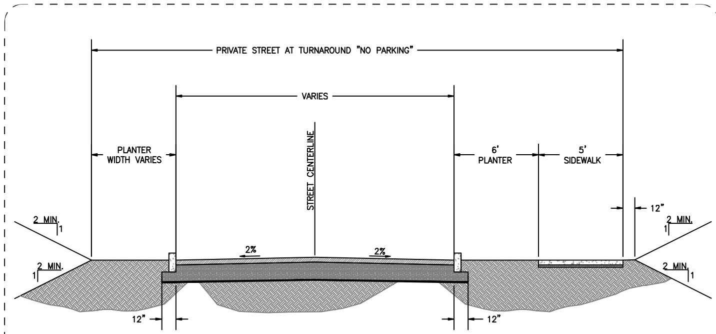

(5) TYPICAL PRIVATE STREET SECTION AT TURNAROUND
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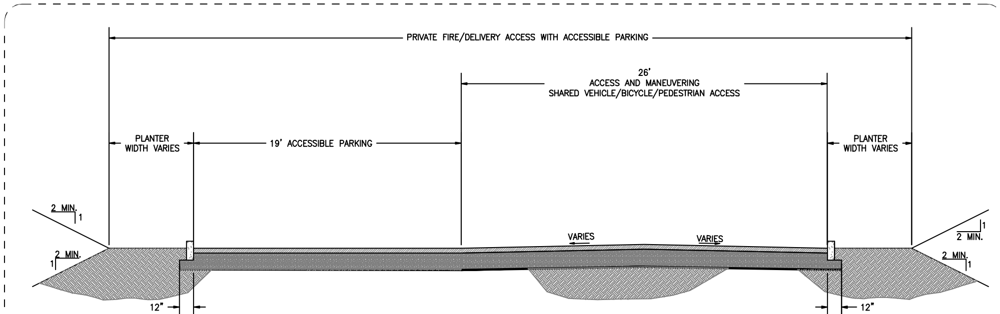
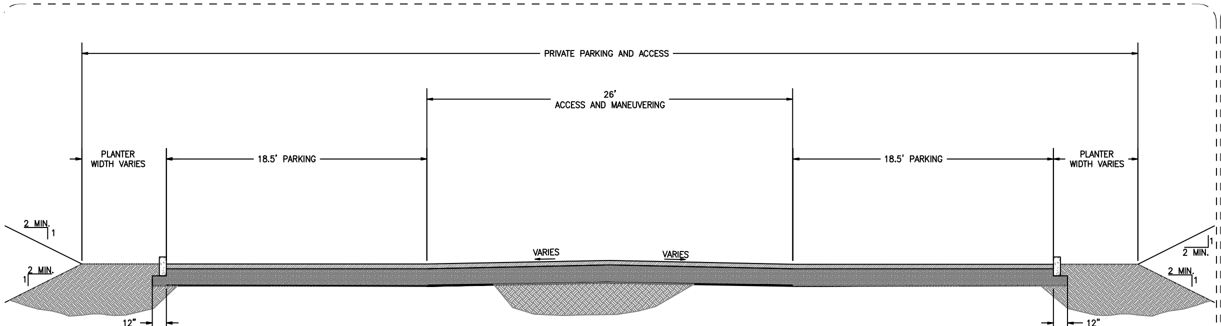


(6) TYPICAL ACCESS DRIVE WITH ACCESSIBLE PARKING
N.T.S.



(3) TYPICAL PARKING SECTION
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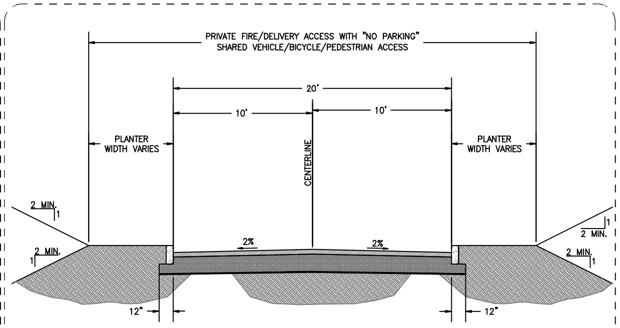
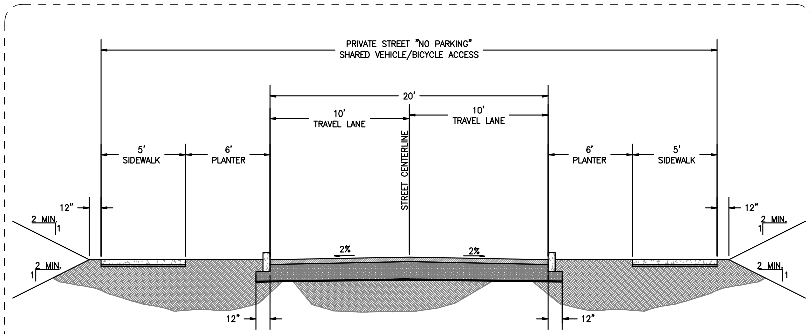
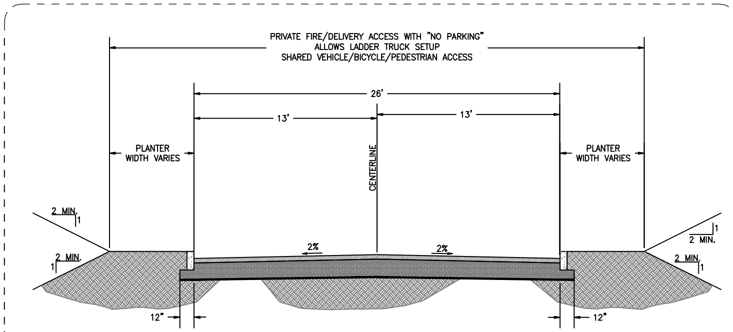


(4) TYPICAL ACCESS SECTION - 20' PAVEMENT
N.T.S.



(1) TYPICAL PRIVATE STREET SECTION - 20' PAVEMENT
N.T.S.



(2) TYPICAL ACCESS DRIVE SECTION - 26' PAVEMENT
N.T.S.

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☐ PERMIT SET		△		
☐ CONST. SET		△		
☐		△		

DEVCO engineering inc.
Corvallis Oregon
(541) 757-8991
245 NE CONIFER, P.O. BOX 1211
CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

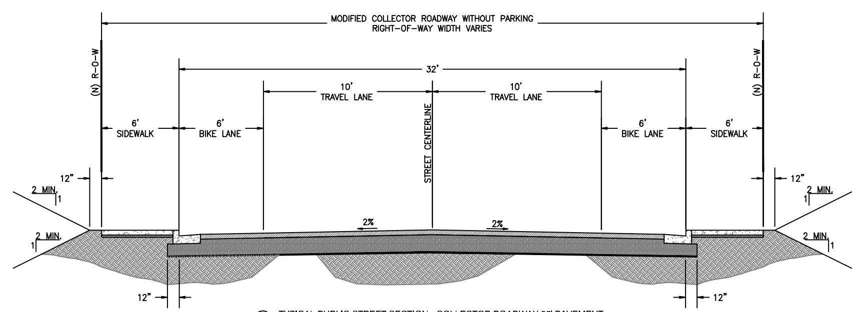
PROJECT:
WUHS LEBANON CAMPUS

PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET

CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
TYPICAL PRIVATE STREET, PARKING, AND ACCESSIBLE SECTIONS

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P210



1 TYPICAL PUBLIC STREET SECTION - COLLECTOR ROADWAY 32' PAVEMENT
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FOR LAND USE PURPOSES ONLY

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☐ PERMIT SET		△		
☐ CONST. SET		△		
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PROJECT:
WUHS LEBANON CAMPUS
PROJECT LOCATION:
800 E. MILTON STREET
1280 E. GRANT STREET
CLIENT:
WESTERN UNIVERSITY OF HEALTH SCIENCES

SHEET TITLE:
TYPICAL PUBLIC STREET SECTION

JOB NO. 19413
DRAWN BY: DEVCO
DRAWING:
P211

WESTERN UNIVERSITY OF HEALTH SCIENCES

LEBANON CAMPUS APPENDIX

Traffic Impact Study

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

Technical Memorandum

December 5, 2025

Project# 24995.22

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

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

CC: Ron Whitlatch, Lebanon Engineering Services Director

RE: Western University of Health Sciences – Traffic Impact Analysis

REGISTERED PROFESSIONAL
ENGINEER
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CHRISTOPHER LYNN BREHMER
RENEWS: 12/31/27

SUMMARY

Western University of Health Sciences (WesternU) currently operates the College of Osteopathic Medicine of the Pacific Northwest in Lebanon, Oregon. This college operates out of a two-story building located in the Samaritan Health Sciences Campus in northern Lebanon. As part of a vision to expand healthcare education in the northwest, WesternU recently acquired a 150-acre site approximately two miles away on the east side of Lebanon. WesternU plans to transform the acquisition site into a new permanent campus that will accommodate all of its current Lebanon operations and have room to grow additional medical education services over time. This report documents a Traffic Impact Analysis (TIA) for the first phase (Phase 1) of the campus master plan, which involves the construction of approximately 177,000 square feet of new medical college and administrative facilities. The existing College of Osteopathic Medicine will be relocated to the new campus. The following recommendations are identified for implementation in conjunction with site development of Phase 1:

- The study intersections are forecast to meet the City of Lebanon 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.
- Conceptual signing and striping modifications were identified for implementation at the E Milton Street / S Williams Street intersection to address historical crash patterns. Subject to City concurrence, we recommend refinement and implementation of the conceptual changes by the City regardless of the proposed development.
- It is recommended that the City of Lebanon continue to monitor queuing conditions at the intersection of E Grant Street with the proposed primary campus access, as well as at the E Grant Street / E Williams Street intersection through future campus expansion land use applications.
- The City and WesternU are encouraged to collaboratively explore long-term opportunities/visions for the E Grant Street campus access. These activities could assess whether treatments that are not necessarily needed to address operational deficiencies may still improve the intersection. Visioning/planning for potential future treatments has the potential to help facilitate enhanced campus access and local land use planning as both the City and campus grow and adjacent parcels change use over time.

Additional details are provided herein.

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INTRODUCTION

The site of the proposed WesternU campus is a former plywood plant. The now-vacant site is zoned Mixed Use and is bounded to the east by the South Santiam River; to the west and south by residential neighborhoods; and to the north by an Albany & Eastern Railroad Company rail line, Gills Landing & RV Park, and small commercial parcels.

The site location and vicinity are shown in Figure 1, and long-term vision for the campus is shown in Exhibit 1.

Site Vicinity Map
Lebanon, Oregon

Figure 1

H:\24\24995 - Lebanon TIA Review\022 - Western University Campus TIA\report\figs\dwg\24995_22_WesternU_TIA_Figures.dwg Nov 10, 2025 - 9:28am - rolney Layout Tab: Site Vicinity Map

KITTELSON & ASSOCIATES

Exhibit 1. WesternU Long-Term Campus Plan Vision (Source: WesternU Oregon Campus Framework, March 2025)

SCOPE OF THE REPORT

This report identifies the transportation-related impacts associated with the first phase of the campus master plan and was prepared in accordance with the City of Lebanon (City) TIA requirements. Per agreement with City staff, operational analyses were performed at the following study intersections:

1. E Grant Street / Proposed campus access drive
2. E Grant Street / S Williams Street
3. E Milton Street / S Williams Street

This report evaluates the following transportation issues:

- Existing 2025 land use and transportation system conditions within the site vicinity during the weekday AM and PM peak periods;
- Forecast year 2033 background traffic conditions during the weekday AM and PM peak periods, considering background growth, in-process development, and transportation improvements planned in the study area;
- Trip generation and distribution estimates for Phase 1 of the proposed campus;
- Forecast year 2033 total traffic conditions during the weekday AM and PM peak period with build-out of Phase 1 of the new campus; 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 2025 analysis software.

Applicable Mobility Standards

All study roadways are owned and operated by the City. Intersection operating targets adopted by the City 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.

EXISTING CONDITIONS

This section summarizes the existing characteristics of the transportation system and adjacent land uses in the vicinity of the proposed campus, 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 project site (tax lot 925473) is a 150-acre property located on the eastern edge of Lebanon. The site historically was home to a plywood plant, which no longer exists; there is currently no active land use on the site.

The entire west edge of the site is bounded by local residential neighborhoods. To the south, part of site sits adjacent to the Riverview School campus. To the north, the site is adjacent to Gill's Landing RV Park and other commercial uses along E Grant Street. The Albany & Eastern Railroad runs through the north portion of the site, separating a small section of the site. The entire east edge of the site is bounded by the Old Mill Trail, a public, shared-use path that runs along the South Santiam River and connects Gill's Landing with Riverview Park to the south.

Transportation Facilities

Table 1 summarizes the characteristics of roadways within the site vicinity. Figure 2 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 Provided?	Striped Bicycle Lanes Provided?	On-Street Parking Provided?
E Grant Street	Minor Arterial	2	35	Yes	Yes	Partial
S Williams Street	Collector	2	25	Yes	No	No
E Milton Street	Collector	2	25	Yes	No	Yes

[1] Per the *City of Lebanon Transportation System Plan* (2019).

All three study roadways (E Milton Street west of S Williams Street) are also designated Lebanon Local Truck Routes, per the City's Transportation System Plan.

MULTI-USE FACILITIES

All three study roadways have sidewalks on both sides near the study intersections. E Grant Street has designated bicycle lanes, while S Williams Street and E Milton Street do not. E Grant Street / S Williams Street is the only study intersection that has marked crosswalks.

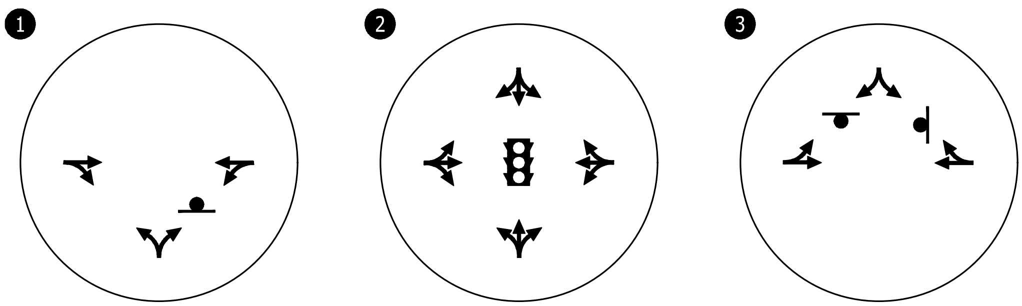
TRANSIT FACILITIES

There are no fixed-route transit services in the study area.

E Grant Street / Proposed Campus Access

E Grant Street / S Williams Street

E Milton Street / S Williams Street



- Study Intersections
- STOP Sign
- Traffic Signal

Note: The southbound right movement at E Milton Street / S Williams Street is permitted without stopping.

Existing Lane Configurations & Traffic Control Devices
Lebanon, Oregon

Figure 2

Intersection Crash History

The Oregon Department of Transportation (ODOT) Crash Data System was queried to obtain crash records at the study intersections for the five-year period from January 1, 2019 to December 31, 2023 (the most-recent five years of available data). Table 2 summarizes the ODOT crash data. No crashes were reported on E Grant Street at the location of the proposed campus entrance. No fatal or serious injury crashes were reported. *Appendix A provides the ODOT crash report which provides more details on the reported crashes.*

Table 2 – Reported Crash History (January 1, 2019 – December 31, 2023)

Study Intersection	Crash Type			Severity		Total
	Angle	Turning	Read-End	PDO	Minor Injury	*Total*
E Grant Street / Proposed campus access drive	-	-	-	-	-	***0***
E Grant Street / S Williams Street	10	6	1	7	10	***17***
E Milton Street / S Williams Street		4		3	1	***4***

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 signalized (4-leg) and urban stop-controlled (3-leg) intersections. 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?
E Grant Street / S Williams Street	17	0.09	0.86	No
E Milton Street / S Williams Street	4	0.04	0.29	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:

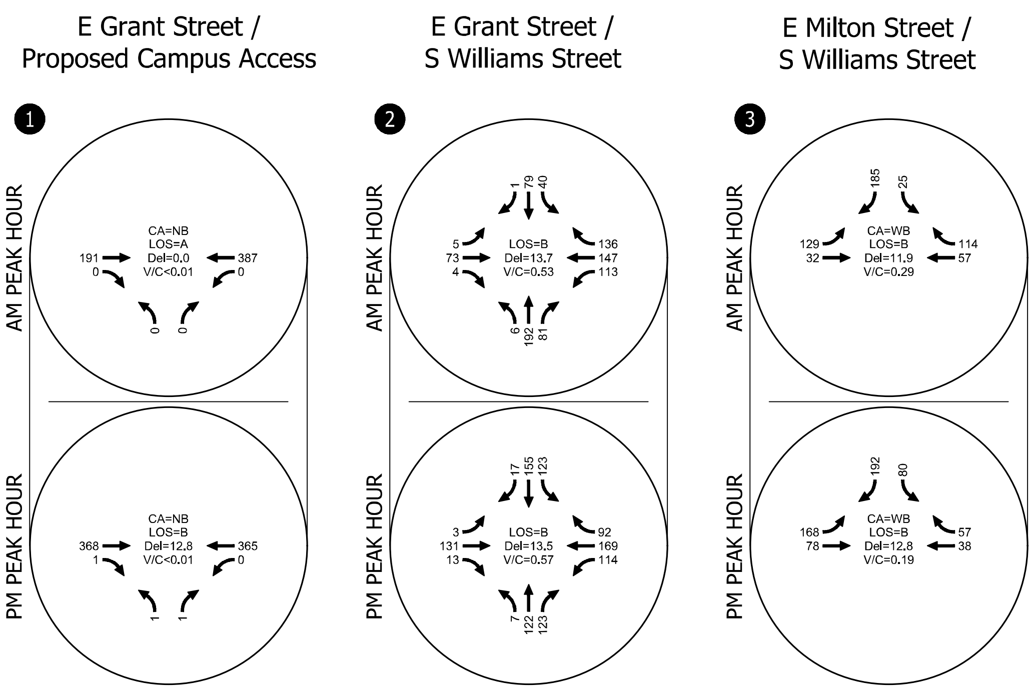
- Angle crashes were particularly prevalent at the E Grant Street / S Williams Street intersection. For multiple crashes, the cause was reported as a driver disregarding the traffic signal.
- All four crashes reported at the E Milton Street / S Williams Street intersection were turning-movement crashes that involved a vehicle traveling eastbound on E Milton Street and turning left through the intersection onto S Williams Street. A closer review of the existing intersection signing and striping suggests some modifications would help drivers navigate the intersection and potentially address some of the historical crashes. Specific recommendations are noted later in this report.
- No crashes involving either pedestrians or bicyclists were reported at the study intersections within the five-year period.

Existing Traffic Conditions

Vehicle turning movement, pedestrian and bicycle counts were conducted at the study intersections on October 8, 2025. 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

Figure 3 summarizes the corresponding traffic operations during the weekday morning (7:05-8:05 AM) and evening (4:40-5:40 PM) peak hours. As shown in Figure 3 and detailed in *Appendix C* (which includes the existing conditions operations analysis worksheets), the study intersection operations currently satisfy applicable City standards during both the AM and PM peak hours.



CA = INTERSECTION APPROACH (UNSIGNALIZED)
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V/C = INTERSECTION VOLUME-TO-CAPACITY RATIO (SIGNALIZED)/ INTERSECTION MOVEMENT/APPROACH VOLUME-TO-CAPACITY RATIO (UNSIGNALIZED)

Existing Traffic Volumes
AM & PM Peak Hours
Lebanon, Oregon

Figure 3

TRANSPORTATION ASSESSMENT

The transportation impact analysis identifies how the study intersections will operate in the year 2033 upon initial buildout of Phase 1 of the new WesternU campus. This section of the report includes analysis of 2033 background traffic volumes and operations, an estimate of site-generated trips, and analysis of 2033 total traffic volumes and operations with Phase 1 of the proposed WesternU campus.

2033 Background Operational Analysis

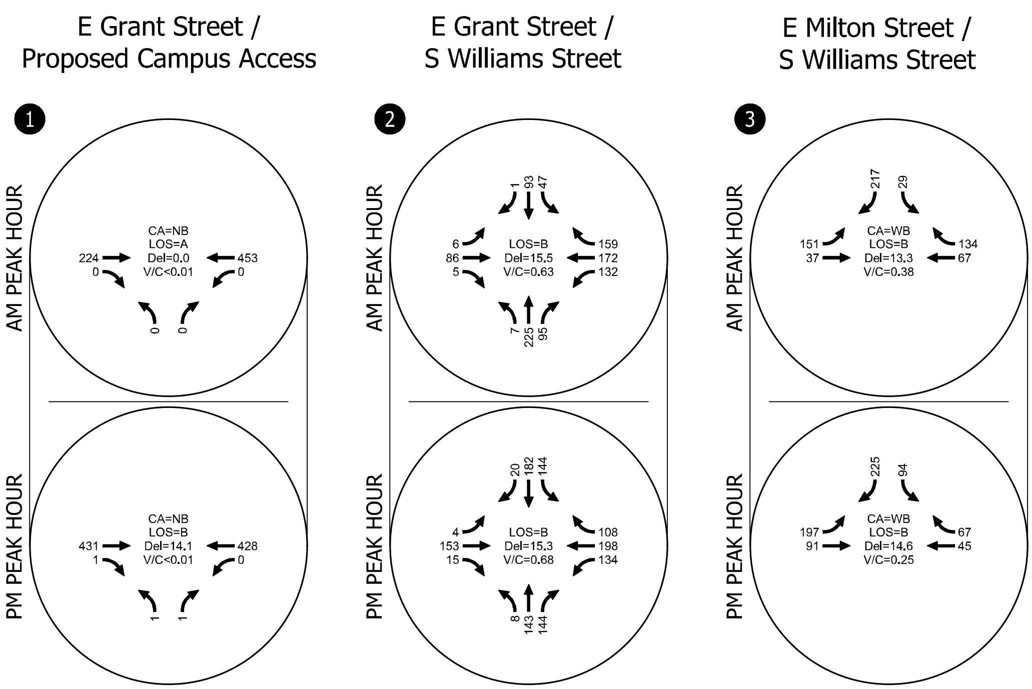
Background traffic operations capture the expected performance of the study intersections in the future prior to development of the proposed WesternU campus Phase 1. This type of analysis typically includes traffic attributed to planned/approved developments within the study area and general growth in the region but does not include traffic from the proposed campus.

GROWTH AND PLANNED DEVELOPMENTS

A 2% annual growth rate (consistent with growth rates forecast in the Lebanon TSP) was applied to the existing study intersection traffic volumes to reflect near-term growth on the local transportation network.

No in-process (planned) developments were identified by the City, so only the 2% growth rate was applied to develop 2033 background volumes.

Figure 4 summarizes the corresponding 2033 background traffic volumes and operational analysis for the weekday AM and PM peak hours. As shown, all study intersections are expected to continue to satisfy the respective City standards under background conditions. *Appendix D includes the 2033 background conditions volumes and operations analysis worksheets.*



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Year 2033 Background Traffic Volumes
AM & PM Peak Hours
Lebanon, Oregon

Figure 4

KITTELSON & ASSOCIATES

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Proposed Development Plan

The proposed WesternU campus is expected to be built out over the next three decades. The buildout is master planned in three Phases, which are summarized in Exhibit 2. This TIA evaluates the buildout of Phase 1, which is expected to be completed as early as 2033. Phase 1 is proposed to consist of three buildings amounting to a combined 177,000 square feet, which will support an estimated 520 students and 180 staff.

As shown in Exhibit 1, there are two proposed vehicular access points to the campus. The primary access is a proposed new roadway connection that would link the campus to E Grant Street; a secondary access involves the reestablishment of the site's historical access at the eastern end of the E Milton Street corridor. The E Grant Street primary access will consist of a new two-lane access drive that would utilize and expand an existing parcel right-of-way located just to the west of the Santiam Physical Therapy parcel. The access drive would then connect to the campus via a proposed underpass of the existing Albany & Eastern elevated rail line.

Exhibit 2. WesternU Lebanon Campus Phasing Plan (Source: WesternU)

WUHS Lebanon Campus
PHASING PLAN

			Phase 1			Phase 2			Phase 3		
			CY 2026 → CY 2035			CY 2036 → CY 2045			CY 2045 → CY 2055		
ITE Land Use	ITE Land Use Code	Use	Floor Area	Max. Students	Max. Faculty/Staff	Floor Area	Max. Students	Max Faculty/Staff	Floor Area	Max. Students	Max Faculty/Staff
University	550		CY 2028								
		AP/AS	70,000	215	75						
			CY 2028								
		C/SS(1)	37,000	90	30						
			CY 2033								
		AP/AS	70,000	215	75						
						CY 2038					
		AP/AS				54,000	140	50			
						CY 2040					
		C/SS(2)				41,000	100	35			
						CY 2044					
		AP/AS				60,000	155	50			
						CY 2045					
		C/SS(3)				87,000	-				
									CY 2048		
		AP/AS							25,000	145	50
									CY 2053		
		C/SS(4)							46,000	140	50
		Subtotals	177,000	520	180	242,000	395	135	81,000	285	100
		Totals							**500,000**	**1200**	**415**

TRIP GENERATION ESTIMATE

The *Trip Generation Manual, 12th Edition*, published by the Institute of Transportation Engineers (ITE), includes two land uses for higher education facilities that could be considered as proxies for WesternU operations: Junior/Community College (540) and University/College (550). However, because WesternU is a smaller, medical-focused college with a significant amount of regional commuting and no on-campus housing, a site-specific trip rate was developed for comparison purposes to ITE rates and ultimately used to estimate the trip generation for the proposed Phase 1 campus.

To develop a trip rate representative of WesternU following ITE *Trip Generation Handbook* guidance, multiple days of daily and peak-hour driveway counts were collected at the existing WesternU north Lebanon campus building in early October. Given that WesternU shares parking with the adjacent Linn-Benton Community College (LBCC), pedestrian counts were collected at the most heavily utilized entrances to the two respective buildings during the same driveway count periods. These pedestrian ingress/egress counts were then used to roughly determine the percentage of observed driveway vehicles that could be attributed to WesternU[1]. *Appendix E contains the driveway vehicle count sheets.*

The results of the counting effort are summarized in Table 4, which shows that the existing WesternU campus (with an enrolled student population of 215) is generating an average of approximately 624 daily vehicle trips, 62 weekday AM peak hour trips, and 53 weekday PM peak hour trips. (These peak hour trips correspond to the peak hours for the study intersections, which were identified in the Existing Traffic Conditions section.) This equates to a daily trip rate of 2.90 trips per student, a weekday AM peak hour trip rate of 0.288 trips per student, and a weekday PM peak hour trip rate of 0.247 trips per student[2].

Table 4 – Existing WesternU Campus Trip Generation Estimate

Land Use	Data Source	Students	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	*In %*	*Out %*	Total	*In %*	*Out %*
WesternU	WesternU Traffic Counts	215	624	62	*95%*	*5%*	53	*25%*	*75%*
		Trip Rate per Student	**2.90**	**0.288**			**0.247**		

These site-specific trip rates were then applied to the anticipated Phase 1 student enrollment of 520 students at the new WesternU campus. The estimated trip generation for Phase 1 is shown in Table 5.

Table 5. Proposed WesternU Campus (Phase 1) Trip Generation Estimate

Land Use	Data Source	Students	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
WesternU	WesternU Traffic Counts	520	**1,508**	**150**	**143**	**7**	**128**	**32**	**96**

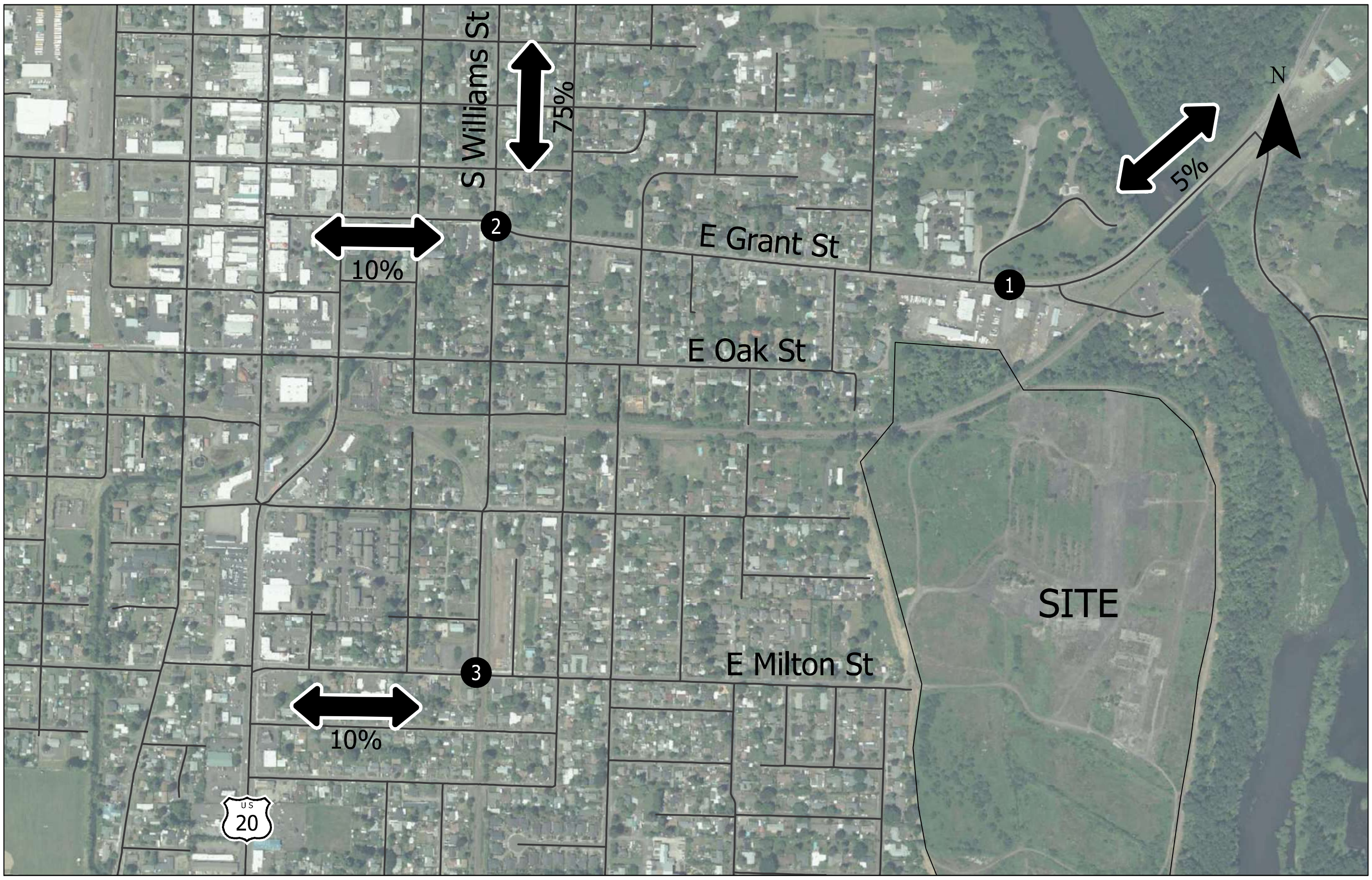
To develop year 2033 projected total traffic volumes, the AM and PM peak hour trip estimates shown in Table 5 were distributed onto the roadway system by the trip distribution described in the next section.

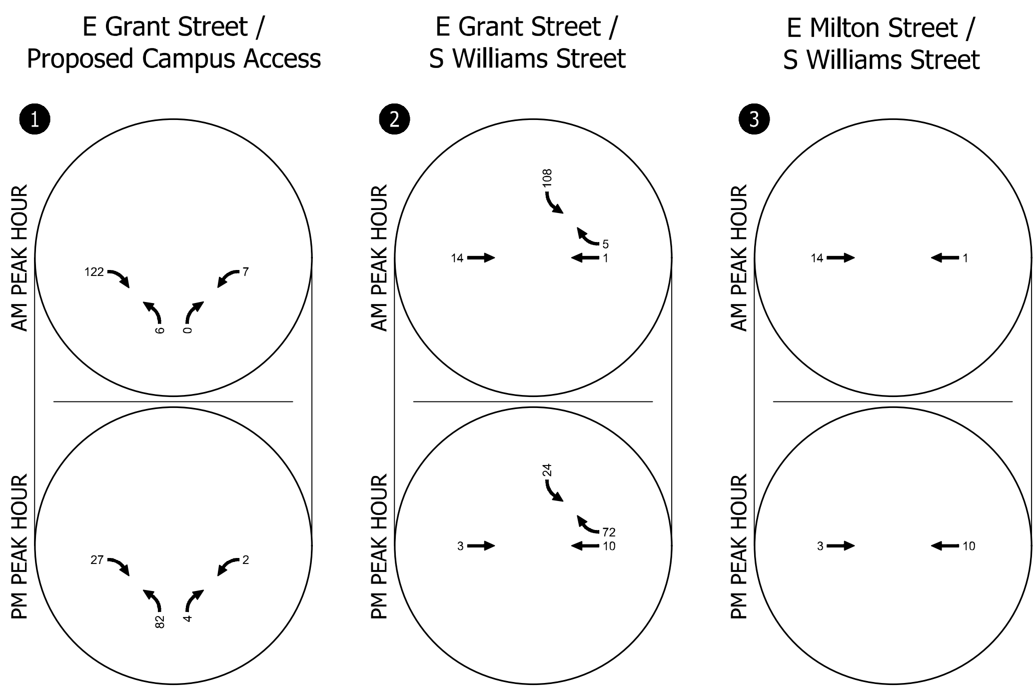
SITE TRIP DISTRIBUTION/TRIP ASSIGNMENT

As previously noted, the proposed campus access drive to E Grant Street is planned to be the main vehicular entrance/exit portal to the surrounding local and regional roadway network. Accordingly, the site-generated trips shown in Table 5 were distributed onto the study area roadways and assigned to the study intersections based on the location of the site within its local and regional context. Based on discussion with WesternU representatives, the school is primarily a commuter institution that draws students and faculty from throughout the Willamette Valley. Some local trips are to be expected, but most trips are assumed to route to/from the site regionally via I-5, Highway 34, and US 20. Within Lebanon, the most direct route to the proposed campus from these regional destinations is via Williams Street to the north of Grant Street. The estimated trip distribution pattern and site-generated trip assignment is illustrated in Figure 5.

[1] This approach assumed that all measured vehicle counts at the campus driveways were single-occupant vehicles. At a combined level, the average number of persons entering and exiting the two buildings was 2,201 per day. The average number of driveway trips across the two days was 1,106, which suggests that the counts did reflect an average vehicle occupancy rate of approximately 1.0.

[2] By way of comparison, the Junior/Community College and University/College land uses in ITE Trip Generation have average daily trip rates of 1.15 and 1.46 trips per student, respectively. These same land uses have average weekday AM and PM peak hour trip rates of 0.11 and 0.15.





Estimated Trip Distribution & Trip Assignment Lebanon, Oregon

Figure 5

Year 2033 Total Traffic Conditions

The total traffic conditions analysis forecasts the operation of the study intersections with the inclusion of traffic generated by Phase 1 of the proposed campus. Total traffic conditions were determined by adding the estimated site-generated trips to the year 2033 background volumes for the weekday AM and PM peak hours.

Figure 6 summarizes the corresponding operational analysis for the weekday AM and PM peak hours. As shown, all study intersections are expected to continue to satisfy the respective City standards under full buildout conditions.

Appendix F includes the 2033 total traffic volumes and operations analysis worksheets.

QUEUEING AND ACCESS MANAGEMENT

The only study intersection where projected 95th-percentile queues were greater than two vehicles was E Grant Street / S Williams Street. All approaches at this intersection currently have a single, shared left-through-right lane. The longest 95th-percentile queue expected for this intersection under total conditions is the westbound approach during the PM peak hour. This queue is estimated at 350 feet, which would extend near to the intersection with Hiatt Street. This is not currently projected to result in any operational deficiencies. However, this intersection should continue to be analyzed in conjunction with land use applications for future development phases, as queues for other movements (particularly the southbound approach during the AM peak hour) may begin to extend to upstream intersections.

E Grant Street Access

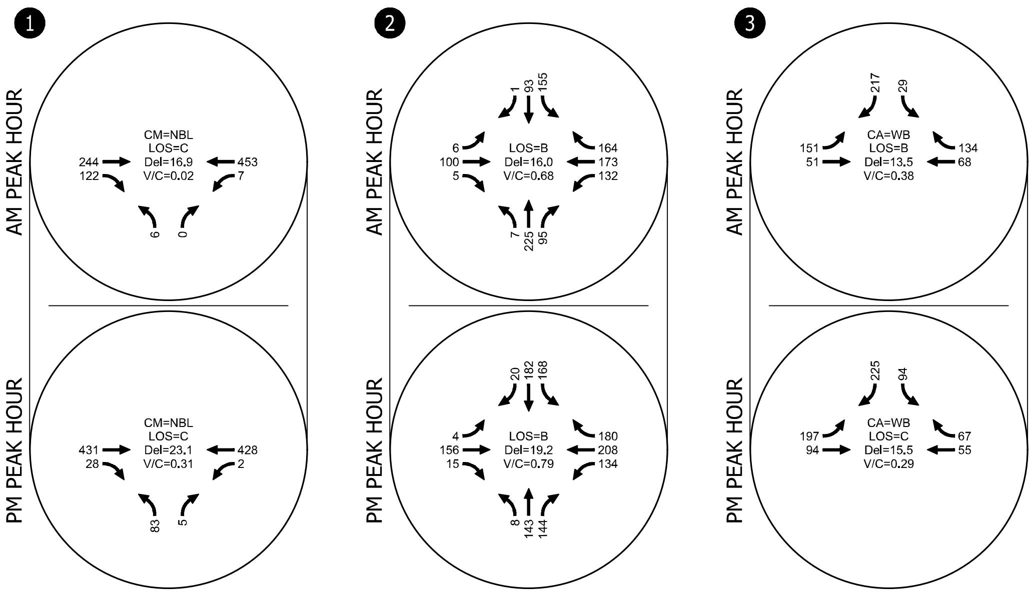
The proposed E Grant Street site access drive is expected to be the primary access to the proposed campus. As summarized in the intersection operations analyses, sufficient capacity is expected at the E Grant Street access drive intersection upon buildout of Phase 1. As subsequent phases to the campus are added, the intersection will need to be reviewed to assess the need for potential future modifications. For example, potential future modifications could include the need for alternative traffic control and/or the provision of a westbound left-turn lane. Over the long term, off-site property redevelopment opportunities along E Grant Street may be realized (potentially in a market response to the new and expanding campus) and could present opportunities for access consolidation, intersection realignment, streetscape/community gateway treatments, and/or enhanced multimodal facilities.

We encourage the City and WesternU to collaboratively explore long-term opportunities/visions for the E Grant Street campus access. These activities could assess whether treatments that are not necessarily needed to address operational deficiencies may still improve the intersection. Visioning/planning for potential future treatments has the potential to help facilitate enhanced campus access and local land use planning as both the City and campus grow and adjacent parcels change use over time.

E Grant Street / Proposed Campus Access

E Grant Street / S Williams Street

E Milton Street / S Williams Street



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INTERSECTION MOVEMENT/APPROACH VOLUME-TO-CAPACITY RATIO (UNSIGNALIZED)

Year 2033 Total Traffic Volumes
AM & PM Peak Hours
Lebanon, Oregon

Figure 6

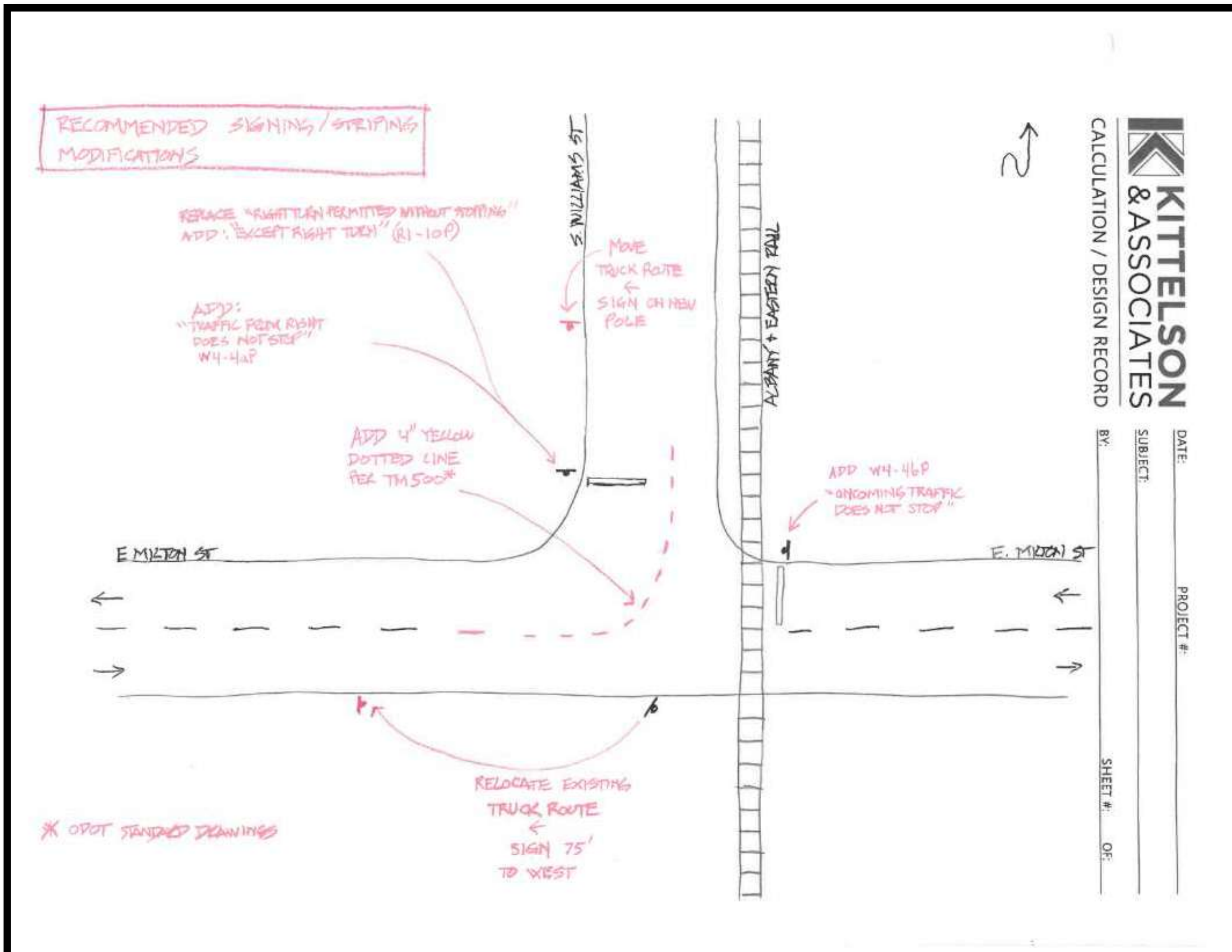
KITTELSON & ASSOCIATES

E MILTON STREET / S WILLIAMS STREET INTERSECTION

As mentioned above in the Crash Data Implications section, a review of the existing intersection signing and striping at the E Milton Street / S Williams Street intersection suggests some modifications could help drivers navigate the intersection and potentially address some of the historical crash patterns. These recommendations are proposed to the City independent of the proposed development.

Exhibit 3 is a conceptual illustration of these proposed signing and striping modifications. This does not represent an official signing and striping plan, but rather illustrates a list of potential signing and striping changes that the City should consider to bring the intersection into compliance with current MUTCD signing standards and more clearly accommodate travel movements through the intersection.

Exhibit 3. Proposed Signing and Striping Modifications at E Milton Street / S Williams Street



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 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.
- Conceptual signing and striping modifications were identified for implementation at the E Milton Street / S Williams Street intersection to address historical crash patterns. Subject to City concurrence, we recommend refinement and implementation of the conceptual changes by the City regardless of the proposed development.
- It is recommended that the City of Lebanon continue to monitor queuing conditions at the intersection of E Grant Street with the proposed primary campus access, as well as at the E Grant Street / E Williams Street intersection through future campus expansion land use applications.

The City and WesternU are encouraged to collaboratively explore long-term opportunities/visions for the E Grant Street campus access. These activities could assess whether treatments that are not necessarily needed to address operational deficiencies may still improve the intersection. Visioning/planning for potential future treatments has the potential to help facilitate enhanced campus access and local land use planning as both the City and campus grow and adjacent parcels change use over time. We trust this memorandum adequately addresses the traffic and circulation impacts associated with the proposed WesternU campus. 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. 2025 Existing Traffic Conditions Worksheets and Volumes
D. 2033 Background Traffic Conditions Worksheets and Volumes
E. Existing WesternU Driveway Counts
F. 2033 Total Traffic Conditions Worksheets and Volumes

Appendix A
Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	I S R
ENTS	0	1	0	1	0	5	0	1	0	0	1	1	
.	**0**	**1**	**0**	**1**	**0**	**5**	**0**	**1**	**0**	**0**	**1**	**1**	
	0	1	3	4	0	1	0	4	0	3	1	4	
ENTS	0	1	1	2	0	4	0	2	0	2	0	2	
.	**0**	**2**	**4**	**6**	**0**	**5**	**0**	**6**	**0**	**5**	**1**	**6**	
	0	1	1	2	0	2	0	1	1	2	0	2	
	0	1	0	1	0	1	0	1	0	1	0	1	
.	**0**	**2**	**1**	**3**	**0**	**3**	**0**	**2**	**1**	**3**	**0**	**3**	
	0	2	0	2	0	4	0	2	0	2	0	2	
.	**0**	**2**	**0**	**2**	**0**	**4**	**0**	**2**	**0**	**2**	**0**	**2**	
	0	1	1	2	0	2	0	2	0	2	0	2	
ENTS	0	2	1	3	0	2	0	3	0	2	1	3	
.	**0**	**3**	**2**	**5**	**0**	**4**	**0**	**5**	**0**	**4**	**1**	**5**	
	0	**10**	**7**	**17**	**0**	**21**	**0**	**16**	**1**	**14**	**3**	**17**	

mation contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash mmitted to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Rep alifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requir ult in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

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	AGE	SEX	LICNS RES
INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT						
E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W						
06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	M	OR-Y OR<25
						02	NONE 0	STOP						
							PRVTE	E -W						
							PSNGR CAR		01	DRVR	INJC	17	F	OR-Y OR>25
INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE	STRGHT						
CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -E						
03	0		N	DARK	INJ		PSNGR CAR		01	DRVR	NONE	28	F	OR-Y OR<25
						02	NONE	TURN-L						
							PRVTE	E -S						
							PSNGR CAR		01	DRVR	NONE	33	F	OR-Y OR<25
						02	NONE	TURN-L						
							PRVTE	E -S						
							PSNGR CAR		02	PSNG	INJC	13	M	
INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	STRGHT						
CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S -N						
04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	63	F	OR-Y OR<25
						02	NONE	TURN-L						
							PRVTE	N -E						
							PSNGR CAR		01	DRVR	NONE	22	M	OR-Y OR<25
INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	S -N						
02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	87	M	OR-Y OR<25
						02	NONE	STRGHT						
							PRVTE	E -W						
							PSNGR CAR		01	DRVR	INJB	27	F	OR-Y OR<25
INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT						
CN		TRF SIGNAL	N	DRY	TURN		N/A	W -E						
03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

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
						02	NONE 9 N/A PSNGR CAR	TURN-L E -S	01	DRVR	NONE	00	Unk	UNK UNK
INTER CN 03	CROSS 0	N TRF SIGNAL	N N N	CLD DRY DAY	ANGL-OTH ANGL PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK
						02	NONE 9 N/A PSNGR CAR	STRGHT N -S	01	DRVR	NONE	00	Unk	UNK UNK
INTER CN 02	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	ANGL-OTH ANGL INJ	01	NONE PRVTE PSNGR CAR	STRGHT S -N	01	DRVR	NONE	35	M	OR-Y OR<25
						02	NONE PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJB	26	F	OR-Y OR<25
						02	NONE PRVTE PSNGR CAR	STRGHT E -W	02	PSNG	INJB	16	F	
						03	NONE PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	63	M	OR-Y OR<25
INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	ANGL-OTH ANGL INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	28	F	OR-Y OR<25
						02	NONE 0 PRVTE PSNGR CAR	STRGHT N -S	01	DRVR	INJB	21	F	OR-Y OR<25
						02	NONE 0 PRVTE PSNGR CAR	STRGHT N -S	02	PSNG	INJC	20	F	

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

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	AGE	SEX	LICNS RES
INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT						
CN		TRF SIGNAL	N	WET	ANGL		PRVTE	E -W						
01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	80	F	OR-Y
														OR<25
						01	NONE 0	STRGHT						
							PRVTE	E -W						
							PSNGR CAR		02	PSNG	INJC	87	F	
						02	NONE 0	STRGHT						
							PRVTE	N -S						
							PSNGR CAR		01	DRVR	NONE	35	M	OR-Y
														OR<25
INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		N/A	W -E						
03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
						02	NONE 9	STRGHT						
							N/A	N -S						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	S -N						
04	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	36	F	OR-Y
														OR<25
						02	NONE 0	STRGHT						
							PRVTE	W -E						
							PSNGR CAR		01	DRVR	INJC	24	M	OR-Y
														OR<25
INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 9	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		N/A	W -E						
03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
						02	NONE 9	STRGHT						
							N/A	N -S						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	TURN-L						
CN		TRF SIGNAL	N	DRY	TURN		N/A	N -E						
04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

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
						02	NONE 9	STRGHT						
							N/A	S -N						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK
INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		N/A	S -N						
04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK
						02	NONE 9	STRGHT						
							N/A	W -E						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK
INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT						
CN		TRF SIGNAL	N	DRY	ANGL		N/A	W -E						
04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK
						02	NONE 9	STRGHT						
							N/A	S -N						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK
INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT						
CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S -N						
04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	42	F	OR-Y OR<25
						01	NONE 0	STRGHT						
							PRVTE	S -N						
							PSNGR CAR		02	PSNG	INJB	18	F	
						01	NONE 0	STRGHT						
							PRVTE	S -N						
							PSNGR CAR		03	PSNG	INJC	10	F	
						02	NONE 0	TURN-L						
							PRVTE	N -E						
							PSNGR CAR		01	DRVR	INJB	52	F	OR-Y OR<25
INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT						
CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S -N						
04	0		N	DARK	INJ		PSNGR CAR		01	DRVR	INJC	46	F	OR-Y OR<25

GRANT ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

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	AGE	SEX	LICNS RES
						02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	01	DRVR	INJB	17	M	OR-Y OR<25
						02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	02	PSNG	INJB	16	F	
						02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	03	PSNG	INJB	19	F	
						02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	04	PSNG	INJB	16	F	

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

MILTON ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	I SI RI
ENTS	0	0	1	1	0	0	0	0	1	1	0	1	
.	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	
ENTS	0	0	1	1	0	0	0	0	1	0	1	1	
.	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	
ENTS	0	1	0	1	0	1	0	1	0	0	1	1	
.	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**1**	
ENTS	0	0	1	1	0	0	0	1	0	1	0	1	
.	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	
	0	**1**	**3**	**4**	**0**	**1**	**0**	**2**	**2**	**2**	**2**	**4**	

mation contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash mmitted to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Rep alifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting require ult in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

MILTON ST at WILLIAMS ST, City of Lebanon, Linn County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

1 - 4 of 4 Crash records shown.

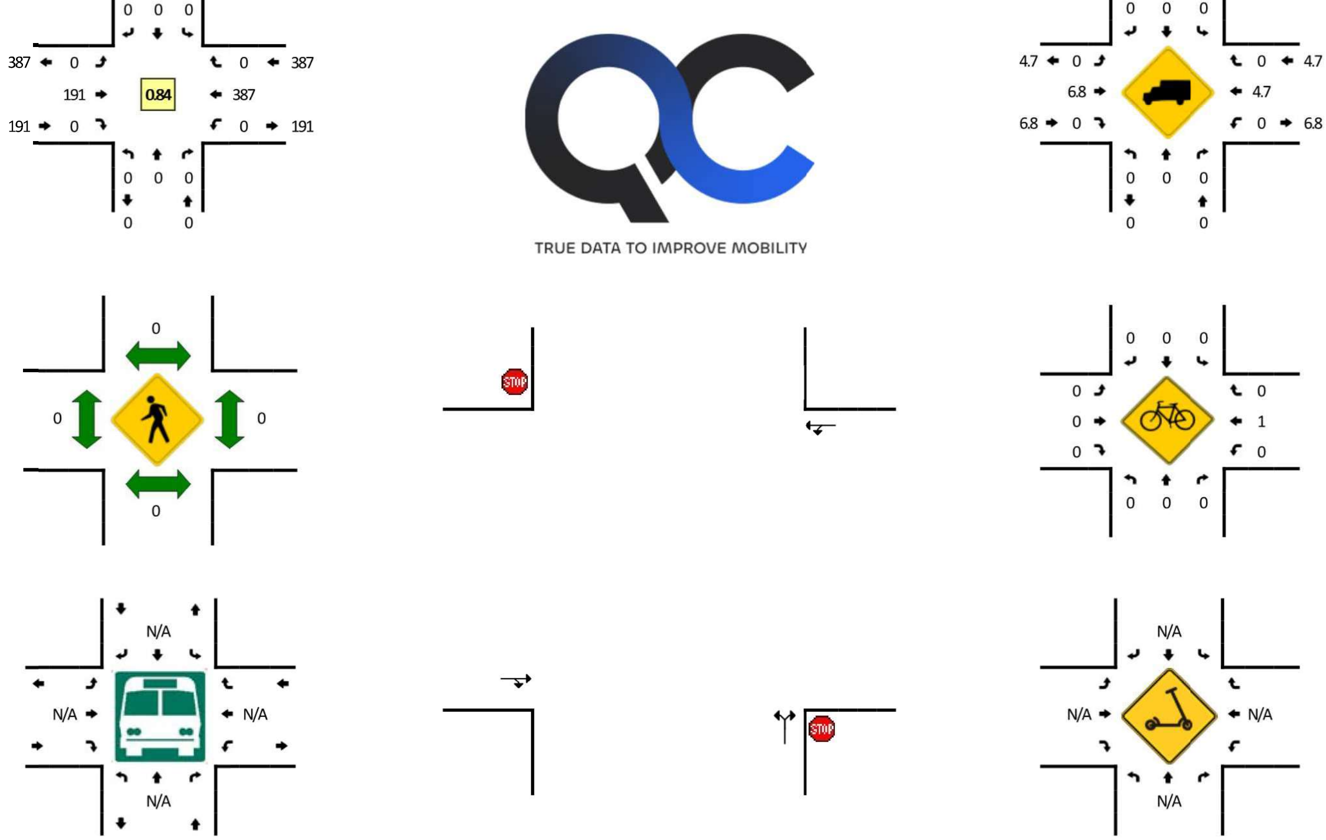
RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CONTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH COLL SVRTY	V#	SPCL USE TRLR QTY OWNER TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES
INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 9	TURN-L						
N		UNKNOWN	N	WET	TURN		N/A	W -N						
06	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
						02	NONE 9	STRGHT						
							N/A	N -S						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 9	TURN-L						
N		UNKNOWN	N	WET	TURN		N/A	W -N						
06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
						02	NONE 9	STOP						
							N/A	N -S						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
INTER	3-LEG	N	N	CLR	S-1TURN	01	NONE 9	STRGHT						
CN		ONE-WAY	N	DRY	TURN		N/A	W -E						
02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
						02	NONE 9	TURN-L						
							N/A	W -N						
							PSNGR CAR		01	DRVR	NONE	00	Unk	UNK
														UNK
INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L						
CN		STOP SIGN	N	DRY	TURN		PRVTE	N -E						
02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y
														OR<25
						02	NONE 0	TURN-L						
							PRVTE	W -N						
							PSNGR CAR		01	DRVR	INJB	47	F	OR-Y
														OR<25

Appendix B
Traffic Count Data

Type of peak hour being reported: User-Defined | Method for determining peak hour: Total Entering Volume

LOCATION: Santiam Physical Therapy Dwy -- E Grant St | **QC JOB #:** 17274111
CITY/STATE: Lebanon, OR | **DATE:** Wed, Oct 8 2025

Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:20 AM -- 7:35 AM



R* = RTOR

5-Min Count Period Beginning At	Santiam Physical Therapy Dwy (Northbound)					Santiam Physical Therapy Dwy (Southbound)					E Grant St (Eastbound)					E Grant St (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	18	0	0	0	35	
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	29	0	0	0	44	
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	29	0	0	0	38	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	30	0	0	0	50	
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	40	0	0	0	59	
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	40	0	0	0	53	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	41	0	0	0	60	
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	34	0	0	0	52	
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	30	0	0	0	39	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	33	0	0	0	57	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	30	0	0	0	38	
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	27	0	0	0	43	568
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	24	0	0	0	45	578
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	16	0	0	0	38	572
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	33	0	0	0	48	582
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	16	0	0	0	34	566
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	25	0	0	0	40	547
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	33	0	0	0	47	541
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	22	0	0	0	37	518
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	14	0	0	0	30	496
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	19	0	0	0	32	489
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	29	0	0	0	39	471
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	27	0	0	0	44	477
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	21	0	0	0	31	465

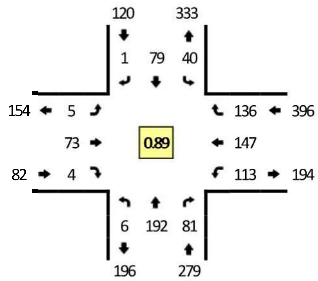
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	204	0	0	0	0	484	0	0	0	688
Heavy Trucks	0	0	0			0	0	0			0	4	0			0	24	0			28
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

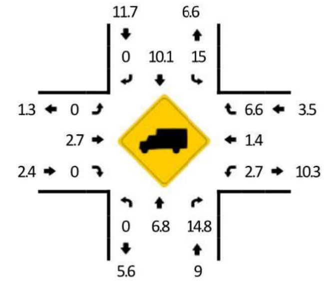
Type of peak hour being reported: User-Defined Method for determining peak hour: Total Entering Volume

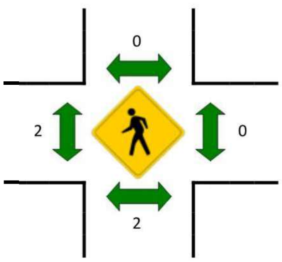
LOCATION: S Williams St -- E Grant St **QC JOB #:** 17274107
CITY/STATE: Lebanon, OR **DATE:** Wed, Oct 8 2025

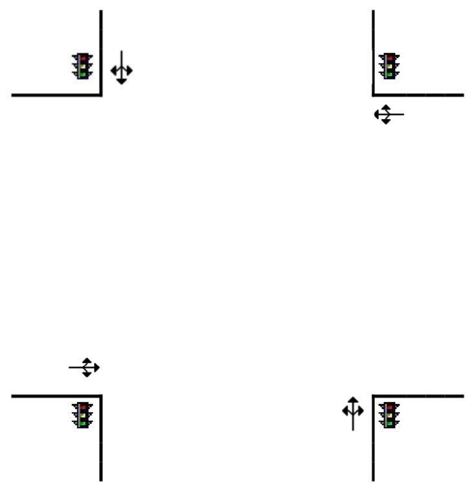
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

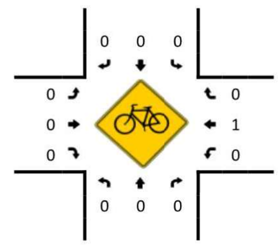


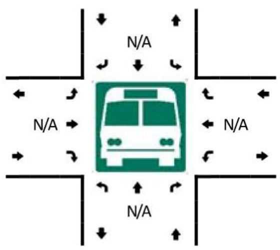
TRUE DATA TO IMPROVE MOBILITY

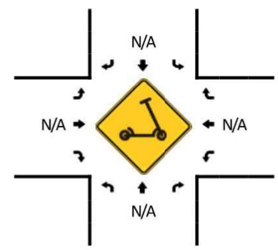












R* = RTOR

5-Min Count Period Beginning At	S Williams St (Northbound)					S Williams St (Southbound)					E Grant St (Eastbound)					E Grant St (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	1	11	5	0	1	4	8	0	0	0	0	3	0	0	0	5	6	10	0	1	55	
7:05 AM	0	17	1	0	1	4	5	0	0	0	0	5	0	0	0	6	11	4	0	4	58	
7:10 AM	0	13	4	0	0	4	10	0	0	0	0	3	0	0	0	9	12	6	0	3	64	
7:15 AM	0	11	2	0	2	5	9	0	0	0	0	9	0	0	1	7	8	12	0	4	70	
7:20 AM	0	13	3	0	3	0	8	0	0	0	0	10	0	0	0	10	13	12	0	2	74	
7:25 AM	0	14	7	0	1	4	4	0	0	0	0	6	0	0	0	13	19	9	0	5	82	
7:30 AM	0	18	9	0	2	1	5	0	0	1	0	4	0	0	0	11	21	10	0	2	84	
7:35 AM	1	22	5	0	1	4	7	0	0	0	1	6	0	0	0	13	11	5	0	3	79	
7:40 AM	0	18	9	0	0	5	5	0	0	0	1	5	0	0	1	15	10	8	0	2	79	
7:45 AM	1	19	7	0	1	3	10	0	0	0	1	4	0	0	0	6	12	8	0	2	74	
7:50 AM	1	16	4	0	1	2	5	0	0	0	0	3	0	0	0	11	8	10	0	2	63	
7:55 AM	3	19	8	0	1	4	8	0	0	0	1	4	0	0	2	7	16	9	0	5	87	869
8:00 AM	0	12	7	0	2	4	3	0	0	0	1	14	0	0	0	5	6	6	0	3	63	877
8:05 AM	0	13	6	0	0	4	3	0	0	0	1	8	0	0	1	5	7	7	0	3	58	877
8:10 AM	0	13	5	0	0	4	6	0	0	0	0	7	0	0	0	6	8	16	0	0	65	878
8:15 AM	0	8	5	0	4	6	6	0	0	0	0	2	0	0	0	8	1	9	0	2	51	859
8:20 AM	2	11	7	0	1	5	6	0	0	0	0	3	0	0	0	6	8	9	0	0	58	843
8:25 AM	0	10	7	0	0	3	7	0	0	0	0	5	0	0	0	3	10	12	0	1	58	819
8:30 AM	1	3	5	0	3	1	4	0	0	0	0	6	0	0	0	12	5	12	0	2	54	789
8:35 AM	0	10	4	0	0	6	5	0	0	0	0	5	0	0	0	0	11	8	0	2	51	761
8:40 AM	0	11	4	0	0	0	8	0	0	0	0	3	1	0	0	6	7	2	0	7	49	731
8:45 AM	2	7	3	0	0	2	4	1	0	0	0	8	1	0	1	3	17	8	0	1	58	715
8:50 AM	0	16	3	0	2	6	3	0	0	0	0	13	0	0	0	4	4	8	0	2	61	713
8:55 AM	0	5	5	0	2	2	3	0	0	0	0	5	1	0	0	9	11	11	0	1	55	681

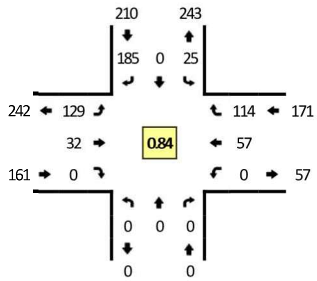
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	4	216	100	0	16	36	64	4	0	4	4	64	0	0	0	148	204	136	0	40	1040
Heavy Trucks	0	8	4			0	0	0			0	0	0			0	4	8			24
Buses																					
Pedestrians		4					0					4					0				8
Bicycles	0	0	0			0	0	0			0	0	0			0	4	0			4
Scooters																					

Comments:

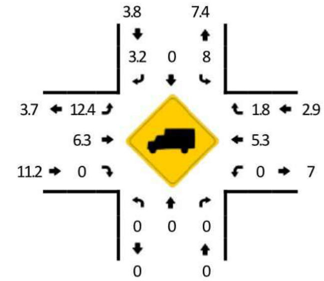
Report generated on 10/26/2025 3:51 PM SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

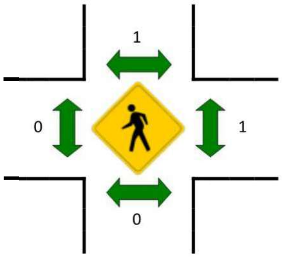
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

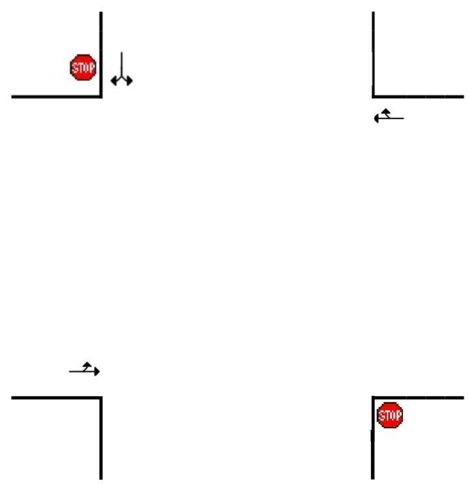
LOCATION: S Williams St -- E Milton St | **QC JOB #:** 17274109
CITY/STATE: Lebanon, OR | **DATE:** Wed, Oct 8 2025

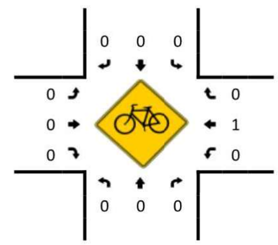


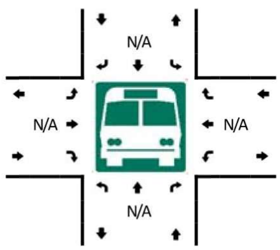
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

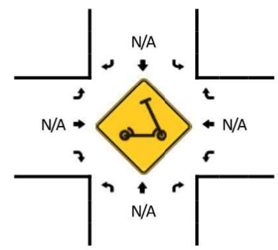












R* = RTOR

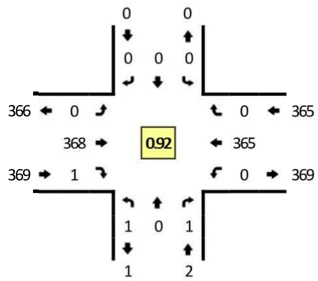
5-Min Count Period Beginning At	S Williams St (Northbound)					S Williams St (Southbound)					E Milton St (Eastbound)					E Milton St (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	4	0	12	0	0	8	2	0	0	0	0	1	3	0	0	30	
7:05 AM	0	0	0	0	0	3	0	9	0	0	3	4	0	0	0	0	6	9	0	0	34	
7:10 AM	0	0	0	0	0	3	0	19	0	0	9	1	0	0	0	0	6	7	0	0	45	
7:15 AM	0	0	0	0	0	2	0	11	0	0	8	1	0	0	0	0	2	2	0	0	26	
7:20 AM	0	0	0	0	0	2	0	17	0	0	7	2	0	0	0	0	6	7	0	0	41	
7:25 AM	0	0	0	0	0	4	0	20	0	0	10	0	0	0	0	0	7	8	0	0	49	
7:30 AM	0	0	0	0	0	2	0	14	0	0	14	3	0	0	0	0	3	15	0	0	51	
7:35 AM	0	0	0	0	0	1	0	24	0	0	8	3	0	0	0	0	3	12	0	0	51	
7:40 AM	0	0	0	0	0	1	0	20	0	0	15	2	0	0	0	0	5	17	0	0	60	
7:45 AM	0	0	0	0	0	1	0	10	0	0	9	6	0	0	0	0	1	8	0	0	35	
7:50 AM	0	0	0	0	0	1	0	16	0	0	17	3	0	0	0	0	6	12	0	0	55	
7:55 AM	0	0	0	0	0	3	0	15	0	0	18	4	0	0	0	0	7	13	0	0	60	537
8:00 AM	0	0	0	0	0	2	0	10	0	0	11	3	0	0	0	0	5	4	0	0	35	542
8:05 AM	0	0	0	0	0	2	0	4	0	0	8	4	0	0	0	0	3	9	0	0	30	538
8:10 AM	0	0	0	0	0	2	0	12	0	0	5	3	0	0	0	0	6	8	0	0	36	529
8:15 AM	0	0	0	0	0	0	0	15	0	0	9	3	0	0	0	0	1	4	0	0	32	535
8:20 AM	0	0	0	0	0	4	0	10	0	0	10	1	0	0	0	0	8	10	0	0	43	537
8:25 AM	0	0	0	0	0	2	0	9	0	0	11	2	0	0	0	0	6	3	0	0	33	521
8:30 AM	0	0	0	0	0	2	0	9	0	0	8	2	0	0	0	0	4	5	0	0	30	500
8:35 AM	0	0	0	0	0	4	0	8	0	0	5	1	0	0	0	0	4	4	0	0	26	475
8:40 AM	0	0	0	0	0	1	0	10	0	0	11	4	0	0	0	0	3	3	0	0	32	447
8:45 AM	0	0	0	0	0	2	0	6	0	0	7	3	0	0	0	0	4	10	0	0	32	444
8:50 AM	0	0	0	0	0	3	0	5	0	0	8	2	0	0	0	0	2	4	0	0	24	413
8:55 AM	0	0	0	0	0	1	0	9	0	0	8	3	0	0	0	0	3	3	0	0	27	380

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	16	0	232	0	0	148	32	0	0	0	0	44	176	0	0	648
Heavy Trucks	0	0	0			0	0	0			12	0	0			0	4	4			20
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

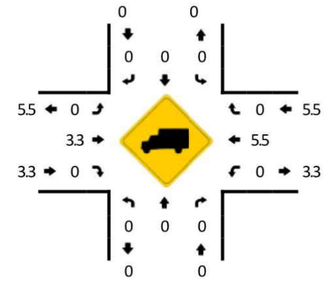
Report generated on 10/16/2025 3:58 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

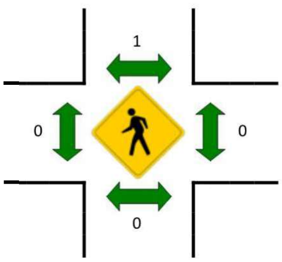
LOCATION: Santiam Physical Therapy Dwy -- E Grant St　　**QC JOB #:** 17274112
CITY/STATE: Lebanon, OR　　**DATE:** Wed, Oct 8 2025

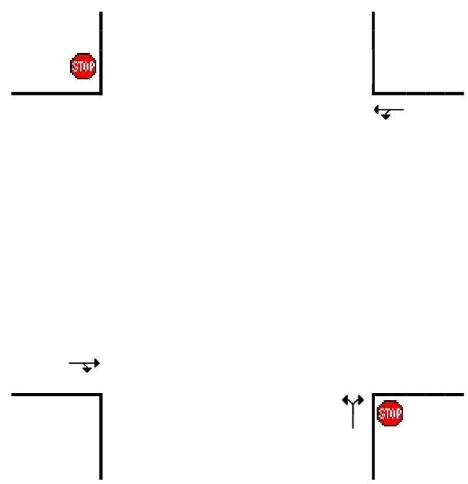


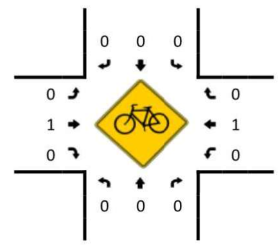
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

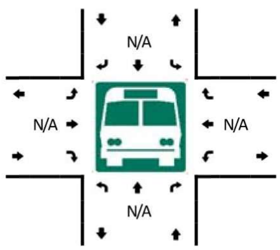
TRUE DATA TO IMPROVE MOBILITY

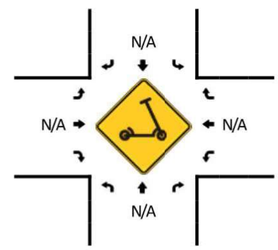












R* = RTOR

5-Min Count Period Beginning At	Santiam Physical Therapy Dwy (Northbound)					Santiam Physical Therapy Dwy (Southbound)					E Grant St (Eastbound)					E Grant St (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	18	0	0	0	40	
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	39	0	0	0	0	21	0	0	0	60	
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0	15	0	0	0	51	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	21	0	0	0	42	
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	29	0	0	0	52	
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	18	0	0	0	53	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	18	0	0	0	42	
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	26	0	0	0	53	
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	34	0	0	0	0	45	0	0	0	79	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	32	0	0	0	62	
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	32	0	0	0	60	
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	36	0	0	0	60	654
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	23	0	0	0	58	672
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	33	0	0	0	68	680
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0	29	0	0	0	65	694
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	32	0	0	0	65	717
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	24	0	0	0	59	724
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	0	0	0	40	711
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	33	1	0	0	0	31	0	0	0	66	735
5:35 PM	0	0	1	0	0	0	0	0	0	0	0	25	0	0	0	0	28	0	0	0	54	736
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	33	0	0	0	71	728
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	23	0	0	0	61	727
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	27	0	0	0	60	727
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	29	0	0	0	55	722

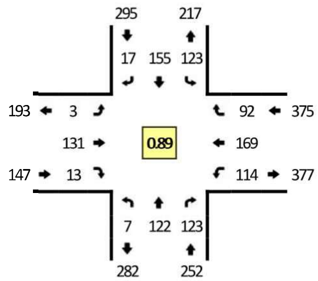
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	368	0	0	0	0	436	0	0	0	804
Heavy Trucks	0	0	0			0	0	0			0	12	0			0	24	0			36
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	4	0			4
Scooters																					

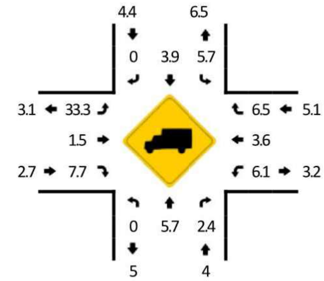
Comments:

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

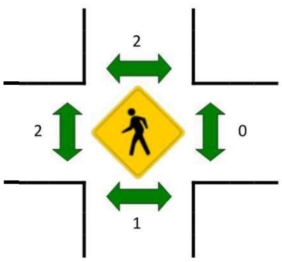
LOCATION: S Williams St -- E Grant St | **QC JOB #:** 17274108
CITY/STATE: Lebanon, OR | **DATE:** Wed, Oct 8 2025

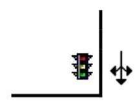
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

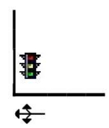


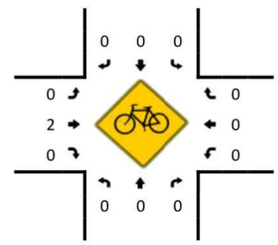


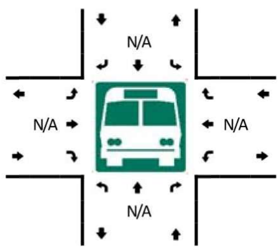
TRUE DATA TO IMPROVE MOBILITY

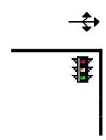


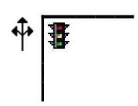


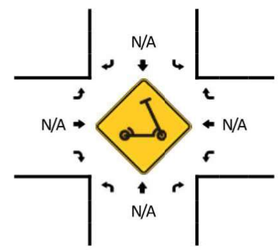












R* = RTOR

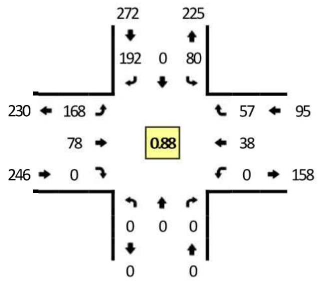
5-Min Count Period Beginning At	S Williams St (Northbound)					S Williams St (Southbound)					E Grant St (Eastbound)					E Grant St (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	2	12	7	0	1	8	16	0	0	0	1	8	0	0	0	8	7	5	0	3	78	
4:05 PM	0	10	12	0	0	11	13	0	0	0	0	18	0	0	0	2	14	4	0	1	85	
4:10 PM	0	7	7	0	3	12	17	0	0	1	2	7	1	0	0	7	7	2	0	3	76	
4:15 PM	1	3	7	0	1	12	14	2	0	0	0	11	1	0	0	6	10	2	0	3	73	
4:20 PM	0	8	6	0	0	12	11	1	0	0	0	8	1	0	0	7	10	9	0	2	75	
4:25 PM	0	5	5	0	2	14	11	0	0	0	0	11	0	0	1	8	10	3	0	0	70	
4:30 PM	1	5	8	0	1	13	12	0	0	0	0	6	0	0	1	8	8	1	0	0	64	
4:35 PM	0	9	7	0	4	10	9	1	0	0	1	6	0	0	0	11	13	1	0	3	75	
4:40 PM	2	9	11	0	5	9	12	0	0	0	0	10	1	0	0	12	13	6	0	3	93	
4:45 PM	0	10	2	0	1	11	13	1	0	1	0	12	3	0	1	7	16	5	0	1	84	
4:50 PM	0	15	10	0	0	9	12	1	0	2	1	7	0	0	0	12	14	4	0	2	89	
4:55 PM	0	9	10	0	2	10	13	1	0	2	0	3	0	0	0	12	20	5	0	3	90	952
5:00 PM	0	9	8	0	2	9	10	0	0	0	0	19	2	0	0	7	16	6	0	1	89	963
5:05 PM	0	12	7	0	1	17	17	0	0	3	0	8	0	0	0	4	7	3	0	1	80	958
5:10 PM	1	13	8	0	4	11	12	0	0	0	1	16	2	0	1	10	18	10	0	1	108	990
5:15 PM	1	9	5	0	6	8	18	2	0	1	0	10	0	0	1	9	15	8	0	3	96	1013
5:20 PM	2	11	10	0	1	7	12	0	0	0	0	18	1	0	0	15	9	9	0	2	97	1035
5:25 PM	0	16	9	0	0	13	13	1	0	1	0	5	1	0	0	7	14	4	0	2	86	1051
5:30 PM	1	3	5	0	4	9	10	1	0	0	0	9	0	0	0	10	7	4	0	2	65	1052
5:35 PM	0	6	10	0	2	10	13	0	0	0	1	14	0	0	0	9	20	4	0	3	92	1069
5:40 PM	0	11	7	0	4	14	18	1	0	0	0	9	1	0	0	4	12	4	0	0	85	1061
5:45 PM	1	12	11	0	5	8	7	0	0	0	0	7	0	0	0	9	10	8	0	0	78	1055
5:50 PM	0	6	5	0	2	9	10	1	0	0	0	15	0	0	0	3	14	10	0	1	76	1042
5:55 PM	0	10	6	0	2	7	3	0	0	0	1	14	0	0	0	10	17	4	0	0	74	1026

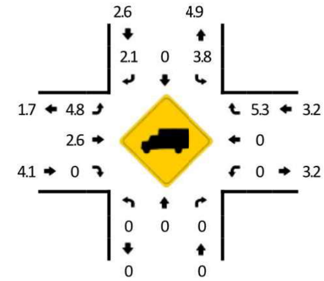
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	16	132	136	0	44	104	168	12	0	4	4	176	20	0	8	136	168	132	0	24	1284
Heavy Trucks	0	16	0			8	0	0			0	0	4			8	8	12			56
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

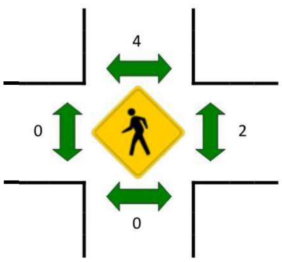
LOCATION: S Williams St -- E Milton St **QC JOB #:** 17274110
CITY/STATE: Lebanon, OR **DATE:** Wed, Oct 8 2025

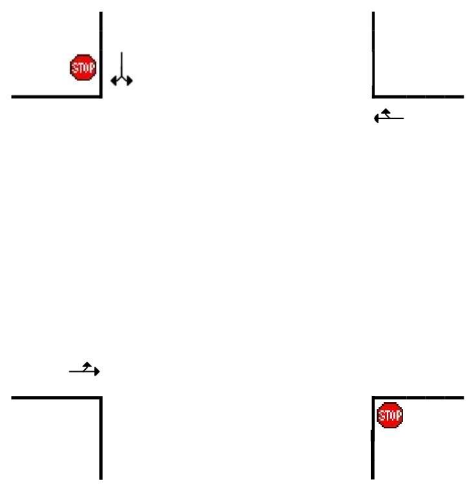
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

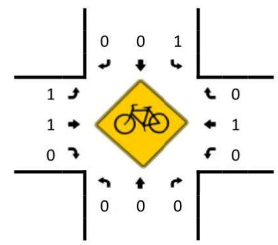


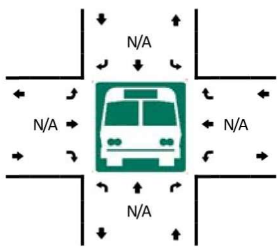


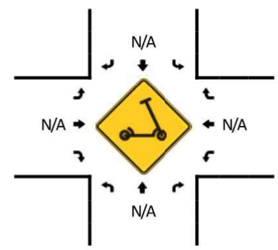
TRUE DATA TO IMPROVE MOBILITY











R* = RTOR

5-Min Count Period Beginning At	S Williams St (Northbound) Left	Thru	Right	U	R*	S Williams St (Southbound) Left	Thru	Right	U	R*	E Milton St (Eastbound) Left	Thru	Right	U	R*	E Milton St (Westbound) Left	Thru	Right	U	R*	Total	Hourly Totals
4:00 PM	0	0	0	0	0	10	0	14	0	0	13	4	0	0	0	0	3	7	0	0	51	
4:05 PM	0	0	0	0	0	6	0	7	0	0	15	1	0	0	0	0	3	8	0	0	40	
4:10 PM	0	0	0	0	0	8	0	15	0	0	18	9	0	0	0	0	1	1	0	0	52	
4:15 PM	0	0	0	0	0	8	0	11	0	0	9	4	0	0	0	0	4	5	0	0	41	
4:20 PM	0	0	0	0	0	2	0	12	0	0	13	4	0	0	0	0	1	1	0	0	33	
4:25 PM	0	0	0	0	0	12	0	15	0	0	11	5	0	0	0	0	5	3	0	0	51	
4:30 PM	0	0	0	0	0	3	0	13	0	0	13	4	0	0	0	0	1	8	0	0	42	
4:35 PM	0	0	0	0	0	6	0	14	0	0	15	7	0	0	0	0	2	5	0	0	49	
4:40 PM	0	0	0	0	0	9	0	20	0	0	11	8	0	0	0	0	3	5	0	0	56	
4:45 PM	0	0	0	0	0	4	0	13	0	0	8	9	0	0	0	0	3	5	0	0	42	
4:50 PM	0	0	0	0	0	7	0	15	0	0	13	6	0	0	0	0	0	6	0	0	47	
4:55 PM	0	0	0	0	0	8	0	13	0	0	20	4	0	0	0	0	1	2	0	0	48	552
5:00 PM	0	0	0	0	0	9	0	12	0	0	15	11	0	0	0	0	3	6	0	0	56	557
5:05 PM	0	0	0	0	0	5	0	13	0	0	14	3	0	0	0	0	5	8	0	0	48	565
5:10 PM	0	0	0	0	0	6	0	18	0	0	14	7	0	0	0	0	4	3	0	0	52	565
5:15 PM	0	0	0	0	0	7	0	19	0	0	16	6	0	0	0	0	3	7	0	0	58	582
5:20 PM	0	0	0	0	0	9	0	22	0	0	17	7	0	0	0	0	2	7	0	0	64	613
5:25 PM	0	0	0	0	0	6	0	19	0	0	12	3	0	0	0	0	4	4	0	0	48	610
5:30 PM	0	0	0	0	0	5	0	17	0	0	13	9	0	0	0	0	4	1	0	0	49	617
5:35 PM	0	0	0	0	0	5	0	11	0	0	15	5	0	0	0	0	6	3	0	0	45	613
5:40 PM	0	0	0	0	0	5	0	19	0	0	18	4	0	0	0	0	3	3	0	0	52	609
5:45 PM	0	0	0	0	0	4	0	11	0	0	17	4	0	0	0	0	2	3	0	0	41	608
5:50 PM	0	0	0	0	0	4	0	8	0	0	12	8	0	0	0	0	4	3	0	0	39	600
5:55 PM	0	0	0	0	0	5	0	12	0	0	14	4	0	0	0	0	3	3	0	0	41	593

Peak 15-Min Flowrates	Northbound Left	Thru	Right	U	R*	Southbound Left	Thru	Right	U	R*	Eastbound Left	Thru	Right	U	R*	Westbound Left	Thru	Right	U	R*	Total
All Vehicles	0	0	0	0	0	88	0	236	0	0	188	80	0	0	0	0	36	68	0	0	696
Heavy Trucks	0	0	0			0	0	4			8	0	0			0	0	8			20
Buses																					
Pedestrians		0					4					0					0				4
Bicycles	0	0	0			4	0	0			0	0	0			0	4	0			8
Scooters																					

Comments:

Appendix C
2025 Existing Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report
Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	0	0	191	0	0	387
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	7.00	0.00	0.00	5.00
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	1
Total Hourly Volume [veh/h]	0	0	191	0	0	388
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	57	0	0	115
Total Analysis Volume [veh/h]	0	0	227	0	0	462
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.68	9.40	0.00	0.00	7.66	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.54		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	6	192	81	40	79	1	5	73	4	113	147	136
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	7.00	15.00	15.00	10.00	0.00	0.00	3.00	0.00	3.00	1.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	15	0	0	1	0	0	4	0	0	37
Total Hourly Volume [veh/h]	6	192	66	40	79	0	5	73	0	113	147	99
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	54	19	11	22	0	1	21	0	32	41	28
Total Analysis Volume [veh/h]	7	216	74	45	89	0	6	82	0	127	165	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.19	0.09	0.05	0.26
s, saturation flow rate [veh/h]	1581	1413	1688	1531
c, Capacity [veh/h]	814	755	715	671
d1, Uniform Delay [s]	9.41	8.34	11.08	14.10
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.51	0.35	3.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.18	0.12	0.60
d, Delay for Lane Group [s/veh]	10.67	8.85	11.43	18.06
Lane Group LOS	B	A	B	B
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.26	0.90	0.70	4.42
50th-Percentile Queue Length [ft/ln]	56.47	22.41	17.49	110.41
95th-Percentile Queue Length [veh/ln]	4.07	1.61	1.26	7.86
95th-Percentile Queue Length [ft/ln]	101.65	40.34	31.49	196.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.67	10.67	10.67	8.85	8.85	8.85	11.43	11.43	11.43	18.06	18.06	18.06
Movement LOS	B	B	B	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.67			8.85			11.43			18.06		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	13.71											
Intersection LOS	B											
Intersection V/C	0.528											

Emissions

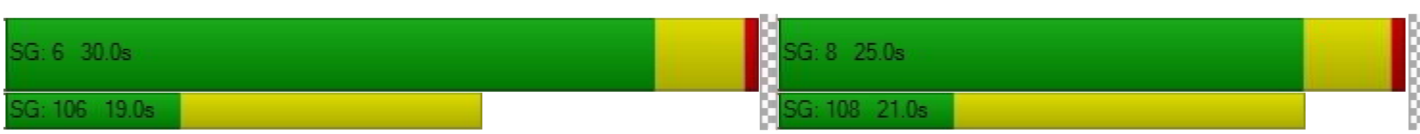
Vehicle Miles Traveled [mph]	128.65	6.24	4.75	202.39
Stops [stops/h]	147.86	58.68	45.80	289.08
Fuel consumption [US gal/h]	7.00	0.75	0.59	11.69
CO [g/h]	489.15	52.24	41.51	817.23
NOx [g/h]	95.17	10.16	8.08	159.00
VOC [g/h]	113.36	12.11	9.62	189.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.105	1.902	1.810	2.070
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.51	10.51
I_b,int, Bicycle LOS Score for Intersection	2.074	1.782	1.711	2.286
Bicycle LOS	B	A	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.127

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	129	32	25	185	57	114
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	6.00	8.00	3.00	5.00	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	1	0
Total Hourly Volume [veh/h]	129	32	25	185	58	114
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	10	7	55	17	34
Total Analysis Volume [veh/h]	154	38	30	220	69	136
Pedestrian Volume [ped/h]	0		0		1	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.02	0.00	0.13	0.16
d_M, Delay for Movement [s/veh]	0.00	0.00	7.71	0.00	13.58	11.10
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	1.17	1.17
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.27	1.27	29.15	29.15
d_A, Approach Delay [s/veh]	0.00		0.93		11.94	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.14					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	1	1	368	1	0	365
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	5.00
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	1	0	0	1
Total Hourly Volume [veh/h]	1	1	369	1	0	366
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	100	0	0	99
Total Analysis Volume [veh/h]	1	1	401	1	0	398
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.11	10.55	0.00	0.00	8.08	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.83		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	7	122	123	123	155	17	3	131	13	114	169	92
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	2.00	6.00	4.00	0.00	33.00	2.00	8.00	6.00	4.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	28	0	0	10	0	0	3	0	0	24
Total Hourly Volume [veh/h]	7	122	95	123	155	7	3	131	10	114	169	68
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	34	27	35	44	2	1	37	3	32	47	19
Total Analysis Volume [veh/h]	8	137	107	138	174	8	3	147	11	128	190	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			1			0			1		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.16	0.22	0.09	0.26
s, saturation flow rate [veh/h]	1545	1435	1695	1505
c, Capacity [veh/h]	798	772	714	661
d1, Uniform Delay [s]	9.13	9.53	11.61	13.96
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	1.64	0.73	3.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.41	0.23	0.60
d, Delay for Lane Group [s/veh]	10.17	11.17	12.34	17.89
Lane Group LOS	B	B	B	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.85	2.51	1.35	4.28
50th-Percentile Queue Length [ft/ln]	46.35	62.69	33.81	106.97
95th-Percentile Queue Length [veh/ln]	3.34	4.51	2.43	7.67
95th-Percentile Queue Length [ft/ln]	83.43	112.85	60.85	191.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.17	10.17	10.17	11.17	11.17	11.17	12.34	12.34	12.34	17.89	17.89	17.89
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.17			11.17			12.34			17.89		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.46											
Intersection LOS	B											
Intersection V/C	0.567											

Emissions

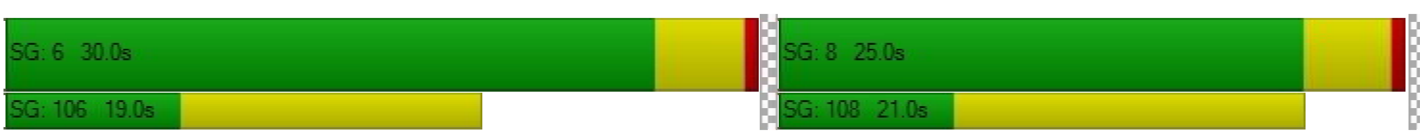
Vehicle Miles Traveled [mph]	109.16	14.91	8.68	197.87
Stops [stops/h]	121.35	164.14	88.51	280.06
Fuel consumption [US gal/h]	5.90	2.03	1.13	11.41
CO [g/h]	412.11	141.75	79.30	797.33
NOx [g/h]	80.18	27.58	15.43	155.13
VOC [g/h]	95.51	32.85	18.38	184.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.151	1.937	1.857	2.258
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.52	10.51
I_b,int, Bicycle LOS Score for Intersection	2.022	2.104	1.830	2.249
Bicycle LOS	B	B	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.109

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	168	78	80	192	38	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	4.00	2.00	0.00	5.00
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]	1	1	1	0	1	0
Total Hourly Volume [veh/h]	169	79	81	192	39	57
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	22	23	55	11	16
Total Analysis Volume [veh/h]	192	90	92	218	44	65
Pedestrian Volume [ped/h]	0		0		2	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.07	0.00	0.11	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	7.95	0.00	15.37	11.03
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.16	0.16	0.70	0.70
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.04	4.04	17.48	17.48
d_A, Approach Delay [s/veh]	0.00		2.36		12.78	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.03					
Intersection LOS	C					

Appendix D
2033 Background Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report

Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	0	0	224	0	0	453
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	7.00	0.00	0.00	5.00
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	1
Total Hourly Volume [veh/h]	0	0	224	0	0	454
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	67	0	0	135
Total Analysis Volume [veh/h]	0	0	267	0	0	540
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	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	15.18	9.64	0.00	0.00	7.75	0.00
Movement LOS	C	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.41		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	7	225	95	47	93	1	6	86	5	132	172	159
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	7.00	15.00	15.00	10.00	0.00	0.00	3.00	0.00	3.00	1.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	15	0	0	1	0	0	4	0	0	37
Total Hourly Volume [veh/h]	7	225	80	47	93	0	6	86	1	132	172	122
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	63	22	13	26	0	2	24	0	37	48	34
Total Analysis Volume [veh/h]	8	253	90	53	104	0	7	97	1	148	193	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.22	0.12	0.06	0.31
s, saturation flow rate [veh/h]	1578	1362	1689	1529
c, Capacity [veh/h]	813	731	715	670
d1, Uniform Delay [s]	9.83	8.47	11.20	15.09
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	0.67	0.43	6.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.21	0.15	0.71
d, Delay for Lane Group [s/veh]	11.50	9.14	11.63	21.48
Lane Group LOS	B	A	B	C
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.81	1.08	0.85	5.86
50th-Percentile Queue Length [ft/ln]	70.30	26.88	21.13	146.60
95th-Percentile Queue Length [veh/ln]	5.06	1.94	1.52	9.84
95th-Percentile Queue Length [ft/ln]	126.55	48.39	38.04	245.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.50	11.50	11.50	9.14	9.14	9.14	11.63	11.63	11.63	21.48	21.48	21.48
Movement LOS	B	B	B	A	A	A	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	11.50			9.14			11.63			21.48		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	15.54											
Intersection LOS	B											
Intersection V/C	0.626											

Emissions

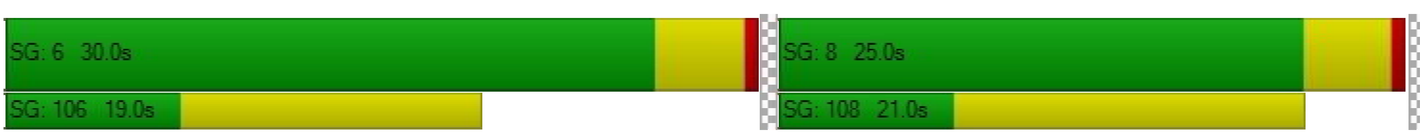
Vehicle Miles Traveled [mph]	152.04	7.32	5.66	240.06
Stops [stops/h]	184.07	70.38	55.33	383.81
Fuel consumption [US gal/h]	8.36	0.89	0.72	14.36
CO [g/h]	584.69	62.29	50.01	1003.54
NOx [g/h]	113.76	12.12	9.73	195.25
VOC [g/h]	135.51	14.44	11.59	232.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.172	1.939	1.831	2.128
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.51	10.51
I_b,int, Bicycle LOS Score for Intersection	2.164	1.820	1.739	2.409
Bicycle LOS	B	A	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.166

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	151	37	29	217	67	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	6.00	8.00	3.00	5.00	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	1	0
Total Hourly Volume [veh/h]	151	37	29	217	68	134
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	11	9	65	20	40
Total Analysis Volume [veh/h]	180	44	35	258	81	160
Pedestrian Volume [ped/h]	0		0		1	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.03	0.00	0.17	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	7.79	0.00	15.32	12.24
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.06	1.62	1.62
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.49	1.49	40.49	40.49
d_A, Approach Delay [s/veh]	0.00		0.93		13.28	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.58					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	1	1	431	1	0	428
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	5.00
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	1	0	0	1
Total Hourly Volume [veh/h]	1	1	432	1	0	429
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	117	0	0	117
Total Analysis Volume [veh/h]	1	1	470	1	0	466
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	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.19	11.07	0.00	0.00	8.27	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.38	0.38	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.13		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	8	143	144	144	182	20	4	153	15	134	198	108
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	2.00	6.00	4.00	0.00	33.00	2.00	8.00	6.00	4.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	28	0	0	10	0	0	3	0	0	24
Total Hourly Volume [veh/h]	8	143	116	144	182	10	4	153	12	134	198	84
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	40	33	40	51	3	1	43	3	38	56	24
Total Analysis Volume [veh/h]	9	161	130	162	204	11	4	172	13	151	222	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			1			0			1		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.19	0.27	0.11	0.31
s, saturation flow rate [veh/h]	1543	1383	1693	1502
c, Capacity [veh/h]	797	747	713	660
d1, Uniform Delay [s]	9.48	10.21	11.82	14.92
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	2.43	0.91	6.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.50	0.26	0.71
d, Delay for Lane Group [s/veh]	10.84	12.64	12.73	21.21
Lane Group LOS	B	B	B	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.31	3.23	1.62	5.67
50th-Percentile Queue Length [ft/ln]	57.72	80.85	40.57	141.73
95th-Percentile Queue Length [veh/ln]	4.16	5.82	2.92	9.57
95th-Percentile Queue Length [ft/ln]	103.90	145.52	73.03	239.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.84	10.84	10.84	12.64	12.64	12.64	12.73	12.73	12.73	21.21	21.21	21.21
Movement LOS	B	B	B	B	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	10.84			12.64			12.73			21.21		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.25											
Intersection LOS	B											
Intersection V/C	0.683											

Emissions

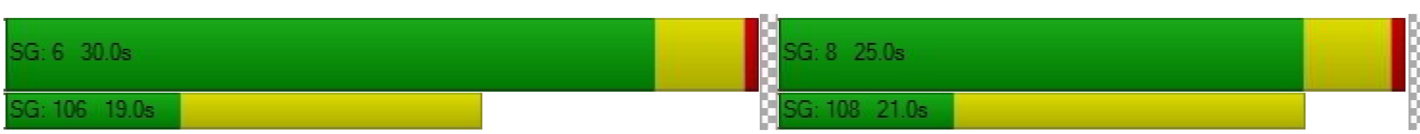
Vehicle Miles Traveled [mph]	129.95	17.57	10.19	234.53
Stops [stops/h]	151.12	211.67	106.23	371.07
Fuel consumption [US gal/h]	7.09	2.57	1.36	13.99
CO [g/h]	495.27	179.77	94.76	977.64
NOx [g/h]	96.36	34.98	18.44	190.21
VOC [g/h]	114.78	41.66	21.96	226.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.226	1.979	1.885	2.351
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.52	10.51
I_b,int, Bicycle LOS Score for Intersection	2.101	2.198	1.876	2.370
Bicycle LOS	B	B	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.153

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	197	91	94	225	45	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	4.00	2.00	0.00	5.00
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]	1	1	1	0	1	0
Total Hourly Volume [veh/h]	198	92	95	225	46	67
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	26	27	64	13	19
Total Analysis Volume [veh/h]	225	105	108	256	52	76
Pedestrian Volume [ped/h]	0		0		2	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.09	0.00	0.15	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	8.09	0.00	17.97	12.20
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.19	0.19	1.00	1.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.78	4.78	24.97	24.97
d_A, Approach Delay [s/veh]	0.00		2.40		14.55	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.33					
Intersection LOS	C					

Appendix E
Existing WesternU Driveway Counts

ort: Midblock Count - Volume Data

N: NE Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 8 2025 - O

e	Mon	Tue	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
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ort: Midblock Count - Volume Data

N: NE Access Dwy — QC JOB #:

LOCATION: — DIRECTIO

TE: Lebanon, OR — DATE: Oct 8 2025 - O

e	Mon	Tue	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			2	3		3			3	
			0	0		0			0	
			1	1		1			1	
			0	1		1			1	
			2	0		1			1	
			1	0		1			1	
			2	2		2			2	
			2	0		1			1	
			0	1		1			1	
			0	1		1			1	
			0	0		0			0	
			0	0		0			0	
			0	1		1			1	
			0	1		1			1	
			0	0		0			0	
			0	1		1			1	
			2	0		1			1	
			5	0		3			3	
			2	0		1			1	
			0	0		0			0	
			0	0		0			0	
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ort: Midblock Count - Volume Data

N: NE Access Dwy | QC JOB #:

LOCATION: | DIRECTIOI

TE: Lebanon, OR | DATE: Oct 8 2025 - O

e	Mon	Tue	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			1	**2**		2			2	
l			0	0		0			0	
l			1	0		1			1	
l			**4**	1		**3**			**3**	
l			0	0		0			0	
l			0	0		0			0	
l			1	1		1			1	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	1		1			1	
l			1	0		1			1	
l			0	0		0			0	
l			0	1		1			1	
l			0	0		0			0	
l			0	1		1			1	
l			0	0		0			0	
l			1	1		1			1	
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ort: Midblock Count - Volume Data

N: NE Access Dwy | QC JOB #:

LOCATION: | DIRECTIO

TE: Lebanon, OR | DATE: Oct 8 2025 - O

e	Mon	Tue	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
			1	1		1			1	
			0	0		0			0	
			2	0		1			1	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	1		1			1	
			0	0		0			0	
			0	0		0			0	
			0	2		1			1	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			0	0		0			0	
			1	1		1			1	
			0	0		0			0	
l			32	25		37			37	
y			86.5%	67.6%						
			86.5%	67.6%		100%				
l			11:00 AM 5	6:45 AM 3		6:45 AM 3			6:45 AM 3	
l			12:45 PM 4	12:00 PM 2		12:45 PM 3			12:45 PM 3	

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ort: Midblock Count - Volume Data

N: SE Access Dwy | QC JOB #:

LOCATION: | DIRECTIOI

TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			2	0		1			1	
l			0	3		2			2	
l			0	3		2			2	
l			1	1		1			1	
l			0	0		0			0	
l			2	0		1			1	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			1	0		1			1	
l			2	0		1			1	
l			0	0		0			0	
l			1	0		1			1	
l			0	0		0			0	
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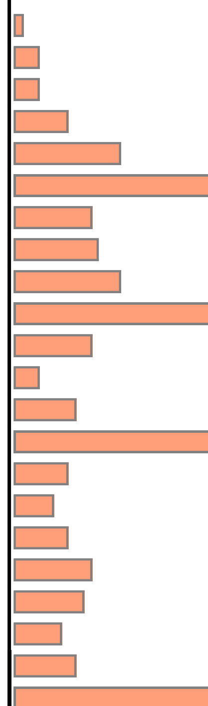
ort: Midblock Count - Volume Data

N: SE Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			0	0		0			0	
l			0	0		0			0	
l			1	1		1			1	
l			2	4		3			3	
l			4	2		3			3	
l			7	7		7			7	
l			18	10		14			14	
l			**40**	29		**35**			**35**	
l			10	10		10			10	
l			11	11		11			11	
l			15	12		14			14	
l			34	28		31			31	
l			6	13		10			10	
l			1	4		3			3	
l			9	7		8			8	
l			17	**36**		27			27	
l			5	9		7			7	
l			7	3		5			5	
l			6	7		7			7	
l			16	3		10			10	
l			11	6		9			9	
l			6	5		6			6	
l			9	7		8			8	
l			33	30		32			32	
l										
y										
l										
l										



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ort: Midblock Count - Volume Data

N: SE Access Dwy | QC JOB #:

LOCATION: | DIRECTIO

TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			26	30		28			28	
l			14	17		16			16	
l			17	15		16			16	
l			**38**	**40**		**39**			**39**	
l			12	6		9			9	
l			14	9		12			12	
l			3	9		6			6	
l			7	9		8			8	
l			7	2		5			5	
l			7	7		7			7	
l			13	6		10			10	
l			8	5		7			7	
l			12	9		11			11	
l			3	9		6			6	
l			3	6		5			5	
l			9	6		8			8	
l			8	16		12			12	
l			6	9		8			8	
l			11	10		11			11	
l			4	13		9			9	
l			16	16		16			16	
l			14	7		11			11	
l			11	3		7			7	
l			7	4		6			6	
l										
y										
l										
l										

:

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ort: Midblock Count - Volume Data

N: SE Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			4	5		5			5	
l			3	3		3			3	
l			6	1		4			4	
l			0	4		2			2	
l			1	7		4			4	
l			2	2		2			2	
l			1	7		4			4	
l			3	3		3			3	
l			0	2		1			1	
l			2	6		4			4	
l			3	2		3			3	
l			7	2		5			5	
l			2	4		3			3	
l			6	2		4			4	
l			6	3		5			5	
l			0	1		1			1	
l		0	1			1			1	
l		6	0			3			3	
l		0	2			1			1	
l		0	0			0			0	
l		1	0			1			1	
l		0	2			1			1	
l		1	3			2			2	
l		0	2			1			1	
l		8	603	568		607			607	
y		1.3%	99.3%	93.6%						
		1.3%	99.3%	93.6%		100%				
l		12:00 AM	7:45 AM 40	9:45 AM 36		7:45 AM 35			7:45 AM 35	
l		10:15 PM 6	12:45 PM 38	12:45 PM 40		12:45 PM 39			12:45 PM 39	

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erated on 10/15/2025 2:54 PM | SOURCE: Quality Counts, LLC (http://www.quality

ort: Midblock Count - Volume Data

N: W Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			0	1		1			1	
l			0	2		1			1	
l			0	0		0			0	
l			1	0		1			1	
l			0	0		0			0	
l			2	0		1			1	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			0	0		0			0	
l			1	0		1			1	
l			0	0		0			0	
l			0	0		0			0	
l			1	0		1			1	
l			1	1		1			1	
l										
y										
l										
l										

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erated on 10/15/2025 2:54 PM SOURCE: Quality Counts, LLC (http://www.quality

ort: Midblock Count - Volume Data

N: W Access Dwy | QC JOB #:

LOCATION: | DIRECTIO

TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
1			0	0		0			0	
1			1	1		1			1	
1			0	0		0			0	
1			1	2		2			2	
1			0	0		0			0	
1			2	4		3			3	
1			19	8		14			14	
1			**37**	**36**		**37**			**37**	
1			5	7		6			6	
1			8	12		10			10	
1			17	21		19			19	
1			37	34		36			36	
1			5	6		6			6	
1			2	4		3			3	
1			7	7		7			7	
1			20	16		18			18	
1			9	5		7			7	
1			3	20		12			12	
1			7	4		6			6	
1			6	0		3			3	
1			3	1		2			2	
1			2	2		2			2	
1			6	9		8			8	
1			26	36		31			31	
l										
y										
l										
l										

:

ort: Midblock Count - Volume Data

N: W Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			21	13		17			17	
l			14	14		14			14	
l			11	8		10			10	
l			**24**	15		20			20	
l			12	17		15			15	
l			8	7		8			8	
l			1	2		2			2	
l			2	6		4			4	
l			6	6		6			6	
l			4	23		14			14	
l			4	8		6			6	
l			4	5		5			5	
l			18	**27**		**23**			**23**	
l			8	6		7			7	
l			8	5		7			7	
l			5	8		7			7	
l			5	12		9			9	
l			3	5		4			4	
l			5	4		5			5	
l			3	6		5			5	
l			14	5		10			10	
l			5	5		5			5	
l			3	4		4			4	
l			7	2		5			5	
l										
y										
l										
l										

:

ort: Midblock Count - Volume Data

N: W Access Dwy | QC JOB #:
LOCATION: | DIRECTIO
TE: Lebanon, OR | DATE: Oct 7 2025 - O

e	Mon	Tue 7 Oct 25	Wed 8 Oct 25	Thu 9 Oct 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week
l			2	5		4			4	
l			3	1		2			2	
l			4	1		3			3	
l			4	4		4			4	
l			2	4		3			3	
l			1	2		2			2	
l			1	6		4			4	
l			1	7		4			4	
l			1	3		2			2	
l			5	0		3			3	
l			1	0		1			1	
l			1	0		1			1	
l			1	0		1			1	
l			1	1		1			1	
l			1	1		1			1	
l			0	2		1			1	
l		0	0			0			0	
l		0	1			1			1	
l		0	2			1			1	
l		1	0			1			1	
l		1	2			2			2	
l		0	0			0			0	
l		0	1			1			1	
l		0	3			2			2	
l		2	462	489		497			497	
y		0.4%	93%	98.4%						
		0.4%	93%	98.4%		100%				
l		12:00 AM	7:45 AM 37	7:45 AM 36		7:45 AM 37			7:45 AM 37	
l		10:45 PM 1	12:45 PM 24	3:00 PM 27		3:00 PM 23			3:00 PM 23	

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Appendix F
2033 Total Traffic Conditions Worksheets and Volumes

Intersection Level Of Service Report
Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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	1	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	6	0	224	122	7	453
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	7.00	0.00	0.00	5.00
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	1
Total Hourly Volume [veh/h]	6	0	224	122	7	454
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	67	36	2	135
Total Analysis Volume [veh/h]	7	0	267	145	8	540
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.02	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	16.86	10.09	0.00	0.00	8.12	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	1.73	0.00	0.00	0.00	0.33	0.33
d_A, Approach Delay [s/veh]	16.86		0.00		0.12	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.19					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	7	225	95	155	93	1	6	100	5	132	173	164
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	7.00	15.00	15.00	10.00	0.00	0.00	3.00	0.00	3.00	1.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	15	0	0	1	0	0	4	0	0	37
Total Hourly Volume [veh/h]	7	225	80	155	93	0	6	100	1	132	173	127
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	63	22	44	26	0	2	28	0	37	49	36
Total Analysis Volume [veh/h]	8	253	90	174	104	0	7	112	1	148	194	143
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.22	0.26	0.07	0.32
s, saturation flow rate [veh/h]	1578	1069	1692	1527
c, Capacity [veh/h]	813	612	715	668
d1, Uniform Delay [s]	9.83	10.52	11.30	15.18
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	2.43	0.51	6.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.45	0.17	0.73
d, Delay for Lane Group [s/veh]	11.50	12.95	11.81	21.94
Lane Group LOS	B	B	B	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.81	2.51	0.98	6.03
50th-Percentile Queue Length [ft/ln]	70.30	62.70	24.42	150.71
95th-Percentile Queue Length [veh/ln]	5.06	4.51	1.76	10.06
95th-Percentile Queue Length [ft/ln]	126.55	112.86	43.95	251.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.50	11.50	11.50	12.95	12.95	12.95	11.81	11.81	11.81	21.94	21.94	21.94
Movement LOS	B	B	B	B	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	11.50			12.95			11.81			21.94		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.96											
Intersection LOS	B											
Intersection V/C	0.676											

Emissions

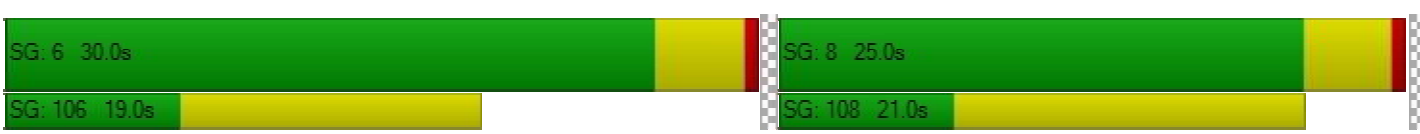
Vehicle Miles Traveled [mph]	152.04	12.96	6.47	243.57
Stops [stops/h]	184.07	164.15	63.92	394.60
Fuel consumption [US gal/h]	8.36	1.94	0.82	14.63
CO [g/h]	584.69	135.94	57.65	1022.79
NOx [g/h]	113.76	26.45	11.22	199.00
VOC [g/h]	135.51	31.51	13.36	237.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.172	1.991	1.837	2.358
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.51	10.51
I_b,int, Bicycle LOS Score for Intersection	2.164	2.020	1.764	2.421
Bicycle LOS	B	B	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	151	51	29	217	68	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	6.00	8.00	3.00	5.00	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	1	0
Total Hourly Volume [veh/h]	151	51	29	217	69	134
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	15	9	65	21	40
Total Analysis Volume [veh/h]	180	61	35	258	82	160
Pedestrian Volume [ped/h]	0		0		1	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.03	0.00	0.17	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	7.83	0.00	15.53	12.40
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.06	1.66	1.66
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.49	1.49	41.53	41.53
d_A, Approach Delay [s/veh]	0.00		0.94		13.46	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.55					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Grant Street / Access road

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.312

Intersection Setup

Name	Access road		Grant Street		Grant Street	
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	1	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Access road		Grant Street		Grant Street	
Base Volume Input [veh/h]	83	5	431	28	2	428
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	5.00
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	1	0	0	1
Total Hourly Volume [veh/h]	83	5	432	28	2	429
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	1	117	8	1	117
Total Analysis Volume [veh/h]	90	5	470	30	2	466
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.31	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	23.05	11.19	0.00	0.00	8.35	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.29	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.34	0.65	0.00	0.00	0.08	0.08
d_A, Approach Delay [s/veh]	22.43		0.00		0.04	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Grant Street / Williams Street

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name	Williams Street			Williams Street			Grant Street			Grant Street		
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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Williams Street			Williams Street			Grant Street			Grant Street		
Base Volume Input [veh/h]	8	143	144	168	182	20	4	156	15	134	208	180
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	2.00	6.00	4.00	0.00	33.00	2.00	8.00	6.00	4.00	7.00
Proportion of CAVs [%]	0.00											
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
Right Turn on Red Volume [veh/h]	0	0	28	0	0	10	0	0	3	0	0	24
Total Hourly Volume [veh/h]	8	143	116	168	182	10	4	156	12	134	208	156
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	2	40	33	47	51	3	1	44	3	38	58	44
Total Analysis Volume [veh/h]	9	161	130	189	204	11	4	175	13	151	234	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing m	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing	1			1			0			1		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	6	0	0	8	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	25	0	0	25	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	12.0	0.0	0.0	12.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	26.0	21.0	21.0
g / C, Green / Cycle	0.47	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.19	0.30	0.11	0.37
s, saturation flow rate [veh/h]	1543	1345	1700	1501
c, Capacity [veh/h]	797	732	716	656
d1, Uniform Delay [s]	9.48	10.68	11.85	16.47
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	2.99	0.92	13.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.55	0.27	0.85
d, Delay for Lane Group [s/veh]	10.84	13.67	12.77	29.74
Lane Group LOS	B	B	B	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.31	3.68	1.65	8.41
50th-Percentile Queue Length [ft/ln]	57.72	92.01	41.29	210.31
95th-Percentile Queue Length [veh/ln]	4.16	6.62	2.97	13.17
95th-Percentile Queue Length [ft/ln]	103.90	165.61	74.33	329.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.84	10.84	10.84	13.67	13.67	13.67	12.77	12.77	12.77	29.74	29.74	29.74
Movement LOS	B	B	B	B	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	10.84			13.67			12.77			29.74		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	19.15											
Intersection LOS	B											
Intersection V/C	0.788											

Emissions

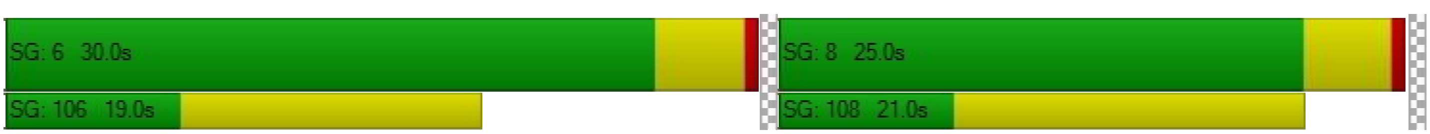
Vehicle Miles Traveled [mph]	129.95	18.83	10.35	281.24
Stops [stops/h]	151.12	240.89	108.11	550.64
Fuel consumption [US gal/h]	7.09	2.89	1.38	18.15
CO [g/h]	495.27	202.35	96.41	1268.63
NOx [g/h]	96.36	39.37	18.76	246.83
VOC [g/h]	114.78	46.90	22.34	294.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.60	17.60	17.60	17.60
I_p,int, Pedestrian LOS Score for Intersectio	2.226	2.023	1.891	2.439
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	945	945	764	764
d_b, Bicycle Delay [s]	7.65	7.65	10.52	10.51
I_b,int, Bicycle LOS Score for Intersection	2.101	2.243	1.881	2.523
Bicycle LOS	B	B	A	B

Sequence

Ring 1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Milton Street / Williams Street

Control Type:	Two-way stop	Delay (sec / veh):	18.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.188

Intersection Setup

Name	Milton Street (EB)		Williams Street		Milton Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Milton Street (EB)		Williams Street		Milton Street	
Base Volume Input [veh/h]	197	94	94	225	55	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	4.00	2.00	0.00	5.00
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]	1	1	1	0	1	0
Total Hourly Volume [veh/h]	198	95	95	225	56	67
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	27	27	64	16	19
Total Analysis Volume [veh/h]	225	108	108	256	64	76
Pedestrian Volume [ped/h]	0		0		2	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.09	0.00	0.19	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	8.10	0.00	18.59	12.81
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.19	0.19	1.19	1.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.78	4.78	29.75	29.75
d_A, Approach Delay [s/veh]	0.00		2.40		15.45	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.63					
Intersection LOS	C					

Wetlands Delineation Report & DSL Concurrence

Oregon
Tina Kotek, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

July 25, 2024

Heatherington Foundation for Innovation and Education in Health Care, Inc.
Attn: Jeff Heatherington
2121 SW Broadway, Suite 115
Portland, OR 97201

Re: WD # 2024-0052 **Approved**
Wetland Delineation Report for Willamette Industries Mill Site
Linn County; T12S R2W S11 TL1000

Dear Jeff Heatherington:

The Department of State Lands has reviewed the wetland delineation report prepared by Turnstone Environmental Consultants, Inc. for the site referenced above. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figure 6 and Figure 6A-6G of the report. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the study areas, 17 wetlands (Wetland 1 through 17), 2 waters (Slough and Open Water), and 2 ditches (Ditch 1 and 2) were identified. The Slough is subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). The remaining wetlands, water and ditches are exempt per OAR 141-085-0515(6) and (8); and therefore, are not subject to these state permit requirements.

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal, other state agencies or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact the Wetland Ecologist for Linn County, Josh Goldsmith, at (971) 375-1675.

Sincerely,

Peter Ryan, SPWS
Aquatic Resource Specialist

Enclosures

ec: Joe Bettis, Turnstone Environmental Consultants, Inc.
Lyle Hutchens, MCH Project Strategies, LLC
Lebanon Planning Department (Maps enclosed for refining LWI)
Alexandra Holecek, Corps of Engineers
Charles Redon, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

A complete report and signed report cover form, along with applicable review fee, are required before a report review timeline can be initiated by the Department of State Lands. All applicants will receive an emailed confirmation that includes the report's unique file number and other information.

Ways to submit report:

- **Under 50MB -** A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- **50MB or larger -** A single unlocked PDF can be uploaded to the Jurisdiction Box.com folder. Email wetland.delineation@dsl.oregon.gov of the new upload.
- Unbound paper report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- By credit card on DSL's epayment portal after receiving the unique file number from DSL's emailed confirmation.
- By check payable to the Oregon Department of State Lands attached to the unbound paper report OR attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information

☐ Applicant ☒ Owner Name, Firm and Address:
Jeff Heatherington
Heatherington Foundation for Innovation and Education in Health Care, Inc.
2121 SW Broadway STE 115
Portland, OR 97201

Business phone # (503) 313-0986
Mobile phone # (optional)
E-mail: jeffh@foundation.health

☒ Authorized Legal Agent, Name and Address (if different):
Lyle Hutchens
MCH Project Strategies, LLC
806 NW Buchanan Ave #102
Corvallis, OR 97330

Business phone # (541) 740-3679
Mobile phone # (optional)
E-mail: lyle@mchps.net

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Jeff Heatherington, President **Signature:** Jeff Heatherington Digitally signed by Jeff Heatherington Date: 2024.01.14 19:10:35 -08'00'

Date: 01/09/2024 Special instructions regarding site access: call prior

Project and Site Information

Project Name: Willamette Industries Mill Site	Latitude: 44.532299° Longitude: -122.891229° **decimal degree** - centroid of site or start & end points of linear project
Proposed Use: Health Sciences Campus (Redevelopment)	Tax Map # 12S02W11 Tax Lot(s) 1000 Tax Map # Tax Lot(s)
Project Street Address (or other descriptive location): 44.532108410370796°, -122.89400142609519°: terminus of East Milton Street	Township 12S Range 2W Section 11 QQ Use separate sheet for additional tax and location information
City: Lebanon County: Linn	Waterway: N/A River Mile: N/A

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Joe Bettis, Turnstone Environmental Consultants, Inc.
PO Box 816
Philomath, OR 97370

Phone # (503) 283-5338
Mobile phone # (if applicable)
E-mail: joe@turnstoneenvironmental.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Date: 12/12/2023

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 119.5 Total Wetland Acreage: 1.8400

Check Applicable Boxes Below

- ☐ R-F permit application submitted
- ☐ Mitigation bank site
- ☐ EFSC/ODOE Proj. Mgr: ______
- ☐ Wetland restoration/enhancement project (not mitigation)
- ☐ Previous delineation/application on parcel
  If known, previous DSL # _____
- ☐ Fee payment submitted $ _____
- ☐ Resubmittal of rejected report ($100)
- ☐ Request for Reissuance. See eligibility criteria. (no fee)
  DSL # _____ Expiration date_____
- ☐ LWI shows wetlands or waters on parcel
  Wetland ID code _____

For Office Use Only

DSL Reviewer: ______________ Fee Paid Date: _____ / _____ / _____ DSL WD # ______________

Date Delineation Received: ___/ ___/ ___ DSL App.# ______________

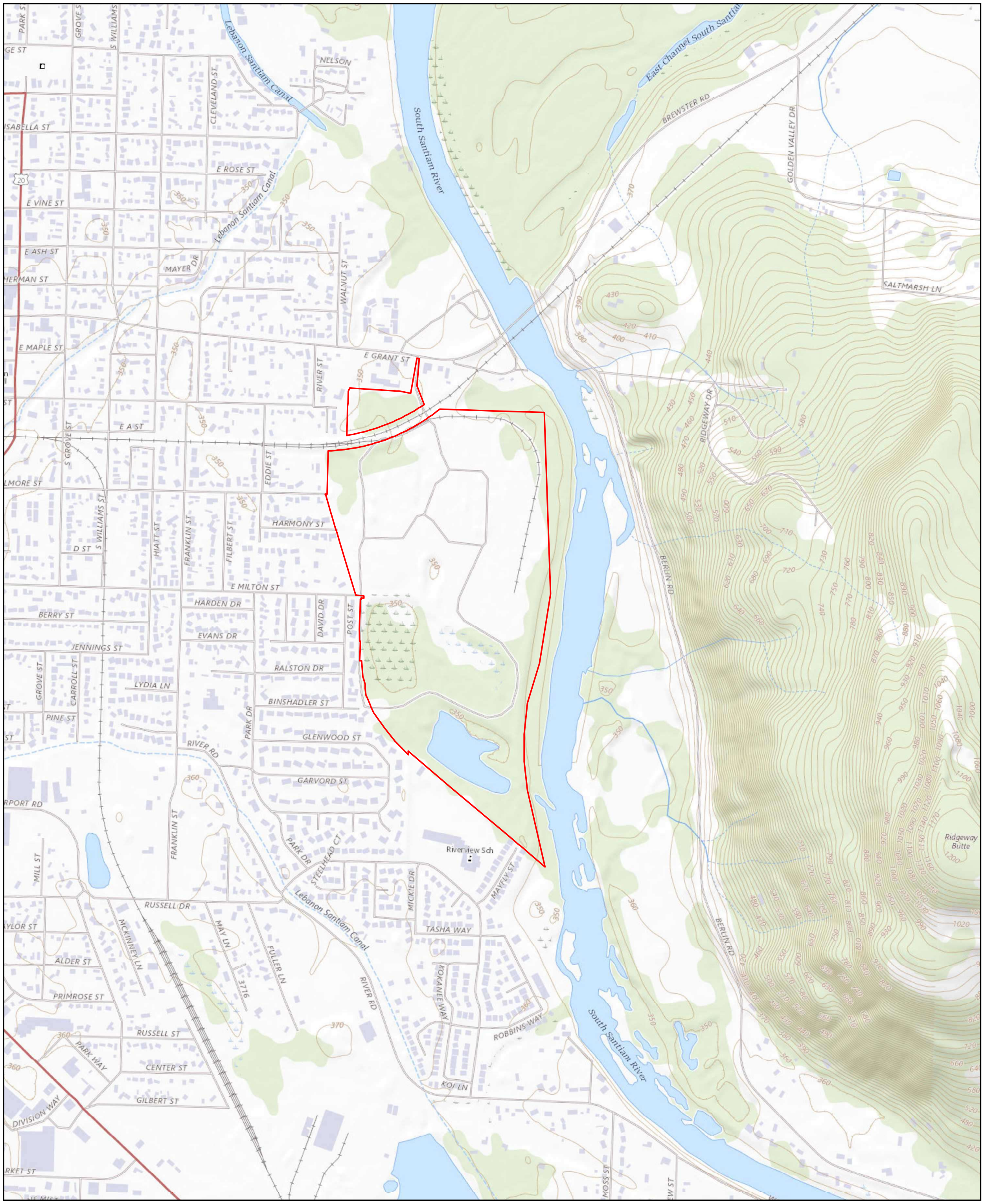
Figure 1:

DEVCO-Tax Lot 1000 Lebanon Wetland Delineation

Lebanon, Linn County, OR

Study Area Overview Map

10/19/2023



Legend

StudyArea

Notes:

1. *Topographic basemap courtesy USGS, The National Map, 2023*
2. *Native size of map layout is 11"x17".*

N W E S

0 1,100 2,200 4,400 Feet

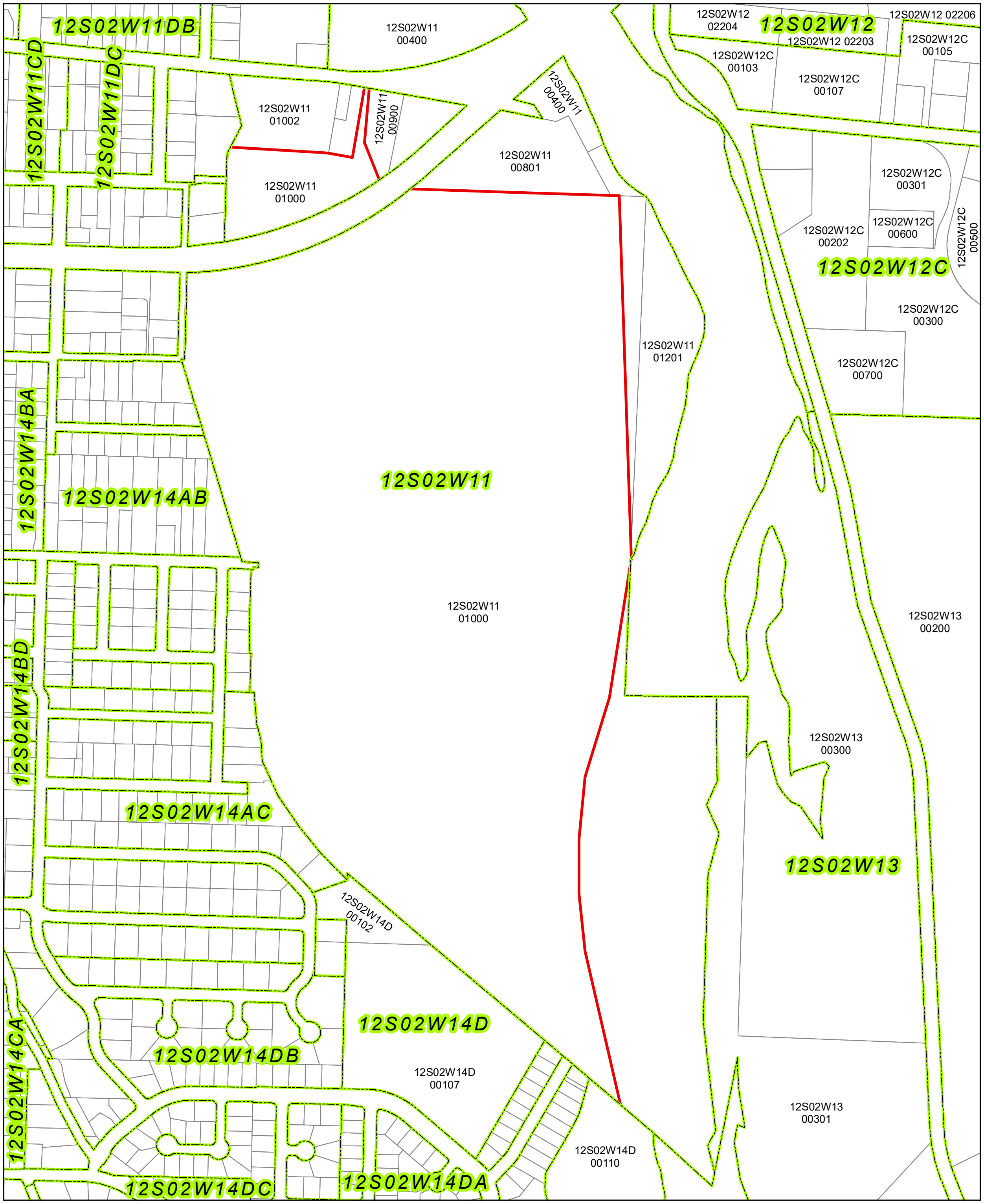
Figure 2:

Tax Lot Map

DEVCO-Tax Lot 1000 Lebanon Wetland Delineation

Lebanon, Linn County, OR

10/19/2023



Legend

Study Area

Tax_Map

Tax Lot

Notes:

1. Tax lot data courtesy Linn County, 2020.

2. Native size of map layout is 11"x17".

0 550 1,100 2,200 Feet

N W E S

TURNSTONE ENVIRONMENTAL CONSULTANTS

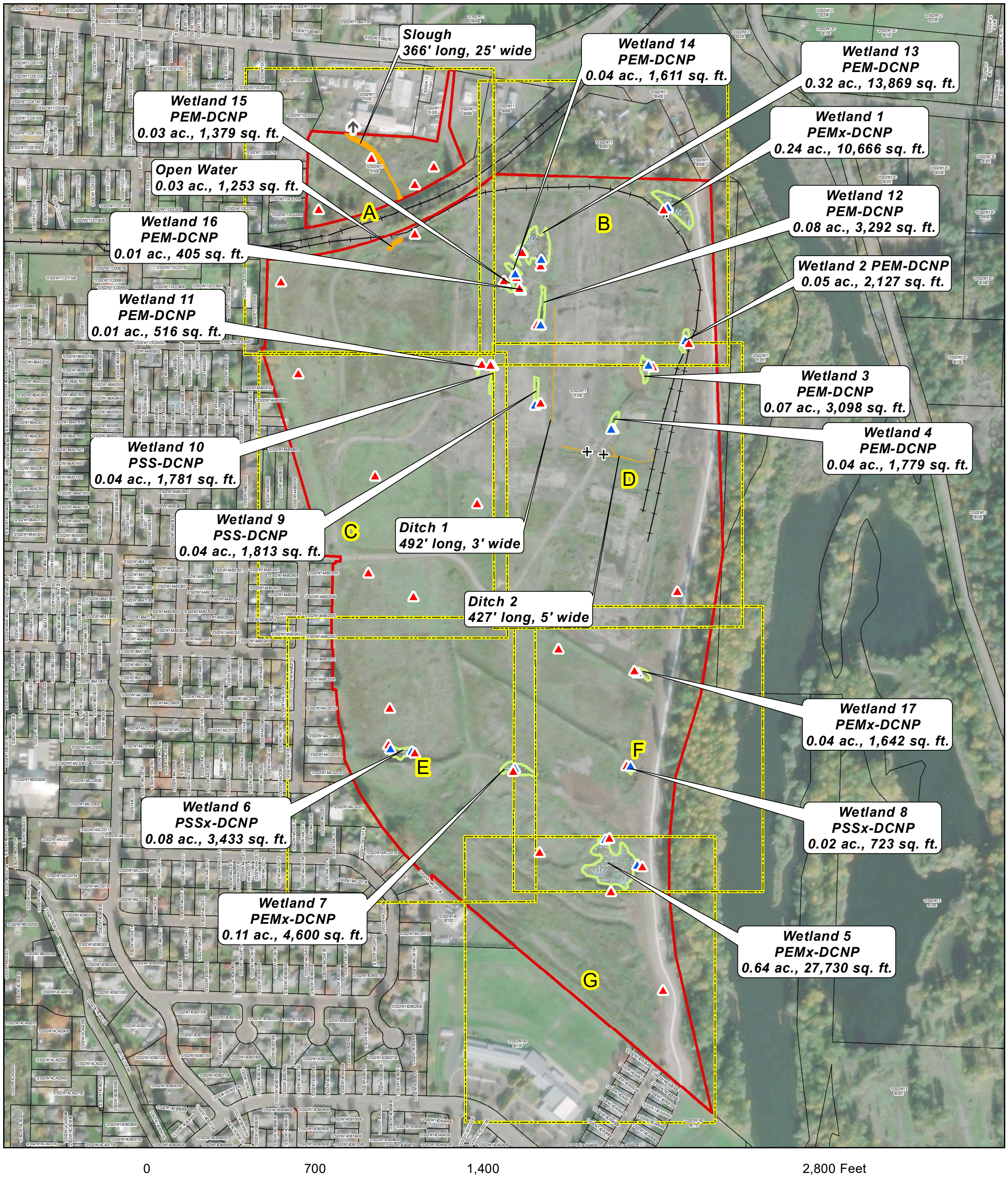
Figure 6:
Wetland Delineation Map (Overview)

Date: 5/13/2024

Tax Lot 1000
MCH LLC
Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Legend

- Detail Map
- Railroad
- Study Area
- Tax Lot
- Non-Wetland Water
- Water Extends
- Culvert

Sample Plot

- Upland
- Wetland
- Wetland

Notes:

1. All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.
2. Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.
3. Native size of map layout is 11"x17".
4. Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).
5. Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded

N

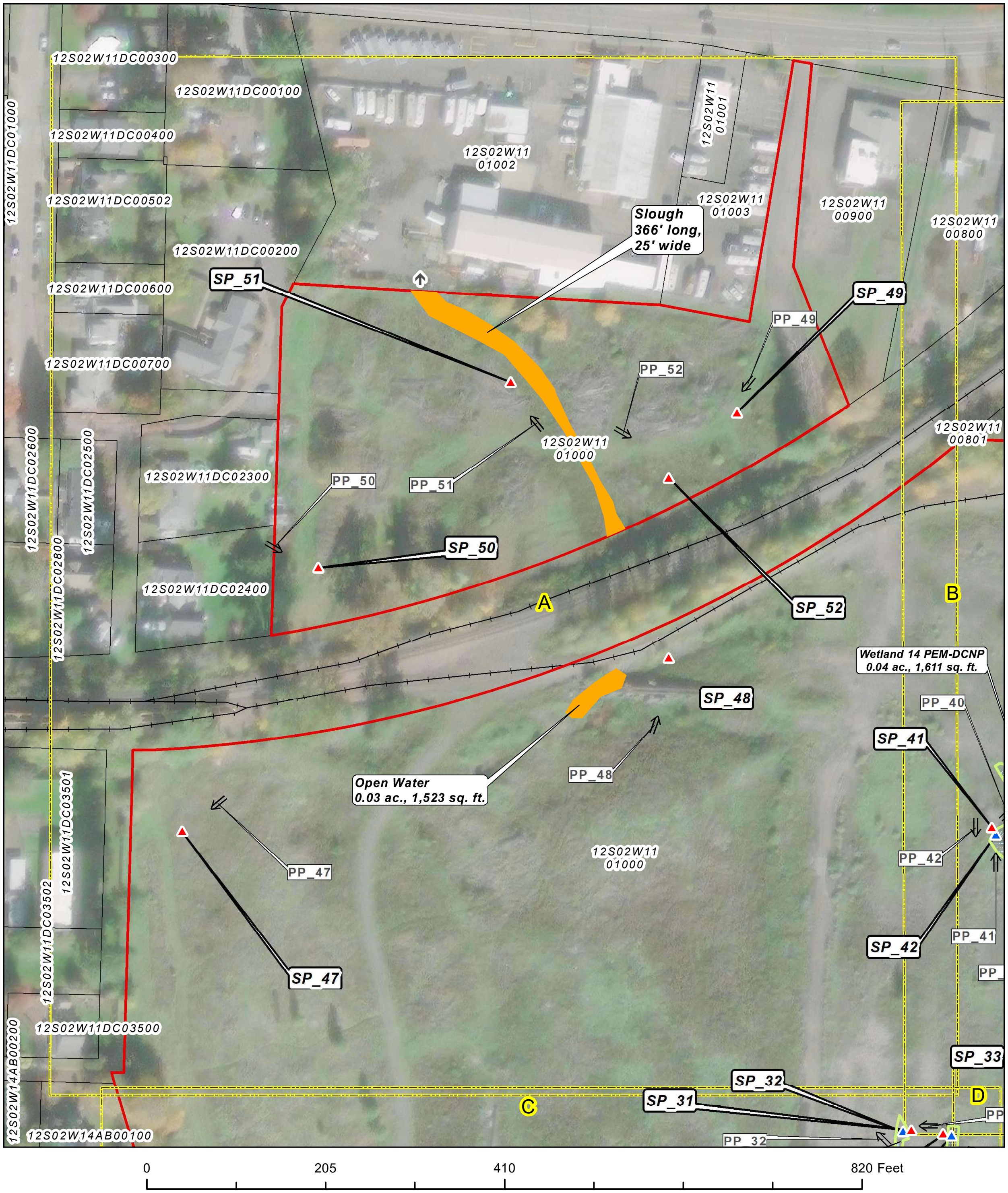
Figure 6A: Wetland Delineation Map (Detail Area A)

Date: 5/13/2024

Tax Lot 1000 MCH LLC Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Legend

- Detail Map
- Railroad
- Study Area
- Tax Lot
- Photo Point
- Non-Wetland Water
- Water Extends

Sample Plot

- Upland
- Wetland
- Wetland

Notes:

1. All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.

2. Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.

3. Native size of map layout is 11"x17".

4. Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).

5. Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded

N

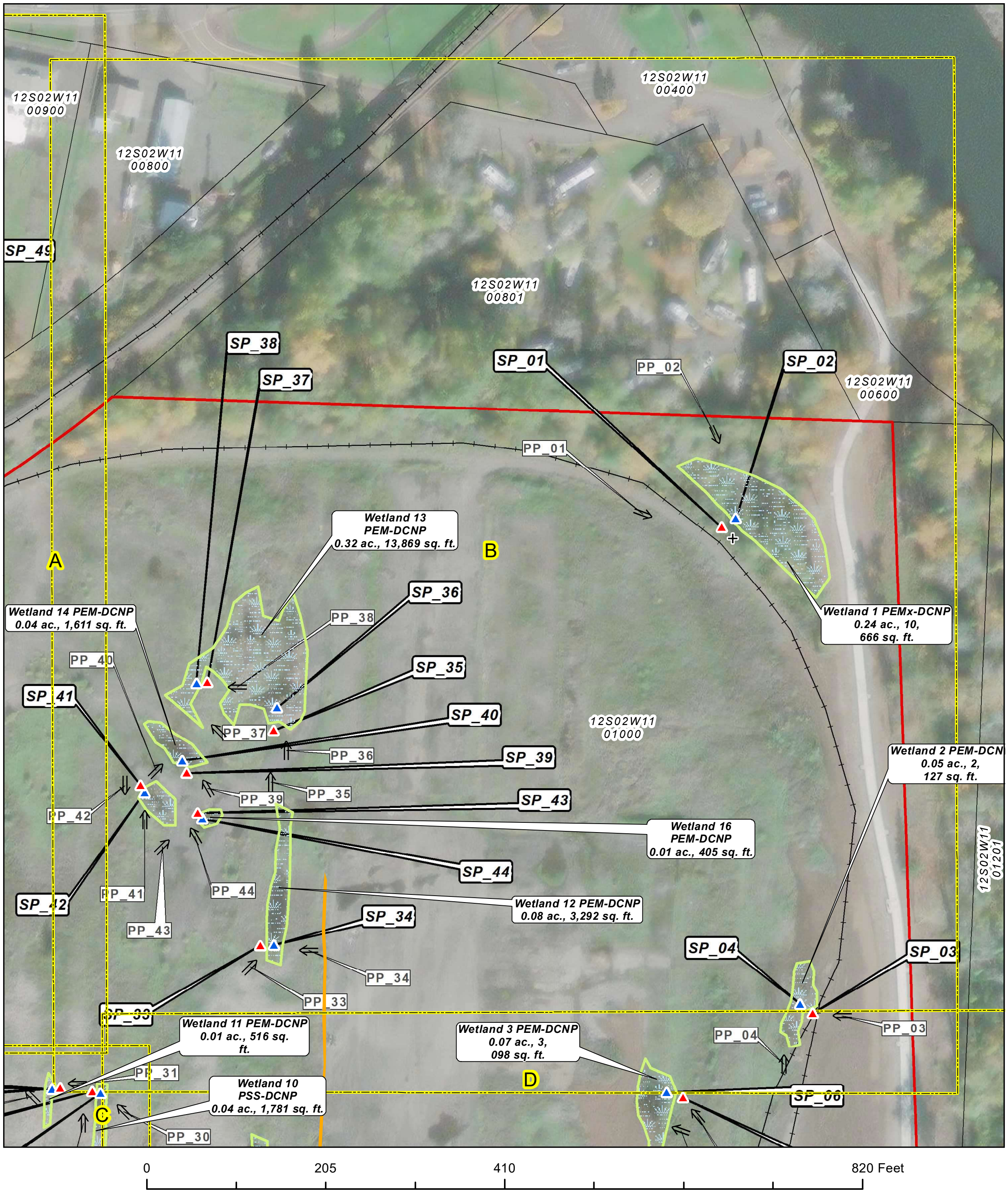
Figure 6B: Wetland Delineation Map (Detail Area B)

Date: 5/13/2024

Tax Lot 1000 MCH LLC Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Legend

- Detail Map
- Railroad
- Study Area
- Tax Lot
- Photo Point
- Non-Wetland Water
- Culvert

Sample Plot

- Upland
- Wetland
- Wetland

Notes:

1. *All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.*
2. *Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.*
3. *Native size of map layout is 11"x17".*
4. *Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).*
5. *Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded*

N

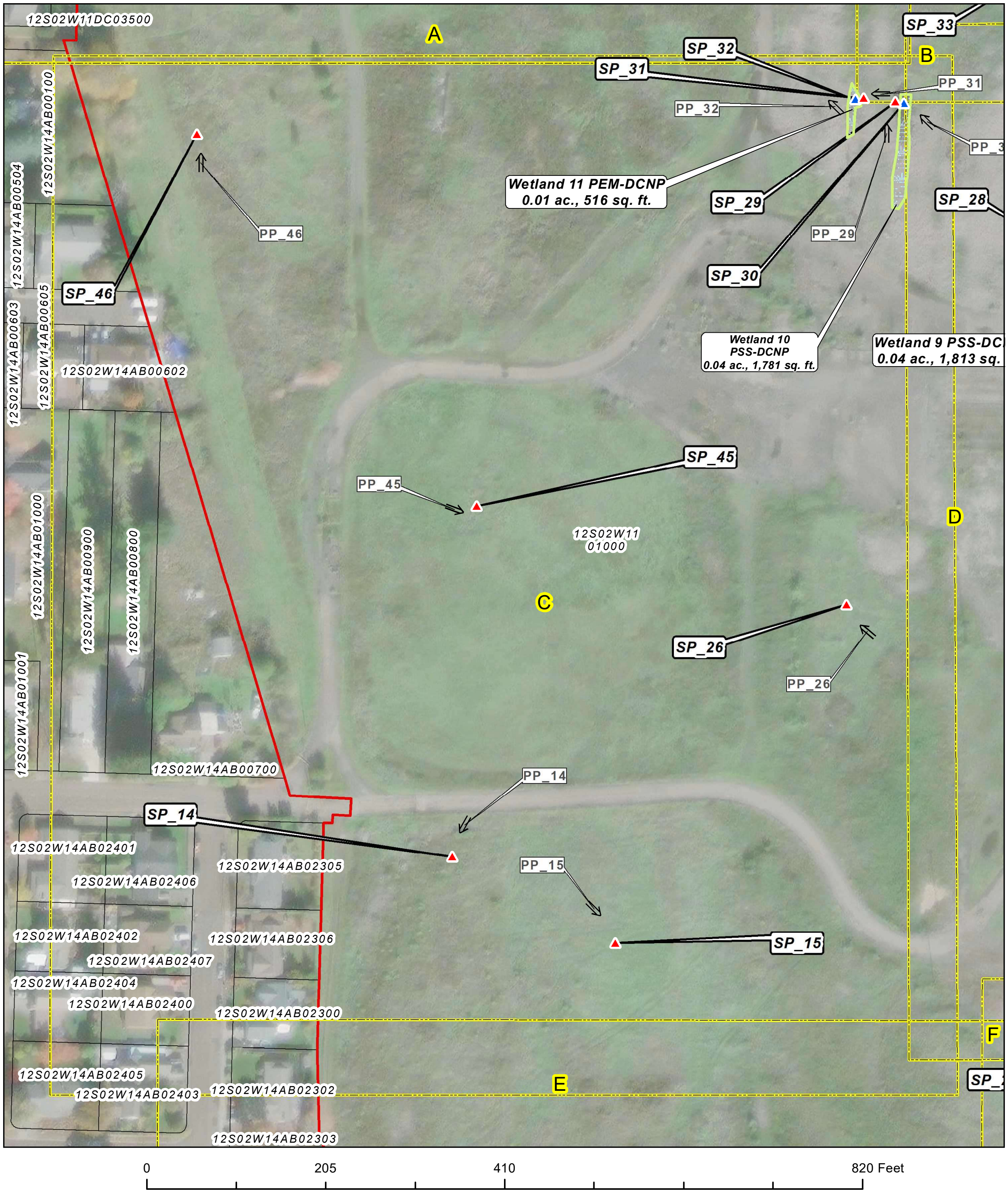
Figure 6C: Wetland Delineation Map (Detail Area C)

Date: 5/13/2024

Tax Lot 1000
MCH LLC
Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued: 7/25/2024
Approval Expires 7/25/2029



Notes:

1. All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.

2. Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.

3. Native size of map layout is 11"x17".

4. Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).

5. Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded

N

Legend

Detail Map
Study Area
Tax Lot
Photo Point

Sample Plot

Upland
Wetland
Wetland

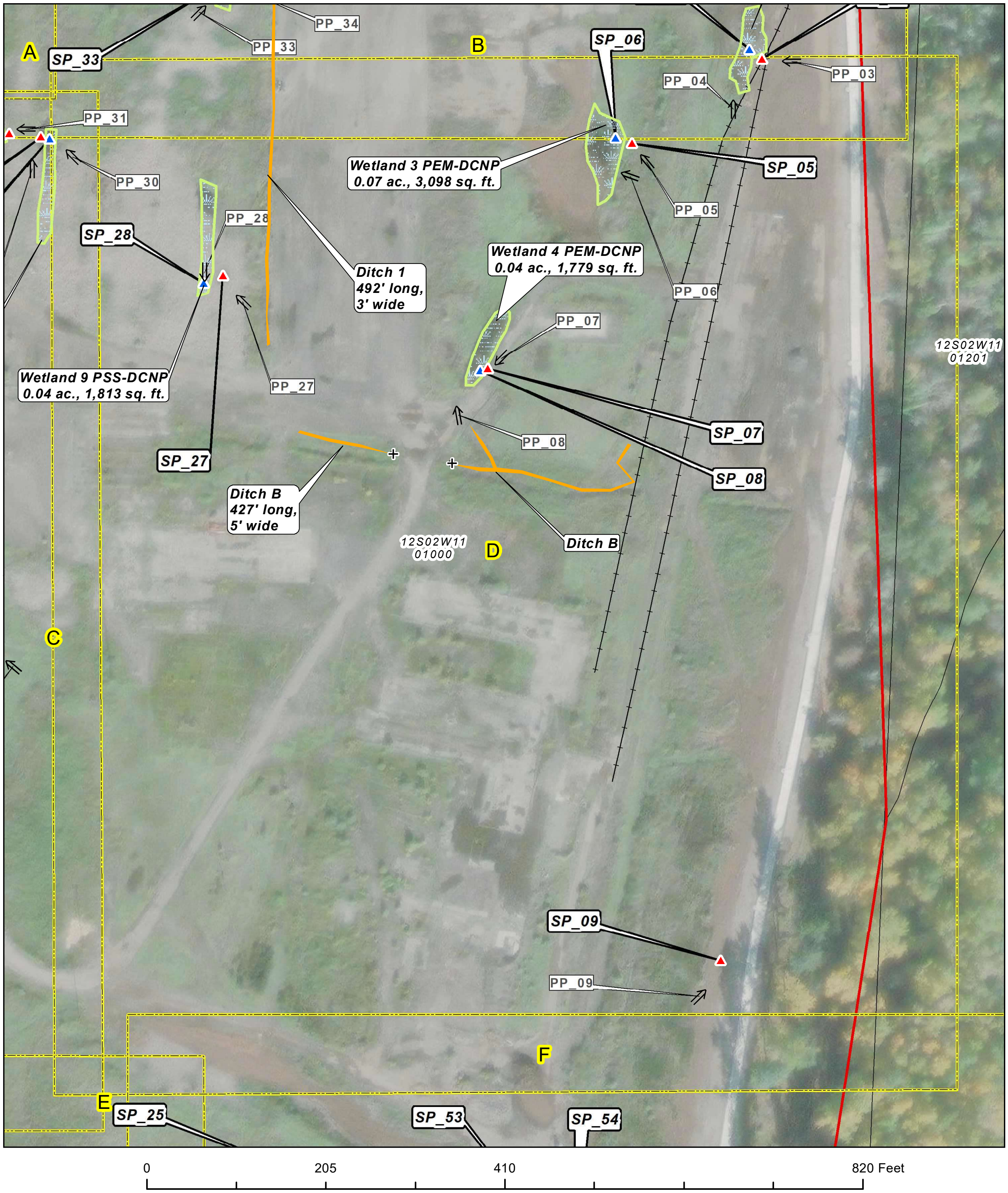
Figure 6D: Wetland Delineation Map (Detail Area D)

Date: 5/13/2024

Tax Lot 1000
MCH LLC
Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Legend

- Detail Map
- Railroad
- Study Area
- Tax Lot
- Photo Point
- Non-Wetland Water
- Culvert

Sample Plot

- Upland
- Wetland
- Wetland

Notes:

1. *All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.*
2. *Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.*
3. *Native size of map layout is 11"x17".*
4. *Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).*
5. *Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded*

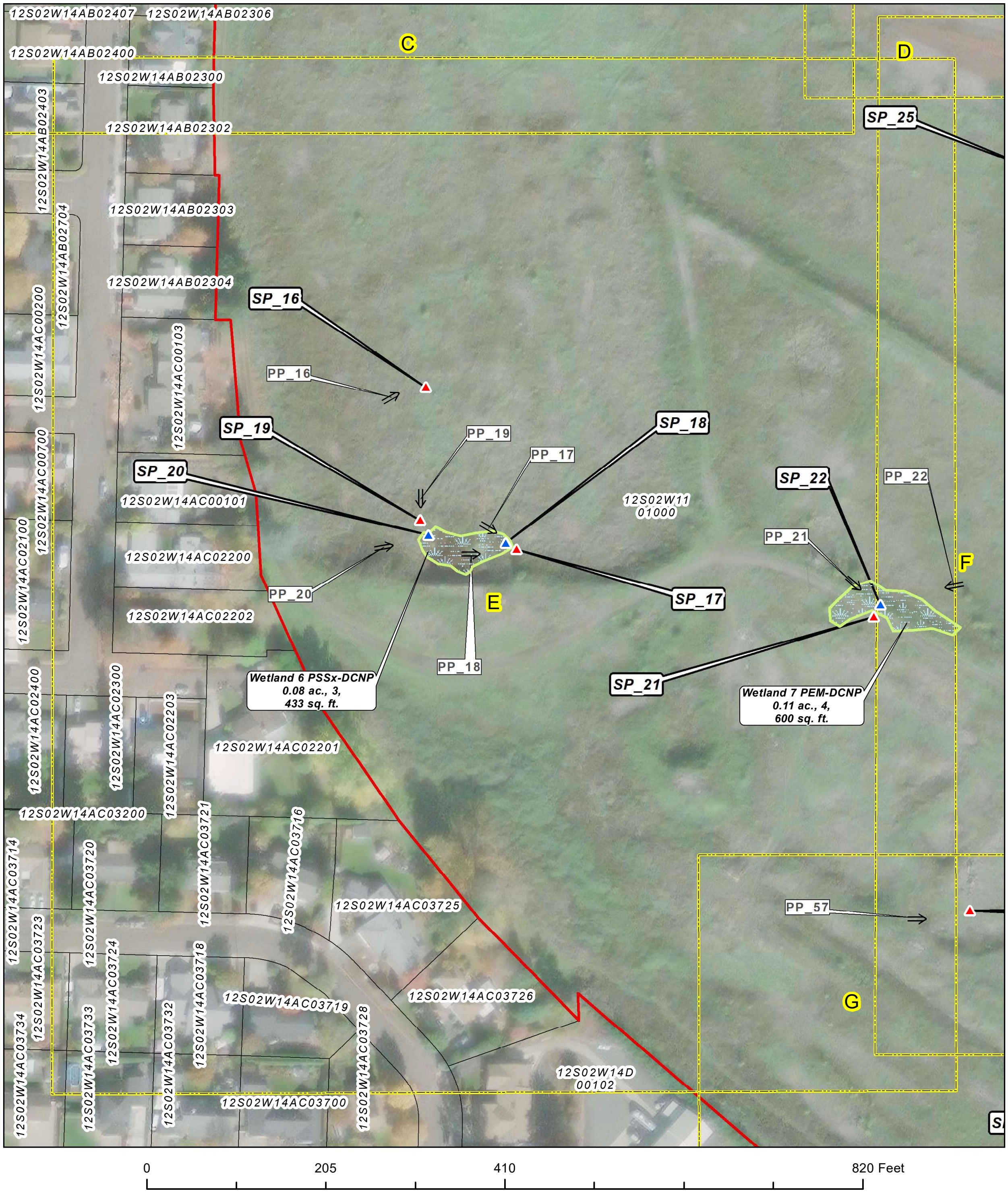
Figure 6E: Wetland Delineation Map (Detail Area E)

Date: 5/13/2024

Tax Lot 1000
MCH LLC
Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Notes:

1. All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.
2. Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.
3. Native size of map layout is 11"x17".
4. Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).
5. Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded

Legend

- Detail Map
- Study Area
- Tax Lot
- Photo Point

Sample Plot

- Upland
- Wetland
- Wetland

N

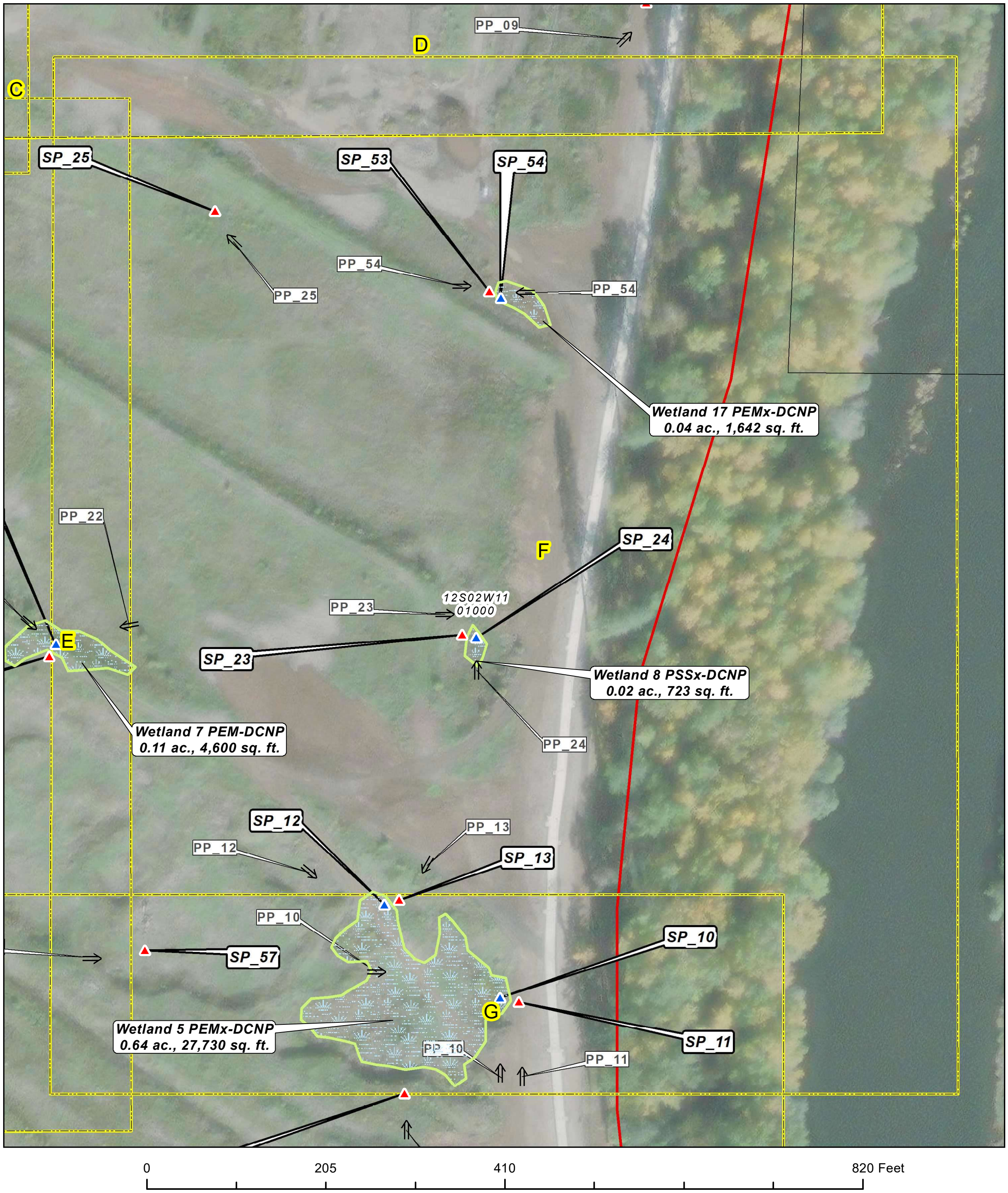
Figure 6F: Wetland Delineation Map (Detail Area F)

Date: 5/13/2024

Tax Lot 1000
MCH LLC
Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Legend

Detail Map
Study Area
Tax Lot
Photo Point

Sample Plot

Upland
Wetland
Wetland

Notes:

1. *All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.*
2. *Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.*
3. *Native size of map layout is 11"x17".*
4. *Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).*
5. *Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded*

N

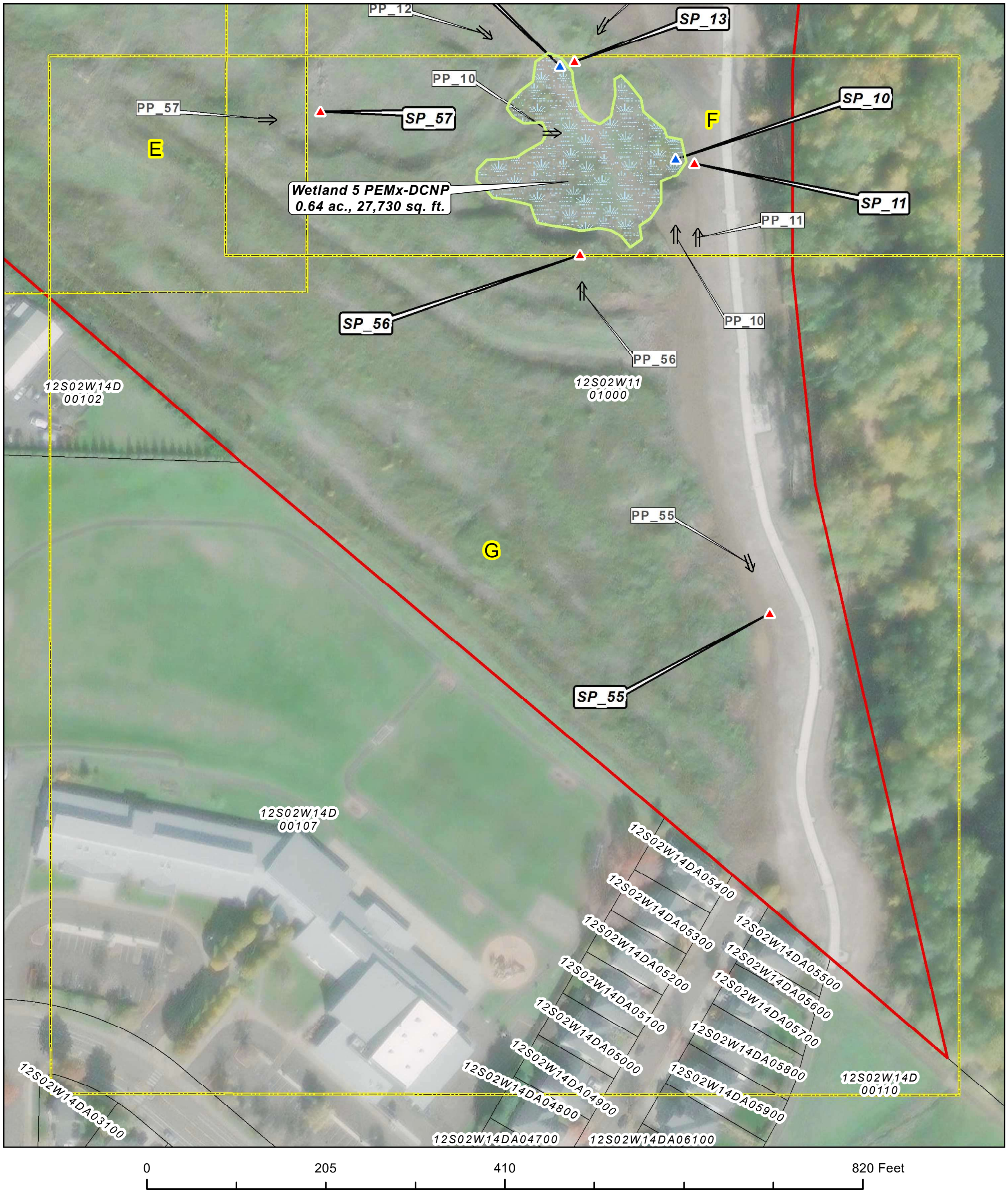
Figure 6G: Wetland Delineation Map (Detail Area G)

Date: 5/13/2024

Tax Lot 1000 MCH LLC Wetland Delineation

Lebanon, Linn County, Oregon

DSL WD # 2024-0052
Approval Issued:7/25/2024
Approval Expires 7/25/2029



Notes:

1. All wetland points and boundary features were collected with a resource grade GPS and have an horizontal accuracy of 0.5 meter or less.

2. Tax Lot boundaries provided by Linn County, assumed accurate to within 1-meter.

3. Native size of map layout is 11"x17".

4. Aerial imagery courtesy ESRI/Maxar, 2021 (flight date 10/30/2021).

5. Wetland label acronyms: PEMx (Cowardin)= palustrine emergent, excavated; PSSx= palustrine scrub-shrub excavated; DCNP (HGM)= depressional, closed, non-permanently flooded

Legend

Detail Map
Study Area
Tax Lot
Photo Point

Sample Plot

Upland
Wetland
Wetland

N

Cultural Resource Survey

Oregon

Tina Kotek, Governor

Parks and Recreation Department
Oregon Heritage/
State Historic Preservation Office
725 Summer St. NE, Suite C
Salem, OR 97301-1266
(503) 986-0690
Fax (503) 986-0793
oregonheritage.org

May 10, 2024

Teresa Trost
Archaeological Investigations Northwest, Inc.
3510 NE 122nd Ave
Portland, OR 97230

RE: SHPO Case No. 24-0774
MCH Project Strategies, 23/3418, Western University of Health Sciences Riverfront Campus
construct satelite campus
Lat: 44.5317 Long; -122.8906, Linn County

Dear Teresa Trost:

Thank you for submitting information for the undertaking referenced above.

Our office has assigned the report SHPO biblio number 34685. Details will be available in the bibliographic database.

Additional consultation regarding this case must be sent through Go Digital. In order to help us track the undertaking accurately, reference the SHPO case number above in all correspondence.

Please contact our office if you have any questions, comments or need additional assistance.

Sincerely,

Jamie French, M.A.
Assistant State Archaeologist
(503) 979-7580
Jamie.French@oprd.oregon.gov

Report #

State Historic Preservation Office
Report Cover Page

Year: 2024

Title: Cultural Resource Survey for the Western University of Health Sciences Project, Linn County, Oregon

REPORT

Author(s): Teresa M. Trost, Khrystyne Tschinkel, and Tara Seaver

Agency/Client: Archaeological Investigations Northwest, Inc. (AINW)

District/Contractor: Western University of Health Sciences

Agency/Client Report#: AINW Report No. 5099 Project Acres: 109 Survey Acres: 109

LOCATION

County(ies): Linn

Township:		Range:		Section(s):	Township:		Range:		Section(s):
12	S	2	W	11, 14					

TESTING

Archaeological Permit Number(s): N/A

Accession Number: N/A

Reports submitted to: Tribes: ☐ UOMNCH: ☐ LCIS: ☐

Curation:

Report Addresses Testing: ☐

CONSULTATION

Have tribes been contacted or consulted? Yes

List tribes: CONFEDERATED TRIBES OF GRAND RONDE, CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON, CONFEDERATED TRIBES OF SILETZ INDIANS

List any other groups contacted or consulted:

PA/ MOA

Report is associated with: PA ☐ MOA ☐

REPORTS WITHOUT A COMPLETE AND ACCURATE COVER PAGE AND APPROPRIATE ADDITIONAL PAGES MAY BE RETURNED. CHECK THE SHPO WEBSITE TO MAKE SURE YOU HAVE THE MOST CURRENT VERSION.

Report #

State Historic Preservation Office Report Summary of Resources and NRHP Eligibility

RESOURCES

Archaeological:

	Site:	Isolate:	Built Environment:	TCP:	HPRCSIT:	Other:
Count:	0	0	0	0	0	0

***Please be sure all archaeological forms have been submitted on-line**

NRHP ELIGIBILITY

EVALUATE PROPERTIES UNDER ALL FOUR CRITERIA.
BE SURE TO INCLUDE JUSTIFICATION IN THE REPORT

Oregon On-Line Form #:	Trinomial:	Temp# or Name:	Criterion A:	Criterion B:	Criterion C:	Criterion D:

10/24/2017

CULTURAL RESOURCE SURVEY FOR THE

WESTERN UNIVERSITY OF HEALTH SCIENCES PROJECT,

LINN COUNTY, OREGON

Prepared For
Western University of Health and Sciences
Lebanon, Oregon

April 1, 2024

REPORT NO. 5099

Archaeological Investigations Northwest, Inc.

3510 NE 122nd Ave. • Portland, OR • 97230

Phone 503 761-6605 • Fax 503 761-6620

CULTURAL RESOURCE SURVEY FOR THE WESTERN UNIVERSITY OF HEALTH SCIENCES PROJECT, LINN COUNTY, OREGON

PROJECT: The expansion of Western University of Health Sciences campus, as a satellite location

DESCRIPTION: Archaeological survey consisting of background research, reconnaissance survey, and excavation of 45 shovel tests. Historic resources survey consisting of background research and windshield survey.

LOCATION: Sections 11 and 14, Township 12 South, Range 2 West, Willamette Meridian.

USGS QUAD: *Lebanon, OR,* 7.5-minute, 2017

CITY: Lebanon

COUNTY: Linn

PROJECT AREA: 109 acres

AREA SURVEYED: 109 acres

FINDINGS/RESULTS:

- The project area has a low probability for the presence of a significant archaeological resource.
- A scatter of objects dating to the 1960s and 1970s may need to be inventoried and evaluated as an archaeological site if the project has a federal nexus.
- There is unlikely to be a historic district in the surrounding neighborhood.

RECOMMENDATIONS

- Archaeological monitoring if excavation should occur where the Lebanon Lumber Mill buildings stood.
- Project work should proceed subject to an archaeological resource inadvertent discovery plan.

PREPARERED BY: Teresa M. Trost, M.A., R.P.A., Khrystyne Tschinkel, Ph.D., R.P.A., and Tara Seaver, M.S.

INTRODUCTION

Western University of Health Sciences (WUHS) is proposing to construct an educational campus on Tax Lots 12S02W11 01000 and 12S02W13 01000 in Linn County, Oregon (Figures 1 and 2). The project is in the concept phase with no plans drawn, so there is currently no regulatory agency involved. However, it is anticipated that a U.S. Army Corps of Engineers (USACE) permit might be required if construction plans move forward. The project area is bounded by residential and commercial development to the north, the lighted and paved Old Mill Trail and the South Santiam River to the east, a school and playground to the south, and a residential neighborhood to the west. The Southern Pacific Railroad bisects the northern portion of the project area (Figure 2). The project area south of the railroad was a lumber mill site. Currently, the project area is an open plot with paved areas; evidence of mill demolition; drainage channels, ponds and/or quarrying scars; evidence of grading using heavy equipment; and other ground-disturbing activities.

Archaeological Investigations Northwest, Inc. (AINW), was contracted by WUHS to complete a cultural resource survey to determine if significant cultural resources could be impacted by the project. The cultural resource survey meets the standards for fieldwork and reporting set by the Oregon State Historic Preservation Office (SHPO) and Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR § 800. An Area of Potential Effects was not defined for the project because it was not known which portions of the project area may fall under USACE jurisdiction. The study was managed and directed by personnel meeting the professional qualifications of the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

AINW conducted background research, a pedestrian surface survey, and shovel test survey for archaeological resources and a reconnaissance level survey for historic (built) resources. No archaeological resources or historic properties were identified. AINW recommends there is a low probability that an archaeological resource, if present, would be eligible for listing in the National Register of Historic Places (NRHP). AINW also recommends an archaeological inadvertent discovery plan be prepared prior to beginning ground-disturbing work associated with the project and that project excavations where Lebanon Lumber Mill buildings stood be monitored by an archaeologist.

LOCATION AND ENVIRONMENTAL SETTING

The project area is in the City of Lebanon and is in Sections 11 and 14, Township 12 South, Range 2 West, Willamette Meridian (Figure 1). Lebanon is within Linn County, which is within the Willamette Valley physiographic province. Immediately to the west of Lebanon is the western border of the Santiam State Forest, which is a part of the Cascade Mountain range. The slopes of these mountains shaped the system of meandering rivers and tributaries within the South Santiam River Watershed and around Lebanon (U.S. Geological Survey [USGS] 1924). The city is on the South Santiam River floodplain. The South Santiam River is due east of the project area, and as close as 100 meters (m) (328 feet [ft]) to some portions of the project area, and as far as 0.6 kilometers (km) (0.4 miles [mi]) from other portions. There are numerous unnamed tributaries of the South Santiam River to the north and northeast of the project area (USGS 2020a, 2020b). Nearby is the man-made Lebanon Santiam Canal, which is 0.5 km (0.3 mi) to the southwest and 0.6 km (0.4 mi) to the northwest.

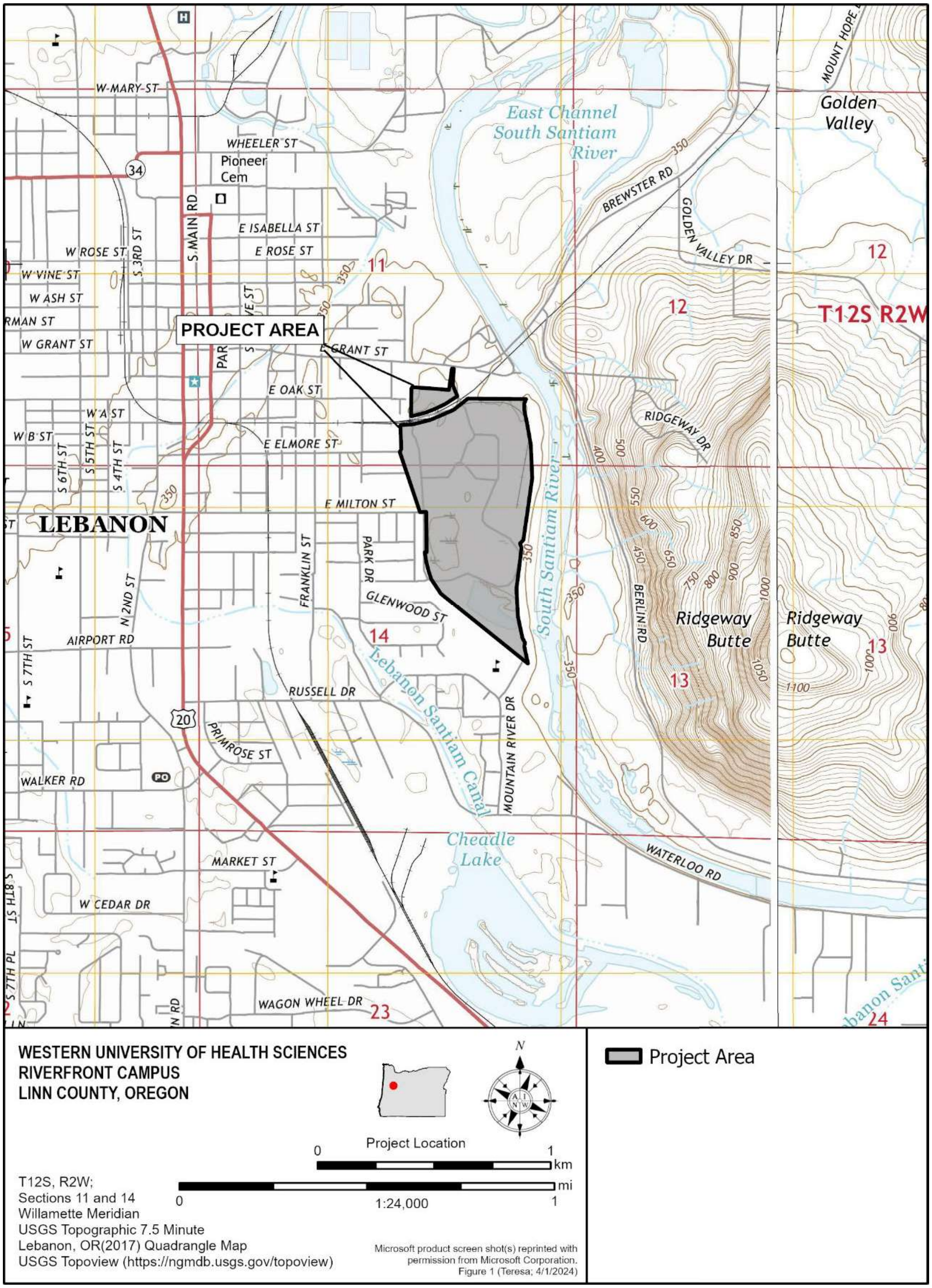


Figure 1. Topographic map showing location of the proposed Riverfront Campus project area, Lebanon, Linn County, Oregon.

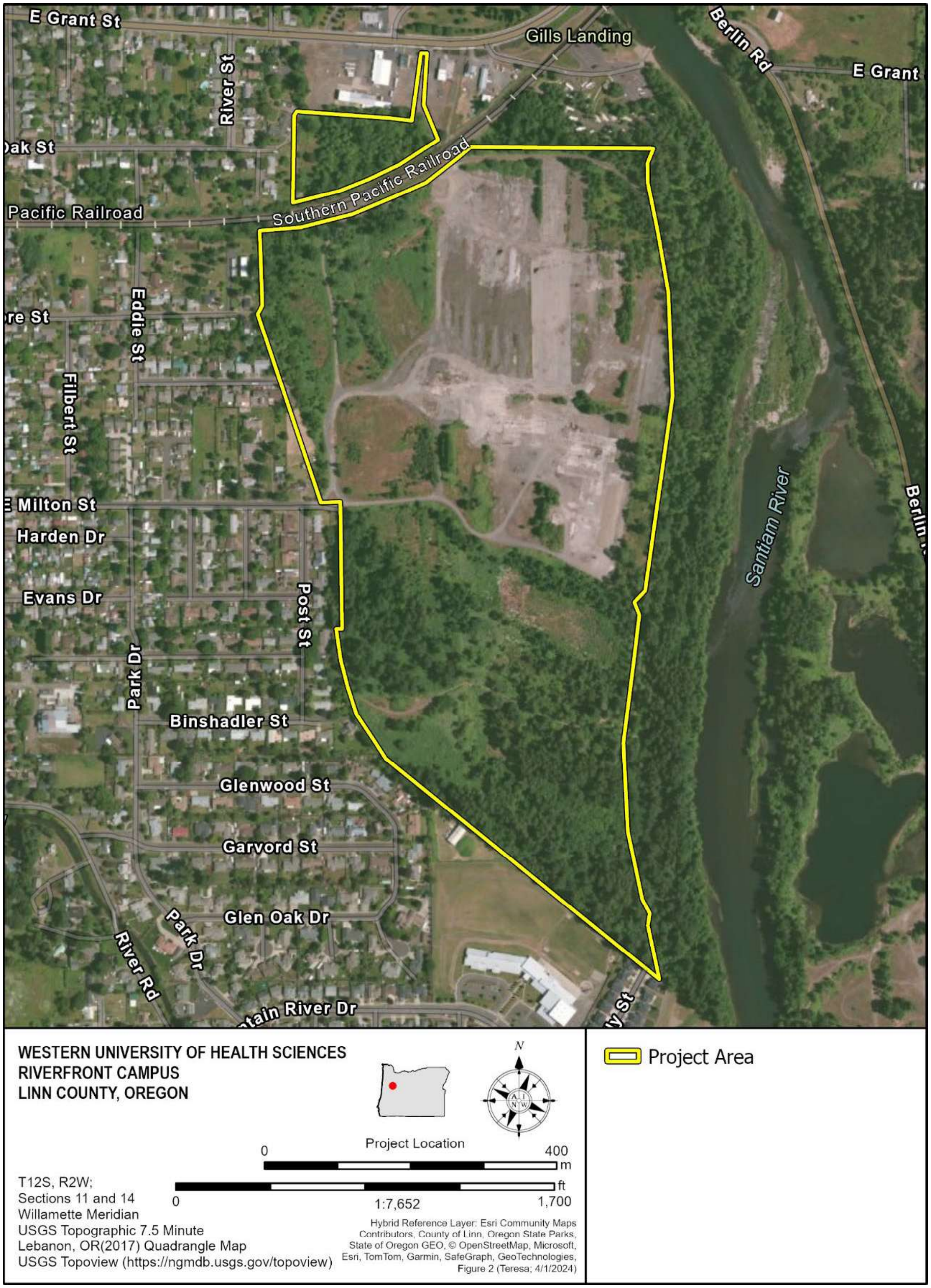


Figure 2. Aerial map showing the proposed Riverfront Campus project area.

The local topography was formed in part by catastrophic Missoula (or Bretz) Floods, which began as early as 18,000 years ago and continued to approximately 13,000 years ago (Allen et al. 2009:160-161; Balbas 2017:583; O'Connor et al. 2020). These floods were caused by episodic failures of ice dams that held back the waters of glacial Lake Missoula during the Pleistocene, resulting in the release of catastrophic floodwaters into eastern Washington and the Columbia River Basin. The floods raced down the Columbia River Valley, depositing thick layers of unconsolidated gravels, sands, and silts along the Columbia River and its tributaries (Allen et al. 2009:161). The constriction of the Columbia River Gorge at Kalama, Washington, created a backwater lake, Lake Allison, that stretched from Portland south to Eugene and deposited "Willamette Silts," which are comprised of layers of sand and silt. Lebanon is at the eastern maximum of Lake Allison (Allen et al. 2009).

In the Lebanon area, glacially deposited sediment is overlain by more recent alluvial sands and gravels deposited during flood events (Allen et al. 2009:160-161; Burns and Coe 2012; Franklin and Dyrness 1973:17; O'Connor et al. 2001). The project area is a mostly flat landform at the edge of the terrace above the South Santiam River. The natural terrace edge has been artificially built-up to create a dike to prevent flooding (Bulder 2021; Oregon Department of Geology and Mineral Industries [DOGAMI] 2024). In the mid-nineteenth century, prairieland and a slough comprised the northwest portion of the project area (General Land Office [GLO] 1853) (Figure 3). In at least the recent past, the eastern edge of the terrace dropped almost directly down to the river, except at the northeast corner of the project area. The current approximately 60-m (199-ft) wide riverbank, which is downslope and east of the project area, began to develop circa 1949 (Historic Aerials 2024).

The sediments in the project area are mapped as Cloquato silt loam, which forms in mixed alluvium (U.S. Department of Agriculture, Natural Resources Conservation Service [USDA-NRCS] 2024). Cloquato soils form on low stream terraces and floodplains (USDA-NRCS 2006a, 2006b). Soil horizons to a depth of approximately 40 centimeters (cm) (16 inches [in]) are very dark grayish brown to dark brown silt loam. Underlying soils area a dark grayish brown to light brownish gray sandy loam to silt loam (USDA-NRCS 2006b). The project area is the only location in the vicinity mapped as Cloquato silt loam (USDA-NRCS 2024). The past land use as a mill site does not seem to have been considered when mapping the soils.

The project area is within an interior valley of northwestern Oregon and lies in the *Pinus-Quercus-Pseudotsuga* vegetation zone (Franklin and Dyrness 1973:110). The natural environments in this region typically consist of oak woodlands, coniferous forests, grasslands, and riparian areas. Oregon white oak, bigleaf maple, and Douglas-fir are common in the overstory, while hazelnut, snowberry, sword fern, blackberry, and poison oak are common understory species. Coniferous forests are common in the foothills and consist primarily of Douglas-fir, grand fir, bigleaf maple, and western redcedar. Riparian vegetation includes red alder, Oregon ash, and various water-tolerant grasses and sedges (Franklin and Dyrness 1973:110-113).

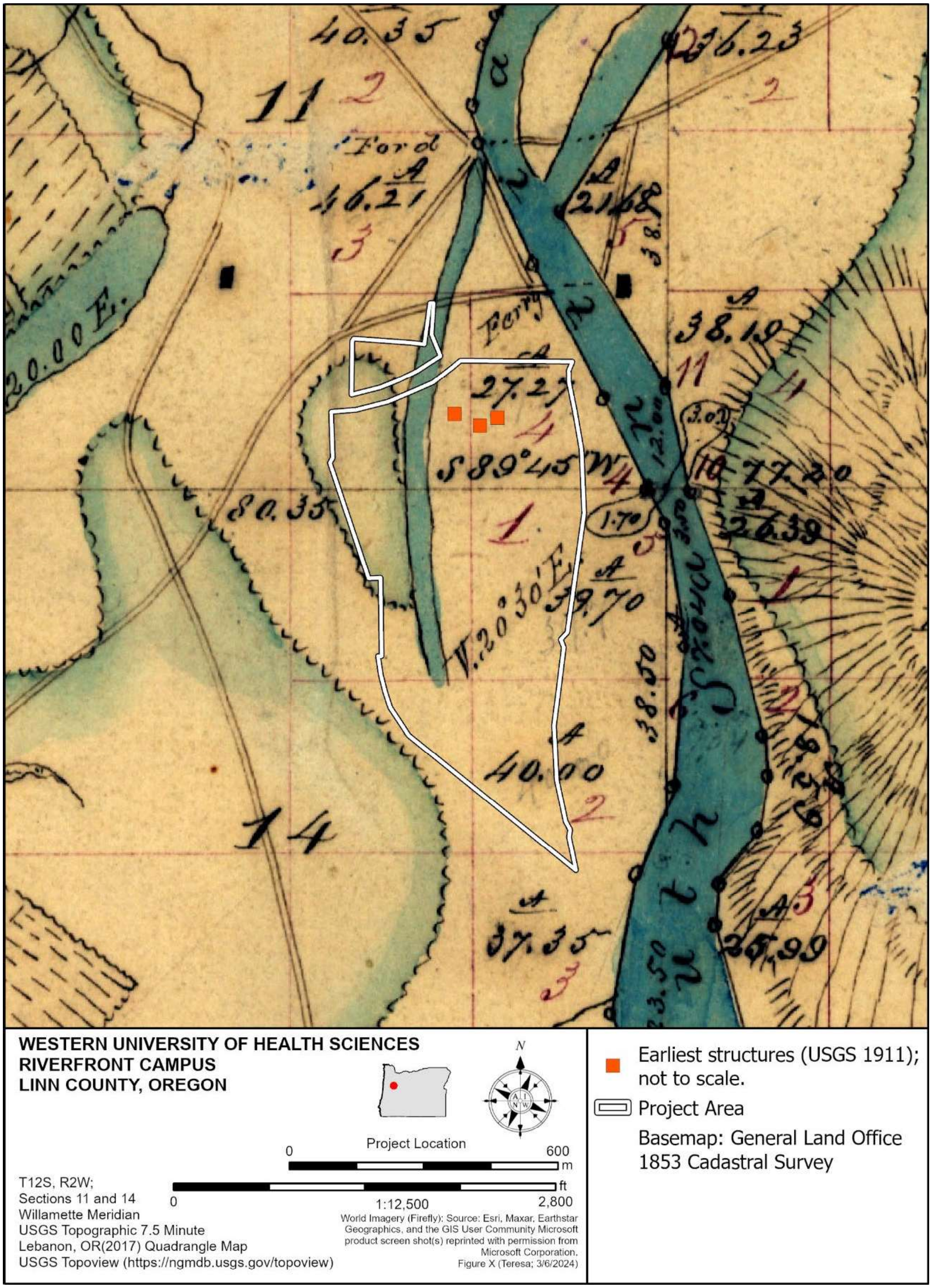


Figure 3. Project area and location of earliest documented structures depicted on an 1853 GLO map.

CULTURAL SETTING

Native Peoples Pre-Contact

As ice retreated from the Pacific coast about 16,000 years ago, during the late Pleistocene, coastal migration likely became possible, resulting in rapid population expansion into the North American continent from Eurasia (Llamas et al. 2016; Skoglund and Reich 2016). However, evidence for early occupation of the Willamette Valley is sparse. This is likely due to Missoula Floods scouring away evidence of early occupation along the Columbia River and its tributaries. Several Clovis points likely dating to between 11,200 and 11,000 years before present have been found in the Willamette Valley at Mohawk Valley, near Cottage Grove, and at Fern Ridge Reservoir (Allely 1975; Connolly 1994; Minor 1985).

During the Early Holocene (11,700 to 7,000 years ago), a climatic shift to a cooler and wetter environment coincided with the rise of more permanent settlements, resource intensification, and changes in social organization (Ellis et al. 1991). The archaeological record indicates people used broad-spectrum foraging strategies that targeted land-based resources associated with oak woodlands and prairies. During this time, lithic technologies became more diversified and localized, exemplified by the emergence of the more geographically restricted Cascade-style projectile point (Butler 1961:128; Kirk and Daugherty 2007). Towards the end of this period, river gradients and flows stabilized as the climate also became more stable, and downcutting into glacial sediments slowed. Subsequently, people shifted to more extensive use of riverine resources (Ames and Maschner 1999). Lithic artifacts from the Early Holocene include large stemmed lanceolate points, shouldered lanceolate points, leaf-shaped points, bifaces, scrapers, and cobble tools (Aikens 2011:291-295; Ames and Maschner 1999). It is during this period that the processing of camas bulbs for food first appears in the Willamette Valley (Aikens 2011).

During the Middle Holocene (7,000 to 4,000 years ago), archaeological sites in the Willamette Valley suggest occupations of repeated but limited duration, and a relatively mobile population (Aikens et al. 2011). Most Middle Holocene archaeological sites in the Willamette Valley are located in seasonally inundated riparian areas (Aikens et al. 2011; Cheatham 1988; Ellis 1996; Gilsen 1989). These areas were likely only habitable during warmer months, when waters receded and/or evaporated (Cheatham 1988; Ellis 1996; Gilsen 1989). Subsistence strategies shift further towards intensive food plant processing, including camas, acorn, and hazelnut, and possibly food storage, as evident by earth ovens and ground stone tools found in archaeological sites dating to this period (Aikens et al. 2011:296). Lithic technologies included large leaf-shaped, stemmed, and side-notched points, and cobble choppers, mortars, and pestles (Aikens et al. 2011; Toepel 1985).

Across the Pacific Northwest, the Late Holocene (4,000 years ago to the present) is marked by the emergence of important social, economic, and subsistence changes, including storage-based economies, heavy reliance on salmon fishing, and the emergence of elites (Aikens et al. 2011; Ames and Maschner 1999; Herbel and Schalk 2002). Archaeological sites dating to this period are most common along major waterways such as the Willamette River. This period indicates a trend of increasing sedentism in which the number and density of occupation sites increased, as evidenced by sites north of the project area along Mill Creek (35MA7, 35MA9, 35MA64, and 35MA65), and the archaeological sites southwest of the project area, including the Calapooia Midden (35LIN468), the Lingo site (35LA290), the Lynch site (35LIN36), the

Hurd site (35LA44), the Benjamin sites (35LA41, 35LA420), and the Flannagan site 935LA218 (Aikens et al. 2011:300). This trend was truncated by population decline due to introduced diseases and removal of people to reservation lands.

Subsistence strategies increasingly focused on seasonally abundant foods that could be preserved and stored for consumption during winter. Specialized subsistence strategies coincided with an increase in specialized tools such as ground stone implements, hammerstones, mauls, bone and antler tools, and flaked cobble chopping tools (Aikens et al. 2011; White 1975). Other technological changes included the adoption of the bow and arrow, as evidenced by the presence of small projectile points in archaeological sites dating to this period (Aikens et al. 2011:306-308). It should be noted that bone, antler, and wooden items were likely used prior to the Late Holocene, but these materials undergo a natural taphonomic decaying process unlike stone tools. The increasingly complex lifeways centered on riverine resources in general and plant foods in the Willamette Valley continued uninterrupted until the arrival of non-Indigenous peoples to the region in the mid-eighteenth century (Aikens et al. 2011; Boyd 1999).

Ethnographic Context

The project area is located within the traditional territory of the *'Kăləʼpōōyu* (Kalapuya) (spelled numerous ways) people, a band of tribes who lived in the Willamette Valley, its tributaries, and portions of the Umpqua River drainage (Aikens et al. 2011; Collins 1951; Mackey 2004; Zenk 1990). The project area is in the traditional territory of the *'Săntē'yăm* (Santiam) people, an autonomous subdivision of the Central Kalapuyan.

Fire was an important agricultural tool for many Kalapuyan tribes (Lewis 2023). Fires were carefully planned and managed by knowledgeable fire ecologists, often women, to create open valleys and prairies that allowed for traditional subsistence in an area that would have naturally reverted to Douglas-fir forest (Boyd 1999; Habeck 1961; Johannessen 1971; Lepofsky and Lertzman 2008; Lewis 2023; Sanders et al. 1983:14-15; Towle 1982). Open valleys were more suitable for hunting, maintaining food sources, and collecting insects and seeds (Boyd 1999; Lepofsky and Lertzman 2008). Targeted burning also allowed vegetation to grow that was better suited for use in building materials, clothes, tools, food, and medicine (Beckham et al. 1981; Boyd 1999; Christy and Alverson 2011; Lepofsky and Lertzman 2008).

Vegetable resources accounted for much of the Kalapuyan diet (Zenk 1990). Camas and wapato were gathered and processed during the summer and fall. These starchy roots were typically roasted in earthen pit ovens and then pressed into cakes for later consumption or trade (Lewis 2023; Mackey 2004; Zenk 1990). Camas was collected in open-prairie settings maintained through centuries of annual burning, while wapato was gathered in wetlands along lakes or rivers. Other important vegetable resources included acorns, hazelnuts, and a variety of seeds and berries (Juntunen et al. 2005; Zenk 1976, 1990).

The Kalapuya hunted animals such as deer, elk, black bear, small mammals, and birds (Juntunen et al. 2005; Zenk 1990). Their diet also consisted of a variety of fish, including trout, suckers, and lamprey eels. Salmon was not a significant resource for peoples of the Willamette Valley, although it was a subsistence staple for many native groups in the Pacific Northwest (Aikens 1993; Zenk 1990). Salmon was either procured through trade, often at Willamette Falls, or fished in limited quantities along the Willamette River and its tributaries (Aikens et al. 2011; Mackey 2004; Zenk 1976).

The colonial period in the Pacific Northwest began with a catastrophic upheaval of traditional Indigenous societies. As a result of European-introduced disease epidemics estimated to have started in the Pacific Northwest in 1770, before the physical presence of non-Indigenous people, up to 95% of the Kalapuyan populace are thought to have died (Aikens 2011;287; Boyd 1999:263). In the mid-1840s, the Kalapuya came into physical contact with non-Indigenous explorers and fur traders. By that time, the land use system, including villages and resource procurement sites, had been altered to serve the needs of the smaller populace (Aikens 2011:287).

Non-Indigenous Settlement

The first non-Indigenous people to explore the Willamette Valley were employees of the Pacific Fur Company. In early 1812, Captain Donald Douglas McKenzie traveled by canoe from Astoria, Oregon, to modern day Eugene (Mackie 1997). The Pacific Fur Company was sold to the North West Company in 1813, and in 1821 the North West Company merged with the Hudson's Bay Company. By the 1820s, the Hudson's Bay Company sent out regular expeditions into the Willamette Valley using routes such as the Santiam Wagon Road (Clark 1987; Harrison 2023; Mackie 1997). Part of the Santiam Wagon Road is approximately 1.3 km (0.8 mi) to the southwest of the project area.

The Donation Land Claim Act of 1850, which granted acreage to eligible homesteaders, encouraged colonial settlement along the Santiam River. Most claims were setback from the river, but not at the location of the current project area. That land claim extended to both sides of the river (GLO 1863). Colonial settlement was furthered in 1856 when the U.S. government removed the Kalapuyan people to reservations. Settlers brought their own agricultural practices, replacing the land management system of the Indigenous people. The use of fire to promote open prairie was abandoned (Lepofsky and Lertzman 2008), and places used traditionally by the Indigeneous residents for gathering and hunting were turned into plowed and fenced fields (Lewis 2023).

Lebanon was platted in 1851, and a post office was opened the same year. Lebanon was not incorporated until 1878. In 1863, the project area was owned by Henry R. Greer (GLO 1863). During this time, farming, ranching, and timber production dominated the colonial economy of Lebanon (Boag 1992). The transportation of goods was problematic because the South Santiam River proved too shallow for big boats (Ziedrich 2022). The Lebanon Santiam Canal was constructed between 1870 and 1890 in the hopes of resolving the issue so that timber could be transported from Lebanon to Albany, and to supply the town with drinking water. The canal is 0.5 km (0.3 mi) to the southwest, and 0.6 km (0.4 mi) to the northwest, of the project area.

In the late 1800s and early 1900s railroad development furthered the distribution of goods from Lebanon. In 1880, a branch of the Southern Pacific Railroad connecting Lebanon with Albany was completed, opening freight and passenger service for eastern Linn County (Meyers 1976). A portion of the Southern Pacific Railroad currently divides the project area east to west (USGS 1911, 2020a) (Figure 2). Lumber, plywood, and paper production became increasingly important in the local economy (Boag 1992; Ziedrich 2022). Sawmills were built along the Oregon & Electric Railroad, which was completed in 1932, and twenty new mills opened in the Lebanon from 1937 to 1942 (Ziedrich 2022). In 1930, Mountain States Power Company owned the project area in Section 11, and First Street Bank and S.L. Stewart owned the project area in Section 14 (Metsker Maps 1930).

Early twentieth century maps depict three structures near the northwest corner of the project area to the south of the Southern Pacific railroad line (GLO 1853; USGS 1911, 1921, 1924) (Figures 3 and 4). Local newspapers indicate that the mapped collection of buildings was probably the site of the town's first lumber mill, the Lebanon Lumber Company, built by P.M Scroggin and Seymour Washburn in 1907 (*The Lebanon Express* 1999a). Earlier operations related to the timber industry in Lebanon were the Lebanon Paper Mill and S.A. Nickerson's Planing Mill, Sash and Door factory, both located in northern Lebanon (Sanborn Map & Publishing Company 1888, 1892).

The known location of the Lebanon Lumber Mill at the east ends of Grant and Milton Streets, aligns with the location of the current project area (*The Lebanon Express* 1999a). The mill appears to have utilized the natural slough documented by early surveyors (GLO 1853), developing it into a log pond. On September 22, 1915, the Lebanon Lumber Company plant was destroyed in a fire (Connet 1915; *Roseburg Review* 1915). The sawmill was never rebuilt, and it was replaced by the Lebanon Super Shingle Mill on the same site in 1919 (*Albany Daily Democrat* 1919, 1923; *The Lebanon Express* 1923, 1999a). Fires were a constant problem for early twentieth century lumber mills, and like its predecessor, the Super Shingle Mill burned in a 1923 fire, but it was subsequently rebuilt (Santiam 1924; *The News Review* 1923). Between 1923 and 1930, the shingle mill ceased operations (*The Lebanon Express* 1930).

In 1940, Fred Powers and Carl L. Davis of the Powers-Davis Lumber Company purchased the former mill site from S.L. Stewart (Metsker Maps 1930; Meyers 1976; *The Capital Journal* 1941). Within the current project area, the company erected a modern "Swede Gang" mill, the first mill of that type to be installed south of Portland. The mill officially opened in 1942 and had a daily capacity of approximately 75,000 board feet (*The Lebanon Express* 1941; 1947; World Forestry Center 2024). In March of 1940, a large log pond was excavated on the west side of the property (*The Capital Journal* 1941). The earliest available aerial photograph that shows the log pond dates to 1947, and the pond is depicted on USGS maps by 1957 (USGS 1947, 1957). The 1913-1944 Sanborn Fire Insurance map documents several mill buildings within the project area, including a lumber shed, sorting table, and the "Swede Gang" sawmill building (Sanborn Map & Publishing Company 1913-1944). A "cultivated field" is mapped to the east of the gang saw building (Sanborn Map & Publishing Company 1913-1944) (Figure 5).

In August of 1946, the Powers-Davis Company consolidated with C.H. Wheeler to create the Santiam Lumber Company (*The Lebanon Express* 1947, 1999b; World Forestry Center 2024). In 1961, Santiam Lumber constructed a 65,000-foot sheathing plant, which did business as Santiam Plywood, south of other mill buildings and on the east side of the project area (*The Lebanon Express* 1961a, 1961b; USGS 1967a). An earthen berm is south of the sheathing plant in a 1967 aerial photograph of the project area (USGS 1967a). Aerial photographs suggest the log pond's south gate was constructed or altered circa 1954 (Historic Aerials 2023). Flooding in 1964 supposedly "destroyed the headgates of the Powers-Davis mill pond"(*The Lebanon* Express 1999c). In 1967, Santiam Lumber Company, Willamette Valley Lumber Company, Wood Fiberboard Company, Western Veneer and Plywood Company, and Dallas Lumber and Supply Company merged to create Columbia Forest Products, eventually renamed Willamette Industries, Inc. (*The Lebanon Express* 1967). At that time, earlier mill buildings were torn down and new ones erected (Figures 6 and 7). The railway spur that ran along the northern and eastern sides of the mill site may have been constructed at that time. The first record found of the railway spur dates to 1967 (Historic Aerials 2023).

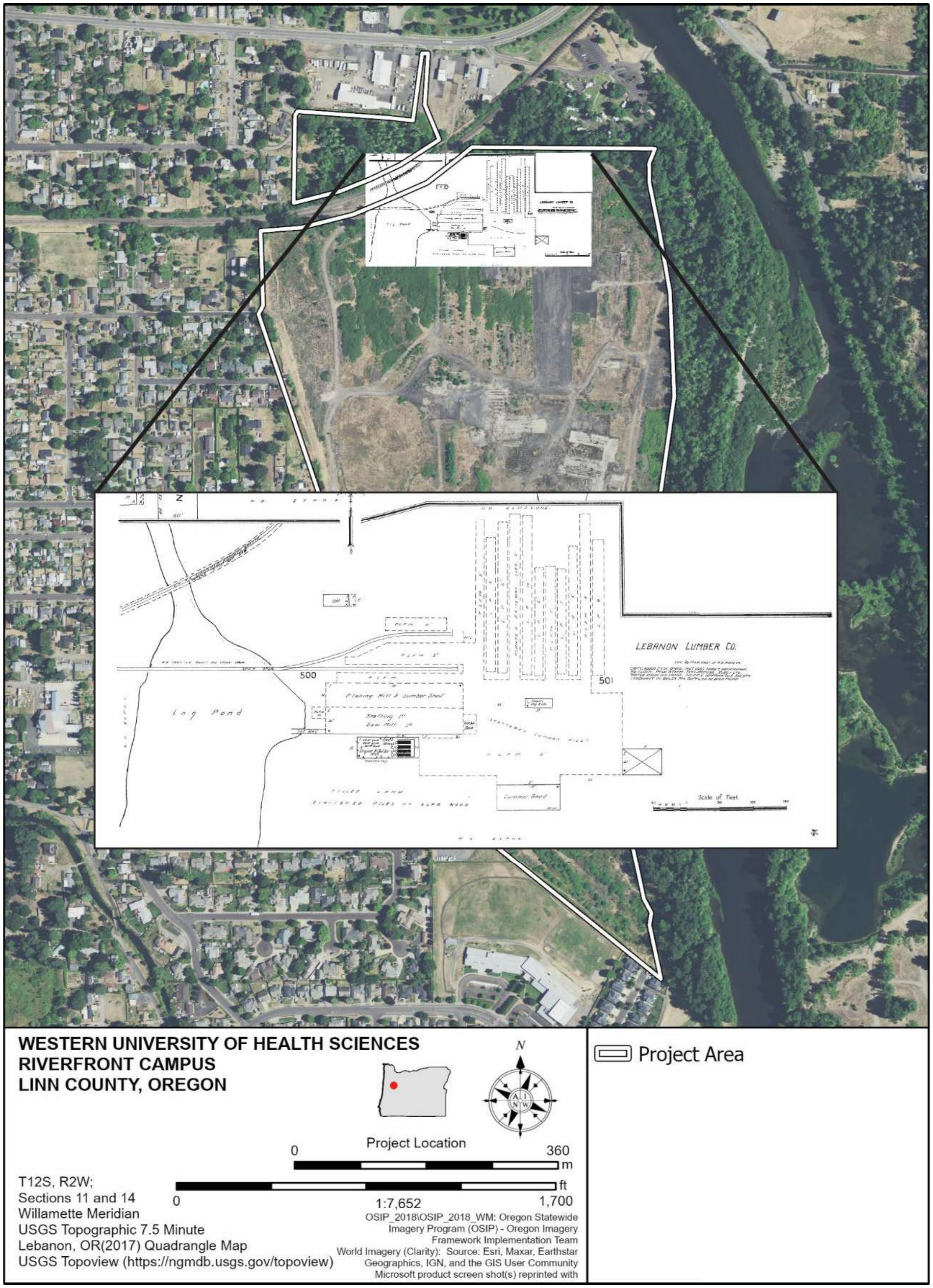


Figure 4. Approximate location of Lebanon Lumber Mill and mill plan (Sanborn Map & Publishing Company 1913).

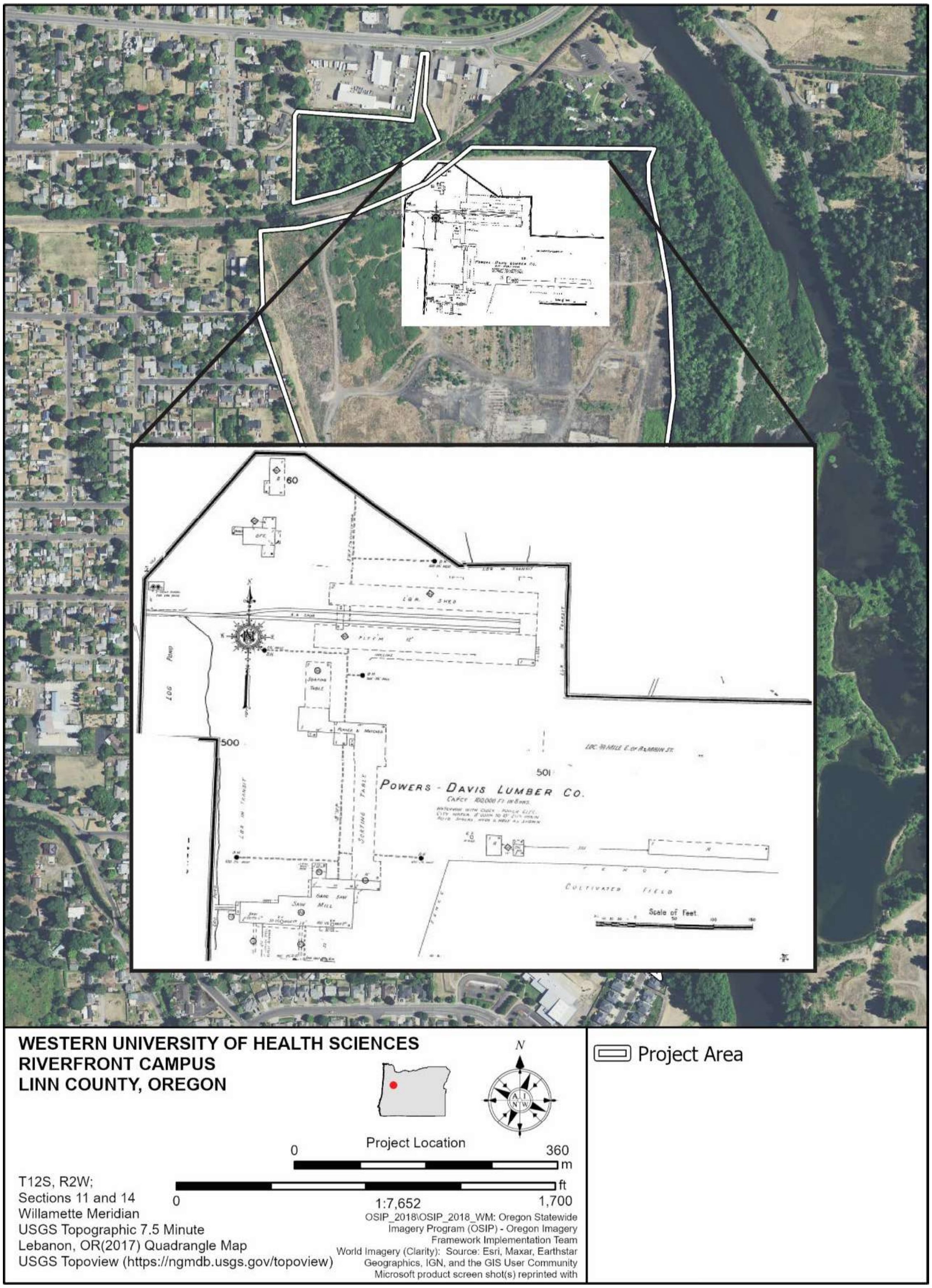


Figure 5. Approximate location of the Power-Davis Lumber Mill and mill plan (Sanborn Map & Publishing Company 1913-1944).

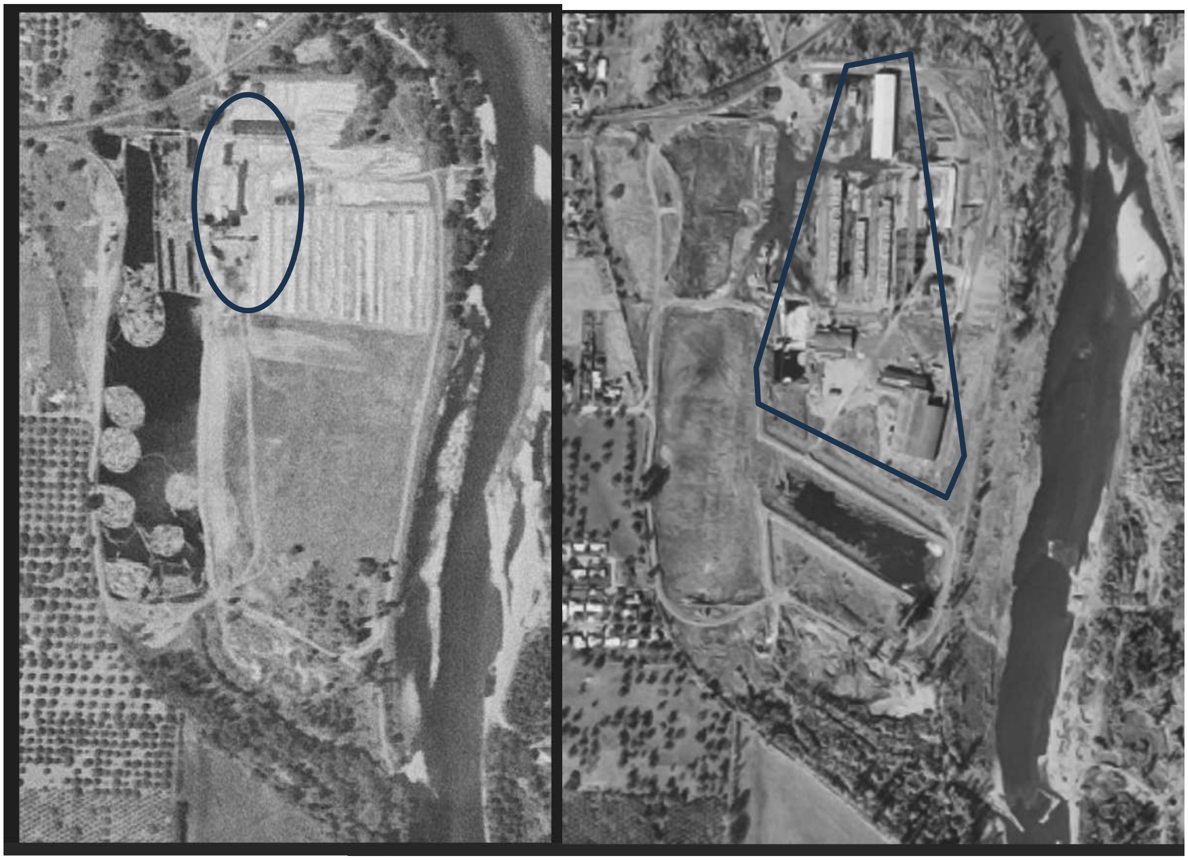


Figure 6. Location of mill buildings (circled) in 1955 (left) and 1967 (right) USGS maps (USGS 1955, 1967b).

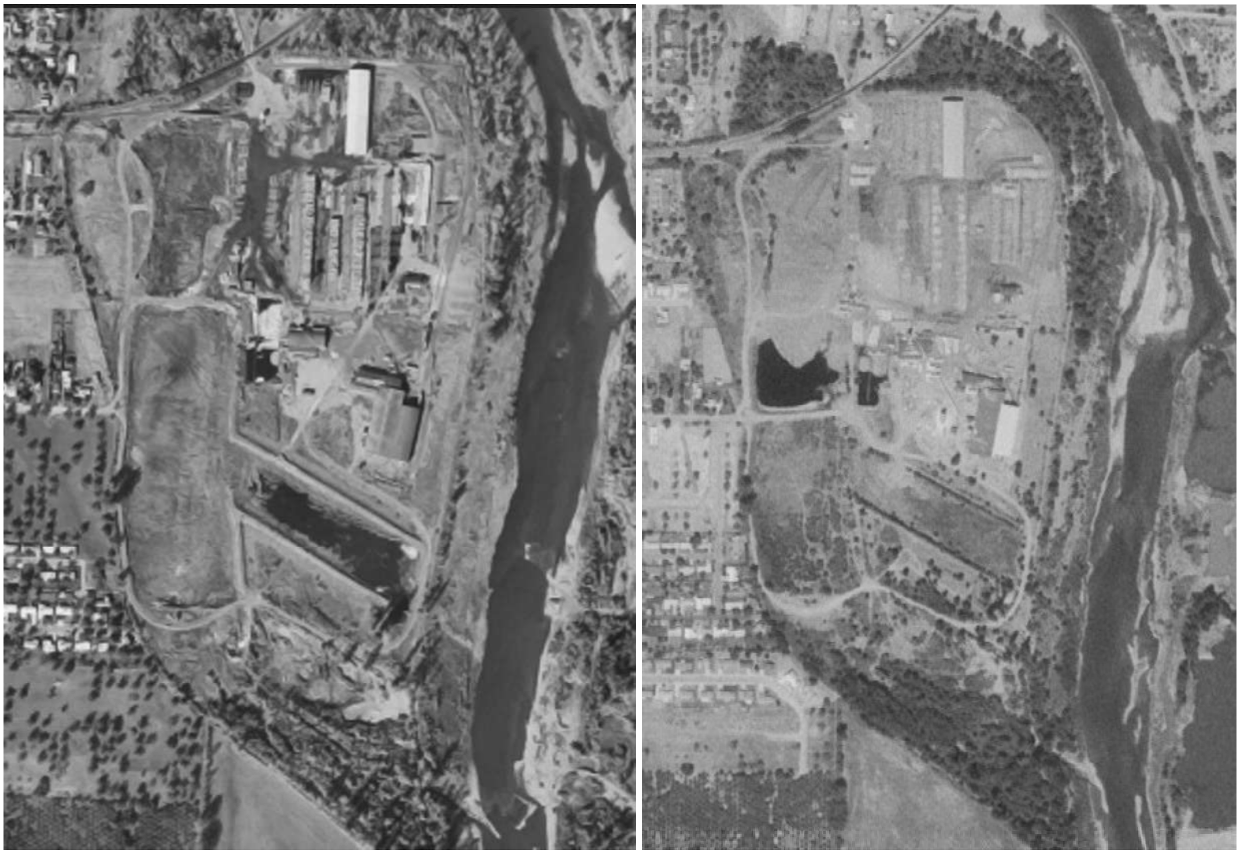


Figure 7. Mill site in 1967 (right) and in 1976 (left) (USGS 1967b, 1976).

As a result of the 1967 merger, Willamette Industries was well-diversified between paper supply products and building materials, and it experienced relatively stable growth during a period of overall decline for the timber industry (Mahoney 2023; *The Lebanon Express* 1970). At its peak in the 1990s, the company owned and managed over one million acres of timber land and operated more than a hundred wood product manufacturing facilities in 23 states and a handful of countries (Mahoney 2023). In May of 1991, Willamette Industries announced the closure of Lebanon Plywood due to a decline in the timber supply and environmental challenges (*The Lebanon Express* 1991). In 1992, Lumber Tech, a local wood products company, moved their operations to the former Willamette Industries Plywood Mill location (*Albany Democrat-Herald* 1992; Dugan 1999). In 1995, Lumber Tech was purchased by Willamette Industries (*The Lebanon Express* 2020).

In November 2000, Weyerhaeuser Corporation announced a hostile takeover of Willamette Industries (Dugan 2001; Mahoney 2023). After two years of negotiations, on February 11, 2002, Willamette Industries accepted Weyerhaeuser's offer to purchase the company (*The Lebanon Express* 2002a, 2002b). Between circa 2000 and circa 2011, the lumber mill was demolished (Historic Aerials 2023) (Figure 8). In 2013, the Lebanon Planning Commission approved an annexation and zoning change for the project area from Industrial to Mixed Use (*The Lebanon Express* 2013a, 2013b). The project area has remained vacant since that time (Historic Aerials 2023).

Figure 8. Weyerhaeuser Mill in 2010 (left) and demolished mill site in 2023 (right) (Google Earth 2010, 2023). Buildings and structures visible in 2010, for most the function is inferred: 1) package or finished lumber shed, 2) dry kiln, 3) plywood mill, 4) railway, 5) unknown building, 6) unknown structure, 7) log pond south gate, and 8) log pond north gate.

In addition to lumber mills, quarries may have operated within the project area, although as a minor industry, and the location may have been used as a dump. Two maps from the early 1940s depict open-pit mining symbols within the north portion of the mill site (USGS 1940, 1944). Historical records suggest the project area is on the opposite side of the South Santiam River across from the former Fitzgerald sand and gravel plant (*The Lebanon Express* 1946). In 1946, the business was purchased by Morse Bros., who renamed the company Lebanon Sand and Gravel. The company retained the plant and gravel pits on the east side of the river, but in 1957 it constructed a new office building on E. Grant Street to the south of the Grant Street bridge in an area north of the project area known as Gill's Landing (*The Lebanon Express* 1957). Morse Bros. previously used that land as a gravel quarry. It is possible that the Morse Bros. operation included land within the project area (Grumbola 1993). DOGAMI Mineral Information Layer documents the Lebanon Pit and Plant, a sand and gravel surface mine, in the south portion of the project area (DOGAMI 2023). Penetar and Bruner (2003), in the Phase II Environmental Site Assessment report, stated that there was a "closed permitted landfill site" in the western portion of the property. No other information regarding the landfill was found by Penetar and Bruner (2003). AINW did not find reference to a landfill during archival research.

Historical maps show limited development in the project area's surroundings until the mid-twentieth century (USGS 1924, 1940, 1944, 1957). Aerial photographs and survey maps show that by 1947, the surrounding area was a mixture of sparse residential subdivisions and small agricultural homesteads immediately west of the project area (Larsen 1940; USGS 1947). As the area urbanized in the 1950s through 1960s, former agricultural fields, likely for fruit or nut trees, were replaced by suburban development (Historic Aerials 2023). Parcels adjacent to the northern boundary of the project area were already being developed in 1947, at which time few trees were present (Historic Aerials 2023).

PREVIOUS CULTURAL RESOURCE STUDIES

Prior to field work, AINW reviewed records to determine whether cultural resource surveys have been previously conducted in the project area and if previously recorded cultural resources were present in or near of the project area. AINW reviewed records utilizing the Oregon Archaeological Records Remote Access (OARRA) system and the Oregon Historic Sites database, which are both maintained by SHPO.

A review of records available through OARRA identified more than 12 cultural resource surveys conducted within 1.6 km (1 mi) of the project area (Bangs and Valentino 2016; Buchanan et al. 2008; Bulder 2021; Connolly and Bland 2007; Foutch et al. 2008; Gallagher and Lebow 2014; Hambelton et al. 2015; Hotze et al. 2016; Lynch and Roulette 2019; Minor 2005; Musil 2005; Roulette and Chapman 1993). One previous archaeological survey, Bulder (2021), abuts the current project area. This survey was a pedestrian walkover along the eastern border of the project area for the development of the Old Mill Trail (Bulder 2021). The new trail follows the top of the dike, which Bulder (2021) concluded was not a historic structure.

Four of the surveys were conducted along the Lebanon Santiam Canal (Buchanan et al. 2008; Gallagher and Lebow 2004; Foutch et al. 2008; Roulette and Chapman 1993). Four surveys were conducted along a road or bridge (Bangs and Valentino 2016; Connolly and Bland 2007; Hotze et al. 2016; Minor 2005). Two surveys were conducted at water treatment facilities (Hambelton et al. 2015; Musil 2005). Seven consisted of a pedestrian survey without shovel testing (Buchanan et al. 2008; Bulder 2021; Connolly and Bland 2007; Foutch et al. 2008; Minor 2005; Musil 2005; Roulette and Chapman 1993). Five consisted of a pedestrian survey with shovel testing; shovel tests were on average 30 cm (12 in) wide and 50 to 80 cm (20 to 31 in) deep (Bangs and Valentino 2016; Gallagher and Lebow 2004; Hambelton et al. 2005; Hotze et al. 2016; Lynch and Roulette 2019).

Archaeological Resources

Five archaeological sites and two archaeological isolates are mapped in OARRA within 1.6 km (1 mi) of the project area.

- Site 35LIN815 is a multicomponent site that is predominately a pre-contact lithic scatter. The site is approximately 0.4 km (0.25 mi) southwest of the current project area and is also on the South Santiam River floodplain. The site was initially identified by Hambelton et al. (2015). Artifacts recorded include 18 pieces of cryptocrystalline silicate (CCS) debitage, 1 CCS scraper, 1 ceramic fragment, 4 milk glass fragments, and 1 square nail. Artifacts were recovered from near the surface to 50 cm (20 in) deep in 12 of 16 shovel tests mapped within the proposed site boundary. The historic-period artifacts were thought to be associated with former homes in the immediate area dating between the early to mid-twentieth century. However, all the artifacts were found in disturbed deposits (Hambelton 2015, Hambelton et al. 2015). The archaeological site was recommended not eligible for listing in the NRHP.

In 2016, AINW conducted a survey within road right-of-way that came within 15 m (50 ft) of the site boundary defined by Habmelton et al. (2015). This portion of the site was identified by 59 artifacts on the surface and five artifacts encountered in shovel tests within 40 cm (16 in) of the ground surface. The lithic scatter was predominately CCS flakes, but it also contained a basalt flake, CCS core, and a possible hammerstone (Hotze et al. 2016). This portion of the archaeological site was recommended to be not eligible for listing in the NRHP (Holtze et al. 2016).

- Approximately 0.8 km (0.5 mi) southwest of the current project area is the foundation of the domed burner for the former McPherson Lumber Company. The burner operated from 1947 to 1960. No Smithsonian number has been assigned to this resource, and it was recommended to be not eligible for listing in the NRHP (Bangs and Valentino 2016).

- A portion of the Santiam Wagon Road is approximately 1.3 km (0.8 mi) southwest of the current project area (O'Grady 2004). The road is listed in the NRHP.

- Site 35LIN732 is approximately 1.0 km (0.6 mi) west of the current project area. The site consists of remnants of an early to mid-twentieth century hydroelectric powerhouse and water pumping station. Site 35LIN732 was recommended to be eligible for listing in the NRHP (Ellis 1999).

- Another site is reported 1.1 km (0.7 mi) to the southeast along Berlin Road near the east bank of the South Santiam River, as per a notation on the original SHPO archaeological resources map. However, no further information about this site is available in OARRA.

- Isolate 15/2325-2 is approximately 0.8 km (0.5 mi) south of the current project area (Hambelton et al. 2015). The isolate consists of a single square nail recovered from a shovel test hole between 10 and 20 cm (4 and 8 in) below the ground surface. The nail was encountered in previously disturbed sediment (Hambelton et al. 2015). In OARRA, isolate 15/2325-2 is listed as unevaluated and noted as potentially being associated with the historic-period component of site 35LIN815.

- Isolate AAR 2138-1i is approximately 1.6 km (1.0 mi) southwest of the current project area. The isolate consists of a CCS flake encountered between 20 and 40 cm (8 to 16 in) below the ground surface in a shovel test (Lynch and Roulette 2019). The isolate is considered to be not eligible for listing in the NRHP.

Discussion

One cultural theme—the timber industry—is associated with the project area. Subject to that theme, the project area is recommended significant for its association with two events in local history. The first event is the Lebanon Lumber Mill, the first lumber mill in Lebanon (*The Lebanon Express* 1999a). The Lebanon Lumber Mill opened in 1907 and existed for a short time before being destroyed in a fire, limiting its period of significance to 1907-1915. The second event was the construction of one of the first Swedish gangsaw mills in Oregon (*The Lebanon Express* 1941, 1947; World Forestry Cetner 2024). The Swedish gangsaw mill was constructed by the Powers-Davis Lumber Company, which operated from 1941-1946, when it merged with the Santiam Lumber Company. The period of significance for the mill is recommended to be 1941-1946. Archival research indicates that no physical evidence of the Lebanon Lumber Mill or Swedish gangsaw mill remain (Historic Aerials 2023) (Figures 6 and 8).

By 1967, the mill had stopped expanding in terms of buildings and structures although land use within the property changed, such as expansion or construction of a new log pond. The mill was demolished between 2000 and 2011.

Six sub-areas (Areas 1 through 6) within the project area were designated for shovel testing based on the results of the archival research (Figure 9). Area 1 is north of the Southern Pacific Railroad and was considered to have a moderate to high probability that pre-contact archaeological material would be found because it once had been a prairie adjacent to a slough. The project area south of the Southern Pacific Railroad was assessed as having an overall low probability for an undisturbed archaeological resource because of past ground disturbance during phases of mill construction and the recent demolition of the mill site. But, in part to respond to a request by the Confederated Tribes of the Grande Ronde of Oregon (CTGR) to conduct subsurface survey, five areas (Areas 2 through 6) were identified as having a relatively higher probability for an archaeological resource to be present (Figure 9).

- **Area 1** was the project area north of the Southern Pacific Railway. It was considered to have at least a moderate probability for a pre-contact archaeological resource to be present. Historically, the western portion of this area was prairie, and the eastern portion was slough. These habitats would have provided a variety of resources used by Indigenous people. The western portion, defined by slope of the terrain and historic maps, was designated to be shovel tested because historically it was prairie land..

- **Area 2 and Area 3** were defined along the terrace edge above the South Santiam River. These two areas appeared to have had less disturbance compared to most of the project area. Area 2, and potentially Area 3, would have been accessible directly from the river at various times over the past 12,000 years.

- **Area 4** was considered to have a higher probability for an archaeological resource because it encompasses former prairie land (USGS 1853), and it appeared to have been less impacted by mill operations (Historic Aerials 2023).

- **Area 5** was thought to be a relatively less disturbed area. Historic aerial photographs suggest some activity in the area, as linear gaps in the trees are visible, aligned somewhat southeast-northwest, suggesting access roads, surface mining, or possible water transport channels. Modern topographic maps indicate that the northern half of Area 5 is sometimes inundated (e.g., USGS 2014). It is unclear whether the water flowed from the log pond or if it flowed inland from the South Santiam River historically, though the latter is more likely. Today, standing water in the area would be either the result of rainfall or inundation from the river.

- **Area 6** is the general area where the Lebanon Lumber Mill buildings stood. Archaeological material, if present in Area 6, could potentially date to the 1907-1915 period of significance. Refuse deposited by employees, if present, could potentially be significant under Criterion A. The location of the Powers-Davis Company Swede Gang Mill was not included within Area 6 because it was the building itself that would have been culturally significant, and the building is no longer extant.

The desktop review of the neighborhood surrounding the project area included researching maps and aerial photographs. The Linn County Surveyor GIS database revealed a broad range of construction dates that typically fall between circa 1940 and circa 1976 for buildings in the surrounding area.

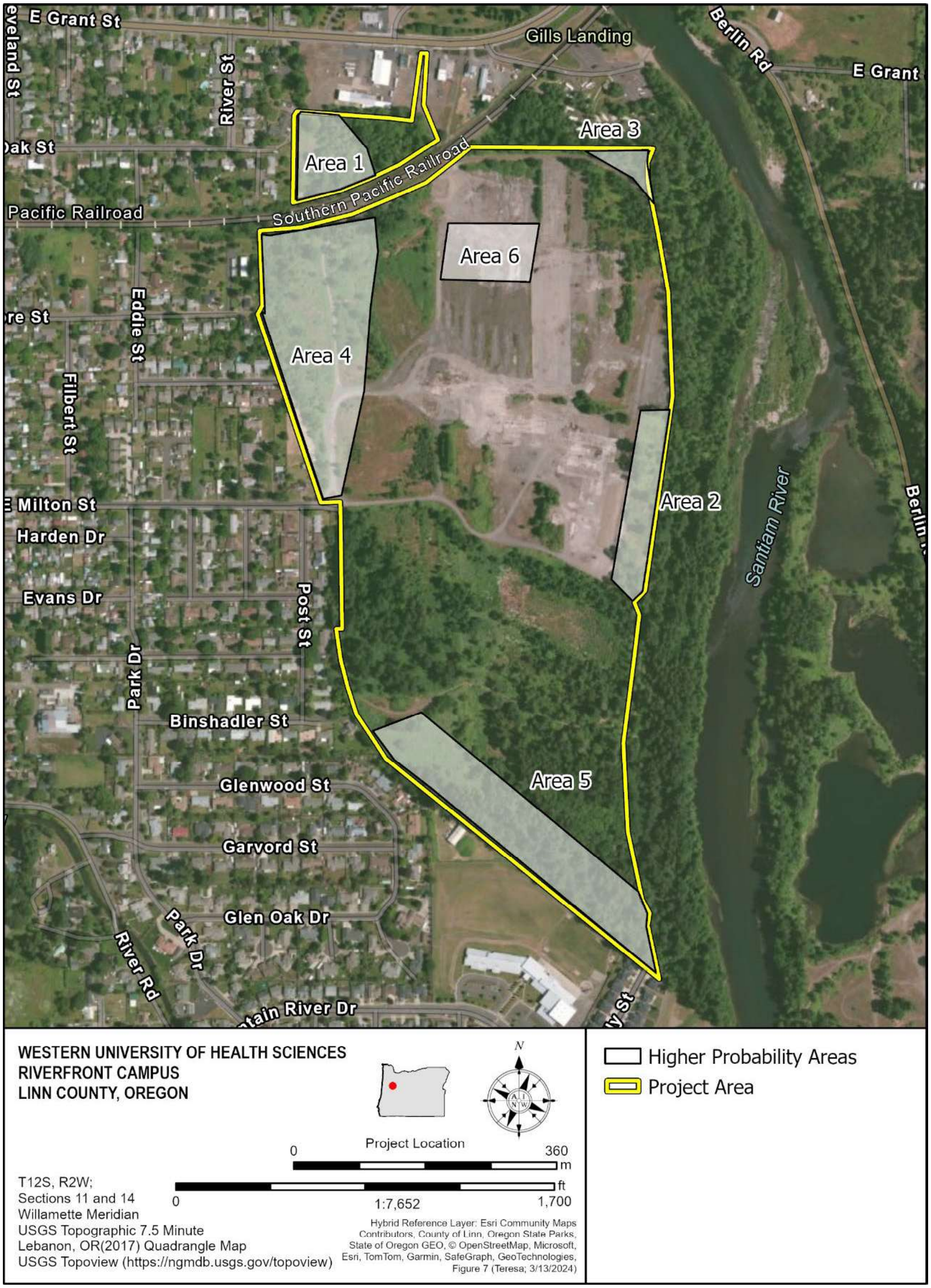


Figure 9. Areas with a relatively higher probability for an archaeological resource.

TRIBAL CONSULTATION

WUHS requested that AINW reach out to their staff-level counterparts at the appropriate Native American tribes. This consultation was not done for the purpose of complying with a regulation. AINW contacted the Legislative Commission of Indian Services to determine which tribes should be consulted. Notification of the project was sent September 13, 2023, via email, to the CTGR, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of Warm Springs. Chris Bailey, CTGR, responded via email on September 14, 2023, requesting that during the project, an inadvertent discovery plan be in place, and that he be contacted by phone if an archaeological and/or cultural resource is found. The CTGR also requested subsurface testing be included in the cultural resource survey.

FIELD METHODS

Fieldwork was conducted on September 21, 2023, and January 10 through 12, and 25, 2024. Participants were AINW Senior Archaeologist Teresa Trost, M.A., R.P.A.; AINW Supervising Archaeologists Khrystyne Tschinkel, Ph.D., R.P.A., and Emily Rich-Hayes (M.S. [abd]); AINW Architectural Historian/Staff Archaeologist Tara Seaver, M.S.; and Staff Archaeologists Olivia Gagnon, B.A.; Madison Hill, B.A., Lea Loiselle, B.A., Ryan Murphy, B.A., and Sydney Sundell, B.A. Teresa managed the project and provided general oversight. Because of the scale of prior ground disturbance and the amount of paved area, a rigid pattern of pedestrian transecting was not followed (Figure 10). On the first day of fieldwork, much of the project area had been recently graded, and the skies were clear. At the time of subsequent fieldwork, grass had grown over the project area, and skies were overcast with some rain showers.

Shovel testing was planned to occur in the six areas described above. Previous research around the current project area indicates that archaeological resources, if present, would be on the surface or detected within the uppermost 50 cm (20 in) of the soil profile. As such, AINW excavated the shovel tests to minimum depths of 60 cm (20 in) below the surface. A few shovel tests in Area 1 were planned to be extended to 1 m (3.28 ft) using a 15-cm (8-in) diameter bucket auger. Excavated sediments were screened through nested 6.4- and 3.2-millimeter (¼- and ⅛-in) mesh hardware cloth. The shovel test data were recorded on standard forms, and excavated soils were returned to the shovel tests when completed. Shovel test locations were mapped using an Arrow 100® Submeter GNSS Receiver System unit with submeter accuracy.

Prior to the shovel test survey, the client provided AINW with the Phase II Environmental Site Assessment prepared for the Department of Environmental Quality for the former "log yard" (Penetar and Bruner 2023). Based on that report and out of an abundance of caution, AINW removed Area 2, the southern portion of Area 4, and Area 6 from the shovel test survey (Figure 11). Overall, the project area is considered to have a low probability for archaeological resources, so removing these areas was considered a low risk for the project. Also, during the reconnaissance survey, Area 2 had almost 100% visibility of the sediments, which had been rutted and churned by heavy equipment. This provided excellent visibility of the nature of the soils. Area 6 was primarily surfaced with paved trails and imported gravels. Excavating shovel tests using hand tools would have been difficult if not impossible. The portion removed from Area 4 was not much utilized in the historic period, and no surficial evidence of buried archaeology was seen in the reworked sediments during the reconnaissance survey. The risk taken on by the project was considered low. Areas 2, 4, and 6 are further described below.

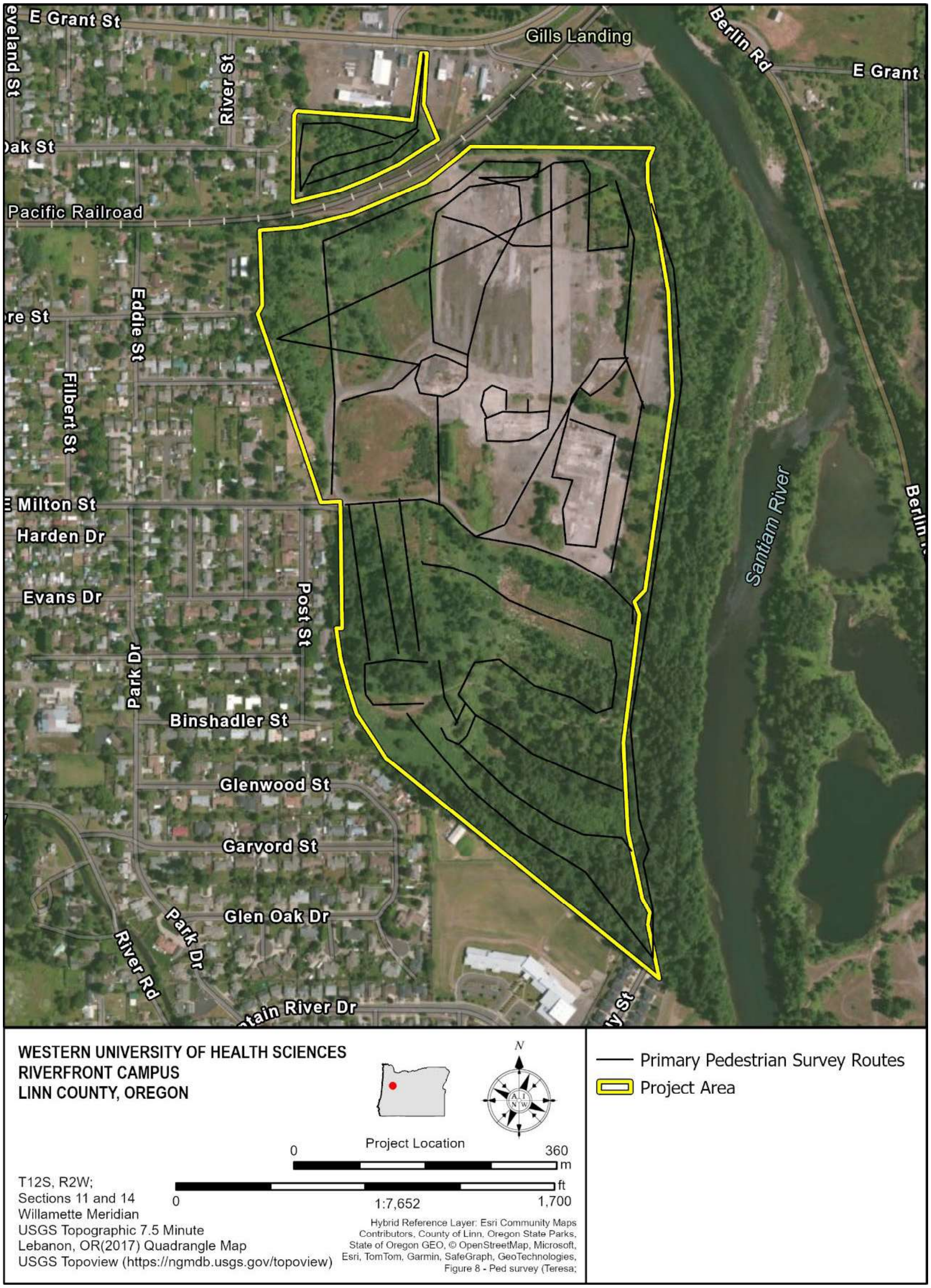


Figure 10. Primary routes walked during the pedestrian survey.

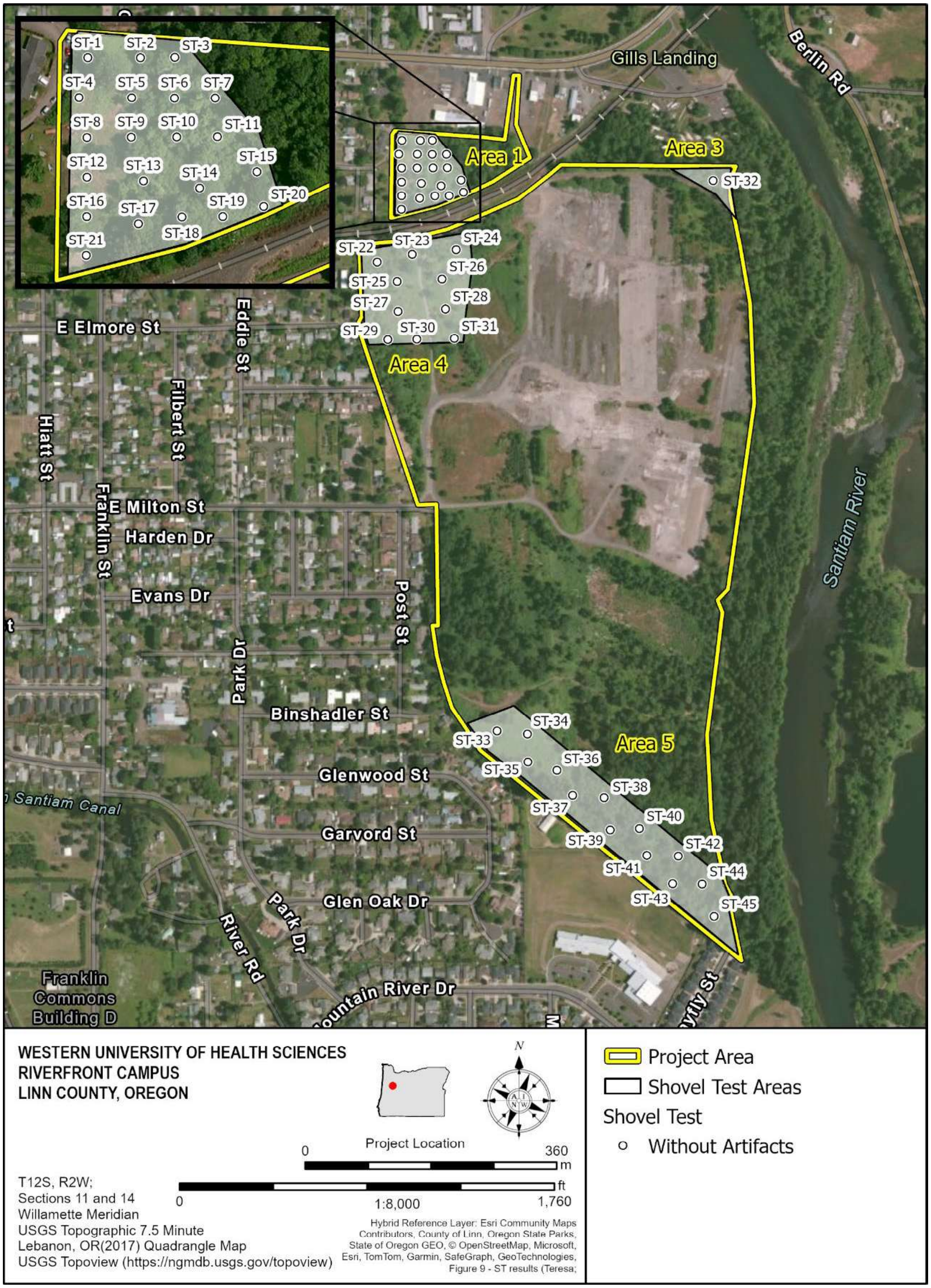


Figure 11. Revised higher probability areas and shovel test locations.

FIELD SURVEY RESULTS

The project area was found to have a low probability for significant archaeological resources. South of the Southern Pacific Railroad, unpaved areas have evidence of heavy equipment having been used to grade the surface and/or remove vegetation such as Himalayan blackberry, create "push piles" primarily of sediment but sometimes with structural debris such as concrete and railroad ties, and create raised earthen "walls" and probable transport routes (Photos 1 through 5). The project area is not fenced and is adjacent to the city-owned Old Mill Trail. People were observed crossing the project area and modern debris was common. North of the Southern Pacific Railroad, the project area was heavily vegetated (Photo 6).

Photo 1. Push piles and heavy equipment tracks viewed from the north end of the project at the approximate east-west midpoint. The view is towards the south. Photo taken September 21, 2023.

Photo 2. Overview of the project area at what had been the north end of the log pond as viewed from the northwest corner of the project area. The view is towards the east. Push piles dot the project area. The railway has been removed to the east (left). Photo taken January 25, 2024.

Photo 3. Overview of the project area where the plywood mill building once stood. The view is towards the northeast. Push piles visible in the midground (left and right). Photo taken September 23, 2023.

Photo 4. Overview of the south portion of the APE with log pond gate (center) and dike along the eastern boundary of the project area (midground right). The view is towards the east-northeast. Photo taken September 23, 2023.

Photo 5. Overview of the southern edge of the project area with two AINW field personnel in the background. Two vegetated southeast-northwest aligned berms are visible. The view is towards the west-southwest from the Old Mill Trail. Photo taken September 21, 2023.

Photo 6. Area 1, which is north of the Southern Pacific Railroad, as seen from the northwest corner of the area. The view is towards the southeast. The Southern Pacific Railway is in the background. Photo taken September 21, 2023.

Shovel Test Survey

AINW excavated 45 shovel tests (ST-1 through ST-45) (Figure 11; Appendix A). Twenty-one shovel tests (ST-1 to ST-21) were in Area 1, 10 shovel tests (ST-22 to ST-32)were in Area 4, one shovel test (ST-32) was in Area 3, and thirteen shovel tests (ST-33 to ST-45) were in Area 5. A description of each area follows.

Area 1 is north of the Southern Pacific Railroad. It is an overgrown, undulating field with push piles, a rudimentary road/ATV trail, fallen trees, and blackberry brambles (Photo 6). The western portion was slightly elevated compared to the eastern portion. Dense vegetation limited surface visibility to less than 5%. As this area was once prairie land and had remained undeveloped it was the area most likely to contain pre-contact archaeological material. Shovel tests were excavated at approximately 20-m (66-ft) intervals.

Shovel tests in Area 1 encountered a mix of intact and disturbed soils matching the Cloquato soil series. Organic material was limited to sparse fine roots with a few shovel tests also having sparse small roots. Shovel tests ST-5, ST-7, ST-11, ST-12, ST-15, ST-16, ST-18, and ST-20, which are distributed throughout Area 1, had three transitions, indicating the area had remnants of an old river or stream bed (Photo 7). The A horizon (0 to 17 cm [7 in] below the surface) was a medium to dark brown silt loam with 10% subrounded gravels. There was a smooth clear transition to the B horizon (17 to 40 cm [7 to 16 in] below the surface), which was medium brown gravelly sandy silt loam with 30% to 60% cobbles less than 17 cm (7 in) in size. There was a smooth clear transition to the C horizon (40 to 60 cm [16 to 24 in] below the surface), which was a medium grain sand with 45% subrounded gravels that decreased in size to 5 cm (2 in). Shovel tests ST-1 through ST-4, ST-6, ST-9, ST-10, ST-13, ST-14, ST-17, ST-19, and ST-21 were disturbed up to 50 cm (20 in) below the surface, and they did not have the cobbly B horizon that the undisturbed shovel tests contained. In these shovel tests the upper stratum (0 to 54 cm [21 in] below the surface) was a medium brown slightly sandy silt with 5% subrounded gravels. The lower stratum, interpreted to be the soil C horizon (54 to 60 cm [21 in] below the surface) was a medium brown gravelly sand with 45% subrounded gravels less than 5 cm (2 in) in size. In two shovel tests (ST-3 and ST-4), thin glass and plastic fragments were encountered between 20 and 50 cm (8 and 20 in) below the surface. A piece of metal was present in shovel test ST-9 at 13 cm (5 in) below the ground surface.

Photo 7. Shovel test ST-5 in Area 1.

Area 2 was removed from the shovel test survey because of environmental concerns. It is mostly situated between mill railway and the Old Mill Trail. On the day of the reconnaissance survey the area was almost entirely unvegetated. Heavy equipment tracks and a berm push pile were visible (Photo 8).

Photo 8. Area 2 viewed from the Old Mill Trail (foreground). Mill railway is visible behind the tree in the middle of the photo. The view is towards the west.

Area 3 is in the northeastern portion of the project area. It is a grassy, gently undulating low area bordered by built up paved paths.

A single shovel test (ST-32) was placed in Area 3 because of the bowling around the edges of the area created by walkway prisms (9 and 10). Sparse fine roots were present throughout the shovel test. The A horizon (0 to 46 cm [18 in] below the surface) was a light brown sandy silt with less than 5% subrounded gravels. There was a smooth subtle transition to the B horizon (46 to 60 cm [18 to 24 in] below the surface), which was a brown sand with less than 5% subrounded gravels. These stata could potentially be a variant of the Cloquato soil series or could be overbank deposits laid down during flood events.

Photo 9. Overview of Area 3, which encompasses the northeast corner of the project area, as it appeared on January 12, 2024, while shovel test ST-32 was excavated. The view is towards the south.

Photo 10. Sediments exposed in shovel test ST-32 within Area 2.

Area 4 is located on the western border of the project area and south of the Southern Pacific Railroad. It a is a gently undulating open area that is maintained by grading (Photos 10 and 11). It is bisected by a paved access road. There are a few young trees in the area. The north headgate of the log pond is at the northern edge of this area. The southern portion of Area 4 was removed from the survey because of environmental concerns (Photo 12).

Shovel tests (ST-22 through ST-31) in Area 4 encountered a mix of intact and disturbed soils matching the Cloquato soil series. Sparse fine roots were present in the shovel tests. The A horizon (0 to 31 cm [in] below the surface) was a dark brown silty sand with less than 30% subangular to rounded gravels and cobbles up to 15 cm (6 in). There was a wavy clear transition to the B horizon (31 to 67 cm [12 to 26 in] below the surface), which was medium gray- to orange-brown silty sand with less than 45% rounded to subrounded gravel and boulders up to 20 cm (8 in) in size (Photo 12). The orange coloring was not observed elsewhere, and may be a mark of disturbance. Shovel test ST-23 encountered architectural debris inside the raised prism of a modern pathway. Red extruded brick fragments (n=5) were encountered at 14 cm (5 in) below the surface, a collection of metal wires was encountered between 34 and 44 cm (13 and 17 in) below the surface, and tan extruded brick fragments were encountered between 40 and 44 cm (16 and 17 in) below the surface.

Figure 10. Overview of Area 4 and location of shovel test ST-23 (foreground). AINW employees are visible in the background. The view is towards the south. Photo taken January 11, 2024.

Photo 11. An example of conditions in Area 4, which is on the west side of the project area and south of the Southern Pacific Railroad. The view is of the portion of Area 4 that was removed from the shovel test survey. Photo taken September 21, 2023.

Photo 12. Sediments exposed in shovel test ST-27 within Area 4.

Area 5 runs northwest to southeast on the southern border of the project area. The western end is adjacent to the south headgate to the former log pond. It is an undulating open area with only cut grass (Photo 13). Large push piles dot the area, and the area has a few deep undulations.

The shovel tests (ST-33 through ST-45) in Area 5 encountered disturbed native soils matching the Cloquato soil series (Photo 14). Soils in this area were disturbed up to 70 cm (28 in) below the surface. In most of the shovel tests (ST-33, ST-34, ST-35, ST-37 through ST-40, ST-42, and ST-44) soils from 0 to 70 cm (28 in) below the surface were a medium brown slightly sandy silt with less than 40% subrounded gravels. Four shovel tests (ST-36, ST-41, ST-43, and ST-45) encountered a dark grey silt loam layer from 40 to 70 cm (16 to 28 in) below the surface. Shovel test ST-35 encountered a metal pipe and wire at 40 cm (16 in) below the surface. Organic debris was observed in the shovel tests, except for shovel test ST-36. Shovel tests ST-35, ST-37, and ST-40 had sparse charcoal inclusions throughout the excavation. Shovel tests ST-38 and ST-43 had wood fragments up to 30 cm (12 in) below the surface. Some of the wood in shovel test ST-43 was burnt. Shovel test ST-39 had a concentration of grass and wood/woody fragments at 67 cm (26 in) below the ground surface. Shovel tests ST-33, ST-34, ST-42, and ST-44 had sparse decaying wood/woody debris and/or roots.

Photo 13. Area 5 with shovel test ST-44 in the foreground. Three AINW field personnel are visible in the background. The view is towards the north. Photo taken January 11, 2024.

Photo 14. Sediments exposed in shovel test ST-39 within Area 5.

Area 6 is in the center or the north portion of the project area, where Lebanon Lumber Mill buildings once stood. It contains asphalt with some exposures of sediments and imported gravels (Photo 15). The area was removed from the shovel test survey because of environmental concerns and that hand tools would be ineffective for digging.

Photo 15. Overview of Area 6, which begins approximately at the north edge of the asphalt (mid-field) and extends to the south. The view is towards the southwest. Photo taken September 21, 2023.

Historic Resources

No historic structures were identified within the project area. Upon completion of the windshield survey, AINW found that it is unlikely that a historic district comprised of buildings in the surrounding neighborhood would be present. In addition to the broad range of construction dates—circa 1940 through circa 1976—many houses were observed to be modified since their original date of construction. Due to the broad representation of construction dates and changes to individual buildings, it is unlikely that a historic district would be present.

Archaeological Resources – No Federal Nexus

No archaeological site as defined by Oregon Revised Statute (ORS 358.905) was identified within the project area. An archaeological resource must be 75 years of age or older. The mill site was recently demolished. Very few older looking ceramic and glass fragments were seen. None were temporally diagnostic, and they did not appear to be in an original provenience based on the grading and other disturbances visible across the project area. Examples are shown in Photos 16 and 17.

Photo 16. Ceramic fragment found near the south end of the log pond. The graphic is likely a variant of the Willow pattern, introduced in the eighteenth century and still produced today. No other objects were found nearby.

Photo 17. Rawleigh milk glass jar found in the northeast portion of the project area. Rawleigh was a popular brand in the 1920s to 1950s, but most companies switched from glass to plastic containers in the 1960s and 1970s (Glassbottlemarks.com 2024). No other objects were found nearby.

Archaeological Resources – With a Federal Nexus

Under federal jurisdiction, an archaeological resource must be at least 50 years old by the time the project completes. If there is a federal nexus and the Area of Potential Effects (APE) overlaps a debris scatter (23/3418-1) described below, an archaeological site inventory form may need to be prepared for the cultural resource.

Scatter 23/3418-1 contains objects with dates of manufacture in the 1960s and 1970s. The date of deposition is not known. It is located 75 m (23 ft) east of the easternmost end of Binshadler Street (Figure 12). The scatter measures 18 m (60 ft) east to west and 30 m (97 ft) north to south. Objects are found on the sides and bottom of a U-shaped scooped-out/push pile area that opens to the north (Photo 18). The south end (bottom of the U-shape) was against a concrete structure likely associated with the log pond. Trackhoe tread marks were visible on the surface. Most of the objects lie on the ground surface and seem to be embedded no more than 5 cm (2 in) into the ground. Shovel testing inside the U-shaped bend was not conducted. The debris scatter appears to be a one-time dumping event that has been scattered across the surface (Photo 19). The low density of objects and that it was spread within a discrete U-shaped area suggests it is not a landfill. It is possible that residents in the nearby neighborhood discarded the debris and that the objects are unrelated to the mill or mill employees.

Over 575 pieces of household, industrial, and architectural debris were encountered (see Appendix B for descriptions). Objects that could be assigned a manufacture date generally dated between the 1960s and 1970s. The types of glass bottles and jars encountered included food, cosmetic, and medical. The types of metal cans noted included food (including baby food) and condiment. Two fragments of child's toys were also encountered. The architectural debris encountered was ten small pieces of brick, which may be inclusions in the debris scatter. The scatter also included temporally non-diagnostic objects and scraps, which were mostly metal (Photo 20). A handful of possible modern inclusions, including plastic water bottles and a plastic jug, were noted.

If considered an archaeological resource, 23/3418-1 would be recommended not eligible for listing in the NRHP. To be eligible for listing in the NRHP, at least one of four criteria defined by the Secretary of the Interior must be met. The term history as used in this paragraph encompasses the breadth of human presence in the area. Criterion A is that the resource is associated with an event that made a significant contribution to a broad pattern of our history. A singular dumping event of domestic debris does not meet this criterion. Criterion B is that the resource has significance because of its association with an important person in history. This Criterion does not apply nor does Criterion C, which is for resources that are important for their engineering, architecture, or artistic character. Criterion D applies if a resource yields important information about our history. A singular dumping event for which the original provenience of the object is not well understood, being possibly in a push pile, does not meet Criterion D.

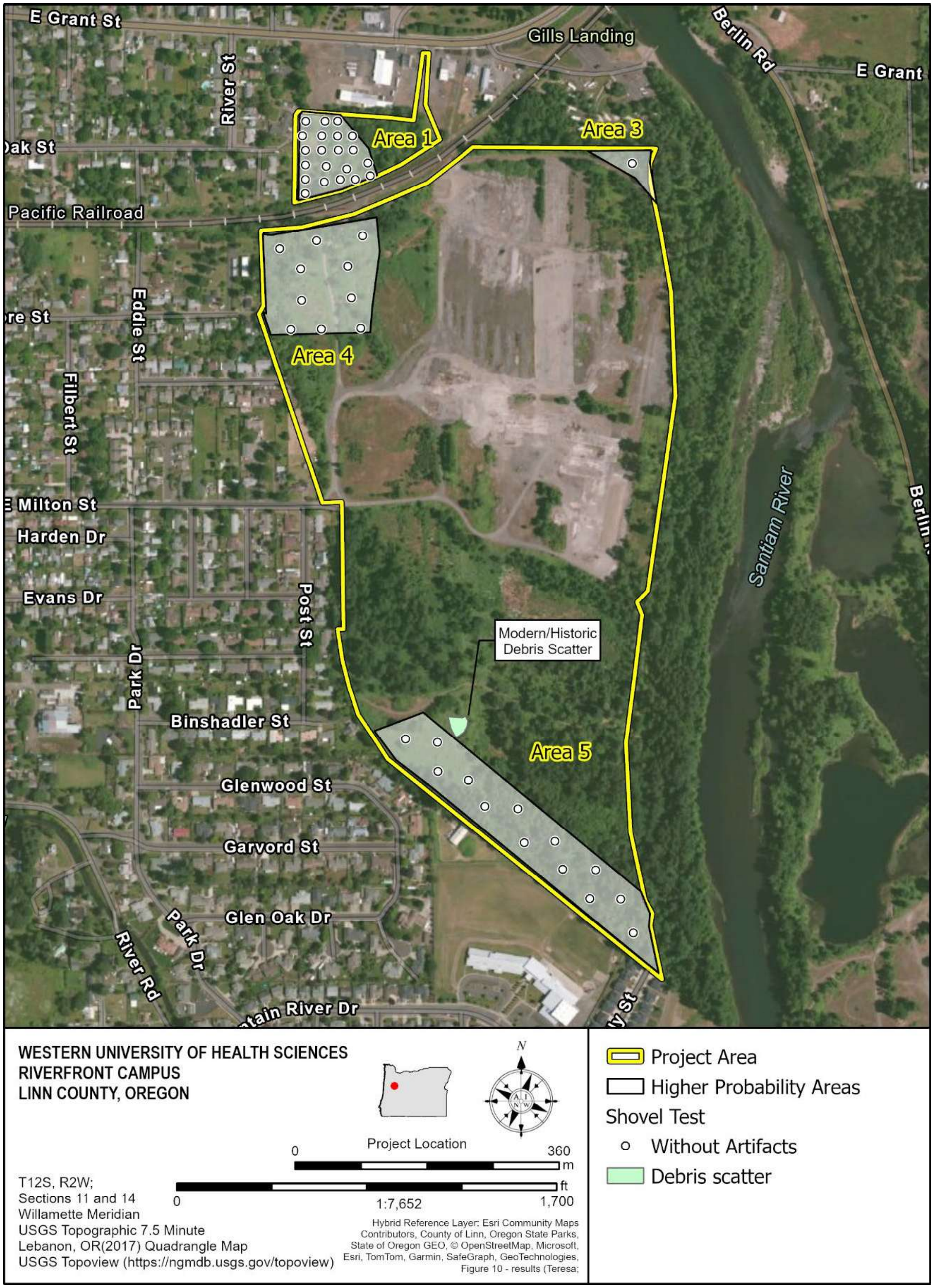


Figure 12. Location of modern/historic debris scatter.

Photo 18. Overview of U-shaped berm containing modern/historic debris. The view is towards the southwest.

Photo 19. Typical density of objects spread across the surface. Plastic, ceramic, and glass objects present.

Photo 20. Example of metal objects found within the U-shaped berm.

SUMMARY

AINW completed a cultural resources survey for the proposed WUHS Riverfront Campus project. The survey consisted of archival research, pedestrian surface survey, and shovel test survey for archaeological resources, and a reconnaissance-level survey of buildings in the nearby neighborhood. No historic resource was identified. If the project has a federal nexus, such as a permit issued by a federal agency, and the APE overlaps the debris scatter 23/3418-1, the scatter may need to be recorded on a state archaeological inventory form and a formal determination of eligibility for listing in the NRHP made by the lead federal agency.

RECOMMENDATIONS

AINW recommends that excavation in Area 6, as shown in Figure 9, be monitored by an archaeologist. This is the location where the first mill buildings stood. Archaeological material associated with the Lebanon Lumber Mill could be present and potentially be eligible for listing in the NRHP.

AINW also recommends that an inadvertent discovery plan (IDP) be put in place for construction. If pre-contact or historic-period archaeological resources are encountered during construction, all ground-disturbing activity near the find(s) should be halted and Oregon SHPO promptly notified. It is expected that further excavation will expose low densities of glass, ceramic, brick, nails and metal fragments in push piles and at the ground surface. However, if a concentration of identifiable objects such as intact objects with makers marks or other diagnostic features are exposed or a potential landfill is exposed, work must cease in that location and the Oregon SHPO must be notified. The same protocol must be followed if any pre-contact archaeological material such as stone tools or debris from the making of stone tools, hearths, concentrations of shell or bone, or ashy or charcoal rich sediments are exposed.

If human remains are encountered in any of the excavations, all ground-disturbing activity in the vicinity of the find(s) should be halted immediately and the State Police, SHPO, the Commission on Indian Services, and the appropriate Indian tribes shall be promptly notified pursuant to ORS 97.745(4).

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APPENDICES

APPENDIX A

SHOVEL TEST TABLE

SHOVEL TEST RESULTS

Shovel Test No.	Location	Depth	Results
ST-1	Area 1	63 cm (25 in)	No Cultural Resources
ST-2	Area 1	60 cm (24 in)	No Cultural Resources
ST-3	Area 1	65 cm (25 in)	No Cultural Resources
ST-4	Area 1	60 cm (24 in)	No Cultural Resources
ST-5	Area 1	60 cm (24 in)	No Cultural Resources
ST-6	Area 1	104 cm (50 in)	No Cultural Resources
ST-7	Area 1	61 cm (24 in)	No Cultural Resources
ST-8	Area 1	60 cm (24 in)	No Cultural Resources
ST-9	Area 1	60 cm (24 in)	No Cultural Resources
ST-10	Area 1	63 cm (25 in)	No Cultural Resources
ST-11	Area 1	60 cm (24 in)	No Cultural Resources
ST-12	Area 1	60 cm (24 in)	No Cultural Resources
ST-13	Area 1	63 cm (25 in)	No Cultural Resources
ST-14	Area 1	60 cm (24 in)	No Cultural Resources
ST-15	Area 1	60 cm (24 in)	No Cultural Resources
ST-16	Area 1	60 cm (24 in)	No Cultural Resources
ST-17	Area 1	60 cm (24 in)	No Cultural Resources
ST-18	Area 1	62 cm (24 in)	No Cultural Resources
ST-19	Area 1	100 cm (39 in)	No Cultural Resources
ST-20	Area 1	60 cm (24 in)	No Cultural Resources
ST-21	Area 1	62 cm (24 in)	No Cultural Resources
ST-22	Area 4	60 cm (24 in)	No Cultural Resources
ST-23	Area 4	44 cm (17 in) **	No Cultural Resources
ST-24	Area 4	60 cm (24 in)	No Cultural Resources
ST-25	Area 4	60 cm (24 in)	No Cultural Resources
ST-26	Area 4	67 cm (26 in)	No Cultural Resources
ST-27	Area 4	54 cm (21 in) *	No Cultural Resources
ST-28	Area 4	60 cm (24 in)	No Cultural Resources
ST-29	Area 4	60 cm (24 in)	No Cultural Resources
ST-30	Area 4	60 cm (24 in)	No Cultural Resources
ST-31	Area 4	60 cm (24 in)	No Cultural Resources

SHOVEL TEST RESULTS

Shovel Test No.	Location	Depth	Results
ST-32	Area 3	60 cm (24 in)	No Cultural Resources
ST-33	Area 5	60 cm (24 in)	No Cultural Resources
ST-34	Area 5	60 cm (24 in)	No Cultural Resources
ST-35	Area 5	40 cm (16 in) **	No Cultural Resources
ST-36	Area 5	60 cm (24 in)	No Cultural Resources
ST-37	Area 5	60 cm (24 in)	No Cultural Resources
ST-38	Area 5	70 cm (28 in)	No Cultural Resources
ST-39	Area 5	70 cm (28 in)	No Cultural Resources
ST-40	Area 5	60 cm (24 in)	No Cultural Resources
ST-41	Area 5	60 cm (24 in)	No Cultural Resources
ST-42	Area 5	63 cm (25 in)	No Cultural Resources
ST-43	Area 5	60 cm (24 in)	No Cultural Resources
ST-44	Area 5	62 cm (24 in)	No Cultural Resources
ST-45	Area 5	60 cm (24 in)	No Cultural Resources

*** Shovel test terminated due to rock impasse**
**** Shovel test terminated due to metal wire or pipe impasse**

APPENDIX B

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
Baby food jars, some with lids	5	n/a		
Gebhardt Chili Powder bottle	1	n/a		
Amber non-return keg bottle	1	Post 1967	(Schulz et al. 2024:27)	

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
Colorless Kraft salad dressing base made by Ball	1	1960s to 1970s	(Collectors Weekly 2018)	
Bayer children's sized Aspirin bottle neck with pink top	1	1910 to 2007	(Science History Institute 2017)	
Owens Illinois bottle bases with an "I in an O" mark	2	1960s	(Lindsey 2024)	

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
Owens Illinois bottle bases with an "I in an O" mark (n = 2)		1960s	(Lindsey 2024)	 
Rawleigh's cold cream jar fragment	1	1920s to ca 1960s	Glassbottlemarks.com 2024	
Colorless glass fragments	100+	n/a		
Cobalt blue glass fragments	11+	n/a		
Dark green glass fragments	6+	n/a		
Amber glass fragments	75+	n/a		
Yellow glass fragments	2	n/a		
Aqua glass fragments	4+	n/a		
Milk glass fragments	10+	n/a		

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
Plain white ceramic fragments	20+	n/a		
Brown transferware ceramic fragments	3	n/a		
White with a red line ceramic fragment	1	n/a		
Brown glazed ceramic electric insulator	1	n/a		
Gerber apple juice can	1	n/a		
Sawcut bone	1	Post 1800s		
Child's shoe fragment	1	n/a		
Toy doll arm	1	n/a		

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
Child's car toy frame with rubber tires	1	n/a		
Pepsi can	1	1965-1975	Schroeder 2019	 

OBJECTS FOUND IN THE DEBRIS SCATTER DATING TO CIRCA 1960s-1970s

Diagnostic Material	Count	Date	Reference	Photo
"Copenhagen Satisfies" lid	1	1935 to 1977	(Rock 1989)	
Metal fragments	300+	n/a		
Metal spike	1	n/a		
Saw-toothed blades	7+	n/a		

Geotechnical Reconnaissance

Foundation Engineering, Inc.
Professional Geotechnical Services

Memorandum

Date: April 23, 2018

To: Kim Ketcham
Associate Director of Development
Western University of Health Sciences
COMP-Northwest

From: James K. Maitland, P.E., G.E.
Erin J. Gillaspie, P.E.

Subject: Preliminary Geotechnical Investigation

Project: Lebanon Property Development
Project 2181024

REGISTERED PROFESSIONAL ENGINEER
10701
OREGON
July 18, 1980
JAMES K. MAITLAND
EXPIRES: 12/31/18

We have completed the requested preliminary geotechnical investigation for the above-referenced project in Lebanon, Oregon. This report provides a description of our work and a discussion of site conditions.

BACKGROUND

Western University of Health Sciences (WUHS) is considering the purchase of a ±150.6-acre parcel in Lebanon, Oregon. The property's location is shown on Figure 1A (Appendix A). Should the purchase proceed, we understand WUHS plans to develop the site for a medical school campus. No details of the planned development were available at the time this report was prepared, but it was indicated the site would be used to relocate and expand the Lebanon Medical School campus of Western Oregon University and Health Sciences.

Foundation Engineering, Inc. was retained by WUHS to complete a geotechnical reconnaissance as part of the due-diligence for the purchase. Details of our scope of work were provided in a proposal dated March 20, 2018, and authorized by a signed agreement dated March 21, 2018. Cascade Earth Sciences (CES) has been retained by WUHS to complete an environmental investigation of the property.

FIELD EXPLORATION

We dug nine exploratory test pits at the site on April 4, 2018, using a John Deere 160C LC tracked excavator. Some test pit locations were selected in conjunction with CES to combine the geotechnical and environmental explorations. The test pits extended to maximum depths ranging from ±6 to 14 feet.

The soil profiles were logged and ground water infiltration, where encountered, was noted. The soil profile, sampling depths, and strength measurements are shown on the test pit logs (Appendix B). The approximate locations of the test pits are shown in Figure 2A (Appendix A). The surface and subsurface conditions are discussed below.

SURFACE AND SUBSURFACE CONDITIONS

The site was previously used as a lumber mill. The original buildings have been demolished, but concrete slabs and footings are still present at the ground surface (Photo 1A, Appendix A). We anticipate buried foundations and abandoned utility lines remain.

Fills of varying depth were encountered in most explorations, suggesting the surface topography of the parcel has changed significantly over time. We anticipate some of the deeper fills may represent log pond backfill.

PES Environmental, Inc. (PES) completed an Environmental Site Assessment for the property in November 2011. That report included a series of aerial photographs dated from 1936 to 2010. Our explorations encountered extensive fill in an area labeled Landfill Area in the PES report (i.e., in the vicinity of TP-3, TP-6, and TP-9), but only limited fill outside of this area. However, the aerial photographs suggest the western and southern portions of the site were used as log ponds in the past. Therefore, unsuitable soil may be present beyond the limits of the designated Landfill Area in the PES report.

It should be noted; several low-lying areas have been identified as potential wetlands. We did not dig exploratory test pits in the area south of TP-7 and TP-8 to avoid impacting potential wetlands.

Site Topography and Surface Conditions

The site is currently relatively flat and was recently cleared of large trees. However, berms up to ±15 feet tall are present across the site and abundant small trees, bushes, and blackberries are found over most of the parcel. Asphaltic concrete (AC) and Portland cement concrete (PCC) pavements, and crushed rock-surfaces extend throughout the parcel. The remaining areas are typically covered with grass. Typical surface conditions are shown in Photo 2A (Appendix A).

Subsurface Conditions

Our previous borings within the Lebanon area suggest the subject parcel is likely underlain by predominantly alluvial deposits (e.g., silt, sand, and gravel) to ±20 to 60 feet, followed by bedrock. A more accurate, deep subsurface profile will be needed if a site-specific seismic hazard study is required for the planned development.

A discussion of the primary soil units encountered in the test pits is presented below. A more detailed description of the subsurface conditions at each test pit location is provided in the test pit logs (Appendix B).

Fill. Surficial fill was encountered in most test pits. The fill typically extends to depths of ±1.5 to 5 feet and consists of predominantly sandy gravel. Pavements and slabs extend over the fill in some locations.

Abundant large, concrete fragments were intermixed with the sandy gravel fill at TP-6 (Photo 3A, Appendix A). Digging at this location was abandoned at ±9 feet, prior to encountering native soil, due to extensive caving of the test pit sidewalls. TP-9 was dug relatively close to TP-6 to estimate the fill thickness. However, the fill at this location extended to only ±6½ feet and did not contain the concrete fragments observed in TP-6. The fill in TP-9 is underlain by ±6 inches of wood debris, suggesting the area was previously a log pond.

TP-3 encountered predominantly wood debris from ±3 to 14 feet (Photo 4A, Appendix A). The wood debris consists of bark, decaying wood fibers, and logs up to ±6 feet long and ±18 inches in diameter. The fill at TP-3 extended to ±14 feet.

Silt and Sand (alluvium). Brown to grey, low plasticity silt and fine or fine to medium sand with varying amounts of silt were encountered above the alluvial gravel in most test pits. The silt and sand are frequently interbedded, and the silt content generally decreases with increased depth. The depth at which these soils (where present) were first encountered ranged from the ground surface to ±7 feet and extended to depths ranging from ±3½ to 9½ feet. The silt is typically very stiff to hard and the sand and silty sand typically appeared dense to very dense. However, the sand appeared loose to medium dense at some locations.

Sandy Gravel and Cobbles (alluvium). Grey to grey-brown, dense to very dense, sandy gravel and cobbles extend below the fill or alluvial sand. The cobbles are up to 12 inches in diameter. This material appears to have been used as fill in some areas.

Ground Water

Water infiltration was observed in some test pits at depths ranging from ±4 to 13.5 feet. The rate of infiltration into the test pits was typically rapid. Due to the variable depth of water infiltration, we believe some or all of the infiltration represents perched or confined, ponded water.

Based on the soil conditions encountered in the test pits, we anticipate the ground water level at the site fluctuates seasonally and closely matches the water level in the Santiam River, which runs east of the site. Therefore, we anticipate the ground water level at the site varies from ±10 to 20 feet below current grades.

LABORATORY TESTING

Laboratory testing was not included in the current scope of work. However, soil samples were retained during our field exploration for possible future laboratory testing.

PRELIMINARY CONCLUSIONS

Based on the geotechnical reconnaissance described above, we have concluded the following:

1. The site is suitable for the planned development of a medical school main campus.

2. Conventional shallow foundations (i.e., spread footings and continuous wall footings) should be suitable to support the proposed buildings. However, mitigation of the existing site fill will be required (see below).

3. Most of the site contains fill consisting predominantly of granular soil (sandy gravel with cobbles) interbedded with some shallow layers of silt. In general, most of the existing site fill should be suitable for re-use as site fill beneath new structures and pavements. However, re-processing of the site fill (i.e., excavation, sorting to remove unsuitable debris, and re-compaction in lifts) will be required beneath buildings. Re-processing may not be required under pavements.

   Soft or wet silt will require drying before it can be re-compacted. Where present, organic-rich topsoil or silt will have to be stripped from beneath building areas and hauled from the site or re-used in landscape areas.

   At some locations, CES has indicated the granular soil may have low-level (non-DEQ issue) hydrocarbon contamination. At those locations, some blending and re-testing may be required as part of the re-processing of the existing site fill.

4. Aerial photographs indicate the western portion of the site was used as a log pond. This area was also the previously designated as a Landfill Area in the PES report. The fill in TP-3, TP-6, and TP-9 included wood debris, bark, logs, and concrete debris, materials consistent with log pond backfill. Therefore, the western portion of the site will have a higher probability of containing unsuitable materials or fill requiring re-processing.

   Additional explorations will be required to better define the extent and depth of unsuitable fill in the above-referenced area, and to determine if any other log ponds were similarly filled. Mitigation options include avoiding development of these areas, limiting construction over the fill to pavements and accepting the risk of some future settlement, or excavation and replacement of the unsuitable materials with an engineered fill.

Preliminary comments by CES suggest the log pond backfill contains low-levels of hydrocarbon contamination. Therefore, if this material is excavated, it will require disposal in a landfill (presumably at the Coffin Butte Landfill).

5. Existing AC pavements, PCC slabs and footings will have to be removed prior to site development. However, properly processed (e.g., crushed) AC and PCC may be re-used onsite as general site fill outside of building areas.

6. Imported granular fill (typically, 1½ or 1-inch minus, well graded, clean crushed gravel or crushed rock) will be required to construct building pads under structures and serve as base rock under pavements. Suitable crushed gravel or crushed quarry rock should be available at nearby rock quarries and gravel pits.

Site grading typically occurs during dry weather months (i.e., mid-June to early October). Where site fill consists of predominantly of granular material, it is possible to extend site grading into wet weather. However, processing of organic fill or fine-grained soils should be limited to dry weather only. Evaluation and selection of suitable sources and types of fill material should be done as part of a design-phase geotechnical investigation, after a grading plan and site layout are developed.

FUTURE GEOTECHNICAL WORK

We understand a master plan will be developed for the proposed development if the property is purchased. Additional geotechnical work will be required to confirm foundation conditions beneath planned buildings and to develop recommendations for site grading (including any needed mitigation), and for the design and construction of foundations and pavements. The design-level geotechnical investigation may be done in phases to match a staged development plan. A site-specific seismic hazard study will also likely be required for the new development.

VARIATION OF SUBSURFACE CONDITIONS, USE OF THIS REPORT, AND WARRANTY

The preliminary conclusions contained herein assume the soil profiles and the water infiltration encountered in the test pits are representative of overall site conditions. It should be clearly understood that former mill sites typically possess highly variable subsurface conditions. The current reconnaissance-level investigation is intended to provide an overview of anticipated site conditions, and conditions between widely-spaced test pits may vary significantly, resulting in still undetected areas of unsuitable fill.

The current scope of work does not include recommendations for site grading, or for foundation or pavement design. We assume a more detailed geotechnical investigation will be conducted prior to design and construction. We will assume no responsibility or liability for any engineering judgment, inspection or testing performed by others.

This report was prepared for the exclusive use of Western University of Health Sciences for their due diligence investigation of the Lebanon Property Development project. Information contained herein should not be used for other sites or for unanticipated design or construction without our written consent. This report is intended solely for the stated purpose. Contractors using this information to estimate construction quantities or costs do so at their own risk. Our services do not include any survey or assessment of potential surface contamination or contamination of the soil or ground water by hazardous or toxic materials. Those services are being provided by others.

Our work was done in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

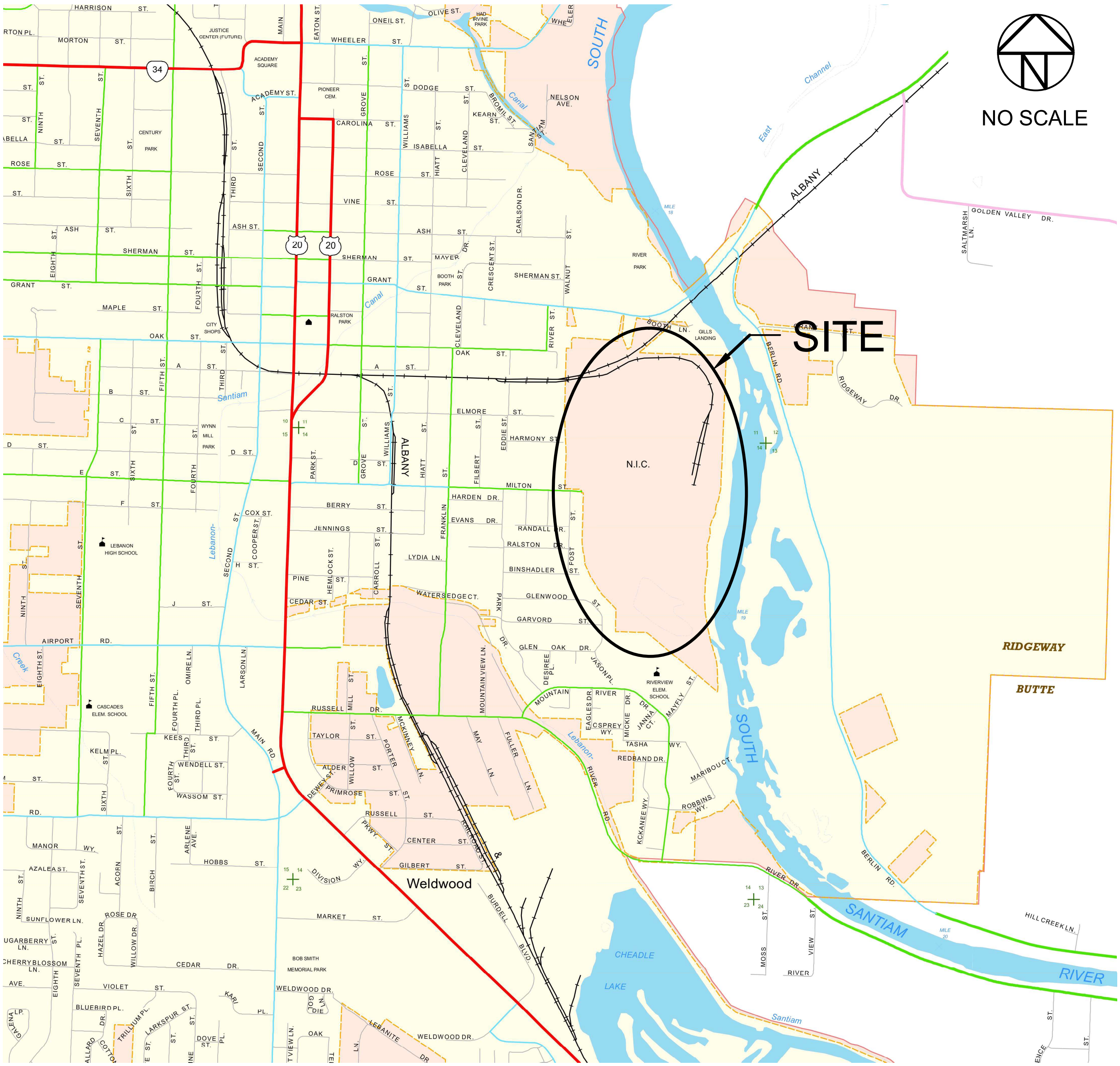
Attachments

Appendix A

Figures and Photos

Professional
Geotechnical
Services

Foundation Engineering, Inc.



Note: Base map obtained from the Oregon Department of Transportion website.

DATE	APR 2018
DWN.	EJG
APPR.	
REVIS.	
PROJECT NO.	2181024

FOUNDATION ENGINEERING INC.
PROFESSIONAL GEOTECHNICAL SERVICES
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VICINITY MAP

LEBANON PROPERTY DEVELOPMENT
LEBANON, OREGON

FIGURE NO.
1A

FILE NAME: FIG 1A

LEGEND

TP-2 TEST PIT NUMBER AND LOCATION

NOTES:
1. TEST PIT LOCATIONS WERE ESTABLISHED BY VISUAL REFERENCE FROM AVAILABLE LANDMARKS AND ARE APPROXIMATE.
2. AERIAL IMAGE OBTAINED FROM GOOGLE EARTH.
3. SEE REPORT FOR A DISCUSSION OF SUBSURFACE CONDITIONS.

DATE APR 2018
DWN. EJG
APPR.
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SITE LAYOUT AND TEST PIT LOCATIONS

LEBANON PROPERTY DEVELOPMENT
LEBANON, OREGON

FIGURE NO.
2A

FILE NAME: FIG 2A


Photo 1A. Slabs and abandoned utilities looking east


Photo 2A. Site looking south from railroad embankment

Photo 3A. Large concrete fragments being removed from TP-6

Photo 4A. Wood debris being removed from TP-3

Appendix B

Test Pit Logs

Professional
Geotechnical
Services

Foundation Engineering, Inc.

DISTINCTION BETWEEN FIELD LOGS AND FINAL LOGS

A field log is prepared for each boring or test pit by our field representative. The log contains information concerning sampling depths and the presence of various materials such as gravel, cobbles, and fill, and observations of ground water. It also contains our interpretation of the soil conditions between samples. The final logs presented in this report represent our interpretation of the contents of the field logs and the results of the sample examinations and laboratory test results. Our recommendations are based on the contents of the final logs and the information contained therein and not on the field logs.

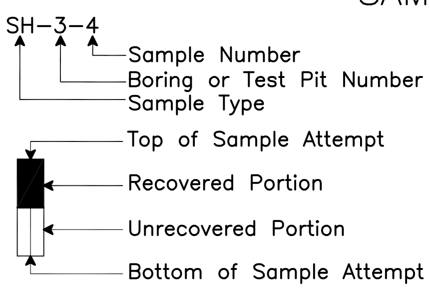
VARIATION IN SOILS BETWEEN TEST PITS AND BORINGS

The final log and related information depict subsurface conditions only at the specific location and on the date indicated. Those using the information contained herein should be aware that soil conditions at other locations or on other dates may differ. Actual foundation or subgrade conditions should be confirmed by us during construction.

TRANSITION BETWEEN SOIL OR ROCK TYPES

The lines designating the interface between soil, fill or rock on the final logs and on subsurface profiles presented in the report are determined by interpolation and are therefore approximate. The transition between the materials may be abrupt or gradual. Only at boring or test pit locations should profiles be considered as reasonably accurate and then only to the degree implied by the notes thereon.

SAMPLE OR TEST SYMBOLS



S – Grab Sample
SS – Standard Penetration Test Sample (split-spoon)
SH – Thin-walled Shelby Tube Sample
C – Pavement Core Sample
CS – Rock Core Sample

▲ Standard Penetration Test Resistance equals the number of blows a 140 lb. weight falling 30 in. is required to drive a standard split-spoon sampler 1 ft. Practical refusal is equal to 50 or more blows per 6 in. of sampler penetration.

● Water Content (%).

UNIFIED SOIL CLASSIFICATION SYMBOLS

G – Gravel	W – Well Graded
S – Sand	P – Poorly Graded
M – Silt	L – Low Plasticity
C – Clay	H – High Plasticity
Pt – Peat	O – Organic

FIELD SHEAR STRENGTH TEST

Shear strength measurements on test pit side walls, blocks of soil or Shelby tube samples are typically made with Torvane or Field Vane shear devices.

TYPICAL SOIL/ROCK SYMBOLS

Concrete	Sand	Basalt
Organics	Gravel	Sandstone
Clay	Silt	Siltstone

WATER TABLE

▼ Water Table Location

(1/31/16) Date of Measurement

FOUNDATION ENGINEERING INC.
PROFESSIONAL GEOTECHNICAL SERVICES

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7857 SW CIRRUS DRIVE, BUILDING 24
BEAVERTON, OR 97008
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SYMBOL KEY

BORING AND TEST PIT LOGS

Explanation of Common Terms Used in Soil Descriptions

Field Identification	Cohesive Soils			Granular Soils	
	SPT*	S_u** (tsf)	Term	SPT*	Term
Easily penetrated several inches by fist.	0 – 2	< 0.125	Very Soft	0 – 4	Very Loose
Easily penetrated several inches by thumb.	2 – 4	0.125–0.25	Soft	4 – 10	Loose
Can be penetrated several inches by thumb with moderate effort.	4 – 8	0.25 – 0.50	Medium Stiff	10 – 30	Medium Dense
Readily indented by thumb but penetrated only with great effort.	8 – 15	0.50 – 1.0	Stiff	30 – 50	Dense
Readily indented by thumbnail.	15 – 30	1.0 – 2.0	Very Stiff	> 50	Very Dense
Indented with difficulty by thumbnail.	>30	> 2.0	Hard		

* SPT N–value in blows per foot (bpf)
** Undrained shear strength

Term	Soil Moisture Field Description
Dry	Absence of moisture. Dusty. Dry to the touch.
Damp	Soil has moisture. Cohesive soils are below plastic limit and usually moldable.
Moist	Grains appear darkened, but no visible water. Silt/clay will clump. Sand will bulk. Soils are often at or near plastic limit.
Wet	Visible water on larger grain surfaces. Sand and cohesionless silt exhibit dilatancy. Cohesive soil can be readily remolded. Soil leaves wetness on the hand when squeezed. Soil is wetter than the optimum moisture content and above the plastic limit.

Term	PI	Plasticity Field Test
Non–plastic	0 – 3	Cannot be rolled into a thread at any moisture.
Low Plasticity	3 – 15	Can be rolled into a thread with some difficulty.
Medium Plasticity	15 – 30	Easily rolled into thread.
High Plasticity	> 30	Easily rolled and re–rolled into thread.

Term	Soil Structure Criteria
Stratified	Alternating layers at least ¼ inch thick.
Laminated	Alternating layers less than ¼ inch thick.
Fissured	Contains shears and partings along planes of weakness.
Slickensided	Partings appear glossy or striated.
Blocky	Breaks into small lumps that resist further breakdown.
Lensed	Contains pockets of different soils.

Term	Soil Cementation Criteria
Weak	Breaks under light finger pressure.
Moderate	Breaks under hard finger pressure.
Strong	Will not break with finger pressure.

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COMMON TERMS

SOIL DESCRIPTIONS

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Woven geotextile encountered at ±8 inches.	1	S-1-1			0.7		Loose to medium dense CRUSHED ROCK (GP); grey, moist, ±1-inch minus angular rock, (fill).
	2	S-1-2			2.0		Dense to very dense sandy GRAVEL and COBBLES, some silt (GW-GM); grey-brown and iron-stained, wet, low plasticity silt, fine to coarse sand, fine to coarse subangular to rounded gravel and cobbles up to ±12-inch diameter, (fill).
	3				3.0		Very stiff SILT, trace to some sand grading to sandy SILT (ML); grey, moist, low plasticity, fine sand, (alluvium).
	4	S-1-3			4.5		Dense silty SAND with silt and sand lenses (SM); grey, moist, low plasticity silt, fine to medium sand, (alluvium).
	5						Dense to very dense sandy GRAVEL and COBBLES (GP); grey, damp to moist, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±12-inch diameter, (alluvium).
	6						
	7						
No seepage or ground water encountered to the limit of exploration.	8				8.0		BOTTOM OF EXPLORATION
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-1

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: gravel.					0.6		Dense sandy GRAVEL, some silt and organics (GW-GM); grey-brown, wet, low plasticity silt, fine to coarse sand, fine to coarse subrounded to rounded gravel, organics consist of fine roots, (fill).
	1				1.0		Very stiff to hard SILT (ML); grey, moist, low plasticity, (possible alluvium).
	2	S-2-1					
	3	S-2-2			2.5		Dense silty SAND (SP-SM); brown, moist, low plasticity silt, fine sand, (alluvium).
	4	S-2-3			3.5		Dense SAND, trace to some silt (SP); brown, moist, fine to medium sand, (alluvium).
	5						Very dense sandy GRAVEL and COBBLES, trace silt (GP); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±8-inch diameter, (alluvium).
	6						
	7						
No seepage or ground water encountered to the limit of exploration.	8				8.0		BOTTOM OF EXPLORATION
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-2

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
					0.6		ASPHALTIC CONCRETE (±7.5 inches).
	1				0.9		Dense to very dense CRUSHED ROCK (GP); grey, moist, ±1-inch minus angular rock, (base rock).
	2–3				3.0		Dense CRUSHED ROCK (GP); grey, moist to wet, ±12-inch minus angular rock, (fill).
	4–6	S-3-1	■				WOOD DEBRIS, scattered silt and sand lenses and debris; brown, wet, wood consists of bark, decaying wood fibers, and logs up to ±18-inch diameter and ±6-foot long, debris consists of rubber, string, and metal, (fill).
Rapid seepage at ±7 feet.	7–13						Scattered cobbles (up to ±12-inch diameter) below ±8 feet.
	14				14.0		
	14–16				14.5		Dense sandy GRAVEL and COBBLES, trace silt (GP); grey, wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±12-inch diameter, (alluvium).
							BOTTOM OF EXPLORATION

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-3

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass and moss.					0.3		Loose ORGANIC GRAVEL and CRUSHED ROCK (OL to GP); grey-brown, wet, ±1½-inch minus angular to rounded gravel and crushed rock, organics consist of moss and fine roots, (fill/topsoil).
	1–3	S-4-1	■		1.5		Dense sandy GRAVEL and COBBLES, trace to some silt (GP); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±10-inch diameter, (fill).
	4–5				4.5		Medium dense silty SAND (SM); grey, moist, low plasticity silt, fine sand, (alluvium).
	6				6.5		Loose to medium dense SAND, trace silt (SP); brown, moist, fine sand, (alluvium).
Ground water encountered at ±13.5 feet.	7–14				14.0		Dense sandy GRAVEL and COBBLES (GW); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±10-inch diameter, (alluvium). Dense to very dense and cobbles (up to ±12-inch diameter) below ±9 feet.
	15–16						BOTTOM OF EXPLORATION

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-4

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass.							Soft organic SILT, some gravel (OL); dark brown, moist to wet, low plasticity, fine to coarse angular to rounded gravel, organics consist of roots and decaying wood, (fill).
	1						
					1.5		Medium dense to dense silty sandy GRAVEL and COBBLES (GM); grey-brown and iron-stained, moist to wet, low plasticity silt, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±8-inch diameter, (fill).
	2						
	3	S-5-1					
	4						
Moderate seepage at ±5 feet.	5	S-5-2			5.0		Dense silty SAND, scattered organics (SM); grey, wet, low plasticity silt, fine sand, organics consist of roots, (alluvium).
	6						
					6.5		Dense to very dense sandy GRAVEL and COBBLES, trace to some silt and boulders (GP); grey-brown, wet, fine to coarse sand, fine to coarse subrounded to rounded gravel, cobbles, and boulders up to ±14-inch diameter, (alluvium).
	7						
	8						
	9						
	10				10.0		BOTTOM OF EXPLORATION
	11						
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-5

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass.							Dense sandy GRAVEL, COBBLES and DEBRIS, trace to some silt (GP); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±12-inch diameter, debris consists of ±6-inch thick concrete slabs up to ±4-foot diameter, (fill).
	1						
	2						
	3						
	4						
	5						
Rapid seepage at ±6 feet, (possible ground water).	6						
	7						
	8						
Test pit terminated at ±9 feet due to extensive caving.	9				9.0		BOTTOM OF EXPLORATION
	10						
	11						
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-6

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass and brambles.	1						Dense sandy GRAVEL and COBBLES, trace silt (GP); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±12-inch diameter, (alluvium).
	2						
Ground water encountered at ±4 feet.	3						
	4						
	5						
	6				6.0		BOTTOM OF EXPLORATION
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-7

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass and brambles.	1	S-8-1			1.0		Dense SAND stratified with silt (SP); grey to brown, moist to wet, layers of silty, fine sand to fine to medium sand, trace silt, (alluvium).
	2				2.0		Dense to very dense sandy GRAVEL (GP); grey, wet, fine to coarse sand, fine to coarse subrounded to rounded gravel, (alluvium).
	3	S-8-2					
	4						
	5	S-8-3			5.0		Dense SAND (SP); grey, moist to wet, fine to medium, (alluvium). ±1-inch silt lens at ±2.5 feet.
	6				6.5		Medium dense silty SAND, scattered gravel (SM); brown, moist to wet, low plasticity silt, fine sand, coarse subrounded to rounded gravel, (alluvium).
	7						
No seepage or ground water encountered to the limit of exploration.	8				8.5		Dense to very dense sandy GRAVEL and COBBLES, trace to some silt (GP); grey-brown, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel and cobbles up to ±10-inch diameter, (alluvium).
	9						
	10						
	11						BOTTOM OF EXPLORATION
	12						
	13						
	14						
	15						
	16						

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-8

Lebanon Property Development

Lebanon, Oregon

Comments	Depth, Feet	Sample #	Location	C, TSF	Elev. Depth	Symbol	Soil and Rock Description
Surface: grass.	1, 2, 3, 4, 5, 6				6.5		Medium dense to dense silty sandy GRAVEL and ROCK FRAGMENTS, scattered organics and debris (GM); grey-brown, moist to wet, low plasticity silt, fine to coarse sand, fine to coarse angular to rounded gravel and rock fragments up to ±8-inch diameter, organics consist of roots up to ±3-inch diameter, debris consists of metal fragments, (fill).
	7	S-9-1			7.0		Organic SILT (OL); brown, wet, low plasticity, organics consist of decaying wood fibers, (fill).
	8				8.0		Loose silty SAND (SM); grey, moist to wet, low plasticity silt, fine sand, (alluvium).
No seepage or ground water encountered to the limit of exploration.	9	S-9-2			9.5		Dense to very dense SAND, trace silt, scattered gravel and organics (SP); grey, moist, fine to medium sand, coarse rounded gravel, organics consist of fine roots, (alluvium).
	10				10.0		Dense to very dense sandy GRAVEL, trace silt (GP); grey, moist to wet, fine to coarse sand, fine to coarse subrounded to rounded gravel, (alluvium).
	11, 12, 13, 14, 15, 16						BOTTOM OF EXPLORATION

Project No.: 2181024

Surface Elevation: N/A (Approx.)

Date of Test Pit: April 4, 2018

Test Pit Log: TP-9

Lebanon Property Development

Lebanon, Oregon

Public Water Extension Engineering Report

Preliminary Waterline Fire Flow Calculations

WUHS Lebanon Campus

Devco Job No. 19413

January 2026

Table of Contents

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(541) 757-8991

Waterline Calculations – WUHS Lebanon Campus

1) Calculate maximum water demand for the proposed area being developed.

   - Maximum water demand = Peak Hour Demand + Fire Flows
   - Per the 2025 Oregon Fire Code Appendix B, the fire flow requirement is as follows:
     - Per Oregon Fire Code Table B105.1(2) with a building Type IIB Construction and a maximum building floor area of 87,000 square feet, fire flow = 6,250 gpm
     - Per Oregon Fire Code Table B105.2: If buildings are sprinklered, 25% reduction for fire flow is allowed, but shall not be less than 1,500 gpm.
       - Buildings will be sprinklered. 25% of 6,250 gpm is 1,563 gpm.

TABLE B105.2—REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3 AND R-4 BUILDINGS AND TOWNHOUSES

AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2)
Section 903.3.1.1 of the *International Fire Code*	25% of the value in Table B105.1(2)[a]	Duration in Table B105.1(2) at the reduced flow rate
Section 903.3.1.2 of the *International Fire Code*	25% of the value in Table B105.1(2)[b]	Duration in Table B105.1(2) at the reduced flow rate

For SI: 1 gallon per minute = 3.785 L/m.
a. The reduced fire flow shall be not less than 1,000 gallons per minute.
b. The reduced fire flow shall be not less than 1,500 gallons per minute.

Water Demand Calculations for Developed Conditions of Proposed Site

Development Information

- Area of Development = 72.5 acres
- The City of Corvallis Engineering Standards for Public Improvements (ESPI) was used for the Peak Hour Demand value due to the data not being available in the Lebanon Water Systems Master Plan Demand Projections Section. Per the Corvallis ESPI for Water Distribution for High Density Residential/Mixed Use Residential the Peak Hour Demand is 26 gpm/acre

Maximum Unit Potential Water Requirements

- PHD = (72.5 acres)(26 gpm/acre)= (1,885 gpm)/13 nodes within the WaterCAD loop = 145 gpm
- Fire flow demand required = 1,563 gpm
- Maximum Peak Water Demand = 1,563 gpm + 135 gpm = 1,698 gpm

The maximum water demand for the proposed developed site conditions is 1,698 gpm

PROJECT: WUHS Lebanon Campus			PROJECT NO: 19413
DESIGN: KH	DATE: 01/26	REV:	PAGE OF

DEVCO engineering inc.
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Corvallis, OR 97339
Fax: (541) 757-9885
(541) 757-8991

Summary:
Fire hydrant flow testing was performed by a third party. WaterCAD software is used to perform fire flow calculations. The model is calibrated using flow testing, with a user defined pipe length determined by the residual. The reservoir height is given based on the static pressure at the test hydrant. The hydraulic model was isolated to the development site and the adjacent water systems, with two dummy reservoirs and connecting distribution pipes incorporated to represent the distribution network outside of the isolated model. These elements were included to calibrate the system based on the tested static and residual pressures, ensuring that the model reflects existing conditions.

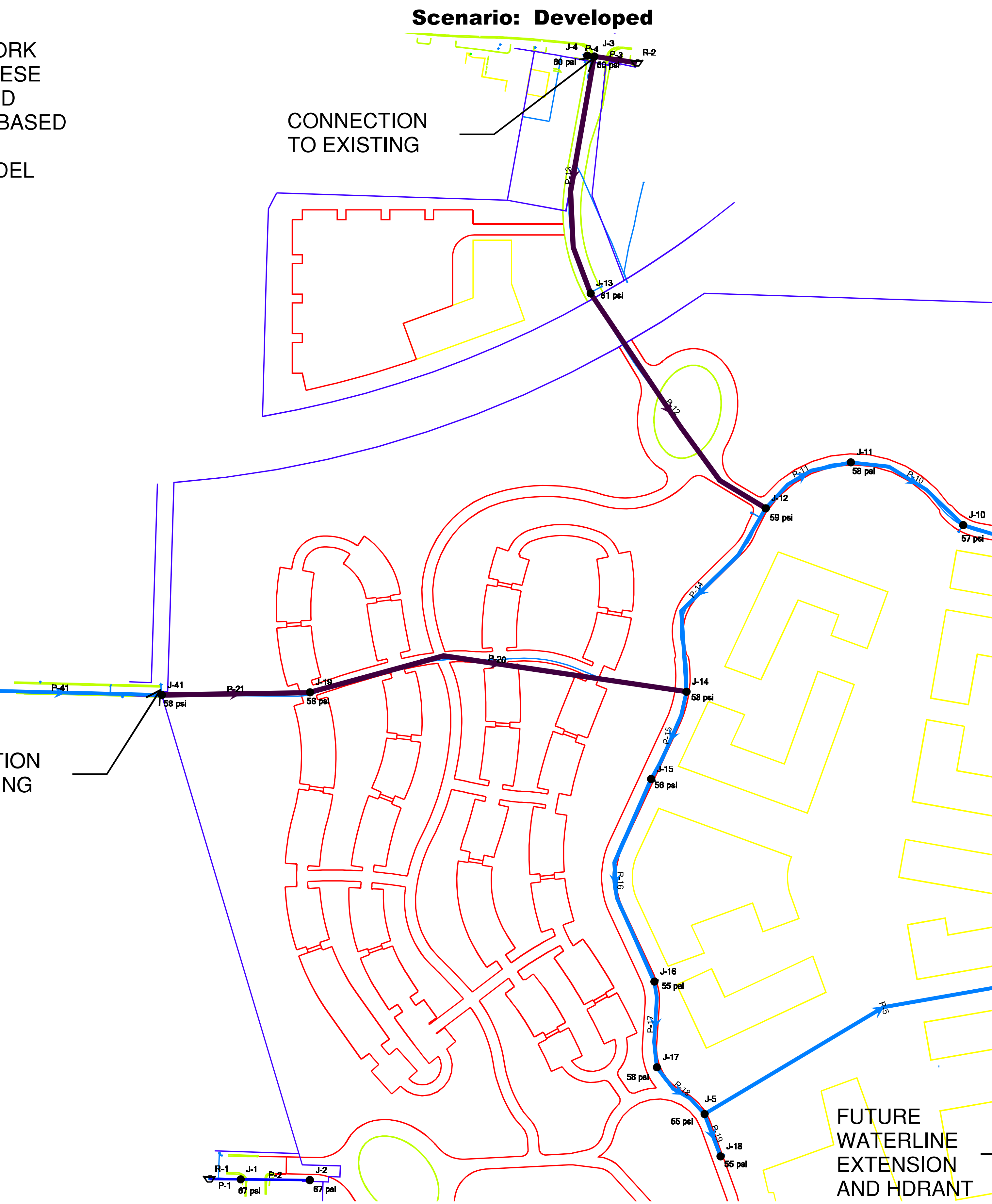
Per the 2025 Oregon Fire Code Appendix B, the required fire flow for a Type IIB Construction building is 6,250 gpm. Since the buildings are proposed to be sprinklered, the required fire flow is reduced to 1,563 gpm per Table B105.2 The fire flow must be achieved while maintaining 20 psi during peak hour demand.

The development is proposed to have public hydrants and private sprinkler systems. Two new 12” waterlines are proposed as connections to existing waterlines. One connection will be an extension of the 8” Distribution Main in Elmore Street and one will be a connection to the 16” Transmission Main in Grant Street. Both 12” waterlines will run into the site to a point and then be reduced in size to an 8” waterline that loops though the site. Table 1 below represents the proposed waterline (see sketch WATR1). Each junction exceeds the required minimum fire flow at peak hour demand.

Table 1. Fire Flow Results

Label	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)
J-6	1,563	1,867	1,698	27	20
J-7	1,563	1,914	1,698	28	20
J-8	1,563	2,048	1,698	31	20
J-9	1,563	2,125	1,698	33	20
J-10	1,563	2,365	1,698	36	20
J-11	1,563	2,755	1,698	41	21
J-12	1,563	3,327	1,698	46	23
J-13	1,563	3,493	1,563	48	24
J-14	1,563	3,220	1,698	44	21
J-15	1,563	2,674	1,698	38	20
J-16	1,563	2,124	1,698	32	20
J-17	1,563	2,038	1,698	33	23
J-18	1,563	1,872	1,698	28	20
J-19	1,563	3,371	1,563	45	21
J-20	1,563	1,818	1,698	26	20

PROJECT: WUHS Lebanon Campus			PROJECT NO: 19413
DESIGN: KH	DATE: 01/26	REV:	PAGE OF



Label
P-1
P-2
P-3
P-4
P-5
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P-22
P-40
P-41

Carter's Fire Sprinkler Maintenance & Piping, Inc.

40478 Baptist Church Drive, Lebanon, OR 97355 - Since 1980 CCB#: 65671
Phone: (541) 258-8510 **24Hour EMERGENCY SERVICE**

Date	October 11, 2019	Technician	Jackson Lacy	Job #	34013

Address of Inspection:	
Redevelopment of Weyerhaeuser Log yard 800 E. Milton Street Lebanon, OR 97355	
Phone	(541) 740-3679
Contact	Lyle Hutchens

Address of Owner/Representative:	
Devco Engineering, Inc. P.O. Box 1211 Corvallis, OR 97339	
Phone	(541) 740-3679
Contact	Lyle Hutchens

Fire Hydrant Testing

Fire Hydrant Information

Hydrant #	Address/Location	Make	Model	Size	Year Mfg	Size of Orifices		
1	Corner of Mt. River and Mayfly	Kennedy	K81D	5¼"	2007	2½"	2½"	5" Storz
2	Corner of Milton and Post	Mueller	-	5¼"	1975	2½"	2½"	5" Storz
3	Next to lebanon Teriyaki	Kennedy	K561A	5¼"	1991	2½"	2½"	5" Storz

Fire Hydrant Flow Testing

Test Hydrant	Address/Location	Time	Static PSI		Residual PSI	Comments
			Before	After		
1	Corner of Mt. River and Mayfly	1:10	68	68	58	Flowed Through 5" Storz to 2½" Fire Hose

Flow Hydrant	Address/Location	Pitot PSI	Flow Device	Min.	GPM	Comments
1	Corner of Mt. River and Mayfly	30	2½" HM	1	925	

Test Hydrant	Address/Location	Time	Static PSI		Residual PSI	Comments
			Before	After		
2	Corner of Milton and Post	12:45	66	67	60	

Flow Hydrant	Address/Location	Pitot PSI	Flow Device	Min.	GPM	Comments
2	Corner of Milton and Post	20	2½" HM	1	755	

Test Hydrant	Address/Location	Time	Static PSI		Residual PSI	Comments
			Before	After		
3	Next to lebanon Teriyaki	12:25	65	65	60	

Flow Hydrant	Address/Location	Pitot PSI	Flow Device	Min.	GPM	Comments
3	Next to lebanon Teriyaki	33	2½" HM	1	970	

INSPECTOR'S INFORMATION

I state that the information on this form is correct at the time and place of my inspection and all equipment tested at this time was left in operational condition upon competition.

Date of Test: October 11, 2019

Inspected by: Jackson Lacy

Jackson Lacy
Inspector

Hydrant Flow Test Data –

Corner of Mt. River and Mayfly #1

FLOW TEST: (2 ½" Hose Monster)
DATE – 10/11/2019 @ 1:10Pm
TECH – Jackson Lacy
===
STATIC BEFORE FLOW – **68psi**
RESIDUAL FLOW – **58psi**
PITOT – **30psi**
STATIC AFTER FLOW – **68psi**
GPM AS PER HOSE MONSTER CHART – **925 gpm**
===
TEST RESULTS: 925gpm @ 58psi
===

Static Pressure (PSI):

68

Residual Pressure (PSI):

58

Total Test Flow-rate (GPM):

925

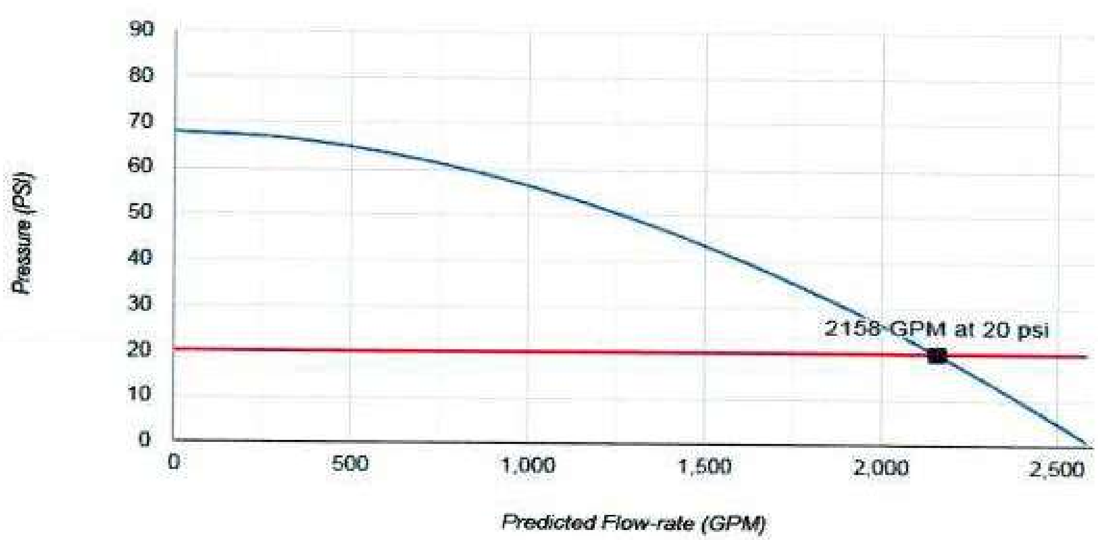
CALCULATE

GPM at 20 psi: 2158

Class: AA

Marking color: Light Blue

% Pressure Drop: 14.7%



Hydrant Flow Test Data –

Corner of Milton and Post #2

FLOW TEST: (2 ½" Hose Monster)
DATE – 10/11/2019 @ 12:45Pm
TECH – Jackson Lacy
==
STATIC BEFORE FLOW – **66psi**
RESIDUAL FLOW – **60psi**
PITOT – **20psi**
STATIC AFTER FLOW – **67psi**
GPM AS PER HOSE MONSTER CHART – **755 gpm**
==
TEST RESULTS: 755gpm @ 60psi
==

Static Pressure (PSI): 67

Residual Pressure (PSI): 60

Total Test Flow-rate (GPM): 755

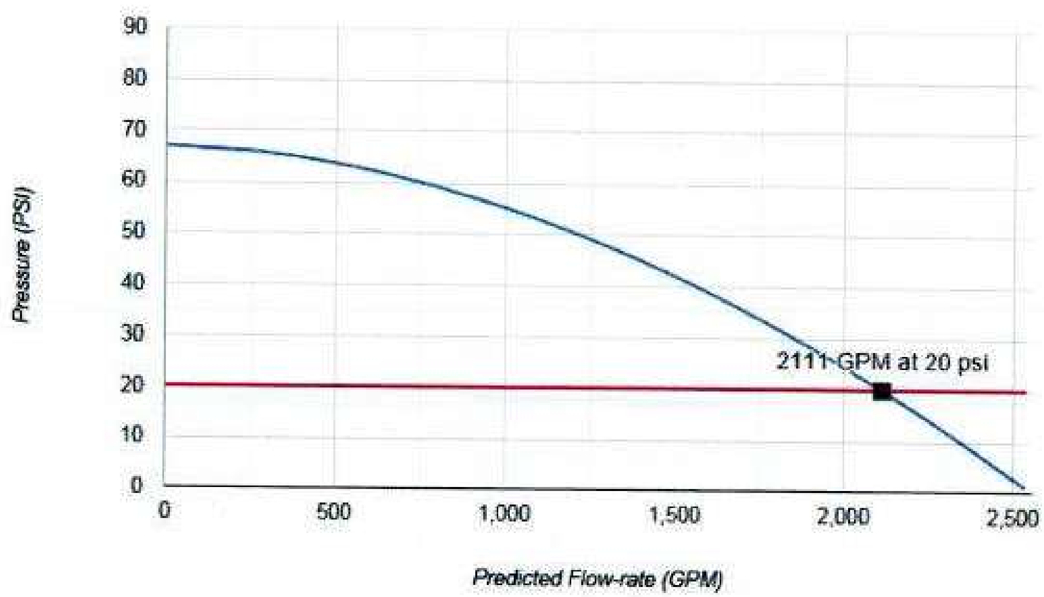
CALCULATE

GPM at 20 psi: 2111

Class: AA

Marking color: Light Blue

% Pressure Drop: 10.4%



Hydrant Flow Test Data –

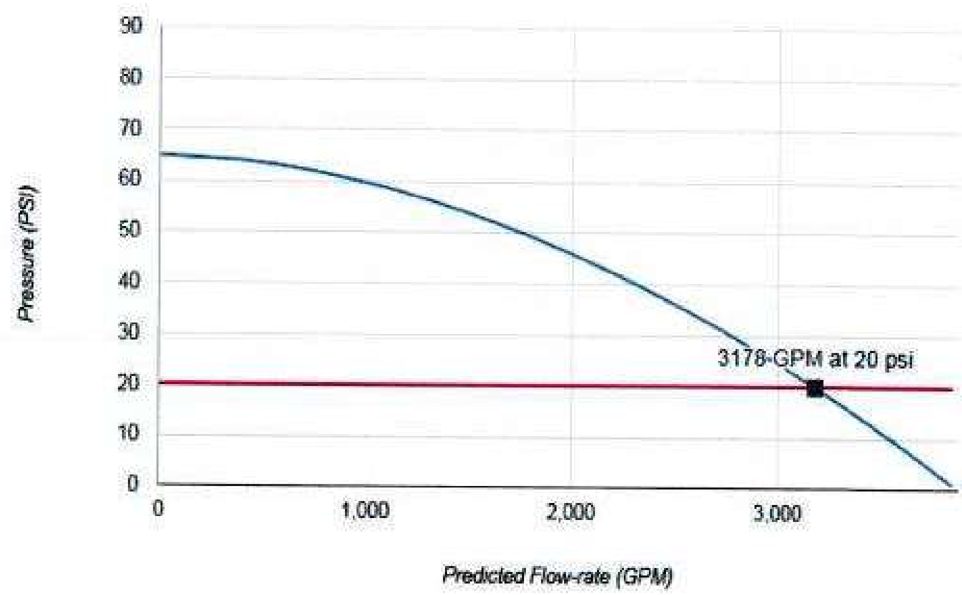
Grant street next to Lebanon Teriyaki #3

FLOW TEST: (2 ½" Hose Monster)
DATE – 10/11/2019 @ 12:20Pm
TECH – Jackson Lacy
==
STATIC BEFORE FLOW – **65psi**
RESIDUAL FLOW – **60psi**
PITOT – **33psi**
STATIC AFTER FLOW – **65psi**
GPM AS PER HOSE MONSTER CHART – **970 gpm**
==
TEST RESULTS: 970gpm @ 60psi
==

Static Pressure (PSI):
65
Residual Pressure (PSI):
60
Total Test Flow-rate (GPM):
970

CALCULATE

GPM at 20 psi: 3178
Class: AA
Marking color: Light Blue
% Pressure Drop: 7.7%



Fire Hydrant Flow Test Report

Rainbow Fire Sprinklers, Inc
38567 Scravel Hill Rd NE
Albany OR 97322
541-327-3666
rainbowfiresprinklers@yahoo.com

Test date- December 17, 2025

Test location- East Elmore St, Lebanon, Oregon

Test method- Pitot and one 2.5” Hose Monster, 0.90 coefficient
flowing one port
Flowing hydrant- east end of E. Elmore, end of street.
Gauge reading- 23
Flow- 805 gpm
Pressure hydrant- Eddie St at E. Elmore St.
Static- 64 psi
Residual- 62 psi

Fire flow at 20 psi- **4,273 gpm**

WUHS LEBANON CAMPUS
CAPITAL IMPROVEMENT PLAN
PHASING PLAN

			Phase 1		Phase 2		Phase 3	
			CY 2026 → CY 2035		CY 2036 → CY 2045		CY 2045 → CY 2055	
ITE Land Use	Building No. (a)	Use	Floor Area	Max. Students	Floor Area	Max. Students	Floor Area	Max. Students
University			CY 2028					
	8	AP/AS	70,000	215				
			CY 2028					
	12	C/SS(1)	37,000	90				
			CY 2033					
	1	AP/AS	70,000	215				
					CY 2038			
	6	AP/AS			54,000	140		
					CY 2040			
	9	C/SS(2)			41,000	100		
					CY 2044			
	5	AP/AS			60,000	155		
					CY 2045			
	3	C/SS(3)			87,000	-		
							CY 2048	
	7	AP/AS					25,000	145
							CY 2053	
	4	C/SS(4)					46,000	140
		Subtotals	177,000	520	242,000	395	81,000	285
		Totals					500,000	1200

(1) Institutional support services
(2) Student commons
(3) Event center
(4) Administration/Health & Wellness Center

AP/AS = Academic Programs / Academic Support
C/SS = Campus / Student Support

(a) Buildings 2, 10, and 11 are not included in this CIP as planned maximum building floor area is met without them.

TABLE B105.1(2)—REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

FIRE-FLOW CALCULATION AREA (square feet)					FIRE FLOW (gallons per minute)[b]	FLOW DURATION (hours)
Types IA and IB[a]	Types IIA and IIIA[a]	Types IV and V-A[a]	Types IIB and IIIB[a]	Types V-B[a]		
0–22,700	0–12,700	0–8,200	0–5,900	0–3,600	1,500	2
22,701–30,200	12,701–17,000	8,201–10,900	5,901–7,900	3,601–4,800	1,750	
30,201–38,700	17,001–21,800	10,901–12,900	7,901–9,800	4,801–6,200	2,000	
38,701–48,300	21,801–24,200	12,901–17,400	9,801–12,600	6,201–7,700	2,250	
48,301–59,000	24,201–33,200	17,401–21,300	12,601–15,400	7,701–9,400	2,500	
59,001–70,900	33,201–39,700	21,301–25,500	15,401–18,400	9,401–11,300	2,750	
70,901–83,700	39,701–47,100	25,501–30,100	18,401–21,800	11,301–13,400	3,000	3
83,701–97,700	47,101–54,900	30,101–35,200	21,801–25,900	13,401–15,600	3,250	
97,701–112,700	54,901–63,400	35,201–40,600	25,901–29,300	15,601–18,000	3,500	
112,701–128,700	63,401–72,400	40,601–46,400	29,301–33,500	18,001–20,600	3,750	
128,701–145,900	72,401–82,100	46,401–52,500	33,501–37,900	20,601–23,300	4,000	4
145,901–164,200	82,101–92,400	52,501–59,100	37,901–42,700	23,301–26,300	4,250	
164,201–183,400	92,401–103,100	59,101–66,000	42,701–47,700	26,301–29,300	4,500	
183,401–203,700	103,101–114,600	66,001–73,300	47,701–53,000	29,301–32,600	4,750	
203,701–225,200	114,601–126,700	73,301–81,100	53,001–58,600	32,601–36,000	5,000	
225,201–247,700	126,701–139,400	81,101–89,200	58,601–65,400	36,001–39,600	5,250	
247,701–271,200	139,401–152,600	89,201–97,700	65,401–70,600	39,601–43,400	5,500	
271,201–295,900	152,601–166,500	97,701–106,500	70,601–77,000	43,401–47,400	5,750	
295,901–Greater	166,501–Greater	106,501–115,800	77,001–83,700	47,401–51,500	6,000	
—	—	115,801–125,500	83,701–90,600	51,501–55,700	6,250	
—	—	125,501–135,500	90,601–97,900	55,701–60,200	6,500	
—	—	135,501–145,800	97,901–106,800	60,201–64,800	6,750	
—	—	145,801–156,700	106,801–113,200	64,801–69,600	7,000	
—	—	156,701–167,900	113,201–121,300	69,601–74,600	7,250	
—	—	167,901–179,400	121,301–129,600	74,601–79,800	7,500	
—	—	179,401–191,400	129,601–138,300	79,801–85,100	7,750	
—	—	191,401–Greater	138,301–Greater	85,101–Greater	8,000	

For SI: 1 square foot = 0.0929 m^2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code*.

b. Measured at 20 psi residual pressure.

Chapter 3
Water Distribution

3.1 Design Criteria

1. Sizing for new water main construction must be consistent with long range system improvements identified in the Water Distribution System Facility Plan.

Flow Rates	
Type	**Rate**
Equivalent Residential Unit (ERU)	192 gallons per day
Maximum Daily Demand (MDD)	0.27 gpm/ERU
The MDD to Peak Hour Demand (PHD) factor is 1.6	

Water Flow Rates per Zone		
Zone	**PHD (gpm/acre)**	**Fire Flow (gpm)**
Residential		
RS-6	3	1,500
RS-9	5	1,500
RS-12, RMU-12	10	1,500
RS-20, RMU-20, MUR	26	2,500
Commercial/Office		
P-AO	8	3,500
CMU-2	10	3,500
CBF, CMU-3	14	3,500
CMU-1, GC	6	3,500
Industrial		
RTC, LI, LI-O	5	3,500
MUE	8	3,500
GI, MUT	3	3,500
II	2	3,500
Other		
OSU		3,500
C-OS, AG-OS		2,500

2. Pressure and Flow Criteria
   a. Maximum acceptable static pressure in water mains is 100 pounds per square inch (psi).
   b. Where the water main pressure exceeds 80 psi, pressure reducing valves are required for service lines on the private side of the meter.
   c. Minimum acceptable static pressure on the private side of the meter is 40 psi.
   d. Minimum acceptable dynamic pressure on the private side of the meter is 20 psi.

Public Sanitary Sewer Extension Engineering Report

REGISTERED PROFESSIONAL
ENGINEER
56483PE
DIGITAL SIGNATURE
OREGON
JAN. 15, 2002
STEVEN C.P. HATTORI

EXPIRES: 06/30/2027

Preliminary Sanitary Calculations

WUHS Lebanon Campus

Devco Job No. 19413

January 2026

Table of Contents

DEVCO engineering inc.
245 NE Conifer, P.O. Box 1211
Corvallis, OR 97339
Fax: (541) 757-9885
(541) 757-8991

Sanitary Sewer Demand Calculations for Proposed Developed Site Conditions

Area Information:

- Per City of Lebanon Facilities Plan for the Waste Wastewater Treatment Plant, the annual average sanitary usage for 2024 is
  155 gal/person/day + 3000 gal/Ac/Day for I & I (Based on Gross Area)

- For the calculations it was assumed that there would be a maximum of one faculty member for every 5 students.

Capital Improvement Phasing Plan

- Phase 1 (CY 2026 – 2035)
  - Subtotal Floor Area = 177,000 square feet
  - Maximum Students = 520 students
  - Maximum Faculty Members = 104 faculty members

- Phase 2 (CY 2036 – CY 2045)
  - Subtotal Floor Area = 242,000 square feet
  - Maximum Students = 395 students
  - Maximum Faculty Members = 79 faculty members

- Phase 3 (CY 2045 – CY 2055)
  - Subtotal Floor Area = 81,000 square feet
  - Maximum Students = 285 students
  - Maximum Faculty Members = 57 faculty members

The totals for the 3 different phases are 500,000 square feet in total floor area, a maximum amount of 1,200 students, and a maximum amount of 240 faculty members.

Total Floor Area = 500,000 square feet = 11.48 acres
Total I & I Area = 3,351386 square feet = 76.93 acres (including total floor area)

- Design Flows
  - Population Flows = 155 gpd x (1,200 + 240) people = 223,200 gal/day
  - Area Flows = 3,000 gal/acre/day x 76.93 acres = 230,790 gal/day

- Design Flow = 223,200 gal/day + 230,790 gal/day = **453,990 gal/day = 0.70 cfs**

PROJECT: WUHS Lebanon Campus			PROJECT NO: 19413
DESIGN: KH	DATE: 01/26	REV:	PAGE OF

DEVCO engineering inc.
245 NE Conifer, P.O. Box 1211
Corvallis, OR 97339
Fax: (541) 757-9885
(541) 757-8991

Sanitary Sewer Demand Calculations for Existing 21" Grant Street Mainline

Area Information:

- Per City of Lebanon Facilities Plan for the Waste Wastewater Treatment Plant, the annual average sanitary usage for 2024 is
  155 gal/person/day + 3000 gal/Ac/Day for I & I (Based on Gross Area)

- Contributing Gross Areas to Sanitary Sewer
  - Z-RL (Corvallis RS-6 Equivalent) = 70 Acres
  - Z-RH (Corvallis RS-12 Equivalent) = 15 Acres
  - Total Gross Area = 85 Acres

- Maximum Number of Dwelling Units per zone is as follows:
  - Z-RL = 4 units/acre
  - Z-RH = 16 units/acre

Maximum Unit Potential Flowrate

- Dwelling Unit Equivalent Calculation
  - Z-RL = 70 Ac x 4 units/Ac = 280 units
  - Z-RH = 15 Ac x 16 units/Ac = 240 units
  - Total Dwelling Units = 520 units

- Number of People = 520 units x 2.14 people/unit = 1,113 People

- Design Flows
  - Population Flows = 155 gpcd x 1,113 people = 172,515 gal/day
  - Area Flows = 3,000 gal/acre/day x 85 acres = 255,000 gal/day

- Design Flow = **427,515 gal/day = 0.66 cfs**

PROJECT: WUHS Lebanon Campus			PROJECT NO: 19413
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DEVCO engineering inc.

245 NE Conifer, P.O. Box 1211
Corvallis, OR 97339
Fax: (541) 757-9885

(541) 757-8991

Capacity of Proposed 8" Connection in Grant Street (through WU Campus)

Determine if 8" Pipe at minimum slope (0.60%) has capacity to convey flows:

Use Manning's Equation to determine pipe capacity:

$$Q = \frac{1.486}{n} A R^{\frac{2}{3}} S^{\frac{1}{2}}$$

n = Manning's Coefficient
n = 0.011 for PVC
A = Area of Pipe Cross Section
$A = \pi r^2$
R = Hydraulic Radius
R = Flow Area of Pipe Section / Wetted Perimeter of the Flow Area
S = Slope
S = 0.0060 ft/ft

$$Q = \frac{1.486}{0.011}(0.349\, sf)(0.137)^{\frac{2}{3}}\left(0.0060\frac{ft}{ft}\right)^{\frac{1}{2}} = 0.97\, cfs$$

- Proposed developed site flows = 0.70 cfs

0.70 cfs < 0.97 cfs

An 8" pipe running at minimum slope has the capacity to convey the flows of the developed site.

Capacity of Existing 21" Mainline in Grant Street

Pipe slope = 0.001 ft/ft (per city as-built information)
Manning's Coefficient = 0.015 for Concrete (pipe material per City of Lebanon Utilities GIS)

Pipe capacity determined using Manning's Equation

$$Q = \frac{1.486}{0.015}(2.41\, sf)(0.44)^{\frac{2}{3}}\left(0.001\frac{ft}{ft}\right)^{\frac{1}{2}} = 4.37\, cfs$$

- Capacity = 4.37 cfs

- Total flows of proposed development and existing developments on Grant Street mainline
  - 0.70 cfs + 0.66 cfs = 1.00 cfs

1.36 cfs < 4.37 cfs

The 21" Grant Street mainline has the capacity to serve the proposed development.

PROJECT: WUHS Lebanon Campus			PROJECT NO: 19413
DESIGN: KH	DATE: 01/26	REV:	PAGE OF

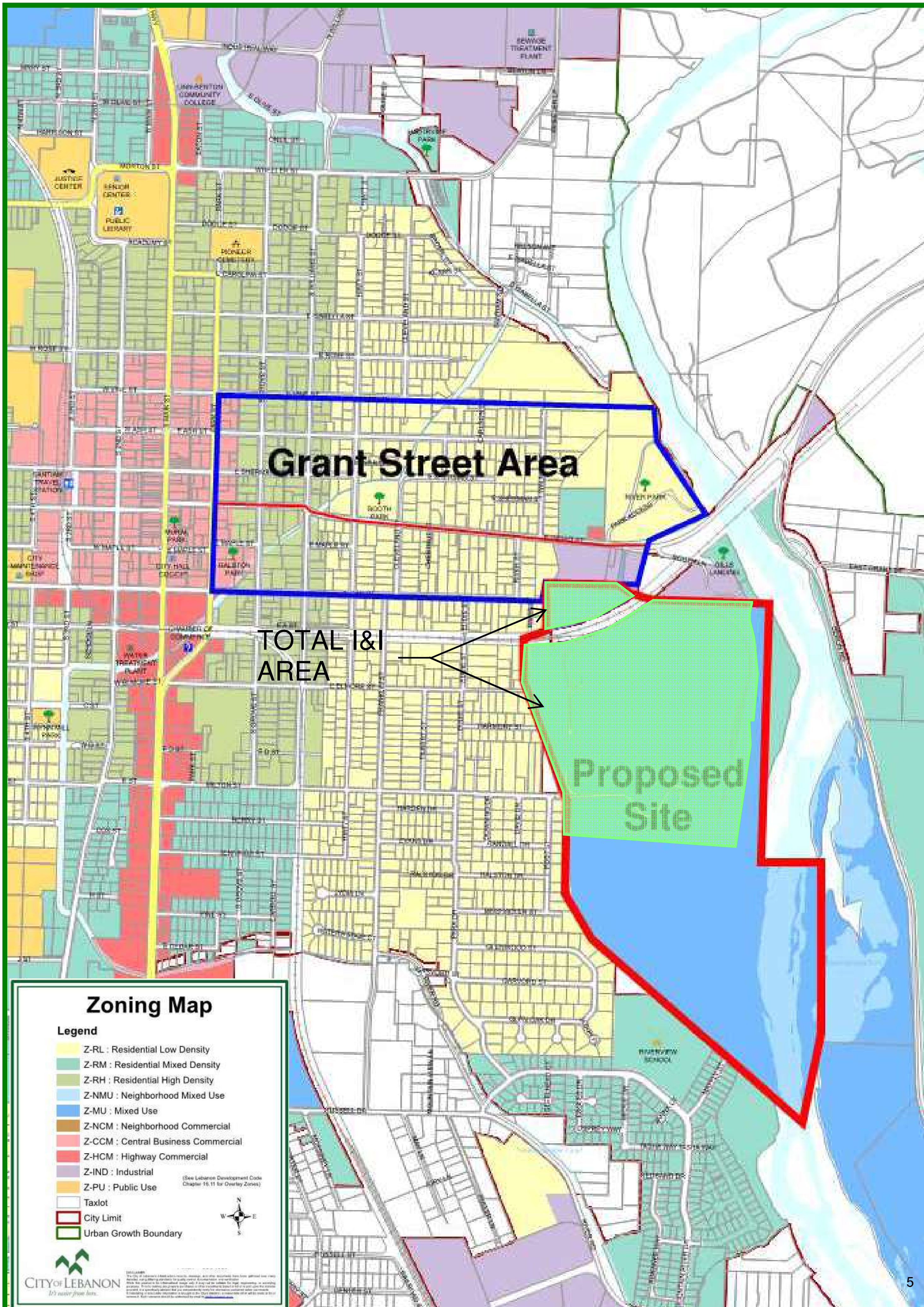
WUHS LEBANON CAMPUS
CAPITAL IMPROVEMENT PLAN
PHASING PLAN

ITE Land Use	Building No. (a)	Use	Phase 1		Phase 2		Phase 3	
			CY 2026 → CY 2035		CY 2036 → CY 2045		CY 2045 → CY 2055	
			Floor Area	Max. Students	Floor Area	Max. Students	Floor Area	Max. Students
University			CY 2028					
	8	AP/AS	70,000	215				
			CY 2028					
	12	C/SS[1]	37,000	90				
			CY 2033					
	1	AP/AS	70,000	215				
					CY 2038			
	6	AP/AS			54,000	140		
					CY 2040			
	9	C/SS[2]			41,000	100		
					CY 2044			
	5	AP/AS			60,000	155		
					CY 2045			
	3	C/SS[3]			87,000	-		
							CY 2048	
	7	AP/AS					25,000	145
							CY 2053	
	4	C/SS[4]					46,000	140
		Subtotals	177,000	520	242,000	395	81,000	285
		Totals					500,000	1200

[1] Institutional support services
[2] Student commons
[3] Event center
[4] Administration/Health & Wellness Center

AP/AS = Academic Programs / Academic Support
C/SS = Campus / Student Support

(a) Buildings 2, 10, and 11 are not included in this CIP as planned maximum building floor area is met without them.


Grant Street Area
TOTAL I&I
AREA
Proposed
Site
Zoning Map
Legend
Z-RL : Residential Low Density
Z-RM : Residential Mixed Density
Z-RH : Residential High Density
Z-NMU : Neighborhood Mixed Use
Z-MU : Mixed Use
Z-NCM : Neighborhood Commercial
Z-CCM : Central Business Commercial
Z-HCM : Highway Commercial
Z-IND : Industrial
Z-PU : Public Use
Taxlot
City Limit
Urban Growth Boundary
(See Lebanon Development Code Chapter 15.11 for Overlay Zones)
CITY OF LEBANON
It's easier from here.
SEWAGE TREATMENT PLANT
JUSTICE CENTER
SENIOR CENTER
PUBLIC LIBRARY
PIONEER CEMETERY
BOOTH PARK
RIVER PARK
RALSTON PARK
CITY HALL
RIVERVIEW SCHOOL

Flow Projections

Sanitary flow generated in the Lebanon WWTP service area comes from a combination of residences, businesses, and schools. Businesses and schools are expected to grow at approximately the same rate as the overall population. Therefore, future flows can be projected by applying unit design flow values to an estimate of the future population. For example, based on the year 2024 population estimate of 19,450 and the ADWF unit value of 155 gallons per capita per day, the year 2024 ADWF will be 3.0 mgd. This basic flow projection technique is used for the ADWF, AWWF, MMDWF, and MMWWF.

Projection of the future peak wet weather flows requires additional consideration due to the variability of I/I rates among existing and future developments. The peak flows are estimated using current wet weather I/I rates for existing portions of the collection system while using lower rates in areas with new sewers. The current PWWF of 21 mgd is greatly influenced by the presence of collection system deficiencies and remnants of the formerly combined stormwater/wastewater system in the older parts of town. As noted earlier, the wet weather I/I rate in Lebanon is estimated at over 7,000 gallons per acre per day (gpad) compared to a more typical rate of 1,500 gpad for new development. Since improved construction materials and techniques in new portions of the collection system should exclude most I/I sources, the projections of future peak wet weather flow must account for lower wet weather I/I rates in new developments. Therefore, for the purposes of the PWWF projections, new developments are assigned the wet weather I/I rate that the City used in the design calculations for the new West Side Interceptor: 3,000 gpad.

Similar to the PWWF, the PDF is sensitive to I/I rates in the collection system. To maintain consistency with the growth of the PWWF relative to the ADWF, the PDF is estimated by interpolating a linear relationship between the peak wet weather flow, average annual flow, and MMWWF on a logarithmic flow probability chart. The flow projections are summarized by period in Table 5-8.

Table 5-8. Lebanon WWTP Design Flow Projection

Parameter	Year 2024, mgd	Build-Out, mgd
Average Dry Weather Flow (ADWF)	3	5
Average Wet Weather Flow (AWWF)	8	14
Maximum Month Dry Weather Flow (MMDWF)	7	12
Maximum Month Wet Weather Flow (MMWWF)	12	21
Peak Day Flow (PDF)	20	26
Peak Wet Weather Flow (PWWF)	26	36

FEMA Maps, Linn County, Panels 561 and 569

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Oregon State Plane North Zone (FIPS zone 3601). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

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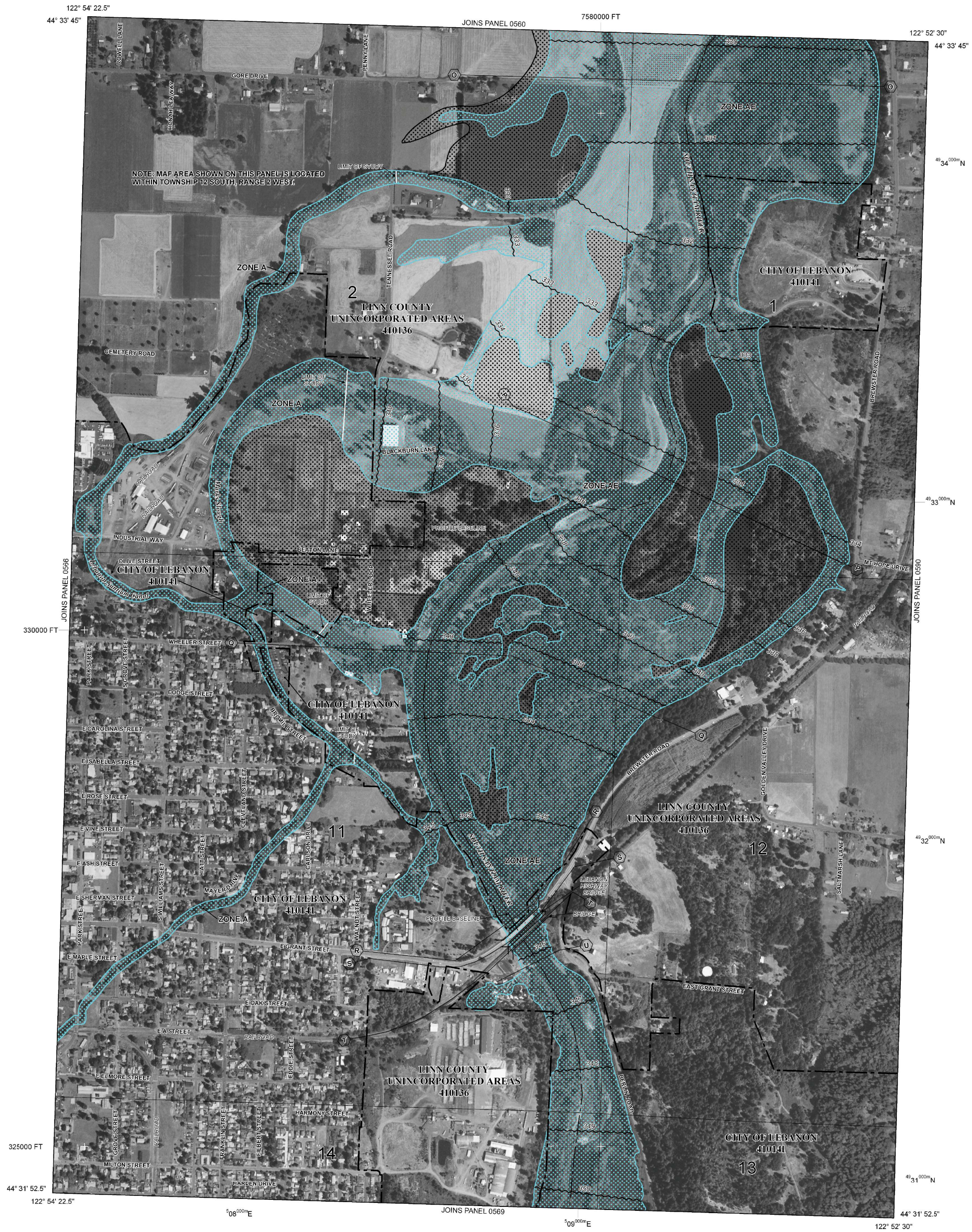

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A ——— A	Cross section line
23 - - - - - - 23	Transect line
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
3100000 FT	5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection
$^{48}89^{000m}$ N	1000-meter Universal Transverse Mercator grid values, zone 10N
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 29, 2010
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

N

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0567G

FIRM

FLOOD INSURANCE RATE MAP

LINN COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 567 OF 1575
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LEBANON, CITY OF	410141	0567	G
LINN COUNTY	410136	0567	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
41043C0567G
EFFECTIVE DATE
September 29, 2010

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Oregon State Plane North Zone (FIPS zone 3601). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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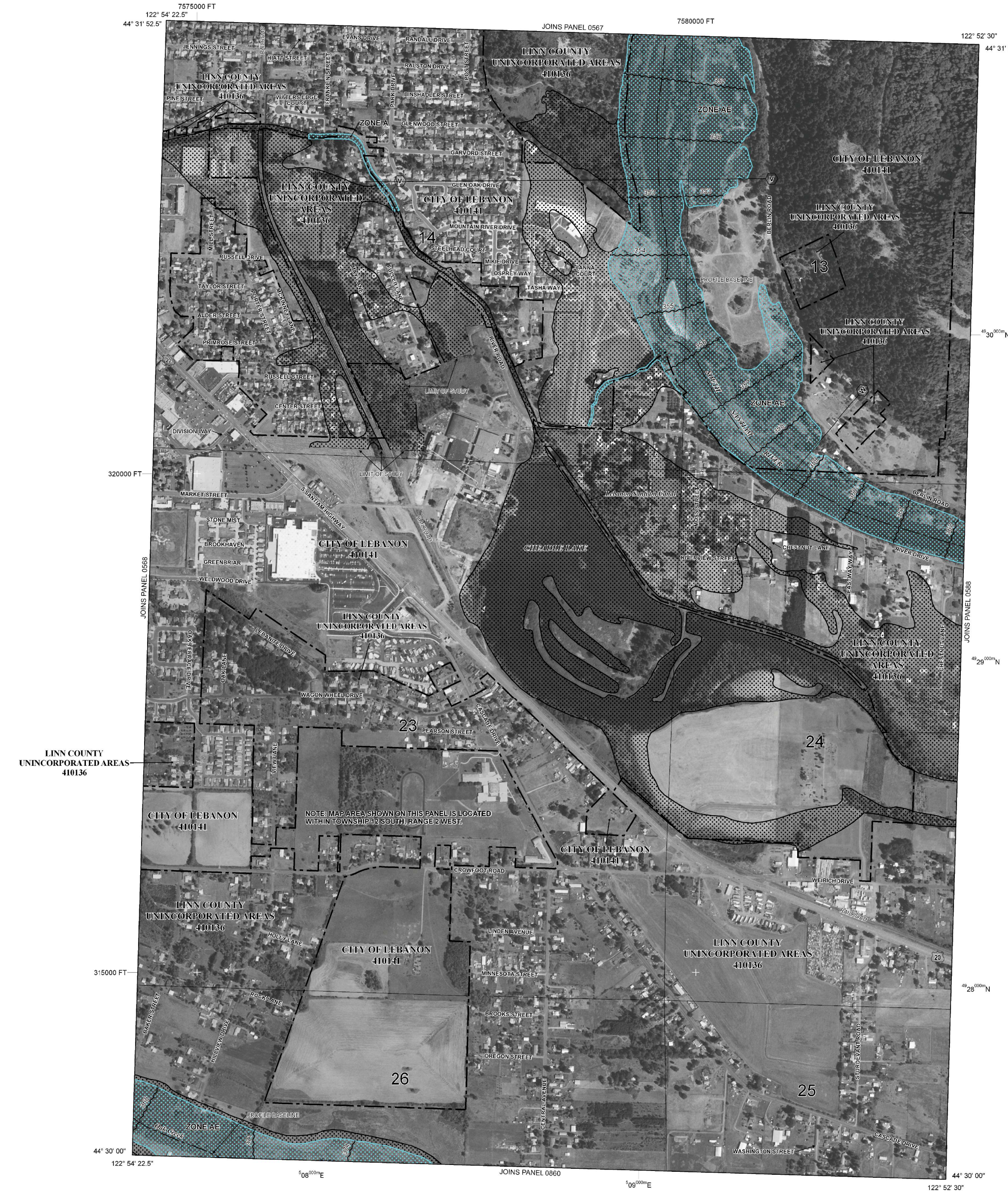

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	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
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NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0569G

FIRM

FLOOD INSURANCE RATE MAP

LINN COUNTY, OREGON
AND INCORPORATED AREAS

PANEL 569 OF 1575
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
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LINN COUNTY	410136	0569	G

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U.S. DEPARTMENT OF HOMELAND SECURITY

MAP NUMBER
41043C0569G

EFFECTIVE DATE
September 29, 2010

Federal Emergency Management Agency

Title Report
WesternU Property LLC

Transaction Identification Data, for which the Company assumes no liability as set forth in Condition 9.d.:
Issuing Agent: First American Title Insurance Company National Commercial Services
Issuing Office: 200 SW Market Street, Suite 250, Portland, OR 97201
Issuing Office's ALTA® Registry ID: 1153372
Issuing Office File Number: NCS-1157684-OR1
Property Address: 800 East Milton Street, Lebanon, OR 97355

SCHEDULE A

Name and Address of Title Insurance Company:
First American Title Insurance Company, 1 First American Way, Santa Ana, CA 92707
Policy Number: 1157684-O
Amount of Insurance: $4,675,000.00
Date of Policy: February 25, 2025 at 11:23 A.M.

1. The Insured is:

   WesternU Oregon Property LLC, an Oregon limited liability company

2. The estate or interest in the Land insured by this policy is:

   Fee Simple

3. The Title is vested in:

   WesternU Oregon Property LLC, an Oregon limited liability company

4. The Land is described as follows:

   See Exhibit A attached hereto and made a part hereof

5. This policy incorporates by reference the endorsements designated below, adopted by the Oregon Title Insurance Rating Organization as of the Date of Policy:

   OTIRO 110 Domestic Partner endorsement (no charge - required on every owner's policy)

File No. NCS-1157684-OR1

SCHEDULE B

Policy Number: 1157684-O

EXCEPTIONS FROM COVERAGE

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This policy treats any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document are excepted from coverage.

This policy does not insure against loss or damage and the Company will not pay costs, attorneys' fees, or expenses resulting from the terms and conditions of any lease or easement identified in Schedule A, and the following matters:

1. This item has been intentionally deleted.

2. This item has been intentionally deleted.

3. This item has been intentionally deleted.

4. This item has been intentionally deleted.

5. This item has been intentionally deleted.

6. This item has been intentionally deleted.

7. Rights of the public and governmental bodies in and to that portion of the premises herein described lying below the high water mark of high and the ownership of the State of Oregon in and to that portion lying below the South Santiam River water mark thereof.

8. This item has been intentionally deleted.

9. Any adverse claim based upon the assertion that some portion of said land has been removed from or brought within the boundaries thereof by an avulsive movement of the South Santiam River or has been formed by the process of accretion or reliction or has been created by artificial means or has accreted to such portion so created.

10. Rights of the public in and to that portion of the Land lying within roads, streets or highways.

11. This item has been intentionally deleted.

12. This item has been intentionally deleted.

13. This item has been intentionally deleted.

14. Unrecorded leases or periodic tenancies, if any.

15. Easement, including terms and provisions contained therein:

Recording Date:	November 19, 1976
Recording Information:	Volume 150, page 755
In Favor of:	The City of Lebanon
For:	Public utility lines
Affects:	Parcel VIII

16. Any facts, rights, interests or claims that may exist or arise by reason of the following matters disclosed by an ALTA/NPS Survey made by Brian Scott Sailor, P.L.S, on behalf of Cole Surveying, LLC, on February 23, 2023, and last revised October 21, 2024, designated Project No. 19-826, (the "Survey"):

a) Fences from adjoining properties appear to encroach over subject Land boundary by as much as 31' on the western side of the subject Land, as much as 1.5' on the south-westerly side of the subject Land, as much as 1.2' on the north-westerly side of the subject Land, and as much as 0.3' on the northerly side of the subject Land;
b) Fences appear to extend from subject property onto adjoining property by as much as 2.1' on the south-westerly side of the subject Land, as much as 3.3' on the western side of subject Land, as much as 0.7' on the northerly side of subject Land;
c) Railroad tracks located within subject Land without apparent benefit of an easement;
d) 100' wide railroad right of way cuts through the subject Land on the north, entirely separating the northern most 4.55 acres;
e) Water vault extends approximately 0.8' over northwesterly boundary onto subject Land;
f) Concrete pad with piping and of unknown ownership extends either over 100' railroad right of way boundary line into subject Land or from subject Land into 100' railroad right of way;
g) Toe of slope for new sidewalk extends over easterly boundary of subject Land;
h) Toe of slope for new sidewalk runs inside easterly property lines;
i) Gate extends over westerly boundary of subject Land;
j) Apparent spur track extends from within 100' railroad right of way and onto subject Land without apparent benefit of easement or other recorded document and extends through property to southern edge;
k) Asphalt drive extends into railroad 100' right of way by several feet;
l) Shed of unknown ownership extends either approximately 13.8' over north-westerly boundary onto subject Land or from subject Land over north-westerly boundary onto adjoining property;
m) Gates of unknown ownership located inside property lines;
n) Gravel area being used for parking extends onto subject property on western side;
o) Landscaped yard with lawn, trees and bushes extends more than 30' onto subject property on western side;
p) Wood shed of unknown ownership located within westerly boundary of subject Land;
q) Garden area of unknown ownership surrounded by fence with a gate located within westerly boundary of subject Land.

17. Any right, title and interest of Burlington Northern Santa Fee pursuant to the railroad spur track located on the property.

18. The terms and provisions contained in the document entitled "Order on Consent" recorded January 28, 2025 as 2025-00964 of Official Records, By and between State of Oregon, Department of Environmental Quality and WesternU Property LLC.

File No. NCS-1157684-OR1

EXHIBIT A

Policy Number: 1157684-O

The Land referred to herein below in situated in the County of Linn, State of Oregon, and is described as follows:

PARCEL I:

Beginning on the North line of and East 1222.09 feet from the Northwest corner of the Henry R. Greer Donation Land Claim No. 47 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence South 11.37 chains; thence West 21 links; thence South 18° East 13.58 chains; thence East 1.15 chains; thence South 588 feet; thence East 24.75 chains; thence North 32.75 chains; thence West 29.99 chains to the point of beginning.

EXCEPTING THEREFROM that portion lying within the boundaries of the S.P.R.R. 100-foot right of way.

AND ALSO LESS AND EXCEPT:
Beginning at a point 18.52-½ chains East and 12 feet South of the Northwest corner of the H.R. Greer Donation Land Claim No. 47 in Township 12 South, Range 2 West of the Willamette Meridian in Linn County, Oregon; thence South along the East line of River Street as dedicated in Riverside Addition 129.63 feet; thence North 83°45' East 158.6 feet; thence North 124.71 feet to a ½" pipe on the North line of said Greer Donation Land Claim No. 47 and 413.76 feet West of the Southeast corner of Donation Land Claim No. 49; thence West along claim line 95.6 feet; thence South 78°41' West 62.22 feet to the place of beginning.

AND ALSO LESS AND EXCEPT:
Beginning at a point 18.52-½ chains East and 141.63 feet South of the Northwest corner of the H.R. Greer Donation Land Claim No. 47 in Township 12 South, Range 2 West of the Willamette Meridian in Linn County, Oregon; thence North 83°45' East 158.6 feet; thence South 124.70 feet to a ½ inch pipe on the North right of way of the Southern Pacific Railroad; thence Southwesterly along said S P Railroad right of way, 2.41 chains to the East line of River Street as dedicated in Riverside Addition; thence North along the East line of River Street, 129.63 feet to the place of beginning.

ALSO LESS AND EXCEPT:
Beginning at a 3/4" iron pipe marking the northeast corner of Lot 11, Block 1, Second Addition to Robertson's Addition to Lebanon, recorded in Linn County Book of Plats, Volume 15, Page 41, said point being coincident with the southeast corner of Lot 11, Block 3, Edes Addition to Lebanon, recorded in Linn County Book of Plats, Volume 10, Page 44; thence South 40°55'58" East, a distance of 142.93 feet to a 5/8" iron rod marking to the most easterly corner of said Lot 11, Block 1, Second Addition to Robertson's Addition to Lebanon; thence along the Northeasterly line of said Lot 11, Block 1, North 46°13'30" West, a distance of 57.97 feet to a 5/8" iron rod marking the angle point in the Northeasterly line of said Lot 11, Block 1; thence North 37°20'31" West, a distance of 85.38 feet to the point of beginning.

ALSO LESS AND EXCEPT that portion conveyed to the City of Lebanon, a municipal corporation, by Bargain and Sale Deed (Property Line Adjustment) recorded May 26, 2022 as Recording No. 2022-09523.

PARCEL II:

Beginning at the Southeast corner of the Henry R. Greer Donation Land Claim No. 47 in Section 14, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence West 18.12 chains; thence South 11.50 chains; thence South 51° East 30.80 chains to the South Santiam River; thence North 10° East 7.50 chains; thence North 22.80 chains; thence West 7.90 chains to the point of beginning.

LESS AND EXCEPT that portion conveyed to R.F. Wilson, Sole Trustee of the R.F. Wilson Living Trust dated May 10, 1996, by Warranty Deed recorded March 14, 2019 as Recording No. 2019-03772.

ALSO LESS AND EXCEPT that portion conveyed to the City of Lebanon, a municipal corporation, by Bargain and Sale Deed (Property Line Adjustment) recorded May 26, 2022 as Recording No. 2022-09523.

PARCEL III:

Beginning at the Northeast corner of the Russell T. Hill Donation Land Claim No. 77 in Section 14, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence South along said claim line 11.86 chains; thence North 48° West 3.31 chains; thence North 36° West 3.70 chains; thence North 26° West 2.50 chains; thence North 5°5' West 1.50 chains; thence North 20½° West 1.00 chain; thence North 6° West 2.00 chains to the North line of said Claim No. 77; thence East 6.60 chains to the point of beginning.

PARCEL IV:

Beginning on the North boundary line of and East 1454.74 feet from the Northwest corner of the Henry R. Greer Donation Land Claim No. 47 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 7.41 chains; thence South 86½° East 5.15 chains; thence South 7.18 chains; thence West 5.15 chains to the point of beginning.

EXCEPTING THEREFROM any portion lying within the tract of land conveyed to Jack C. Lemons and Joyce Lemons by deed recorded October 9, 1967 in Book 326, page 509, being described as follows:

Beginning at a ½ inch pipe which bears North 7°38' East 160 feet from the Southeast corner of the James Ralston Donation Land Claim No. 49 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 89°58' West 420.48 feet to a ½ inch pipe; thence North 26°10' East 100.47 feet to a ½ inch pipe; thence North 15° West 227.04 feet to a ½ inch pipe on the South line of Grant Street; thence Easterly, following the South line of Grant Street, 476.2 feet, more or less, to a point which bears North 8°31' East from the place of beginning; thence South 8°31' West 271.15 feet, more or less, to the place of beginning.

PARCEL V:

Beginning at the Southeast corner of the Jeremiah Ralston Donation Land Claim No. 49 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 7.30 chains; thence South 80° East 350 feet; thence South 10° West 419.7 feet; thence West 278.3 feet to the place of beginning.

EXCEPTING THEREFROM that portion lying within the boundaries of the S.P.R.R. 100-foot right of way

ALSO EXCEPTING THEREFROM any portion lying within the following described tracts of land:

TRACT A (tax lot 1002):

That property conveyed to Jack C. Lemons and Joyce Lemons by deed recorded October 9, 1967 in Book 326, page 509, being described as follows:

Beginning at a ½ inch pipe which bears North 7°38' East 160 feet from the Southeast corner of the James Ralston Donation Land Claim No. 49 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 89°58' West 420.48 feet to a ½ inch pipe; thence North 26°10' East 100.47 feet to a ½ inch pipe; thence North 15° West 227.04 feet to a ½ inch pipe on the South line of Grant Street; thence Easterly, following the South line of Grant Street, 476.2 feet, more or less, to a point which bears North 8°31' East from the place of beginning; thence South 8°31' West 271.15 feet, more or less, to the place of beginning.

TRACT B (tax lot 1001):

That property conveyed to Ralph H. Myler and Mildred R. Myler by deed recorded May 12, 1966 in Book 316, page 811, being described as follows:

Beginning at a 1/2 inch iron pipe which is North 7°38' East 160 feet and North 8°31' East 255.15 feet from the Southwest corner of the J. Ridgeway DLC No. 46 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence South 8-°31' West 100.0 feet to a 5/8 inch rod; thence South 81°29' East 50.0 feet to a 5/8 inch rod; thence North 8°31' East 100.0 feet to a 5/8 inch rod; thence prolonging North 8°31' East 16.0 feet, more or less, to the Southerly right of way line of the county road; thence Westerly, along the South right of way line of said county road, 50.0 feet, more or less, to a point 16.0 feet, more or less, North 8°31' East from the point of beginning; thence South 8°31' West 16.0 feet, more or less, to the point of beginning.

TRACT C (tax lot 1003):

That property conveyed to Ralph H. Myler and Mildred R. Myler by deed recorded April 9, 1968 in Book 330, page 134, being described as follows:

Beginning at a 5/8 inch iron rod which is North 7°38' East 160 feet from the Southwest corner of the J. Ridgeway DLC No. 46 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence South 81°21' East 109 feet to a 5/8 inch iron rod; thence North 7°38' East 255.4 feet to a 5/8 inch iron rod; thence continuing North 7°38' East 16 feet, more or less, to the Southerly line of the County Road; thence Westerly, along the Southerly line of said County Road, 55 feet, more or less, to the Northeast corner of that property conveyed to Ralph H. Myler and Mildred R. Myler, by deed recorded May 12, 1966 in Book 316, page 811, Linn County Deed Records; thence South 8°31' West 16 feet, more or less, to a 5/8 inch iron rod on the East line of said Myler property; thence South 8°31' West 100 feet to a 5/8 inch iron rod at the Southeast corner of said Myler property; thence North 81°29' West 50 feet to a 5/8 inch iron rod at the Southwest corner of said Myler property; thence South 8°31' West 155.15 feet to the place of beginning.

TRACT D (tax lot 900):

That property conveyed to Morse Brothers, a partnership, by deed recorded November 11, 1956 in Book 268, page 296, being described as follows:

A portion of the James Ridgeway Donation Land Claim No. 46 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian, in the County of Linn and State of Oregon described as follows:

Beginning at a 1¼ inch x 31½ inch car axle which lies North 89°40' East 278.3 feet and North 10° East 51.96 feet of the Southeast corner of the Jeremiah Ralston Donation Land Claim No. 49 and which axle is further described as being on the Northerly right-of-way line of that strip of land conveyed to the Oregon and California Railroad Company by deed recorded in Book 90, page 273, Deed Records; thence North 10° East 367.74 feet to a point in the center of county road also known as Grant Street which is South 80° East 360 feet from the intersection of the center of said road and the East line of said Claim No. 49; thence Westerly along the center of said county road to a point which is South 80° East 201.4 feet from the intersection of the center line of said road and the East line of said Claim No. 49; thence South 4°13' West 270.6 feet to a 3/4 inch x 42 inch iron pipe; thence South 22°40' East 165.5 feet to a 3/4 inch x 42 inch iron pipe set on the aforesaid Oregon and California Railroad right-of-way line; thence along said right-of-way line on a 2°50' curve to the left, the chord of which bears North 55°45' East, 58.62 feet to the point of beginning.

EXCEPTING THEREFROM that portion lying within the boundaries of Grant Street.

PARCEL VI:

Beginning at the Southeast corner of the James Ralston Donation Land Claim No. 49 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 7.20 chains; thence North 86° West 13.18 chains; thence South 8 chains to the South line of said claim; thence East 13.16 chains to the place of beginning.

EXCEPTING THEREFROM any portion lying within the following described tracts of land:

TRACT A:

That property described in deed recorded October 9, 1908 in Volume 84, page 286, as follows:

Beginning on the North boundary line of and East 1454.74 feet distant from the Northwest corner of the Henry R. Greer Donation Land Claim No. 47 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 7.41 chains to the center of the county road; thence South 86½° East 5.16 chains to the East boundary line of the DLC of Jeremiah Ralston, same being Claim No. 49; thence South 7.18 chains to the Southeast corner of said Claim No. 49; thence West 5.15 chains to the point of beginning.

TRACT B:

All that portion lying Westerly of the East line of the following described tract of land:

Beginning at an iron pipe on the North line of and East 16.95 chains distant from the Northwest corner of the H.R. Greer Donation Land Claim No. 47 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian, in the County of Linn and State of Oregon; thence North 7.41½ chains to an iron pipe in the South line of Grant Street; thence South 86¾° East along the South line of said Grant Street 3.96 chains to an iron pipe; thence South 15° East 3.44 chains to an iron pipe ½ by 24 inches; thence South 26°10' West 2.02 chains to an iron pipe ½ by 24 inches; thence South 5.76 chains to an iron pipe on the North line of the right-of-way of the Oregon and California Railroad Company; thence Southwesterly along said right of way 2.41 chains to the East line of Riverside Addition; thence North 4.11 chains to the Northeast corner of said Riverside Addition; thence West 1.57½ chains to the point of beginning.

TRACT C:

That property conveyed to Jack C. Lemons and Joyce Lemons by deed recorded October 9, 1967 in Book 326, page 509, being described as follows:

Beginning at a ½ inch pipe which bears North 7°38' East 160 feet from the Southeast corner of the James Ralston Donation Land Claim No. 49 in Section 11, Township 12 South, Range 2 West of the Willamette Meridian in the County of Linn and State of Oregon; thence North 89°58' West 420.48 feet to a ½ inch pipe; thence North 26°10' East 100.47 feet to a ½ inch pipe; thence North 15° West 227.04 feet to a ½ inch pipe on the South line of Grant Street; thence Easterly, following the South line of Grant Street, 476.2 feet, more or less, to a point which bears North 8°31' East from the place of beginning; thence South 8°31' West 271.15 feet, more or less, to the place of beginning.

PARCEL VII:

Beginning at a point on the East line of Post Street, said point being North 89°54' East 50.00 feet from the Southeast corner of Lot 1, Block 4, DOWNING ADDITION TO THE CITY OF LEBANON, as recorded in Volume 11 of Plats, page 49, in the County of Linn and State of Oregon; thence North 0°07' West, along the East line of Post Street of said addition, 535.67 feet tot he South line of Milton Street as originally deeded to the City of Lebanon; thence Easterly, along said street line, 20.48 feet to the East line of the land of the grantors; thence Southerly, along the East line of said land, 535.64 feet to the Southeast corner of the land of the grantors; thence South 89°54' West 20.45 feet to the point of beginning.

PARCEL VIII:

The East 10 feet of even width of Lots 1, 2, 3 and 4, Block 1, DOWNING ADDITION REVISED as recorded in Volume 12 of Plats, page 45, in the City of Lebanon, County of Linn and State of Oregon.

ALTA/NSPS Land Title Survey
Dated February 23, 2023

ALTA/NSPS LAND TITLE SURVEY

FOR:

HEATHERINGTON FOUNDATION FOR INNOVATION AND EDUCATION IN HEALTHCARE, FIRST AMERICIAN TITLE INSURANCE COMPANY, AND WESTERN UNIVERSITY OF HEALTH SCIENCES

LOCATED IN:

LOCATED IN THE SOUTHEAST 1/4 OF SECTION 11 AND THE NORTHEAST 1/4 OF SECTION 14 OF TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN, CITY OF LEBANON, LINN COUNTY, OREGON

PROPERTY IDENIFICATION:

LINN COUNTY TAX ASSESSOR'S MAP 12S-02W-11, TAX LOT 1000
800 EAST MILTON STREET, LEBANON, OREGON

SHEET 1 OF 29
DATE OF SURVEY: FEBRUARY 23, 2023

SURVEYORS CERTIFICATION

TO HEATHERINGTON FOUNDATION FOR INNOVATION AND EDUCATION IN HEALTHCARE, FIRST AMERICAN TITLE INSURANCE COMPANY, AND WESTERN UNIVERSITY HEALTH SCIENCES. THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 7(a), 7(b)(1), 8, 9, 13, 14, 16, 17, AND 18 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED FEBRUARY 23, 2023.

BRIAN SCOTT SAILOR P.L.S.
OREGON REGISTRATION No. 61341

DATE:

LEGAL DESCRIPTION:
(PER LOT BOOK SERVICE REPORT No. NCS-1157684-OR1 BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH AN EFFECTIVE DATE OF FEBRUARY 2, 2023)

REAL PROPERTY IN THE COUNTY OF LINN, STATE OF OREGON, DESCRIBED AS FOLLOWS:

PARCEL I:
BEGINNING ON THE NORTH LINE OF AND EAST 1222.09 FEET FROM THE NORTHWEST CORNER OF THE HENRY R. GREER DONATION LAND CLAIM No. 47 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE SOUTH 11.37 CHAINS; THENCE WEST 21 LINKS; THENCE SOUTH 18° EAST 13.58 CHAINS; THENCE EAST 1.15 CHAINS; THENCE SOUTH 588 FEET; THENCE EAST 24.75 CHAINS; THENCE NORTH 32.75 CHAINS; THENCE WEST 29.99 CHAINS TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE BOUNDARIES OF THE S.P.R.R. 100-FOOT RIGHT OF WAY.

AND ALSO LESS AND EXCEPT:
BEGINNING AT A POINT 18.52-½ CHAINS EAST AND 12 FEET SOUTH OF THE NORTHWEST CORNER OF THE H.R. GREER DONATION LAND CLAIM No. 47 IN TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN LINN COUNTY, OREGON; THENCE SOUTH ALONG THE EAST LINE OF RIVER STREET AS DEDICATED IN RIVERSIDE ADDITION 129.63 FEET; THENCE NORTH 83°45' EAST 158.6 FEET; THENCE NORTH 124.71 FEET TO A 1/2" PIPE ON THE NORTH LINE OF SAID GREER DONATION LAND CLAIM No. 47 AND 413.76 FEET WEST OF THE SOUTHEAST CORNER OF DONATION LAND CLAIM No. 49; THENCE WEST ALONG CLAIM LINE 95.6 FEET; THENCE SOUTH 78°41' WEST 62.22 FEET TO THE PLACE OF BEGINNING.

AND ALSO LESS AND EXCEPT:
BEGINNING AT A POINT 18.52-1/2 CHAINS EAST AND 141.63 FEET SOUTH OF THE NORTHWEST CORNER OF THE H.R. GREER DONATION LAND CLAIM No. 47 IN TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN LINN COUNTY, OREGON; THENCE NORTH 83°45' EAST 158.6 FEET; THENCE SOUTH 124.70 FEET TO A 1/2" IRON PIPE ON THE NORTH RIGHT OF WAY OF THE SOUTHERN PACIFIC RAILROAD; THENCE SOUTHWESTERLY ALONG SAID S P RAILROAD RIGHT OF WAY, 2.41 CHAINS TO THE EAST LINE OF RIVER STREET AS DEDICATED IN RIVERSIDE ADDITION; THENCE NORTH ALONG THE EAST LINE OF RIVER STREET, 129.63 FEET TO THE PLACE OF BEGINNING.

ALSO LESS AND EXCEPT:
BEGINNING AT A 3/4" IRON PIPE MARKING THE NORTHEAST CORNER OF LOT 11, BLOCK 1, SECOND ADDITION TO ROBERTSON'S ADDITION TO LEBANON, RECORDED IN LINN COUNTY BOOK OF PLATS, VOLUME 15, PAGE 41, SAID POINT BEING COINCIDENT WITH THE SOUTHEAST CORNER OF LOT 11, BLOCK 3, EDES ADDITION TO LEBANON, RECORDED IN LINN COUNTY BOOK OF PLATS, VOLUME 10, PAGE 44, THENCE SOUTH 40°55'58" EAST, A DISTANCE OF 142.93 FEET TO A 5/8" IRON ROD MARKING TO THE MOST EASTERLY CORNER OF SAID LOT 11, BLOCK 1, SECOND ADDITION TO ROBERTSON'S ADDITION TO LEBANON; THENCE ALONG THE NORTHEASTERLY LINE OF SAID LOT 11, BLOCK 1, NORTH 46°13'30" WEST, A DISTANCE OF 57.97 FEET TO A 5/8" IRON ROD MARKING THE ANGLE POINT IN THE NORTHEASTERLY LINE OF SAID LOT 11, BLOCK 1; THENCE NORTH 37°20'31" WEST, A DISTANCE OF 85.38 FEET TO THE POINT OF BEGINNING.

ALSO LESS AND EXCEPT THAT PORTION CONVEYED TO THE CITY OF LEBANON, A MUNICIPAL CORPORATION, BY BARGAIN AND SALE DEED (PROPERTY LINE ADJUSTMENT) RECORDED MAY 26, 2022 AS RECORDING No. 2022-09523.

PARCEL II:

BEGINNING AT THE SOUTHEAST CORNER OF THE HENRY R. GREER DONATION LAND CLAIM No. 47 IN SECTION 14, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE WEST 18.12 CHAINS; THENCE SOUTH 11.50 CHAINS; THENCE SOUTH 51° EAST 30.80 CHAINS TO THE SOUTH SANTIAM RIVER; THENCE NORTH 10° EAST 7.50 CHAINS; THENCE NORTH 22.80 CHAINS; THENCE WEST 7.90 CHAINS TO THE POINT OF BEGINNING.

LESS AND EXCEPT THAT PORTION CONVEYED TO R.F. WILSON, SOLE TRUSTEE OF THE R.F. WILSON LIVING TRUST DATED MAY 10, 1996, BY WARRANTY DEED RECORDED MARCH 14, 2019 AS RECORDING No. 2019-03772.

ALSO LESS AND EXCEPT THAT PORTION CONVEYED TO THE CITY OF LEBANON, A MUNICIPAL CORPORATION, BY BARGAIN AND SALE DEED (PROPERTY LINE ADJUSTMENT) RECORDED MAY 26, 2022 AS RECORDING No. 2022-09523.

PARCEL III:

BEGINNING AT THE NORTHEAST CORNER OF THE RUSSELL T. HILL DONATION LAND CLAIM No. 77 IN SECTION 14, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE SOUTH ALONG SAID CLAIM LINE 11.86 CHAINS; THENCE NORTH 48° WEST 3.31 CHAINS; THENCE NORTH 36° WEST 3.70 CHAINS; THENCE NORTH 26° WEST 2.50 CHAINS; THENCE NORTH 5°5' WEST 1.50 CHAINS; THENCE NORTH 20½° 1.00 CHAIN; THENCE NORTH 6° WEST 2.00 CHAINS TO THE NORTH LINE OF SAID CLAIM No. 77; THENCE EAST 6.60 CHAINS TO THE POINT OF BEGINNING.

PARCEL IV:

BEGINNING ON THE NORTH BOUNDARY LINE OF AND EAST 1454.74 FEET FROM THE NORTHWEST CORNER OF THE HENRY R. GREER DONATION LAND CLAIM No. 47 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LIN AND STATE OF OREGON; THENCE NORTH 7.41 CHAINS; THENCE SOUTH 86½° EAST 5.15 CHAINS; THENCE SOUTH 7.18 CHAINS; THENCE WEST 5.15 CHAINS TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM ANY PORTION LYING WITHIN THE TRACT OF LAND CONVEYED TO JACK C. LEMONS AND JOYCE LEMONS BY DEED RECORDED OCTOBER 9, 1967 IN BOOK 326, PAGE 509, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2 INCH PIPE WHICH BEARS NORTH 7°38' EAST 160 FEET FROM THE SOUTHEAST CORNER OF THE JAMES RALSTON DONATION LAND CLAIM No. 49 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 89°58' WEST 420.48 FEET TO A 1/2 INCH PIPE; THENCE NORTH 26°10' EAST 100.47 FEET TO A 1/2 INCH PIPE; THENCE NORTH 15° WEST 227.04 FEET TO A 1/2 INCH PIPE ON THE SOUTH LINE OF GRANT STREET; THENCE EASTERLY, FOLLOWING THE SOUTH LINE OF GRANT STREET, 476.2 FEET, MORE OR LESS, TO A POINT WHICH BEARS NORTH 8°31' EAST FROM THE PLACE OF BEGINNING; THENCE SOUTH 8°31' WEST 271.15 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING.

PARCEL V:

BEGINNING AT THE SOUTHEAST CORNER OF THE JEREMIAH RALSTON DONATION LAND CLAIM No. 49 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 7.30 CHAINS; THENCE SOUTH 80° EAST 350 FEET; THENCE SOUTH 10° WEST 419.7 FEET; THENCE WEST 278.3 FEET TO THE PLACE OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE BOUNDARIES OF THE S.P.R.R. 100-FOOT RIGHT OF WAY.

ALSO EXCEPTING THEREFROM ANY PORTION LYING WITH THE FOLLOWING DESCRIBED TRACTS OF LAND:

TRACT A (TAX LOT 1002):

THAT PROPERTY CONVEYED TO JACK C. LEMONS AND JOYCE LEMONS BY DEED RECORDED OCTOBER 9, 1967 IN BOOK 326, PAGE 509, BEING DESCRIBED AS FOLLOWS:

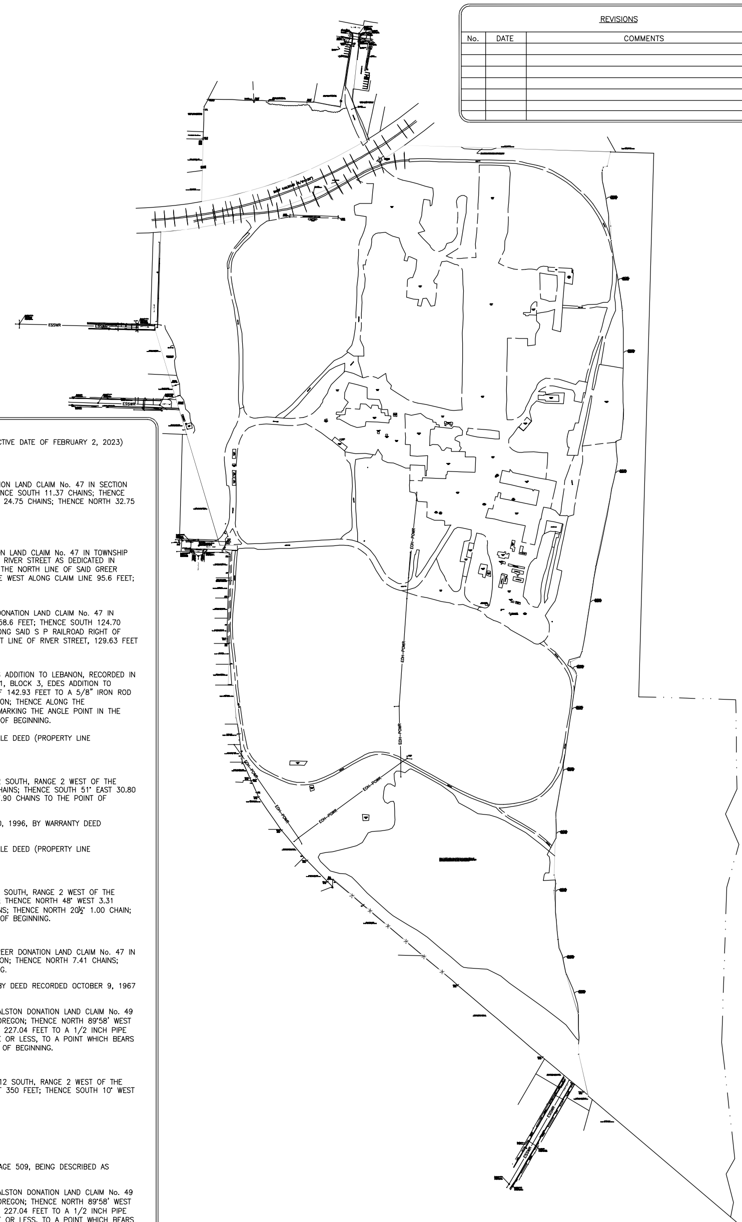
BEGINNING AT A 1/2 INCH PIPE WHICH BEARS NORTH 7°38' EAST 160 FEET FROM THE SOUTHEAST CORNER OF THE JAMES RALSTON DONATION LAND CLAIM No. 49 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 89°58' WEST 420.48 FEET TO A 1/2 INCH PIPE; THENCE NORTH 26°10' EAST 100.47 FEET TO A 1/2 INCH PIPE; THENCE NORTH 15° WEST 227.04 FEET TO A 1/2 INCH PIPE ON THE SOUTH LINE OF GRANT STREET; THENCE EASTERLY, FOLLOWING THE SOUTH LINE OF GRANT STREET, 476.2 FEET, MORE OR LESS, TO A POINT WHICH BEARS NORTH 8°31' EAST FROM THE PLACE OF BEGINNING; THENCE SOUTH 8°31' WEST 271.15 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING.

TRACT B (TAX LOT 1001):

THAT PROPERTY CONVEYED TO RALPH H. MYLER AND MILDRED R. MYLER BY DEED RECORDED MAY 12, 1966 IN BOOK 316, PAGE 811, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2 INCH IRON PIPE WHICH IS NORTH 7°38' EAST 160 FEET AND NORTH 8°31' EAST 255.15 FEET FROM THE SOUTHWEST CORNER OF THE J. RIDGEWAY DLC No. 46 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE SOUTH 8°31' WEST 100.0 FEET TO A 5/8 INCH IRON ROD; THENCE SOUTH 81°29' EAST 50.0 FEET TO A 5/8 INCH IRON ROD; THENCE NORTH 8°31' EAST 100.0 FEET TO A 5/8 INCH IRON ROD; THENCE PROLONGING NORTH 8°31' EAST 16.0 FEET, MORE OR LESS, TO THE SOUTHERLY LINE OF THE COUNTY ROAD; THENCE WESTERLY, ALONG THE SOUTH RIGHT OF WAY LINE OF SAID COUNTY ROAD, 50.0 FEET, MORE OR LESS, TO A POINT 16.0 FEET, MORE OR LESS, NORTH 8°31' EAST FROM THE POINT OF BEGINNING; THENCE SOUTH 8°31' WEST 16.0 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SEE CONTINUATION OF LEGAL ON RIGHT HAND SIDE OF SHEET



REVISIONS

No.	DATE	COMMENTS

SCALE: 1" = 200'

GENERAL ALTA NOTES:

1.) SOURCE OF TITLE IS FROM LOT BOOK SERVICE REPORT ORDER No. NCS-1157684-OR1 DATED FEBRUARY 2, 2023 BY FIRST AMERICAN TITLE INSURANCE COMPANY NATIONAL COMMERCIAL SERVICES, 200 SW MARKET STREET, SUITE 250, PORTLAND, OR 97201. PER THE REPORT, THE LAST DEED OF RECORD RUNS TO HEATHERINGTON FOUNDATION FOR INNOVATION AND EDUCATION IN HEALTH CARE, AN OREGON NON-PROFIT PUBLIC BENEFIT ENTITY WITH MEMBERS.
2.) IN RESPONSE TO TABLE A ITEM 2: THE PROPERTY ADDRESS PER SAID REPORT AND THE LINN COUNTY TAX ASSESSOR'S OFFICE IS 800 EAST MILTON STREET, LEBANON, OREGON.
3.) IN RESPONSE TO TABLE A ITEM 3: THERE IS THE POSSIBILITY THAT A VERY SMALL PART OF THE PROPERTY ON THE NORTH END IS WITHIN FLOOD ZONE AE AS SHOWN ON FEMA FIRM MAP 41043C0567G, EFFECTIVE DATE 9/29/2010. THE LOCATION SHOWN ON THE ATTACHED MAP IS APPROXIMATE. PLEASE REFER TO SAID FIRM MAP FOR LOCATION. THERE IS A PORTION OF THE PROPERTY AT THE SOUTH END THAT IS WITHIN ZONE X AS SHOWN ON FEMA FIRM MAP 41043C0569G, EFFECTIVE DATE 9/29/2010. THE LOCATION AND CLASSIFICATION OF SAID FLOOD ZONE IS SHOWN ON THE ATTACHED MAP.
4.) IN RESPONSE TO TABLE A ITEM 4: THE GROSS LAND AREA IS 111.15 ACRES OF LAND, MORE OR LESS.
5.) IN RESPONSE TO TABLE A ITEM 7(a), AND 7(b)(1): THERE ARE NO BUILDINGS ON SITE.
6.) IN RESPONSE TO TABLE A ITEM 8: ALL SUBSTANTIAL FEATURES OBSERVED HAVE BEEN SHOWN ON THE ATTACHED MAP.
7.) IN RESPONSE TO TABLE A ITEM 9: THERE ARE NO STRIPED AND DESIGNATED PARKING SPACES AND NO SPACES THAT ARE OTHERWISE IDENTIFIABLE ON THE PROPERTY.
8.) IN RESPONSE TO TABLE A ITEM 13: ALL INFORMATION PERTAINING TO THE ADJOINING PROPERTY OWNERS IS SHOWN ON THE ATTACHED MAP.
9.) IN RESPONSE TO TABLE A ITEM 14: ALL OF THE STREETS HAVE BEEN SHOWN.
10.) IN RESPONSE TO TABLE A ITEM 16: THE ONLY RECENT CONSTRUCTION ACTIVITY TO HAVE TAKEN PLACE OCCURRED WITH THE CONSTRUCTION OF A NEW 11-FOOT WIDE CONCRETE WALKWAY THAT RUNS ESSENTIALLY PARALLEL WITH AND APPROXIMATELY 20 FEET EAST OF THE EAST PROPERTY LINE FOR THE LENGTH OF THE PROPERTY. THE TOE OF THE SLOPE MATERIAL FROM THE WEST EDGE OF SAID WALKWAY IS APPROXIMATELY AT THE EAST PROPERTY LINE.
11.) IN RESPONSE TO TABLE A ITEM 17: I AM UNAWARE OF ANY PROPOSED CHANGES TO RIGHT OF WAY LINES.
12.) IN RESPONSE TO TABLE A ITEM 18: ALL EASEMENTS DISCLOSED IN THE ABOVE REFERENCED LOT BOOK REPORT HAVE BEEN SHOWN OR OTHERWISE ADDRESSED.

APPARENT ENCUMBRANCES PER ABOVE REFERENCED LOT BOOK SERVICE REPORT:

1.) PROPERTY IS SUBJECT TO THE RIGHTS OF THE PUBLIC AND GOVERNMENTAL BODIES IN AND TO THAT PORTION OF THE PREMISES HEREIN DESCRIBED LYING BELOW THE MEAN HIGH WATER MARK OF SOUTH SANTIAM RIVER AND THE OWNERSHIP OF THE STATE OF OREGON IN AND TO THAT PORTION LYING BELOW THE HIGH WAY MARK OF THE SOUTH SANTIAM RIVER. THERE APPEARS TO BE SOME TYPOGRAPHICAL ERRORS IN THE LOT BOOK SERVICE REPORT AND THIS VERBIAGE WAS TAKEN FROM A PREVIOUS REPORT PROVIDED BY FIRST AMERICAN TITLE, ORDER No. 7091-3148703, DATED NOVEMBER 28, 2018.
2.) PROPERTY IS SUBJECT ANY ADVERSE CLAIM BASED UPON THE ASSERTION THAT SOME PORTION OF SAID LAND HAS BEEN REMOVED FROM OR BROUGHT WITHIN THE BOUNDARIES THEREOF BY AN AVULSIVE MOVEMENT OF THE SOUTH SANTIAM RIVER OR HAS BEEN FORMED BY THE PROCESS OF ACCRETION OR RELICTION OR HAS BEEN CREATED BY ARTIFICIAL MEANS OR HAS ACCRETED TO SUCH PORTION SO CREATED.
3.) PROPERTY IS SUBJECT TO THE RIGHT OF PARTIES IN POSSESSION BY REASON OF THE FOLLOWING UNRECORDED LEASES DISCLOSED TO FIRST AMERICAN TITLE: ROADS, STREET OR HIGHWAYS.
4.) PROPERTY IS SUBJECT TO AN OIL AND GAS LEASE EXECUTED BY WILLAMETTE INDUSTRIES, INC., AN OREGON CORPORATION AS LESSOR AND AMERICAN QUASAR PETROLEUM CO. OF NEW MEXICO AS LESSEE, RECORDED JUNE 10, 1985 AS VOLUME 385, PAGE 873 OF LINN COUNTY DEED RECORDS.
5.) PROPERTY IS SUBJECT TO UNRECORDED LEASES AND PERIODIC TENANCIES, IF ANY.
6.) PROPERTY IS SUBJECT TO CITY LIENS, IF ANY, FOR THE CITY OF LEBANON. AN INQUIRY WAS NOT MADE CONCERNING THE ACTUAL STATUS OF SUCH LIENS.

THE FOLLOWING DISCLAIMER WAS PROVIDED AT THE END OF SAID LOT BOOK SERVICE REPORT: "THIS IS NOT A TITLE REPORT SINCE NO EXAMINATION HAS BEEN MADE OF THE TITLE TO THE ABOVE DESCRIBED PROPERTY. OUR SEARCH FOR APPARENT ENCUMBRANCES WAS LIMITED TO OUR TRACT INDICES, AND THEREFORE ABOVE LISTINGS DO NOT INCLUDE ADDITIONAL MATTERS WHICH MIGHT HAVE BEEN DISCLOSED BY AN EXAMINATION OF THE RECORD TITLE. WE ASSUME NO LIABILITY IN CONNECTION WITH THE LOT BOOK SERVICE AND WILL NOT BE RESPONSIBLE FOR ERRORS OR OMISSIONS THEREIN."

NOTE: THERE IS AN EXISTING 5' WIDE CITY OF LEBANON PUBLIC UTILITY EASEMENT ALONG A PORTION OF THE WEST PROPERTY LINE PER LCDR VOLUME 150, PAGE 755 THAT DOES NOT APPEAR IN SAID LOT BOOK SERVICE REPORT, BUT IS LISTED AS AN EXCEPTION IN SAID PREVIOUS REPORT PROVIDED BY FIRST AMERICAN TITLE, ORDER No. 7091-3148703, DATED NOVEMBER 28, 2018. THE LOCATION OF THE EASEMENT IS SHOWN ON THE ATTACHED MAP.

LEGAL DESCRIPTION CONTINUED

TRACT C (TAX LOT 1003):

THAT PROPERTY CONVEYED TO RALPH H. MYLER AND MILDRED R. MYLER BY DEED RECORDED APRIL 9, 1968 IN BOOK 330, PAGE 134, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A 5/8 INCH IRON ROD WHICH IS NORTH 7°38' EAST 160 FEET FROM THE SOUTHWEST CORNER OF THE J. RIDGEWAY DLC No. 46 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE SOUTH 81°21' EAST 109 FEET TO A 5/8 INCH IRON ROD; THENCE NORTH 7°38' EAST 255.4 FEET TO A 5/8 INCH IRON ROD; THENCE CONTINUING NORTH 7°38' EAST 16 FEET, MORE OR LESS, TO THE SOUTHERLY LINE OF THE COUNTY ROAD; THENCE WESTERLY ALONG THE SOUTHERLY LINE OF SAID COUNTY ROAD, 55 FEET, MORE OR LESS, TO THE NORTHEAST CORNER OF THAT PROPERTY CONVEYED TO RALPH H. MYLES AND MILDRED R. MYLER, BY DEED RECORDED MAY 12, 1966 IN BOOK 316, PAGE 811, LINN COUNTY RECORDS; THENCE SOUTH 8°31' WEST 16 FEET, MORE OR LESS, TO A 5/8 INCH IRON ROD ON THE EAST LINE OF SAID MYLER PROPERTY; THENCE SOUTH 8°31' WEST 100 FEET TO A 5/8 INCH IRON ROD AT THE SOUTHEAST CORNER OF SAID MYLER PROPERTY; THENCE NORTH 81°29' WEST 50 FEET TO A 5/8 INCH IRON ROD AT THE SOUTHWEST CORNER OF SAID MYLER PROPERTY; THENCE SOUTH 8°31' WEST 155.15 FEET TO THE PLACE OF BEGINNING.

TRACT D (TAX LOT 900):

THAT PROPERTY CONVEYED TO MORSE BROTHERS, A PARTNERSHIP, BY DEED RECORDED NOVEMBER 11, 1956 IN BOOK 268, PAGE 296, BEING DESCRIBED AS FOLLOWS:

A PORTION OF THE JAMES RIDGEWAY DONATION LAND CLAIM No. 46 IN TOWNSHIP 11 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN, IN THE COUNTY OF LINN AND STATE OF OREGON DESCRIBED AS FOLLOWS:

BEGINNING AT A 1¼ INCH X 31½ INCH CAR AXLE WHICH LIES NORTH 89°40' EAST 278.3 FEET AND NORTH 10° EAST 51.96 FEET OF THE SOUTHEAST CORNER OF THE JEREMIAH RALSTON DONATION LAND CLAIM No. 49 AND WHICH AXLE IS FURHTER DESCRIBED AS BEING ON THE NORTHERLY RIGHT-OF-WAY LINE OF THAT STRIP OF LAND CONVEYED TO THE OREGON AND CALIFORNIA RAILROAD COMPANY BY DEED RECORDED IN BOOK 90, PAGE 273, DEED RECORDS; THENCE NORTH 10° EAST 367.74 FEET TO A POINT IN THE CENTER OF COUNTY ROAD ALSO KNOWN AS GRANT STREET WHICH IS SOUTH 80° EAST 360 FEET FROM THE INTERSECTION OF THE CENTER OF SAID ROAD AND THE EAST LINE OF SAID CLAIM No. 49; THENCE WESTERLY ALONG THE CENTER OF SAID COUNTY ROAD TO A POINT WHICH SOUTH 80° EAST 201.4 FEET FROM THE INTERSECTION OF THE CENTER LINE OF SAID ROAD AND THE EAST LINE OF SAID CLAIM No. 49; THENCE SOUTH 4°13' WEST 270.6 FEET TO A 3/4 INCH x 42 INCH IRON PIPE; THENCE SOUTH 22°40' EAST 165.5 FEET TO A 3/4 INCH x 42 INCH IRON PIPE ON THE AFORESAID OREGON AND CALIFORNIA RAILROAD RIGHT-OF-WAY LINE; THENCE ALONG SAID RIGHT-OF-WAY LINE ON A 2°50' CURVE TO THE LEFT, THE CHORD OF WHICH BEARS NORTH 55°45' EAST, 58.62 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE BOUNDARIES OF GRANT STREET.

PARCEL VI:

BEGINNING AT THE SOUTHEAST CORNER OF THE JAMES RALSTON DONATION LAND CLAIM No. 49 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 7.20 CHAINS; THENCE NORTH 86° WEST 13.18 CHAINS; THENCE SOUTH 8 CHAINS TO THE SOUTH LINE OF SAID CLAIM; THENCE EAST 13.16 CHAINS TO THE PLACE OF BEGINNING.

EXCEPTING THEREFROM ANY PORTION LYING WITHIN THE FOLLOWING DESCRIBED TRACTS OF LAND:

TRACT A:

THAT PROPERTY DESCRIBED IN DEED RECORDED OCTOBER 9, 1908 IN VOLUME 84, PAGE 286, AS FOLLOWS:

BEGINNING ON THE NORTH BOUNDARY LINE OF AND EAST 1454.74 FEET DISTANT FROM THE NORTHWEST CORNER OF THE HENRY R. GREER DONATION LAND CLAIM No. 47 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 7.41 CHAINS TO THE CENTER OF THE COUNTY ROAD; THENCE SOUTH 86½° EAST 5.16 CHAINS TO THE EAST BOUNDARY LINE OF THE DLS OF JEREMIAH RALSTON, SAME BEING CLAIM No. 49; THENCE SOUTH 7.18 CHAINS TO THE SOUTHEAST CORNER OF SAID CLAIM No. 49; THENCE WEST 5.15 CHAINS TO THE POINT OF BEGINNING.

TRACT B:

ALL THAT PORTION LYING WESTERLY OF THE EAST LINE OF THE FOLLOWING DESCRIBED TRACT OF LAND:

BEGINNING AT AN IRON PIPE ON THE NORTH LINE OF AND EAST 16.95 CHAINS DISTANT FROM THE NORTHWEST CORNER OF THE H.R. GREER DONATION LAND CLAIM No. 47 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN, IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 7.41½ CHAINS TO A IRON PIPE IN THE SOUTH LINE OF GRANT STREET; THENCE SOUTH 86¾° EAST ALONG THE SOUTH LINE OF SAID GRANT STREET 3.96 CHAINS TO AN IRON PIPE; THENCE SOUTH 15° EAST 3.44 CHAINS TO AN IRON PIPE 1/2 x 24 INCHES; THENCE SOUTH 26°10' WEST 2.02 CHAINS TO AN IRON PIPE 1/2 x 24 INCHES; THENCE SOUTH 5.76 CHAINS TO AN IRON PIPE ON THE NORTH LINE OF THE RIGHT-OF-WAY OF THE OREGON AND CALIFORNIA RAILROAD COMPANY; THENCE SOUTHWESTERLY ALONG SAID RIGHT OF WAY 2.41 CHAINS TO THE EAST LINE OF RIVERSIDE ADDITION; THENCE NORTH 4.11 CHAINS TO THE NORTHEAST CORNER OF SAID RIVERSIDE ADDITION; THENCE WEST 1.57½ CHAINS TO THE POINT OF BEGINNING.

TRACT C:

THE PROPERTY CONVEYED TO JACK C. LEMONS AND JOYCE LEMONS BY DEED RECORDED OCTOBER 9, 1967 IN BOOK 326, PAGE 509, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2 INCH PIPE WHICH BEARS NORTH 7°38' EAST 160 FEET FROM THE SOUTHEAST CORNER OF THE JAMES RALSTON DONATION LAND CLAIM No. 49 IN SECTION 11, TOWNSHIP 12 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 89°58' WEST 420.48 FEET TO A 1/2 INCH PIPE; THENCE NORTH 26°10' EAST 100.47 FEET TO A 1/2 INCH PIPE; THENCE NORTH 15° WEST 227.04 FEET TO A 1/2 INCH PIPE ON THE SOUTH LINE OF GRANT STREET; THENCE EASTERLY, FOLLOWING THE SOUTH LINE OF GRANT STREET, 476.2 FEET, MORE OR LESS, TO A POINT WHICH BEARS NORTH 8°31' EAST FROM THE PLACE OF BEGINNING; THENCE SOUTH 8°31' WEST 271.15 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING.

PARCEL VII:

BEGINNING AT A POINT ON THE EAST LINE OF POST STREET, SAID POINT BEING NORTH 89°54' EAST 50.00 FEET FROM THE SOUTHEAST CORNER OF LOT 1, BLOCK 4, DOWNING ADDITION TO THE CITY OF LEBANON, AS RECORDED IN VOLUME 11 OF PLATS, PAGE 49, IN THE COUNTY OF LINN AND STATE OF OREGON; THENCE NORTH 0°07' WEST, ALONG THE EAST LINE OF POST STREET OF SAID ADDITION, 535.67 FEET TO THE SOUTH LINE OF MILTON STREET AS ORIGINALLY DEEDED TO THE CITY OF LEBANON; THENCE EASTERLY, ALONG SAID STREET LINE, 20.48 FEET TO THE EAST LINE OF THE LAND OF THE GRANTORS; THENCE SOUTHERLY, ALONG THE EAST LINE OF SAID LAND 535.64 FEET TO THE SOUTHEAST CORNER OF THE LAND OF THE GRANTORS; THENCE SOUTH 89°54' WEST 20.45 FEET TO THE POINT OF BEGINNING.

PARCEL VIII:

THE EAST 10 FEET OF EVEN WIDTH OF LOTS 1, 2, 3 AND 4, BLOCK 1, DOWNING ADDITION REVISED AS RECORDED IN VOLUME 12 OF PLAT, PAGE 45, IN THE CITY OF LEBANON, COUNTY OF LINN AND STATE OF OREGON.

THE ABOVE DESCRIPTION MATCHES EXACTLY THE DESCRIPTION PROVIDED IN THE AFOREMENTIONED LOT BOOK SERVICE REPORT No. NCS-1157684-OR1 BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH AN EFFECTIVE DATE OF FEBRUARY 2, 2023. THE BEARINGS AND DISTANCES AROUND THE PERIMETER OF THE PROPERTY AS SHOWN ON THE ATTACHED MAP ARE THE AS-SURVEYED BOUNDARIES BASED ON FOUND MONUMENTATION AND ACCEPTABLE LAND SURVEYING METHODS FOR DETERMINING BOUNDARIES.

COLE SURVEYING, LLC

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341

EXPIRES 6/30/24

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