Board of County Commissioners Business Meeting Minutes – DRAFT

A complete video copy and packet including staff reports of this meeting can be viewed at https://www.clackamas.us/meetings/bcc/business.

Thursday, March 14, 2024 – 6:00 PM

In person and via virtual technology (Zoom)

PRESENT: Chair Tootie Smith
Commissioner Paul Savas
Commissioner Martha Schrader
Commissioner Mark Shull

CALL TO ORDER

I. PRESENTATION

A. Update on the 2024 Oregon Legislative Session

Interim Public & Government Affairs Director Tonia Holowetzki and Interim Government Affairs Manager Trent Wilson briefed the Board on outcomes from the recently completed legislative session, followed by remarks from Oregon House Representative Annessa Hartman, District 40, and Oregon House Representative James Hieb, District 51.

II. PUBLIC HEARINGS

A. Second reading and adoption of an Ordinance amending Clackamas County Code Chapter 5.01, Animal Licensing, Services and Enforcement. No fiscal impact. No County General Funds are involved. – To be continued to March 21, 2024.

Chair Smith opened the public hearing and announced that it would be continued to March 21, 2024 at 10am, with no testimony taken at this time.

III. CONSENT AGENDA

A. Elected Officials

1. Approval of Previous Business Meeting Minutes – BCC
2. Approval of a Board Order authorizing a Purchase Order with Datec, Inc. for the purchase of 55 Panasonic Toughbooks, Docking Stations, and DVD Drives. Purchase Order value is $162,452.40. $37,364.05 is funded through the Sheriff's Operating Levy, $34,115 is funded through the Enhanced Law Enforcement District and $90,973.35 is funded through budgeted County General Funds. – CCSO

B. Technology Services

1. Approval of a new construction contract with Roth Communications, Inc. for broadband expansion in the Government Camp area. Total value is $298,800. Funding is through the Clackamas Broadband eXchange ARPA Broadband Expansion fund. No County General Funds are involved.

C. Transportation & Development

1. Approval of a grant request to the Oregon Department of Transportation for support of transportation safety planning and implementation projects. Total value is $1,271,475.94. Grant request is for $1,017,500 and matching funds of $253,975.94 for three years. Funding through State grant and match through County Road Fund. No County General Funds are involved.

D. County Administration

1. Approval of a Board Order delegating authority to sign an Irrevocable Letter of Credit with US Bank to meet the qualifications of the Oregon City Type II Land Use decision for the replacement County courthouse. Letter of Credit value is $1,000,000 to expire on March 3, 2028. Funding is through budgeted County General Funds in the Courthouse Capital Fund.

Clerk to the Board Tony Mayernik read the consent agenda. Chair Smith asked if any Commissioner wished to remove any item from the consent agenda. No request were heard.

Commissioner Schrader: “I move we approve the consent agenda.” Commissioner Savas seconded the motion. No further discussion was heard.

Clerk Mayernik called the poll
Commissioner Shull Aye
Commissioner Savas Aye
Commissioner Schrader Aye
Chair Smith Aye; motion passes 4-0.

Chair Smith recessed the Board of County Commissioners and convened the Water Environment Services Board of Directors.

IV. WATER ENVIRONMENT SERVICES CONSENT AGENDA

A. Approval of Amendment #1 with OTAK, Inc. for engineering services necessary for the design and construction management of Phase 2 of Upper Kellogg Capital Improvements. Amendment value not to exceed $587,843.20, contract value is increased to $875,324.78. Funding is through County-allocated ARPA Funds and the Water Environment Services Surface Water Construction Fund. No County General Funds are involved.

B. Approval of a Resolution of Necessity and Purpose Authorizing the Acquisition of Easements and Fee Property by Good Faith Negotiations, if possible, or Condemnation, if necessary, for the Mt. Talbert Realignment Project. Total project value is $1,066,000. Funding is through the Water Environment Services Sanitary Sewer Construction Fund. No County General Funds are involved.

C. Approval of a Resolution of Necessity and Purpose Authorizing the Acquisition of Necessary Easements and Fee Property by Good Faith Negotiations, if possible, or Condemnation, if necessary for the Multiple Pump Station Upgrades Project. Total project value is $9,600,000. Funding is through the Water Environment Services Sanitary Sewer Construction Fund. No County General Funds are involved.

Clerk Mayernik read the consent agenda. Chair Smith asked if any Director wished to remove any item from the consent agenda. No request were heard.

Commissioner Shull: “I move for approval of the Water Environment Services consent agenda.” Commissioner Savas seconded the motion. No further discussion was heard.

Clerk Mayernik called the poll
Commissioner Shull Aye
Commissioner Savas Aye
Commissioner Schrader Aye
Chair Smith Aye; motion passes 4-0.

Chair Smith adjourned the Water Environment Services Board and reconvened the Board of County Commissioners.

V. PUBLIC COMMUNICATION

Chair Smith opened the meeting for public testimony.

Transportation & Development Director Dan Johnson briefed the Board on the County's review of a conditional use permit application from Portland General Electric for their proposed alignment on Stafford Road and the separate topic of proposed amendments to the County's Zoning and Development Ordinance for processes that currently require a conditional use permit.

Portland General Electric Senior Vice President Larry Bekkedahl briefed the Board on Portland General Electric's Tonquin project and its alignment on Stafford Road for the installation of power poles and associated transmission and distribution lines.

Greg Hathaway (Portland) – Portland General Electric proposed alignment on Stafford Road

Ed Wagner (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Loretta Smith (Portland) – Portland General Electric proposed alignment on Stafford Road

Marlene Ryser (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Anthony Barber (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Janis Hess (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Kelly Bartholomew (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Eileen Hutchinson (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Joe Ratti (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Luda Greene (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Kelly Lee (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Jon Landry (Estacada) – Portland General Electric proposed alignment on Stafford Road

Carol Schaaf (Tualatin) – Portland General Electric proposed alignment on Stafford Road

John Lekas (Tualatin) – Portland General Electric proposed alignment on Stafford Road

Jared Essig (West Linn) – Multnomah County resolution on Israel/Palestine Ceasefire

Chair Smith closed the meeting for public testimony.

VI. COUNTY ADMINISTRATOR UPDATE

County Administrator Gary Schmidt recognized Public & Government Affairs staff for their work on the County's YouTube channel, which just recognized its 13,000th subscriber.

VII. COMMISSIONER COMMUNICATION

Commissioner Shull made comments on private property rights.

Commissioner Savas yielded in the interest of time.

Commissioner Schrader thanked everyone who attended this evening.

Chair Smith yielded in the interest of time and adjourned the meeting at 8:03 PM.

The Tonquin Project

March 2024

Larry Bekkedahl, SVP, Strategy & Advanced Energy Delivery

Jennifer Santhouse, Manager, Construction Project Management

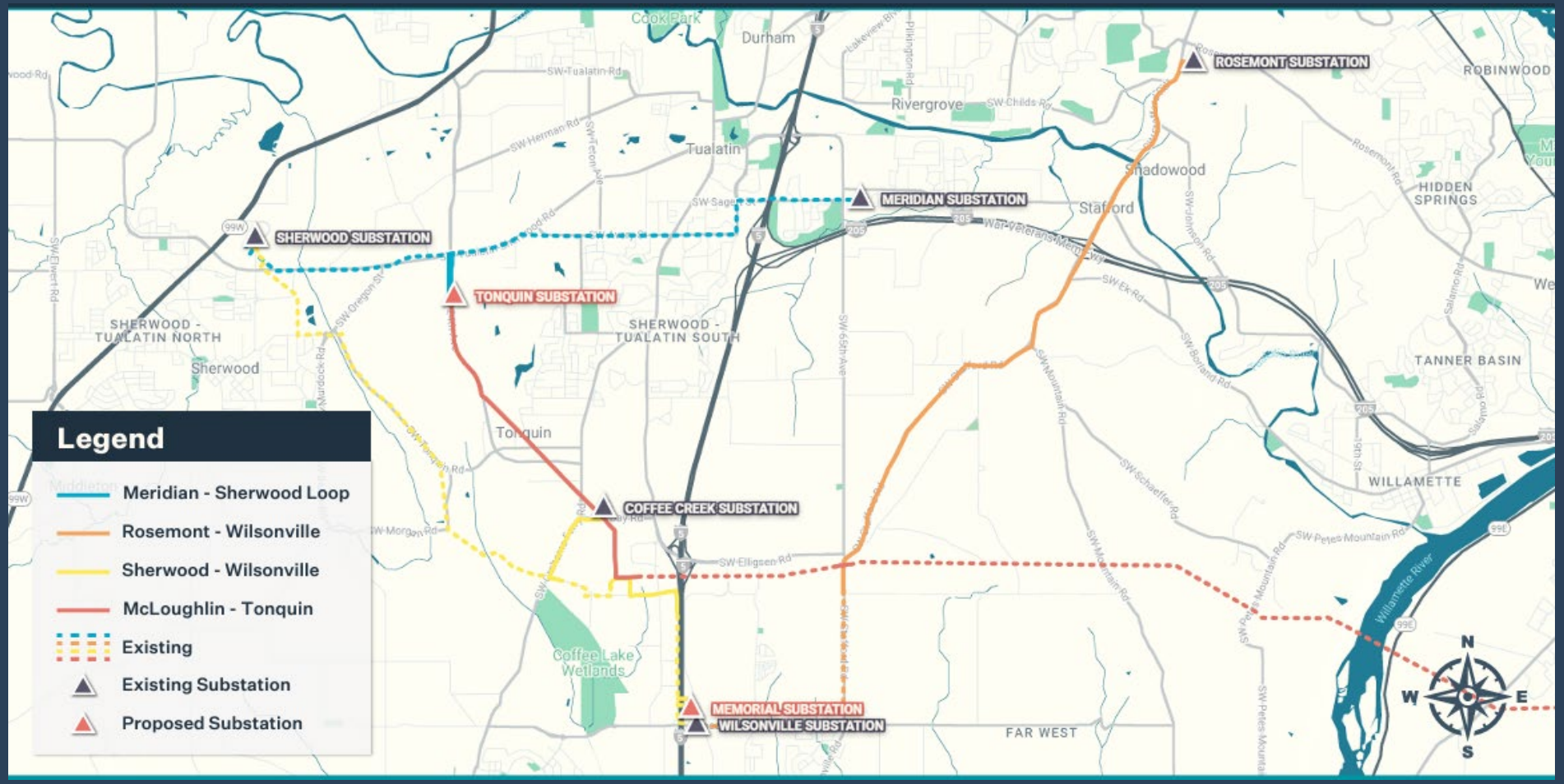
Meredith Armstrong, Manager, Property Rights

PGE An Oregon kind of energy.℠

This multi-phase project will build a substation and upgrade 11 miles of 115 kV transmission lines in Tualatin, Sherwood, Stafford, Wilsonville and unincorporated Clackamas County. The 7.4 mile Rosemont to Wilsonville segment (circa 1940's) will place transmission lines above 5 miles of existing power distribution lines.

Project Needs:

- Meet growing energy demand
- Strengthen system resilience
- Reduce power outages
- Support Willamette Water Supply



https://www.portlandgeneralprojects.com/Tonquin

Growth in Clackamas County

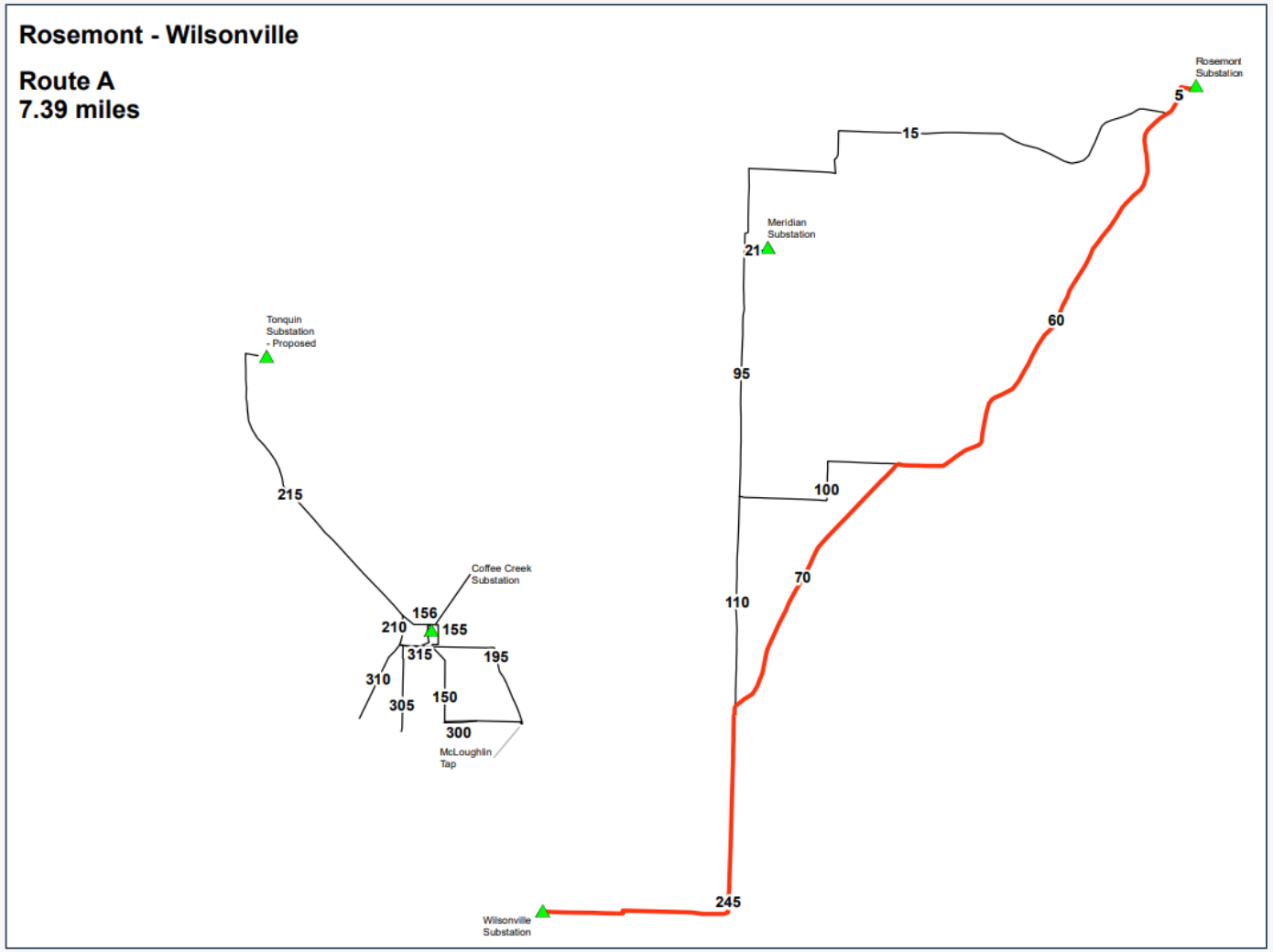
YEAR	ADDED MEGAWATTS	APPROX # OF HOMES
2024	12.65	4,200
2025	11.65	3,900
2026	5.88	2,000
2027	10.23	3,400
2028	14.64	4,900
2029	9.85	3,300
2030	8.28	2,800
2031	9.16	3,000
2032	12.40	4,100
2033	17.11	5,700
2034	26.20	8,700
2035	21.52	7,200

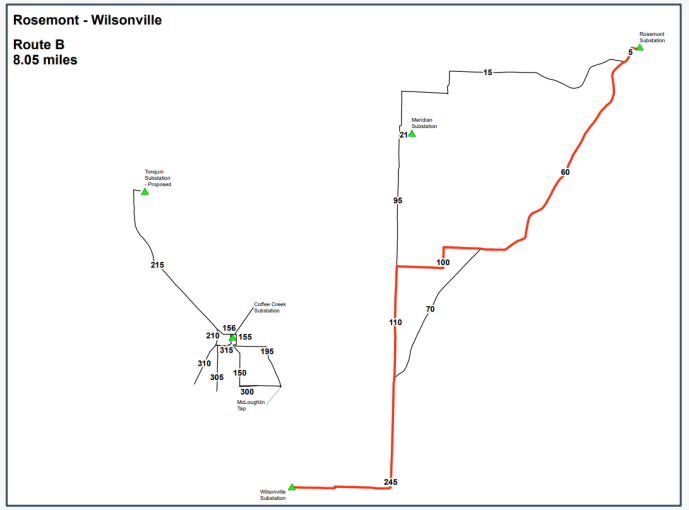
**Each megawatt (MW) is the equivalent electrical for ~330 typical homes in the PNW; load forecast includes homes and businesses.*

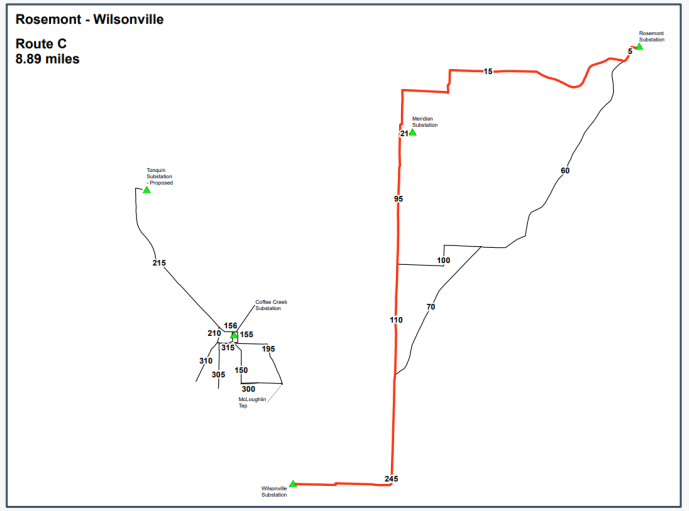
JURISDICTION	1990	2000	2023	POPULATION INCREASE
Clackamas County	278,850	338,391	424,043	52%
Wilsonville	7,106	13,991	27,634	289%
Tualatin	14,664	22,791	27,910	90%
West Linn	16,389	22,261	27,360	67%
Sherwood	3,093	11,791	20,868	575%
Lake Oswego	30,576	35,278	41,386	35%

**Portland State University Population Research Center*

Route Options - Rosemont-Wilsonville Line







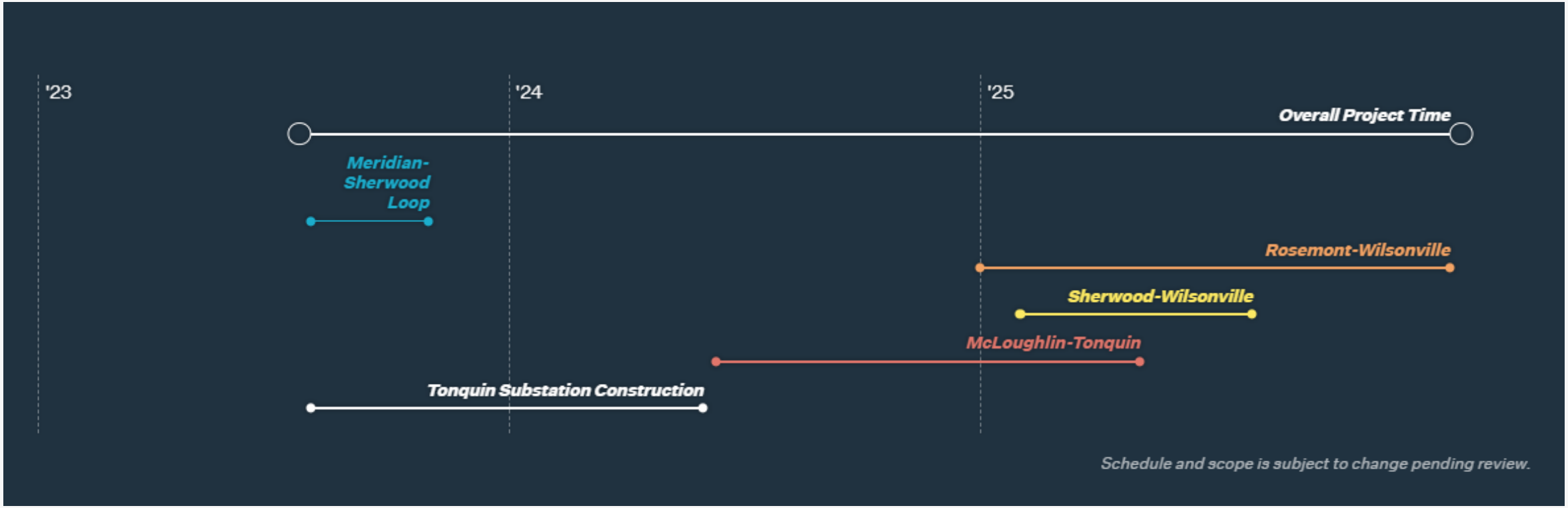
Project route selection

Rigorous analysis that considered 100+ line segments and combinations, and factors including:

- **Avoid homes, buildings within 100’**
- **Fewest parcels** will be crossed
- **Least impact** to wetlands, wildlife habitat
- **If existing equipment can be used**
- Adjacency **within road ROW**
- **Aligning with road widening**
- **Total length** of route
- **Proximity** to schools, parks, worship, cemeteries

Project Status & Timeline

- Right-of-way permit requested mid-2023
- Land use pre-application process initiated Feb. 2024



Questions?

Portlandgeneralprojects.com/Tonquin

PGEProjects@pgn.com

Subject: Tonquin Project

Date: March 13, 2024

Contact: Julie Hernandez
121 SW Salmon Street
Portland, Oregon 97204
Phone: (503) 484-7742
Email: julie.hernandez@pgn.com

The Tonquin Project

The Tonquin Project involves a new substation and a total of 11 miles of upgraded and new transmission lines in Tualatin, Sherwood, Stafford, Wilsonville, and unincorporated Clackamas County.

The Rosemont-Wilsonville segment of the project spans 7.4 miles along SW Stafford Road where we'll replace existing poles that were first installed in the 1940's with new poles that will accommodate the addition of transmission lines above distribution power lines. Of the 7.4-mile total length for this line, 5.0 miles is existing distribution lines that will be upgraded to include transmission lines, and the remaining 2.4 miles is an existing transmission line that will be repurposed to complete this route. The vast majority of the poles are in the public right of way and our equipment will largely remain within a few feet of the current pole locations.

When determining the transmission lines to be upgraded or constructed, we conducted a routing study that considered over 100 different line segments and combinations based on existing infrastructure, alignment to road rights-of-way, parcels crossed, environmental impacts and places of significance. The chosen route for this line crosses the fewest parcels, most closely aligns to the road, has the fewest buildings within 100', has the smallest impact on wetlands, impacts the fewest parks, places of worship, or cemeteries, and doesn't require a new crossing of the Tualatin River.

The identified route begins at the existing PGE Rosemont Substation at the SW corner of Rosemont Road and Stafford Road. From there, the line runs south along a portion of Stafford Road that is scheduled for a widening project with Clackamas County. It will then utilize an existing crossing point of the Tualatin River before making a new crossing of Interstate 205. The line will then continue south along the same route as an existing distribution line following the Stafford Road right of way where it will link up with an existing transmission line near the intersection with SW 65th Avenue that will be repurposed for this new line. From there, the existing transmission poles and line will travel the remaining distance to the PGE Wilsonville Substation at the NW corner of Boeckman Road and Parkway Avenue.

This will provide an additional transmission link between the two distribution substations (Rosemont and Wilsonville) that provide service to the surrounding homes and businesses. The new link allows for power to be rerouted between the two substations if other transmission sources are damaged by a storm or accident, or when energy demand is high due to extreme hot or cold weather events, helping to reduce power outages in the immediate area and region.

Why Tonquin?

The transmission upgrades will increase capacity to meet growth and electrification needs, add flexibility to allow energy to flow between different distribution level substations, reducing the frequency and duration of power outages in the area served by these local distribution substations (Tonquin, Meridian, Coffee Creek, Wilsonville, Rosemont, and McLoughlin) which benefits the SW Stafford Road area and the northwestern portion of Clackamas County that are served by these substations. The resulting enhanced system redundancy and ability to reroute power along alternate transmission linkages will benefit the immediate area and larger Clackamas County region as a whole.

Based on PGE Planning efforts, the load demands in Clackamas County are expected to grow significantly in the coming years as result of general growth and economic development, as well as the increasing popularity of rooftop solar and transportation and building electrification. Current load growth projections are provided below.

POPULATION GROWTH (Portland State University- Population Research Center)

Jurisdiction	1990	2000	2023	% Increase 1990-2023
Clackamas County	278,850	338,391	424,043	52%
Wilsonville	7,106	13,991	27,634	289%
Tualatin	14,664	22,791	27,910	90%
West Linn	16,389	22,261	27,360	67%
Sherwood	3,093	11,791	20,868	575%
Lake Oswego	30,576	35,278	41,386	35%

Table 1 – Clackamas County Projected Load Growth by Year (MW)

YEAR	LOAD GROWTH (MW)	EQUIVALENT # OF HOMES
2024	12.65	4,200
2025	11.65	3,900
2026	5.88	2,000
2027	10.23	3,400
2028	14.64	4,900
2029	9.85	3,300
2030	8.28	2,800
2031	9.16	3,000
2032	12.40	4,100
2033	17.11	5,700
2034	26.20	8,700
2035	21.52	7,200

Each megawatt (MW) equates to the equivalent electrical demand for 650 to 750 typical homes in the Pacific Northwest. While the new load in Clackamas County will be a mix of new homes and businesses, this gives a sense of the scale of the projected growth.

Permitting the Tonquin Project

PGE filed for a Right of Way Permit with the County in May 2023, it was not until September 2023 that PGE learned that the County may require the project to go through land use, which was unanticipated since in the past, projects in the County right-of-way would only require a right of way permit. After confirming that the County code was not clear and the project would be subject to land use, PGE filed a land use application, and a pre-application conference is scheduled for April 2nd, 2024. PGE will comply with all necessary notice requirements during the land use process to keep relevant stakeholders informed of the process.

In response to questions about the Certificate of Public Convenience and Necessity, an overview of the process is attached.

As we work to progress the Tonquin Project, PGE is committed to continued transparency with our customers and the public.

Construction Timeline

Construction of the new Tonquin substation is underway and will be complete in May 2024.

Once the new substation is energized, there are three additional transmission line segments that are required to improve the reliability of service for the new Tonquin substation as well as the existing Meridian, Coffee Creek, Wilsonville, Rosemont, and McLoughlin substations. Construction of these three transmission lines (McLoughlin-Tonquin, Sherwood-Wilsonville, and Rosemont-Wilsonville) is slated to begin in May 2024 and will be completed by the end of 2025.

For more information

Additional information is available online at portlandgeneralprojects.com/Tonquin, or by contacting Julie Hernandez at the phone number or email listed above.

APPENDIX

About the Certificate of Public Convenience and Necessity process

Source: Oregon Public Utility Commission, https://www.oregon.gov/puc/Documents/PCN5-FAQ.pdf

When an electric utility in Oregon seeks to build transmission lines and anticipates the need to condemn property to construct the line, the law requires the utility to apply to the Oregon Public Utility Commission (PUC) for a Certificate of Public Convenience and Necessity (CPCN).

If granted, the utility would use the certificate in court proceedings where it seeks to condemn an interest in land along the transmission line's path. The certificate would demonstrate to the court that the transmission line is a public use and necessary for public convenience.

The utility must provide evidence of its need and justification to construct a transmission line. The PUC investigates these applications to determine whether projects meet the legal requirements set out in ORS 758.015.

The PUC will review the information provided by the utility, as well as evidence from the PUC Staff and other parties through a quasi-judicial (contested case) process. This process allows individuals and groups to "intervene" as formal parties to the case, provide written testimony and legal briefs, and cross-examine witnesses in the case. The PUC also takes comments from customers and members of the public as part of this process.

If granted, the CPCN itself would not condemn any land. A utility would need to commence a formal condemnation suit in a separate, state court proceeding under Oregon's General Condemnation Procedure Act. That statute dictates the formal process.

The PUC will determine the "necessity, safety, practicability and justification in the public interest for the proposed transmission line," as required by ORS 758.015(2) and further described in the agency's administrative rules. View OAR 860-025-0030 through 0040. As part of its review, the PUC will consider whether the transmission line will meet a need for additional transmission capacity and reliability in the electricity grid; whether it will be operated in a way that protects the public from danger; whether the proposed route is

practicable and feasible; whether the public benefits and costs justify the project; and other factors the PUC deems relevant under the law.

The PUC does not determine the value of any property interests that the utility may seek to condemn through a court proceeding. That determination would be made by the court or through other processes of negotiation or resolution associated with the court proceeding. The PUC will post online all the applications for a certificate, all filings related to the application, and the schedule for the docket. Members of the public may request to be added to the distribution list for the docket number, to receive publicly available documents via email, once the utility's filing is made.

UNIVERSAL
FIELD SERVICES

P.O. BOX 2354
SALEM, OR 97308-2354
OFFICE: 503/399-8002
FAX: 503/399-8003
TOLL FREE: 877/501-7282
WWW.UFSRW.COM

June 23, 2023

John Lekas
315 W Mill Plain Blvd. #204
Vancouver, WA 98660

RE: PGE Tonquin Project: Rosemont-Wilsonville line
Address: 21956 SW Stafford Rd., Tualatin, OR 97062
APN: 21E3200412

Dear Mr. Lekas:

Portland General Electric Company ("PGE") has an upcoming project in your area called the Tonquin: Rosemont-Wilsonville line project (the "Project"). The Project includes the construction of a new 115kV transmission line which will replace the existing distribution poles/line (12.5kV line) on or near your property with a new transmission pole(s)/lines. This Project is part of a larger project called the "Tonquin" Project which includes multiple phases, a new substation and two additional transmission lines in other areas.

The construction of the full Tonquin Project will provide more resilient power for the entire region. Additionally, based on projected load growth in the area, the expansion is necessary to mitigate overloads on other electrical systems serving the area. Construction for the Project is currently planned to begin in spring 2024.

PGE seeks to acquire an easement (the "Easement") on your above-described property to meet Project safety and clearance needs. The Easement is sought for construction, operation and maintenance of the new 115kV transmission line. The terms of the easement are provided in the enclosed Powerline Easement document and the Easement's location is shown on Exhibit C of the enclosed Powerline Easement document.

PGE hereby offers the sum of **[$8,212.00]**, for the Easement. PGE will pay all recording costs, title insurance premiums, and all other normal costs of easement acquisition.

Concurrent with issuing payment for the purchase of this easement right, PGE is required to file a 1099-S form with the Internal Revenue Service. The enclosed W-9 form will need to be filled out and returned to PGE prior to payment being issued. It is PGE procedure to issue a check once we have received the signed easement and W-9 form.

This proposed Easement was designed to minimize the effect of the Project on your property. I look forward to discussing the offer with you at your earliest convenience. Universal Field Services has been retained as the agency acting on behalf of PGE to secure the easement(s) necessary for the project. If you have any questions or concerns, please feel free to call or email me at 503-399-8002 / bkirchner@ufsrw.com. I would be happy to meet on site with you to further go over the details of this request and will be available to assist you and work with you throughout the process.

Thank you for your cooperation and timely attention to this matter.

Sincerely,

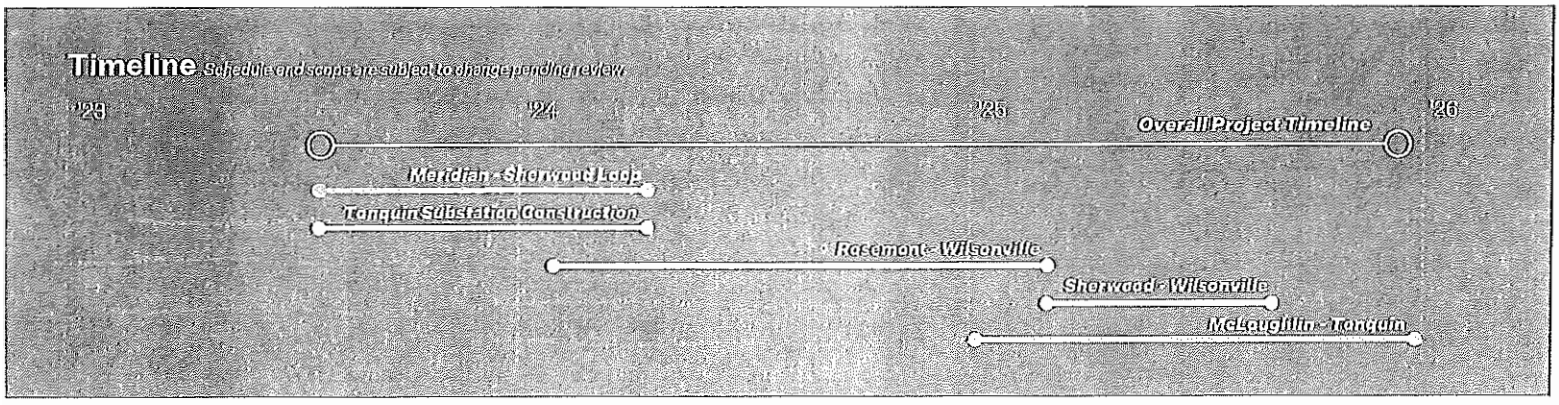
Brenden Kirchner
Universal Field Services
Right of Way Agent

cc: tina.tippin@pgn.com (PGE)

Enclosures: Powerline Easement
IRS Form W-9
PGE Tonquin Project Fact Sheet
Power Lines and vegetation brochure

Tonquin Project

A multi-phase project that will build a substation on existing PGE property and upgrade 11 miles of 115kV transmission lines in Tualatin, Sherwood, Stafford, Wilsonville and unincorporated Clackamas County.



Purpose and Need

PGE is working toward Oregon's clean energy future, building a smarter, stronger and more flexible grid to deliver the power customers need today and into the future.

PGE's energy grid is the backbone of a system that brings reliable, cost-effective clean energy solutions to all customers. When complete, this project will strengthen PGE's system for generations to come.

Key Community Benefits

- *Reduce power outages*
- *Strengthen system resiliency*
- *Meet growing energy demand*
- *Support the Willamette Water Supply project*

After Recording Please Return To:
Portland General Electric Company
Attn: Property Services
121 SW Salmon Street,1WTC1302
Portland, Oregon 97204-9951

Grantor's Mailing Address:
c/o Leader Financial
315 W Mill Plain Boulevard, Suite 204
Vancouver, WA 98660

(Space above this line for Recorder's use)

Grantor: **John Lekas**

Grantee: **Portland General Electric Company**

APN/APN2: **21E32 00412/00398581**

PGE UTILITY EASEMENT

For good and valuable consideration, the current receipt, reasonable equivalence, and sufficiency of which is hereby acknowledged by **JOHN LEKAS** ("**Grantor**") hereby grants, conveys and warrants to **PORTLAND GENERAL ELECTRIC COMPANY**, an Oregon corporation, and its successors and assigns ("**Grantee**"), a nonexclusive, perpetual easement and right-of-way (the "**Easement**") over, under, upon, through and across the real property situated in Clackamas County, Oregon (the "Property").

The Easement area is defined using the center line of SW Stafford Road described in Exhibit "A" attached hereto. The Easement affects a strip of land more particularly described in Exhibit "B" and depicted in Exhibit "C" attached hereto (the "**Easement Area**").

TERMS, CONDITIONS AND COVENANTS

1. Said Easement and right of way shall be for the following purposes: the non-exclusive, perpetual right to enter upon and to construct, maintain, repair, replace (of initial or any size), operate and patrol electric power lines, including the right to install such poles, wires, cables, guys and support as are necessary thereto, together with the present and future right to clear said right of way, without Grantee paying compensation, as necessary to accomplish the above purpose and as Grantee deems necessary to comply with state or federal regulations. Solely to the extent necessary to exercise its rights under the Easement, Grantee has ingress and egress rights over and across the Property and Grantor's adjoining property interests, in connection with or related to all or any portion of the foregoing.

2. Grantor shall have the right to use the Easement Area for all purposes, provided that such use does not unreasonably interfere with the use, enjoyment, or exercise by Grantee of any rights under the Easement. Grantor shall not build or erect any structure upon the Easement without the prior written consent of the Grantee, which consent shall not be unreasonably withheld.

3. Grantor hereby warrants that Grantor is possessed of a marketable title to the Property covered by this Easement and has the right to grant the same.

4. Grantee will repair any damage it causes to the Property and agrees to restore the Property as nearly as practicable to its condition immediately preceding Grantee's access to, and installation, repair or maintenance activities on the Easement Area, excepting vegetation management performed by Grantee per this Easement, normal wear and tear, and changes in the condition solely caused by Grantor or persons or entities other than Grantee, its agents or contractors.

5. In no event shall Grantee or Grantor be liable to the other party or any other person or entity for any lost or prospective profits or any other special, punitive, exemplary, consequential, incidental or indirect losses or damages (in tort, contract, or otherwise) under or in respect of this Easement or for any failure of performance related hereto howsoever caused, whether or not arising from a party's sole, joint or concurrent negligence.

6. Grantee shall indemnify, protect, defend and hold harmless Grantor, its heirs and assigns (each, an "indemnified person") for, from and against claims, liabilities, costs and expenses resulting from any act or omission of Grantee or its agents on or about the Easement. Notwithstanding the foregoing, Grantee shall not be liable in respect of (and the foregoing indemnity shall not cover) any claim, damage, loss, liability, cost or expense to the extent the same resulted from the negligence or willful misconduct of Grantor.

7. This Easement, along with any exhibits and attachments or other documents affixed hereto or referred to herein, constitutes the entire agreement between Grantee and Grantor relative to the Easement. The consideration acknowledged herein is accepted by Grantor as full compensation for all rights granted Grantee pursuant hereto and loss of value incidental to or in any way associated with the Property and/or the Easement. This Easement may be altered and/or revoked only by an instrument in writing signed by both Grantee and Grantor and recorded. This Easement shall run with the Property and shall be binding on Grantor and shall inure to the benefit of Grantee, and Grantee's successors, and assigns, as well as the tenants, sub-tenants, licensees, concessionaires, mortgagees in possession, customers, and invitees of such persons or entities. The Easement is an in-gross easement and is not appurtenant to any particular property of Grantee.

IN WITNESS WHEREOF, Grantor has executed this Easement effective as of the _____ day of _____, 20____.

GRANTOR:

By: _____
John Lekas

STATE OF _____)
) ss.
COUNTY OF _____)

I certify that I know or have satisfactory evidence that **John Lekas** is the person who appeared before me, and said person acknowledged that they were authorized to execute the instrument individually and acknowledged it to be their free and voluntary act for the uses and purposes mentioned in the instrument.

Dated: _____, 20__.

_____
Notary Public
My commission expires: _____

Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

EXHIBIT A

SW STAFFORD ROAD CENTERLINE DESCRIPTION
(VICINITY OF MOUNTAIN ROAD)
LEGAL DESCRIPTION

A strip of land being a portion of SW Stafford Road (Market Road No. 12), new centerline alignment, per Clackamas County survey number 2011-176, lying in the Southwest 1/4 of Section 29 and the Northwest 1/4 of Section 32, of Township 2 South, Range 1 East, Clackamas County, Oregon, the centerline more particularly described as follows:

Beginning at a found 1-3/16" copper disk in monument box, on centerline of Clackamas County Roll Map of Market Road 12, Unit 3, Oswego to Wilsonville, Sharp Hill Section, marking the new Engineer's centerline Station 0+00, per said survey 2011-176, said station being North 42°08'02" East 2187.86 feet of a 3" Brass Disk in monument box marking the west 1/4 corner of Section 32, Township 2 South, Range 1 East, Willamette Meridian;

thence North 55°09'58" East, leaving said centerline of Clackamas County Roll Map of Market Road 12, 644.29 feet to the beginning of a tangent curve to the left, having a radius of 650.00 feet; thence northeasterly 493.40 feet along said curve, through a central angle of 43°29'30" to the point of tangency; thence North 11°40'28" East 654.18 feet to a point on said centerline of Clackamas County Roll Map of Market Road 12 and the terminus of said new centerline.

Bearings are based on Oregon State Plane Coordinate system NAD83(2011), epoch 2010.000.

Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

EXHIBIT "B"

EASEMENT AREA

21956 SW STAFFORD ROAD

LEGAL DESCRIPTION

A strip of land in a portion of Deed 2023-001588, Clackamas County Official records, in the southwest quarter of Section 29, Township 2 South, Range 1 East, Willamette Meridian, Clackamas County, Oregon, lying easterly of the centerline of SW Stafford Road, described in Exhibit "A" attached hereto, more particularly described as follows:

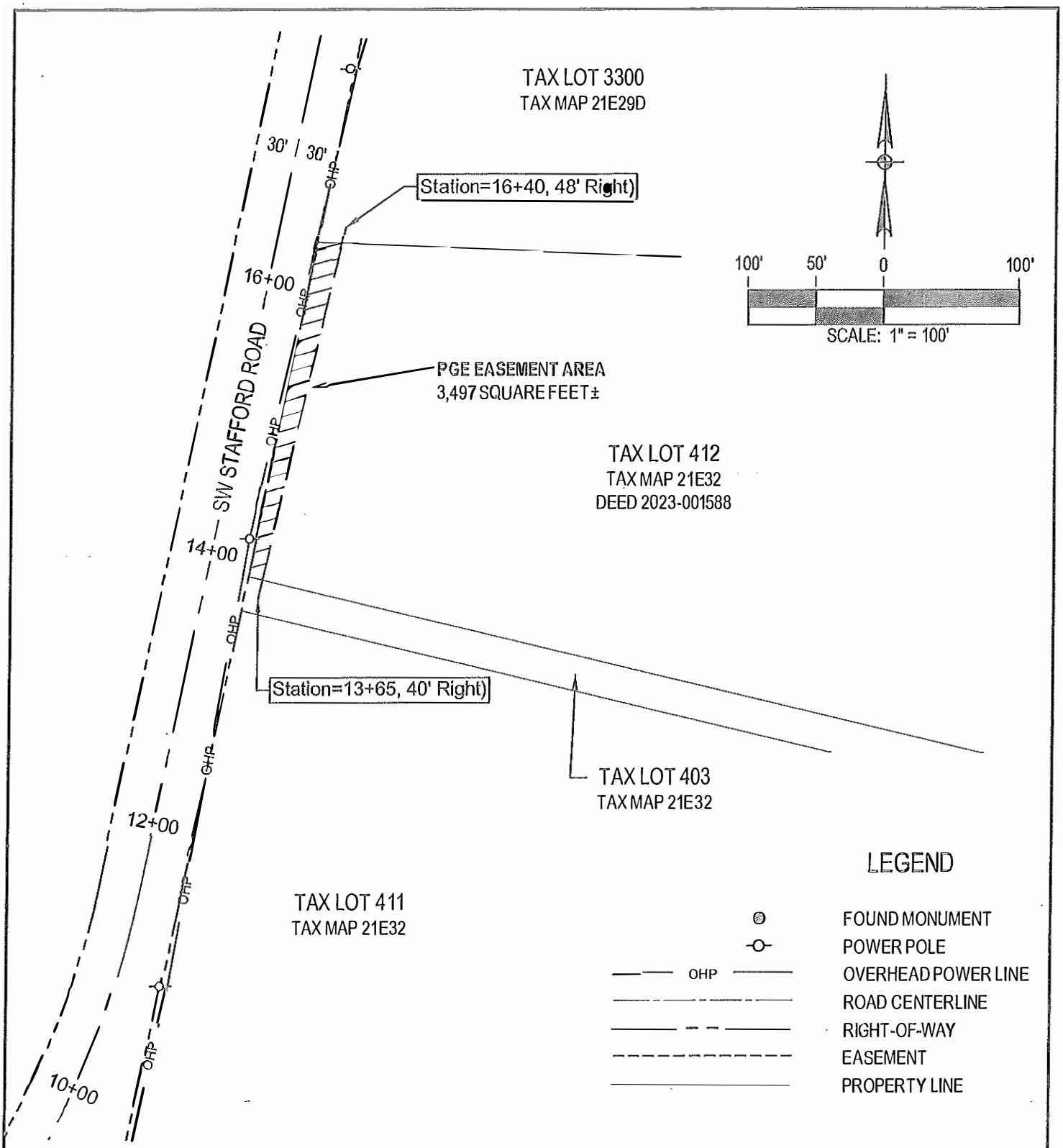
All of that parcel described in said Deed 2023-001588, lying westerly of, when measured at right angles or radial to, a line described as follows:

Beginning at Engineers station 13+65, 40 feet right, as per Clackamas County survey number 2011-176 to centerline Station 16+40, 48 feet right.

EXCEPT any portion lying within the right-of-way of SW Stafford Road.

The above described strip of land contains 3,497 square feet, more or less.

The above described parcel is shown on Exhibit "C" attached hereto, which by reference thereto is made a part hereof.



DISCLAIMER: THE GRAPHIC REPRESENTATIONS AND OTHER INFORMATION/DATA CONTAINED HEREIN (COLLECTIVELY THE "DEPICTION") IS THE PROPERTY OF PGE. THE DEPICTION DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY AND RESOLUTION. INFORMATION DERIVED FROM GIS AND OTHER DATA SHOWN IS SUBJECT TO CHANGE. THE DEPICTION IS MERELY TO AID IN DESCRIBING THE CONFIGURATION AND LOCATION OF THE PARCEL OF LAND IN THE ACCOMPANYING LEGAL DESCRIPTION.

PORTLAND GENERAL ELECTRIC CO.
121 SW SALMON ST. PORTLAND, OR 97204

EXHIBIT C

EASEMENT AREA
21956 SW STAFFORD ROAD,
CLACKAMAS COUNTY,
SEC. 29, T. 2 S., R. 1 E., W.M.

DRAWING NO.:

M2764844

UNIVERSAL
FIELD SERVICES

RE: **AGENCY DISCLOSURE**

Universal Field Services has been contracted by Portland General Electric Company ("PGE") to acquire property for the Tonquin: Rosemont-Wilsonville line project. This company represents PGE and its interest in acquiring your property or property rights. We will endeavor to ensure that all federal and state laws and regulations are followed pertaining to your rights. We are retained on an hourly fee schedule and no real estate commission will be paid to Universal Field Services by any part to this transaction.

Should you require legal assistance, please contact a representative to act on your behalf.

Sincerely,

Leslie Finnigan, Principal Broker/ Senior Right of Way Agent

By my signature below, I acknowledge that this letter was delivered and explained to me by Brenden Kirchner, Broker, and Right of Way Agent.

_____ _____

(Owner or owner's representative) Date

APPRAISAL REPORT

Taking & Damages Analysis
21956 SW Stafford Road
Tualatin, Oregon 97062
October 1, 2023

PREPARED FOR

John Lekas
21956 SW Stafford Road
Tualatin, Oregon 97062

PREPARED BY

RSP & Associates LLC
www.rspa-pdx.com
Ryan S. Prusse, MAI
email - ryan@rspa-pdx.com
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Wilsonville, Oregon 97062
(503) 805-4059

AF#23049

RSP & Associates LLC
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Wilsonville, Oregon 97062
(503) 805-4059
www.rspa-pdx.com

November 11, 2023

John Lekas
21956 SW Stafford Road
Tualatin, Oregon 97062

Subject: Appraisal Report – Takings & Damages
Rural Residential Acreage & Improvements
Tualatin, Oregon 97062

Dear Client:

At your request, we have prepared an appraisal in narrative report format valuing the applicable takings and damages for the rural residential property at 21956 SW Stafford Road, in Tualatin, Oregon. Specifically, PGE proposes to acquire a high-voltage overhead transmission line corridor easement along the property's Stafford Road frontage. A legal description of the property and site/improvement details are included in this report. The scope of work includes inspection of the subject property, analysis of historic/current market trends and consideration of the Cost, Income Capitalization and Sales Comparison Approaches.

The purpose of this appraisal is to estimate the **appropriate just compensation for a proposed private easement** as of **October 1, 2023**. The intended users include the client/property owner (Lekas) and designated representatives/assignees. The land and applicable site improvement components of the subject property are appraised on an "as is" basis to provide support for valuation of the new easement. Further, damages to the subject property have also been considered within the context of both existing and proposed uses within those allowed by zoning. The report will function (intended use) as a basis of just compensation.

This report is prepared in compliance with current Uniform Standards of Professional Appraisal Practice (USPAP), as formulated by the Appraisal Foundation. Reference to the Assumptions and Limiting Conditions section of the attached report is recommended for a complete understanding of the basis on which the value conclusion is predicated. In this appraisal we relied upon disclosure of historic maintenance, current occupancy reported by the current owner and public records.

The signatories of this report have sufficient education and experience in valuing similar properties to satisfy the competency rule of the Uniform Standards. The reported value (just compensation) was not based upon a requested valuation or on specific loan approval.

It is our opinion the **just compensation** applicable to the subject property, as a direct result of the proposed easement(s), as of **October 1, 2023,** was:

FOUR HUNDRED SIXTY-THREE THOUSAND DOLLARS...$463,000.

The basis for this conclusion is explained in detail in the contents of the attached appraisal report. If additional clarification is needed, please do not hesitate to contact our office.

Sincerely,

RSP & ASSOCIATES LLC

Ryan S. Prusse, MAI
Oregon Appraiser Certification No. C000498

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INTRODUCTION

FACTUAL DATA

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ANALYSIS AND CONCLUSIONS

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EXECUTIVE SUMMARY

Location:	21956 SW Stafford Road Tualatin, Oregon 97062
Assessor Map & Tax Lots:	2S-1E-32, TL 412 Clackamas County, Oregon
Reference Parcels:	00398581 Clackamas County, Oregon
Area in Site:	4.63 gross acres
Zone:	RRFF-5 (Rural Residential Farm Forest 5-Acre) Clackamas County, Oregon
Flood Zone Designation:	Zone X, outside flood plain FIRM # 41005C 0255D, June 17, 2008
Special Hazards:	No known hazards

Improvements: Acreage is improved as a custom/upscale residence measuring about 4,747 SF with a 4BR-4BA floor plan and updated condition/quality. It is two-story with an array of recent post-purchase (2023) improvements including expanded hardwood flooring, new kitchen appliances, whole-home back-up generator, paint, pool equipment, etc. Site improvements are numerous, including circular driveway, hardscape, in-ground pool, poolhouse, rear covered kitchen/fireplace, barn/outbuilding, gazebo, perimeter fencing and majority landscaped yard (with irrigation). The property features views west, north and east based on the grade of the acreage and location of the building(s).

Highest & Best Use (vacant):	Rural residential development – primary home, ADU and private/recreation improvements
Highest & Best Use (improved):	Custom rural residential occupancy, hobby farm, private/recreation

Proposed HVTL Easement: PGE will acquire a perpetual 3,497 SF easement along the entirety of the subject property's Stafford Road (west) frontage as part of a new high-voltage powerline corridor for PGE's Tonquin: Rosemont-Wilsonville line project. The overhead lines will reportedly be mounted on 90-plus foot steel monopoles with an initial 115kV capacity; however, the draft easement reviewed specifies no limits in terms of pole height, pole quantity, number/thickness of wires, voltage, sound or EMF emissions.

Damages to Remainder: As a result of the easement, the remainder ("after") property will experience loss of use/utility and market appeal that far exceeds the basic calculation of impacted land value within the defined easement boundaries. The combinatorial impacts of visual, audio, fire hazard and EMF/stigma is expected to degradate the quality of the upscale home site from very good to only moderate (base priced home).

EXECUTIVE SUMMARY (Cont.)

Estimate of Just Compensation:	**$463,000** ***(October 1, 2023)***
Interest Appraised:	Fee simple
Date of Inspection:	October 1, 2023
Appraiser(s):	Ryan S. Prusse, MAI

PURPOSE OF APPRAISAL

The purpose of this appraisal is to estimate the **appropriate just compensation for the proposed easement**, as of **October 1, 2023**.

FUNCTION OF APPRAISAL

The land and applicable site improvement components of the subject property are appraised on an "as is" basis to provide support for valuation of the easement (taking). Further, damages (loss of use/appeal) to the subject property have also been considered within the context of both existing and proposed uses of the rural home site/residence.

The report will function (intended use) as a basis of just compensation.

The intended users include the client/property owner (Lekas), and designated representatives/assignees.

APPRAISAL DEFINITIONS

Market Value

This is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. Continual refinement is essential to the growth of the appraisal profession. A current economic definition is stated as follows:

> The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> 1) buyer and seller are typically motivated;
> 2) both parties are well informed or well advised, and acting in what they consider their best interests;
> 3) a reasonable time is allowed for exposure in the open market;
> 4) payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and
> 5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.[1]

This definition is in compliance with the OCC (Office of the Comptroller of the Currency), FDIC (Federal Deposit Insurance Corporation), *FIRREA* (*Financial Institutions Reforms, Recovery and Enforcement Act),* and *USPAP (Uniforms Standards of Professional Appraisal Practice)* as adopted by the Appraisal Foundation and the Appraisal Institute.

For the purpose of real property acquisition by State agencies in Oregon, fair market value is defined as the amount of money, in cash, that property would bring if offered for sale by one who desired but was not obliged to sell and was bought by one willing but not obliged to buy. It is the actual value of the property on the date of the taking, with all its adaptations to general and special uses, that is to be considered. However, nothing shall be allowed for prospective value, speculative value or possible value based upon the future expenditures and improvements." Refer, also, to Highway v. Superbilt Mfg. Co. (1955) 204 OR 393,412,281 P2d 707. (ODOT Right of Way Manual §5.315)

Property Rights Appraised

Leased Fee Estate, is defined in *The Dictionary of Real Estate Appraisal,* Sixth Edition (Chicago: Appraisal Institute, 2015), as:

> The ownership interest held by the lessor, which includes the right to receive the contract rent specified by the lease plus the reversionary right when the lease expires.

[1] Office of Comptroller of the Currency (OCC), Title 12 of the code of Federal Regulation, Part 34, Subpart C - Appraisal, 34-42 (g); Office of Thrift Supervision (OTS), 12 CFR 564.2 (g); This is also compatible with the RTC, FDIC, FRS and NCUA definition of market value.

Fee Simple Estate, is defined in *The Dictionary of Real Estate Appraisal,* Sixth Edition (Chicago: Appraisal Institute, 2015), as:

> Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

Market Rent, is defined in *The Dictionary of Real Estate Appraisal,* Sixth Edition (Chicago: Appraisal Institute, 2015), as:

> The most probable rent that a property should bring in a competitive and open market reflecting the conditions and restrictions of a specified lease agreement, including the rental adjustment and revaluation, permitted uses, use restrictions, expense obligations, terms, concessions, renewal and purchase options, and tenant improvements (Tis).

Leasehold Interest, is defined in *The Dictionary of Real Estate Appraisal,* Sixth Edition (Chicago: Appraisal Institute, 2015), as:

> The right held by the lessee to use and occupy real estate for a stated term and under the conditions specified in the lease.

Sandwich Leasehold Estate, is defined in *The Dictionary of Real Estate Appraisal,* Sixth Edition (Chicago: Appraisal Institute, 2015), as:

> The interest held by the sandwich leaseholder when the property is subleased to another party; a type of leasehold estate.

Exposure Time/Marketing Period

Exposure time is defined within the *USPAP*, Statement 6, as:

> The estimated length of the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based upon an analysis of past events assuming a competitive and open market.

Marketing period is very similar to exposure time, but reflects a projected time period to sell the property, rather than a retrospective estimate. As such, a similar time period of three to six months is supported for the subject property's marketing period. This conclusion is based upon the assumption that no soil contamination exists and deferred maintenance is cured to the satisfaction of typical investor parameters.

ASSUMPTIONS & LIMITING CONDITIONS

- The analysis assumes that the Clackamas County Assessor's office legal description accurately represents the subject property. A survey has not been provided to RSP & Associates LLC. If further verification is required, a survey by a qualified surveyor is advised.

- We assume no responsibility for matters legal in character, nor do we render any opinion as to title, which is assumed to be marketable.

- All existing liens, encumbrances, and assessments have been disregarded, unless otherwise noted, and the property is appraised as though free and clear, under responsible ownership, and competent management.

- The exhibits in this report are included to assist the reader in visualizing the property. We have made no survey of the property and assume no responsibility in connection with such matters.

- Unless otherwise noted herein, it is assumed that there are no encroachments, zoning, or land use violations existing in the subject property.

- The appraisers assume no responsibility for determining if the property requires environmental approval by the appropriate governing agencies, nor if it is in violation thereof, unless noted.

- Information presented in this report has been obtained from what are believed to be reliable sources. It is assumed that the information obtained from trusted third-party sources is accurate.

- This report shall be used for its intended purpose only. Possession of the report does not include the right of publication.

- RSP & Associates LLC staff will not be required to give testimony or to appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

- The statements of value and all conclusions shall apply as of the dates shown herein. The appraisers have no present or contemplated future interest in the property, which is not specifically disclosed in this report.

- Neither all, nor any part, of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media without the written consent or approval of the authors. This applies particularly to value conclusions and to the identity of RSP & Associates LLC and its employed staff.

- This report must be used in its entirety. Reliance on any portion of the report out of context may lead the reader to erroneous conclusions regarding the property and/or its value(s). No portion of the report is intended to stand alone without approval from RSP & Associates LLC.

- The valuation stated herein assumes professional management and operation of the building(s). Inherent in this assumption is an adequate maintenance and repair program.

ASSUMPTIONS & LIMITING CONDITIONS (Cont.)

- The valuation is based on the projection that the property will maintain stabilized occupancy as defined herein. Specific to this definition is the existence of tenants paying market level rents.

- The liability of RSP & Associates LLC and staff is limited to the client only. Further, there is no accountability, obligation, or liability to any third party. If this report is placed in the hands of anyone other than the client, the client shall make such party aware of all limiting conditions and assumptions of the assignment and related discussions.

- Disclosure of the contents of this appraisal report is governed by the By-Laws and Regulations of the Appraisal Institute. The party for whom the appraisal report was prepared may distribute copies, in its entirety, to such third parties as may be selected.

- The appraisers are in no way responsible for any costs incurred to discover or correct any deficiency in the property. The appraisers assume that there are no hidden or non-apparent conditions of the property, subsoil, or structures, which would render it more or less valuable.

- In the case of limited partnerships or syndication offerings or stock offerings in real estate, the client agrees that in case of lawsuit (brought by lender, partner, or part owner in any form of ownership, tenant, or any other party), any and all awards, settlements, or cost, regardless of outcome; the client will hold RSP & Associates LLC completely harmless.

- The appraisers are not qualified to detect the non-apparent presence of toxic or hazardous substances or materials, which may influence or be associated with the property or any adjacent properties. No investigation or analysis as to the presence of such materials has been made. The duty to note the presence of such materials has been expressly disclaimed. Therefore, irrespective of any degree of fault, RSP & Associates LLC its principals, agents, and employees, shall not be liable for costs, expenses, damages, assessments, or penalties, or diminution in value, property damage, or personal injury (including death) resulting from or otherwise attributable to toxic or hazardous substances or materials, including without limitation hazardous waste, asbestos material, formaldehyde, or any smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids, solids, or gases, waste materials or other irritants, contaminants, or pollutants.

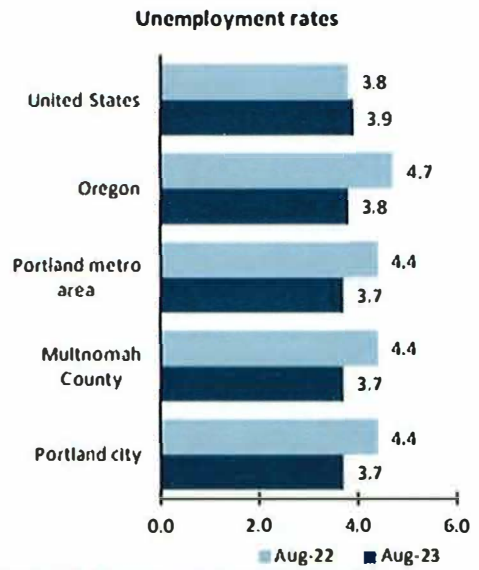
- The appraisers assume no responsibility for determining if the subject property complies with the *Americans with Disabilities Act (ADA)*, which prescribes specific building standards which may be applied based on factors such as building age, historical significance, amenability to improvement, and costs of renovation. RSP & Associates LLC its principals, agents, and employees, shall not be liable for any costs, expenses, assessments, penalties, or diminution in value resulting directly from non-compliance. Except as otherwise noted herein, this appraisal assumes that the subject property complies with all ADA standards appropriate to the subject improvements; if the subject property is not in compliance, the eventual renovation costs and/or penalties may negatively impact the present value of the property. If RSP & Associates LLC was advised of necessary renovation costs, time period needed for renovation, and penalties for non-compliance, appropriate adjustments would be made to the value conclusion(s) reported herein.

Portland Area Economic Summary

Updated September 28, 2023

This summary presents a sampling of economic information for the area; supplemental data are provided for regions and the nation. Subjects include **unemployment, employment, wages, prices, spending,** and **benefits**. All data are not seasonally adjusted and some may be subject to revision. Area definitions may differ by subject. For more area summaries and geographic definitions, see www.bls.gov/regions/economic-summaries.htm.

Unemployment rates for the nation and selected areas



Source: U.S. BLS, Local Area Unemployment Statistics.

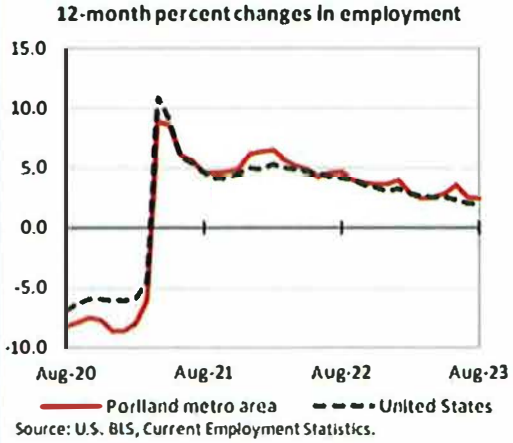
Average weekly wages for all industries by county

Portland metro area, first quarter 2023

(U.S. = $1,465; Area = $1,498)

Source: U.S. BLS, Quarterly Census of Employment and Wages.

Over-the-year changes in employment on nonfarm payrolls and employment by major industry sector



Source: U.S. BLS, Current Employment Statistics.

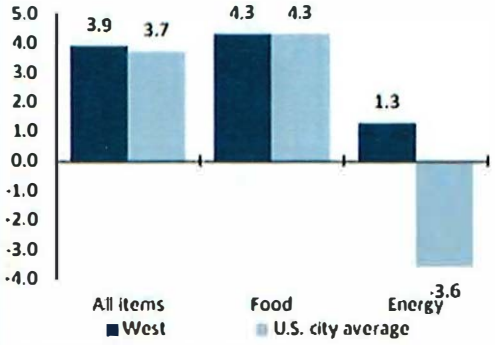
Portland metro area employment (number in thousands)	Aug. 2023	Change from Aug. 2022 to Aug. 2023	
		Number	Percent
Total nonfarm	1,266.6	30.8	2.5
Mining and logging	1.2	0.1	9.1
Construction	92.6	9.2	11.0
Manufacturing	125.2	-3.6	-2.8
Trade, transportation, and utilities	224.2	-1.8	-0.8
Information	29.0	1.3	4.7
Financial activities	78.1	1.3	1.7
Professional and business services	203.7	1.3	0.6
Education and health services	187.2	6.2	3.4
Leisure and hospitality	131.9	11.4	9.5
Other services	42.5	0.4	1.0
Government	151.0	5.0	3.4

Source: U.S. BLS, Current Employment Statistics.

U.S. BUREAU OF LABOR STATISTICS • bls.gov | @BLS_gov

Over-the-year change in the prices paid by urban consumers for selected categories

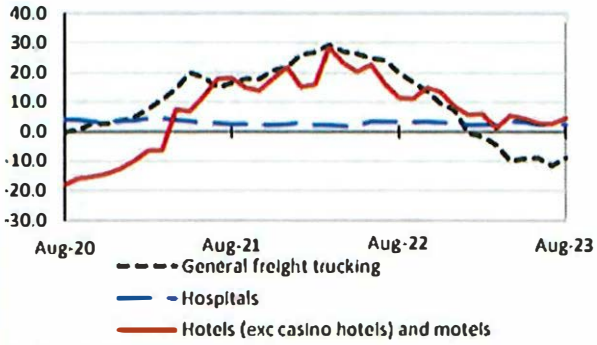
12-month percent change in CPI-U, August 2023



Source: U.S. BLS, Consumer Price Index.

Over-the-year changes in the selling prices received by producers for selected industries nationwide

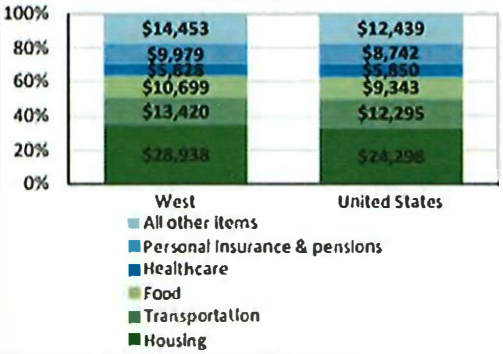
12-month percent changes in PPI



Source: U.S. BLS, Producer Price Index.

Average annual spending and percent distribution for selected categories

Average annual expenditures, United States and West, 2022



Source: U.S. BLS, Consumer Expenditure Survey.

Average hourly wages for selected occupations

Occupation	Portland metro area	United States
All occupations	$32.68	$29.76
Financial managers	75.43	79.83
Human resources managers	64.36	70.07
Registered nurses	53.66	42.80
Accountants and auditors	40.08	41.70
Chefs and head cooks	27.63	28.95
Construction laborers	25.00	22.29

Source: U.S. BLS, Occupational Employment and Wage Statistics, May 2022.

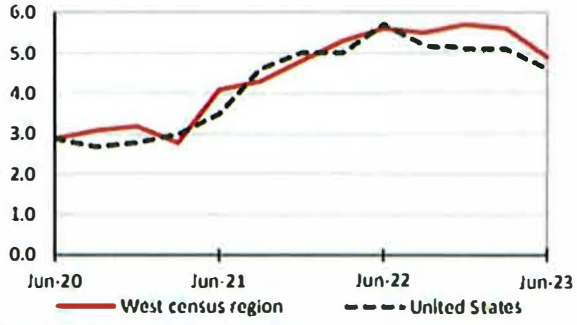
Employer costs per hour worked for wages and selected employee benefits by geographic division

Private industry, June 2023	West census region	United States
Total compensation	$44.51	$41.03
Wages and salaries	31.52	28.97
Total benefits	12.99	12.06
Paid leave	3.32	3.05
Vacation	1.68	1.56
Supplemental pay	1.51	1.53
Insurance	3.19	3.02
Retirement and savings	1.47	1.39
Legally required benefits	3.50	3.08

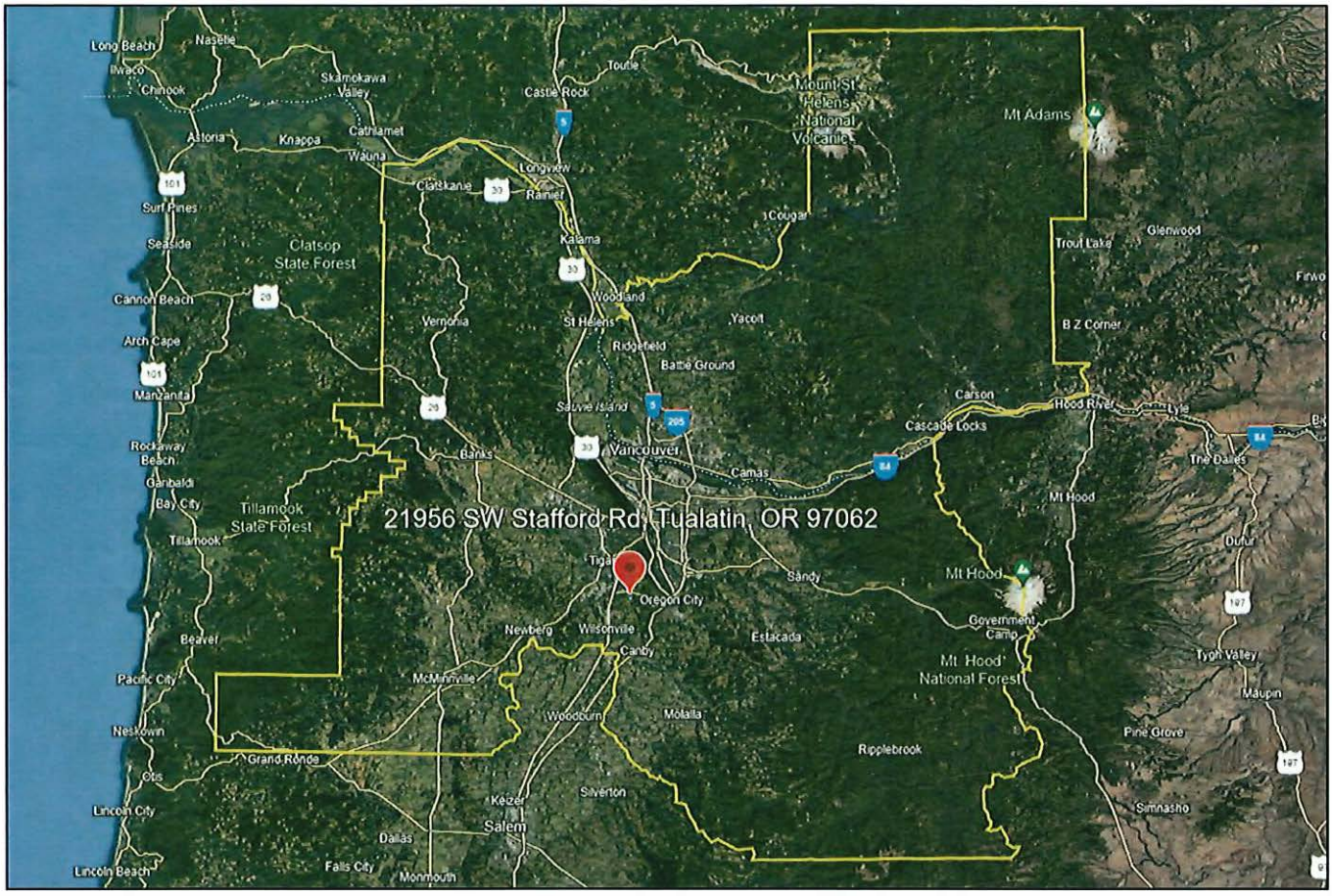
Source: U.S. BLS, Employer Costs for Employee Compensation.

Over-the-year changes in wages and salaries

12-month percent changes in ECI



Source: U.S. BLS, Employment Cost Index.



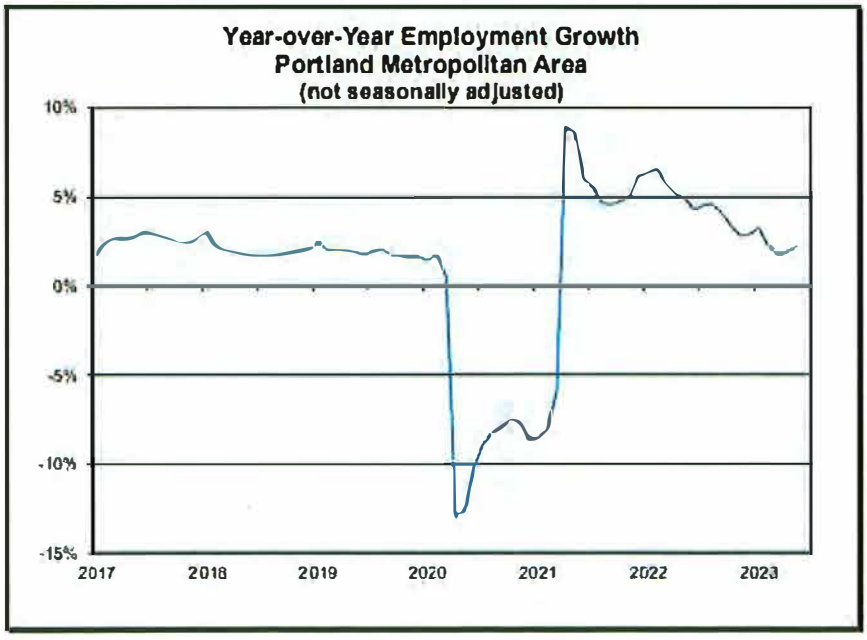
During early 2020 and continuing through 2023, the global COVID-19 pandemic hammered many industries and led to massive unemployment in select sectors. Given the unprecedented events of the past three years, it has been complicated and speculative predicting/assessing the impacts to the broad sectors of the real estate market. Conventional commercial space (office, industrial and retail) has performed unevenly in response to COVID-19. The hardest hit among investors has been retail and office properties occupied by nonessential or heavily-regulated businesses shut down during the early weeks of the pandemic and beyond. Sit-down restaurants, shopping malls and urban/suburban office buildings are exhibiting high vacancy and only fractional leasing velocities. Conversely, industrial space has remained in high demand and relatively scarce in supply. The same can be said of fast food and quick-serve restaurants, as well as grocers and big box retailers, where consumers flocked during the months of restrictive social distancing measures.

In contrast, the residential housing markets thrived in response to slow creation of new product (via construction) and record-low mortgage rates (until recently). Strong buyer demand fueled by flush capital accounts far exceeds the number of homes available for sale in nearly every regional submarket. From the perspective of single-family housing, COVID-19 had also spurred a long-awaited shift toward suburban ownership. Work from-home preferences

among employers negated the once-impeding factor of geographic distance for workers commuting. Homebuilders benefited by the spike in new home demand, and the inventory of existing homes on the market shrunk to a mere one to two-months during late 2020, 2021 and much of 2022. Current (2023) residential market activity is saddled by six-plus percent mortgage interest rates and fewer sellers.

The multifamily rental housing sector was impacted by multiple quarters of landlord restrictions against tenant evictions and some rent increases; though nearly all have finally expired. Construction of new supply has continued, albeit at a delayed pace due to a shortage of labor and rapidly increasing materials costs. Construction financing for new projects is now priced at much higher levels, which has caused some projects to stall. Portland has benefited from some COVID-19-era population trends, as well. Many employees in higher-priced coastal metros like the Bay Area and Seattle have been working remotely for most of 2020-22, and a growing number of companies have announced a permanent shift to telework. Residents who no longer need to commute to their jobs in expensive areas are choosing more affordable options like Portland, and the influx of well-paid new residents is expected to translate into increased retail sales.

Overall, market respondents point to rapid recovery to pre-pandemic demand factors, thanks in large part to unprecedented Federal stimulus that continues as of this writing. Like most other markets, COVID-19 impacts were significant in the Portland MSA and submarket, though heavy government stimulus and strong consumer spending have softened the landing. The rise of home prices accelerated during 2020-22; fueled by low mortgage interest rates, very limited for-sale inventory, and sharply rising homebuilder costs. Full economic recovery is anticipated in the near-term in direct response to the effectiveness of the vaccines, full opening of the public schools and return to work trends.

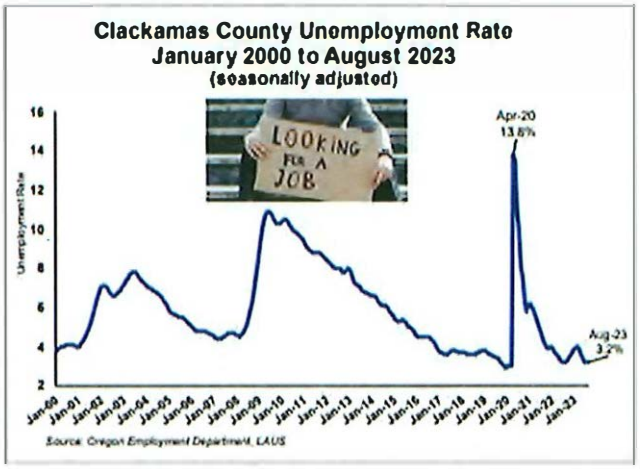


Clackamas County

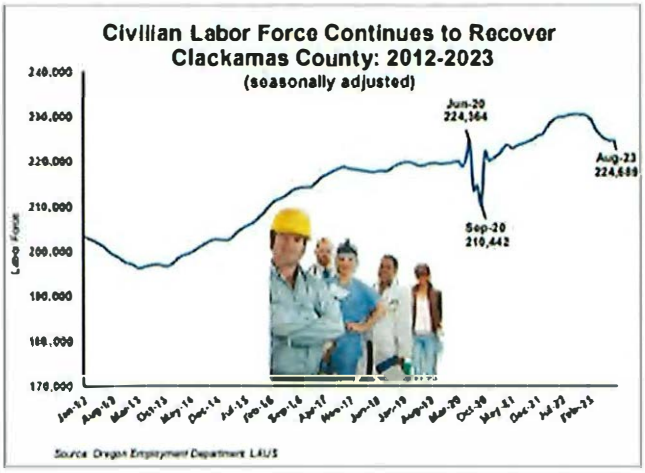
ECONOMIC INDICATORS

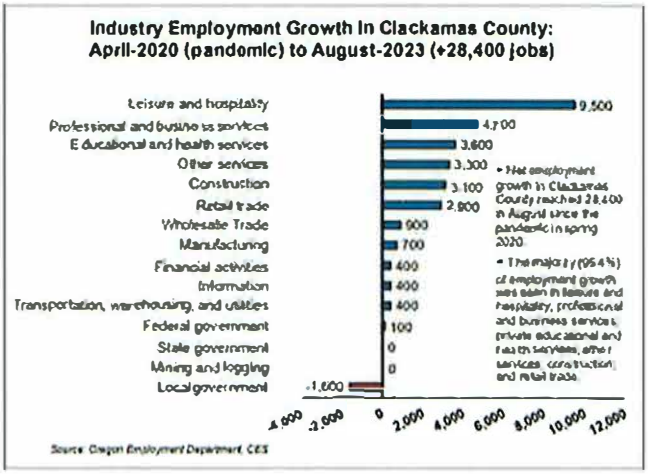
September 2023 (August data)

State of Oregon
Employment Department



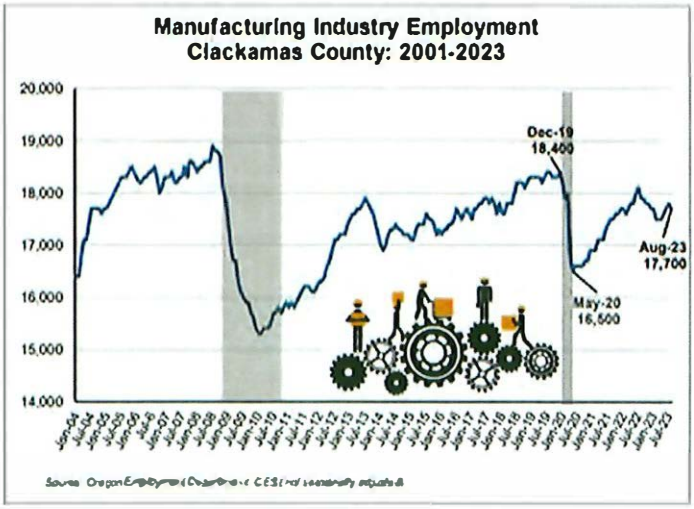
- The *seasonally adjusted* **unemployment rate** in Clackamas County fell to 3.2% in August with 7,100 residents unemployed and actively seeking work.
- The county's *seasonally adjusted* civilian labor force reached 224,689 in August which was an increase of 14,247 residents working or seeking work since the low point in September 2020.
- Since the pandemic losses in early 2020, the county has added back 28,400 jobs with the highest number of jobs in leisure and hospitality (9,500) and professional and business services (4,700).





Focus on the Manufacturing Industry

- The manufacturing industry in Clackamas County employed 17,700 workers in August 2023 and made up 10.3% of the county's total employment.
- During the pandemic recession in early 2020, the manufacturing industry lost a total of -1,900 jobs and has now slowly regained 1,200 or 63% of this industry's employment level.
- The county has 21 subsector industries within the broad manufacturing sector. The subsectors that provided the most jobs in 2023 include fabricated metals (3,355), computer and electronics (2,633), food manufacturing (2,208), and primary metals (2,073).



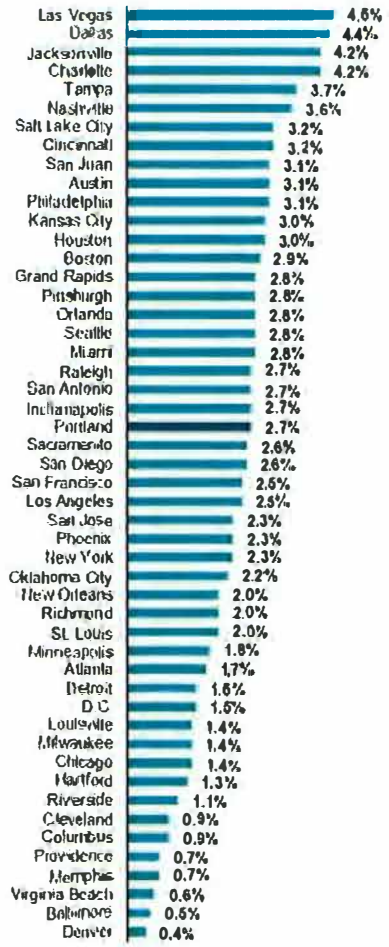
September 2023

Multnomah County **Economic Indicators**

State of Oregon Employment Department QUALITYINFO.ORG

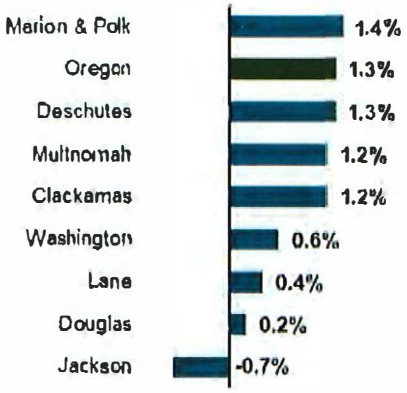
Job Growth by U.S. Metro

Percentage Growth - Jul. 2022 to Jul. 2023



Employment Growth by County

Aug. 2022 to Aug. 2023 - By County



Employment in Portland Metro

Jan. 2020 to Aug. 2023 (seasonally adjusted)

Select Industry Gains and Losses

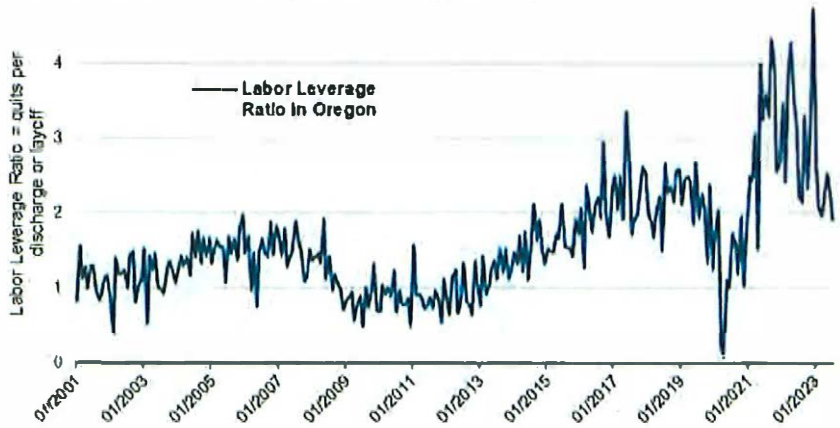
Multnomah County, Aug. 2022 to Aug. 2023

Unemployment Rate Portland Metro

Jan. 2020 through Aug. 2023 (Seasonally Adjusted)

Labor Leverage Ratio in Oregon

Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey



Labor Leverage Ratio (LLR) Shows Oregon Labor Market Loosening in 2023

The LLR is very simple: it's the ratio between the number of voluntary quits and the number of layoffs or firings, a proxy for measuring how confident each side of the labor market is – the buyers (employers) and the sellers (workers). When the ratio is high, more people are quitting their jobs than are being laid off, signaling that workers are confident they can find employment and businesses are loath to lose workers.

In both Oregon and the U.S. the LLR has declined since peaks in 2022. Layoffs have increased slightly at the same time that quit totals have come down a bit since the middle of last year. Neither trend seems to signal a massive souring of the job market. The more likely explanation is a slight moderation of the extreme competition for workers experienced last year.

IMMEDIATE MARKET AREA ANALYSIS - Stafford

Location

Despite having a Tualatin address, the subject property is located in Clackamas County outside of Tualatin and Wilsonville's city limits in the Stafford area of northern Clackamas and southern Washington Counties. The subject property is situated along SW Stafford Road less than one mile south of an Interstate 205 interchange. Further, the location is roughly two and one-half miles east of Interstate 5 and roughly 11 miles south of downtown Portland, Oregon.

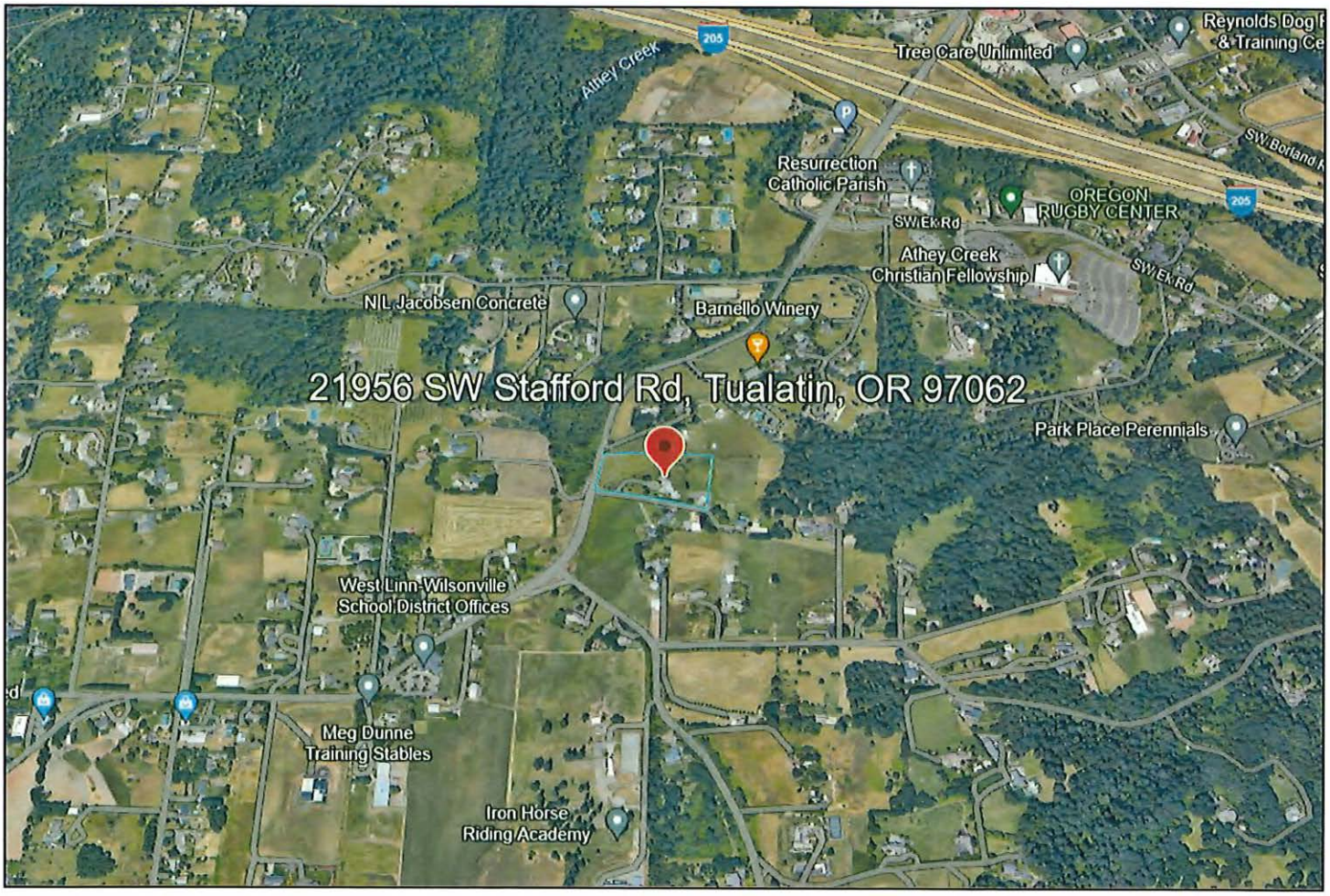
The following map displays the subject property's location in relation to Tualatin's city limits (highlighted in yellow).

Tualatin is located between Interstates 5-205 to the east/south and Highway 99W to the west, and is situated in both Clackamas and Washington Counties. According to the US Census Bureau the city covers an area of approximately 8.23 square miles and has a current population estimate of 27,910.

The unincorporated semi-rural Stafford Hamlet area is generally bounded by I-205 to the north, I-5 to the west, the Willamette River to the south and SW Mountain Road to the east.

Surrounding Area of Influence Trends

The subject's surrounding area is viewed as rural, semi-rural and suburban with high-value homes on acreage, interchange commercial uses, and interspersed with traditional farms and a variety of agribusiness enterprises. The local area is predominately comprised of custom homes on agreage with or without agricultural components. In addition to agriculture, there is an abundance of outlying suburban single-family residences in the surrounding area. The nearest retail, office, and multi family uses are located within the city limits of Tualatin, as well as the neighboring cities of Sherwood, Wilsonville, West Linn and Oregon City.



Tualatin is conveniently centered near the intersection of Interstates 5 and 205, and is home to a collection of retail shopping centers as well as a variety of manufacturing and corporate business services. Tualatin's location between Highway 99W and the I-5/I-205 interchange is advantageous and attracts a large number of workers from around the region. According to

Tualatin's Economic Opportunity Analysis dated 2019, approximately 93 percent of the city's employment base consists of workers commuting to the city from the surrounding area.

CITY OF TUALATIN
PRINCIPAL EMPLOYERS
CURRENT YEAR AND NINE YEARS AGO

	2022			2013		
Employer	Employees	Rank	Percentage of Total City Employment	Employees	Rank	Percentage of Total City Employment
Lam Research Corporation	2,984	1	10.61%	659	2	2.67%
Legacy Meridian Park Hospital	990	2	3.52%	905	1	3.67%
Pacific Foods of Oregon	600	3	2.13%	280	10	1.13%
United Parcel Services	593	4	2.11%	512	3	2.07%
Nortek Air Solutions	522	5	1.86%	-	-	-
Portland General Electric	478	6	1.70%	478	4	1.94%
Amazon.com Services LLC	369	7	1.31%	-	-	-
Columbia Corrugated	327	8	1.16%	320	7	1.30%
Fred Meyer	292	9	1.04%			
Ichor Systems Inc	286	10	1.02%	-	-	-
Huntair	-	-	-	460	5	1.86%
Precision Wire Components	-	-	-	457	6	1.85%
Veris Industries LLC	-	-	-	300	8	1.22%
DPI Northwest	-	-	-	300	9	1.22%
	7,441			4,671		
Total City employment			28,129			

The city limits of Wilsonville are located approximately three miles southwest of the subject property. The city of Wilsonville is located primarily in Clackamas County, with a northern portion of the city limits extending into Washington County. According to the US Census Bureau, the city covers a total area of 7.42 square miles and has a current population estimate of 25,915.

Wilsonville's role in regional and statewide commerce is significant, in part because of its location on the banks of the Willamette River and proximity to interstate transportation routes; the city has an abundance of distribution and manufacturing buildings adjacent to the I-5 corridor. The city is home to several technology companies including Flir, Mentor Graphics (Siemens), Collins Aerospace, Fritz Automation, etc.

TABLE 1
TEN LARGEST EMPLOYERS

Employer	Type of Business	2021-22 Number of Employees	2021-22 Percentage of total City employment*
Siemens Mentor Graphics Corporation	CAD software systems	1,153	7.6%
Coca Cola Bottling Company	Bottling & distribution center	637	4.2%
Collins Aerospace	Aerospace technology	586	3.8%
Sysco Food Services of Portland Inc.	Warehouse & distribution center	438	2.9%
Columbia Distributing	Warehouse & distribution center	400	2.6%
Fllr Surveillance Inc.	Image equipment manufacturer	335	2.2%
Costco Wholesale	Wholesale retail	332	2.2%
DW Fritz Automation	Advanced manufacturing solutions	266	1.7%
TE Connectivity	Consumer electronics company	265	1.7%
Fred Meyer	Grocer	257	1.7%
		4,669	30.7%

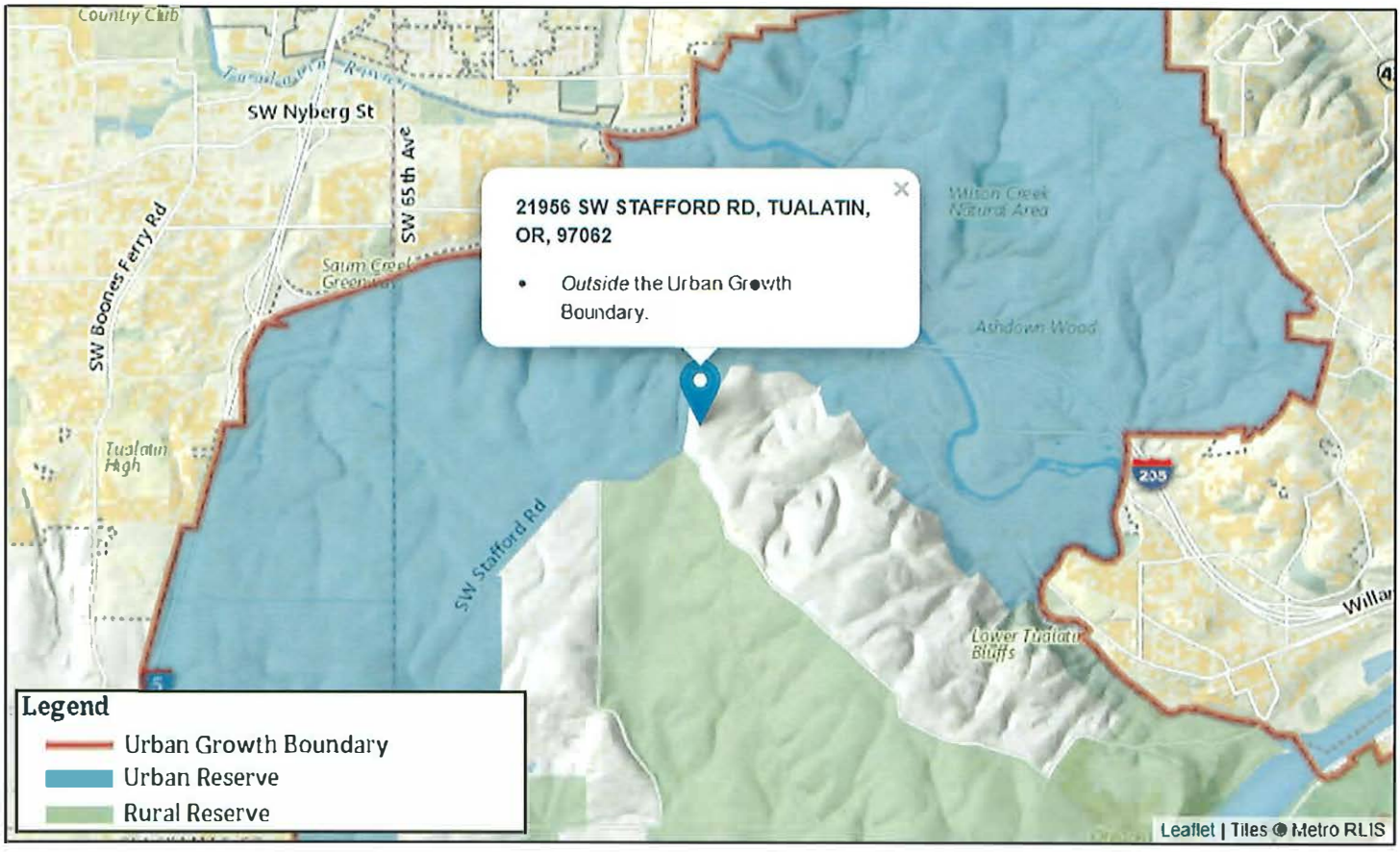
**Total employment for FY 2021-22 was 15,224*
Source: City of Wilsonville, Business Licenses

METRO manages the boundary that separates urban land from rural land in the Portland region and works with communities to plan for future population growth and meet needs for housing, employment, transportation and recreation. Under Oregon law, greater Portland must have enough land inside its urban growth boundary for 20 years of growth. That means that even if the boundary was not expanded for two decades, all of the growth to be expected in greater Portland would fit inside the existing boundary. Land inside that boundary is available for construction of homes, employment/industrial centers and shopping areas for the region's residents.

Every six years, the METRO Council looks at growth forecasts and development trends within the context of evaluating expansion of the boundary(s) to meet the 20-year supply obligation. The Urban Reserves process was created by the Legislature in 2007, as a way to improve upon the old system that relied on soil quality to decide where to add land for development. Urban Reserves are lands suitable for accommodating urban development over the 50 years after designation, while rural reserves are lands that will be protected from urbanization for 50 years after designation. As a result of numerous meetings, negotiations and debates, Clackamas, Washington and Multnomah County governments agreed on approximately 28,000 acres of Urban Reserves and 271,000 acres of rural reserves designations in February 2010.

The following map displays the subject property's proximity to the Urban Growth Boundary (red line), as well as its location outside the Urban Reserves (blue shading) and Rural Reserves (green shading).

The following map displays the subject property's location in relation to the Metro UGB as well as its location outside the Urban (blue) and Rural (green) reserves.



The region's UGB has been expanded several times over the past 20 years, most recently in 2018 when the Metro Council approved four expansions which opened up 2,181 acres to suburban development. During UGB expansions, Urban Reserves are the areas to be incorporated first.

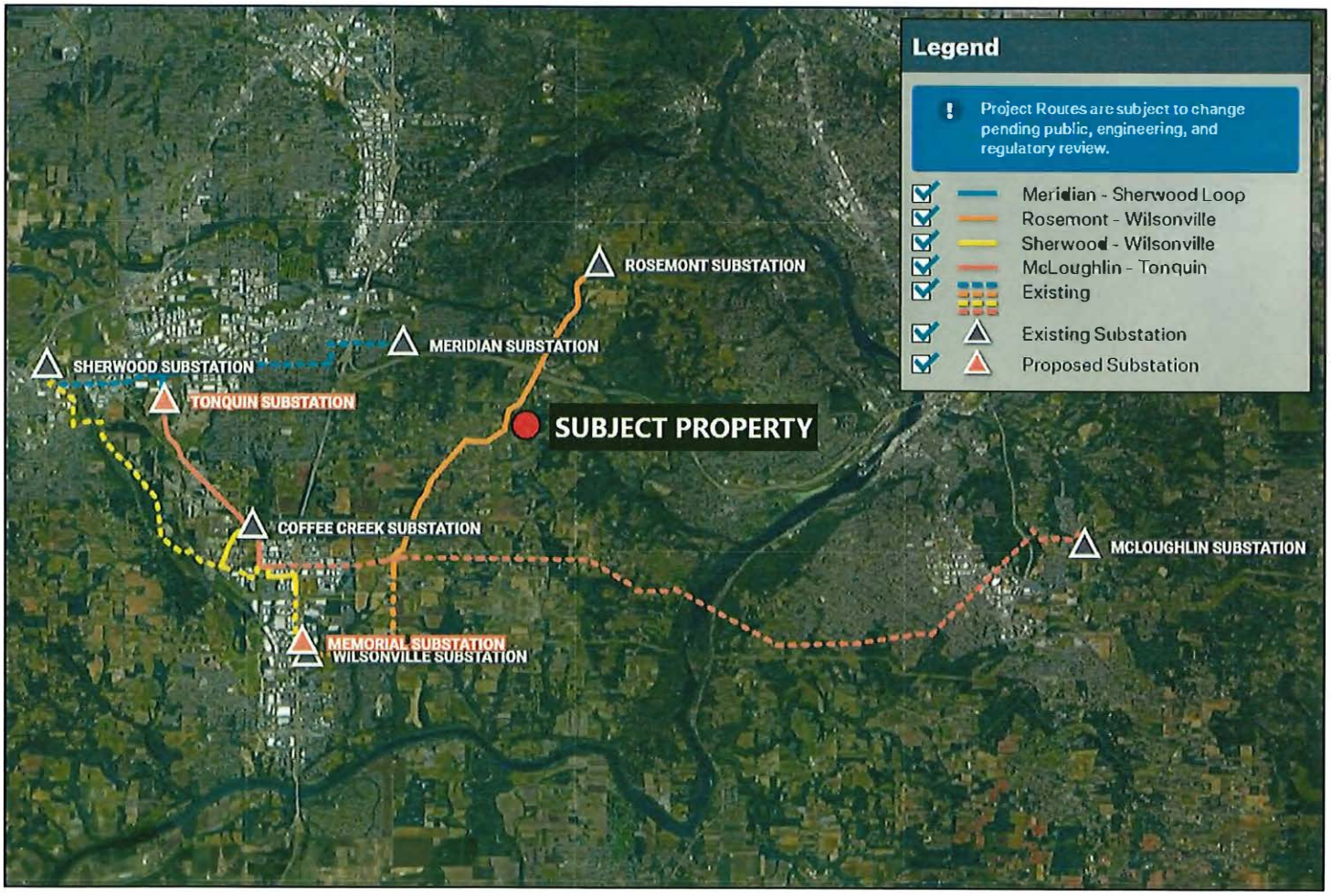
Land Use

Suburbanization in and around the Stafford Hamlet has focused on creation of residential subdivision lots where zoning, utilities and growth allow. In nearby Wilsonville, the Frog Pond UGB expansion around the intersection of Boeckman/Advance and Wilsonivlle/Stafford Roads expanded city limits significantly to the north/northeast, including two new school sites, traffic improvements and public parks. To date, both regional and national homebuilders have gradually acquired and built-out hundreds of medium/high density subdivision lots at prices from about $600,000.

The new residential growth is expected to increase demand for both commercial and industrial businesses, as well as the public infrastructure (roads, schools, parks, utilities, etc.).

Conversely, the bounding cities of Tualatin and West Linn possess far less UGB expansion acreage to accommodate residential growth. New development in those cities is often limited to smaller/in-fill projects where dated improvements are razed to make way for new (more dense) development.

Portland General Electric (PGE) has proposed a new high voltage powerline corridor along Stafford Road. It is known as the Tonquin: Rosemont-Wilsonville line project, which includes the construction of a new 115kV transmission line that will replace the existing distribution line (12.5kV) and some poles along SW Stafford Road. This project is part of a larger project called the "Tonquin" Project which includes multiple phases, a new substation and two additional transmission lines in other areas, which will provide regional redundancy. Based on projected load growth in the area, PGE asserts that the expansion is necessary to mitigate overloads on existing systems serving the area.



The existing 7.4 miles of distribution power corridor along SW Stafford Road is planned to be expanded/upgraded to distribution and transmission lines. Some in-place poles will be upgraded/replaced to support new transmission cables, distribution lines and perhaps non-

PGE utility lines (phones, cable, data, etc.). To date, existing poles are just 30-40 feet in height, while new/replacements will measure 100-plus feet. Taller/heavier poles are required to accommodate the much higher loads (voltage), more cables and greater required clearances.

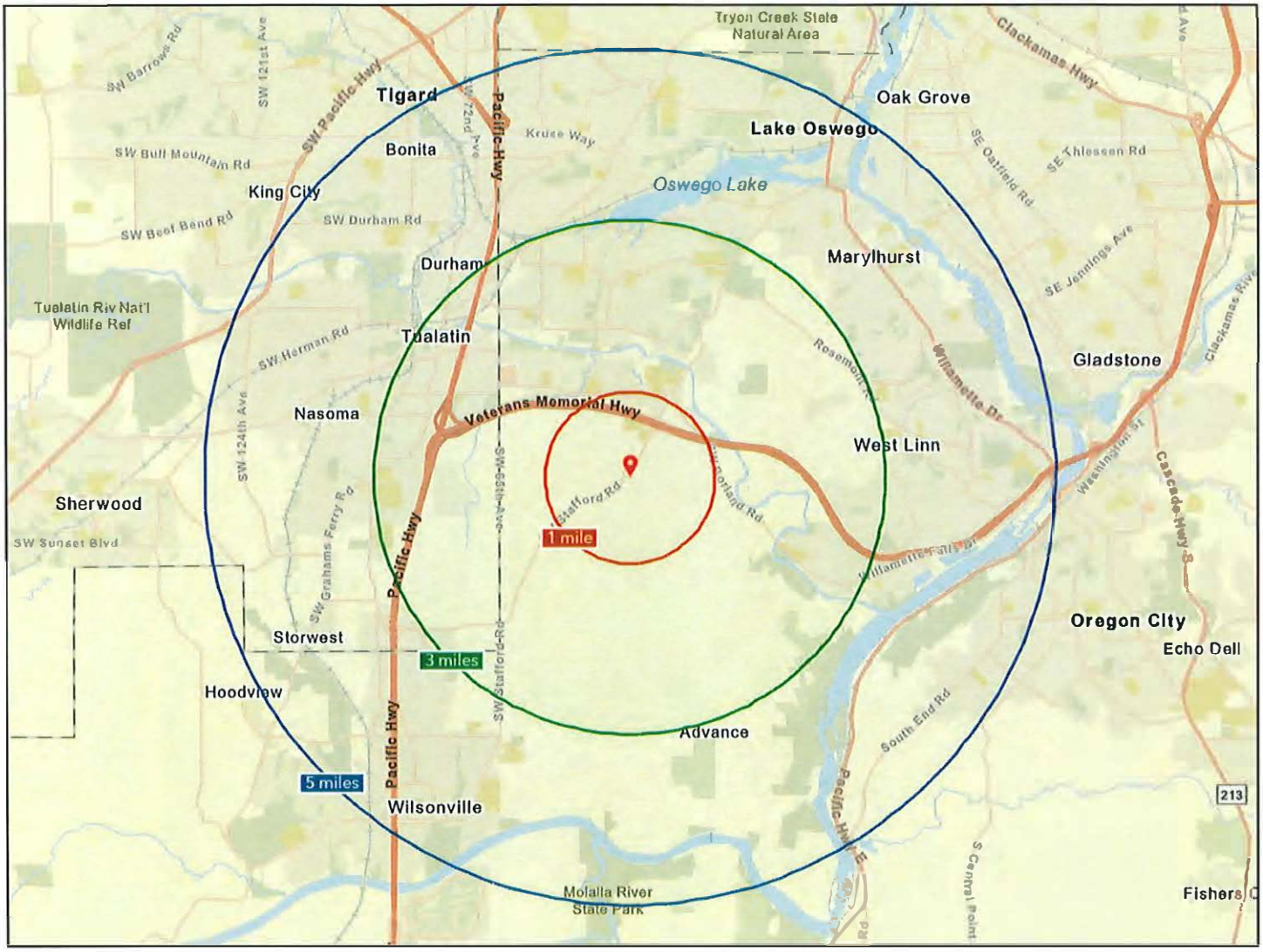
The majority of new poles will be within the existing PGE right of way, though additional easements are being acquired in the area satisfy meet safety and clearance requirements for the Tonquin Project.

Residents along SW Stafford Road have formed a coalition to "Save Stafford Road" and are exploring alternatives obstacles and alternatives for PGE's Tonquin: Rosemont-Wilsonville line project. Primary neighborhood concerns include fire hazards, view disruptions, sound (buzzing), ground level static electricity, loss of numerous mature/historic trees along the corridor, Electromagnetic Field (EMF) danger/stigma and general property value impacts. Construction for the Tonquin: Rosemont-Wilsonville line project is currently scheduled to begin in Spring 2024; pending successful/timely acquisitions of sufficient right-of-way (easements), government approval and construction contracting.

Demographics

The following map identifies the one, three and five-mile radii from the subject property. Following the map is a tabulation of primary demographic characteristics of the concentric rings, including historic, current and projected figures.

IMMEDIATE MARKET AREA ANALYSIS – Stafford (Cont.)



The submarket displays relative uniformity across the concentric demographic rings. In general, the one-mile ring encompasses an entirely rural residential/agricultural area of northern Clackamas County. The three-mile ring extends to include small areas of Wilsonville, Tualatin, West Linn, Lake Oswego, and additional agricultural areas of northern Clackamas County. The five-mile ring encompasses a majority of the Wilsonville, Tualatin, West Linn, and Lake Oswego city limits, and also includes areas of King City, Tigard, and Oregon City.

esri

Demographic and Income Comparison Profile

21956 SW Stafford Rd, Tualatin, Oregon, 97062
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

	1 mile	3 miles	5 miles
Census 2010 Summary			
Population	564	35,617	132,972
Households	201	13,859	53,125
Families	161	9,870	35,756
Average Household Size	2.81	2.52	2.46
Owner Occupied Housing Units	179	9,258	35,312
Renter Occupied Housing Units	22	4,601	17,812
Median Age	47.0	39.6	40.7
Census 2020 Summary			
Population	622	38,570	147,021
Households	205	14,950	57,863
Average Household Size	3.03	2.53	2.49
2023 Summary			
Population	628	38,789	148,768
Households	204	14,995	58,763
Families	159	10,265	37,836
Average Household Size	3.08	2.54	2.49
Owner Occupied Housing Units	173	10,103	39,612
Renter Occupied Housing Units	31	4,892	19,151
Median Age	50.8	42.7	43.2
Median Household Income	$162,503	$114,693	$109,379
Average Household Income	$249,846	$163,333	$153,413
2028 Summary			
Population	632	38,993	150,873
Households	205	15,154	59,890
Families	160	10,332	38,394
Average Household Size	3.08	2.52	2.47
Owner Occupied Housing Units	175	10,275	40,694
Renter Occupied Housing Units	30	4,879	19,197
Median Age	50.8	43.4	43.8
Median Household Income	$176,496	$128,062	$122,995
Average Household Income	$277,595	$183,644	$174,371
Trends: 2023-2028 Annual Rate			
Population	0.13%	0.10%	0.28%
Households	0.10%	0.21%	0.38%
Families	0.13%	0.13%	0.29%
Owner Households	0.23%	0.34%	0.54%
Median Household Income	1.67%	2.23%	2.37%

Population density is very low in the immediate vicinity of the subject property due to the limited number of acreage home sites, distance from established city limits and the size of the existing agricultural holdings. Population within the one-mile ring is just 628 and 204 households for an average household size of 3.08 people. The five-mile ring is the most heavily populated in terms of density of the three concentric rings (1,894 people per square mile). Growth projections predict just 0.43 percent annual population increases in the one-

mile demographic area through 2026. The broader three- and five-mile rings indicate slightly stronger growth projections.

The chart shows a nearly 6.00:1 ratio of owner-occupied housing in the one-mile radius; declining toward a 2.00:1 ratio in the three- and five-mile rings. Median household income for the one-mile radius is between $250,000 and $300,000; making Stafford one of the most affluent neighborhoods of the entire Portland metropolitan region. While still high, median household incomes for the the broader three- and five-mile demographic rings rank lower.

	1 mile		3 miles		5 miles	
2023 Households by Income	Number	Percent	Number	Percent	Number	Percent
<$15,000	4	2.0%	763	5.1%	3,098	5.3%
$15,000 - $24,999	9	4.4%	725	4.8%	2,735	4.7%
$25,000 - $34,999	13	6.4%	633	4.2%	2,835	4.8%
$35,000 - $49,999	13	6.4%	1,075	7.2%	4,185	7.1%
$50,000 - $74,999	8	3.9%	1,464	9.8%	6,320	10.8%
$75,000 - $99,999	10	4.9%	1,606	10.7%	6,935	11.8%
$100,000 - $149,999	36	17.6%	3,161	21.1%	12,403	21.1%
$150,000 - $199,999	32	15.7%	2,048	13.7%	7,541	12.8%
$200,000+	81	39.7%	3,519	23.5%	12,711	21.6%
Median Household Income	$162,503		$114,693		$109,379	
Average Household Income	$249,846		$163,333		$153,413	
Per Capita Income	$84,325		$61,961		$60,657	

In short, the Stafford semi-rural submarket is surrounded by Lake Oswego, West Linn, Wilsonville and Tualatin city limts; and includes an extremely affluent population with estate-sized/quality residences primarily on two to 20-acre parcels. This is clearly manifest by the approximate $250,000 average household income figure above, as well as very low-density of mostly-owner-occupied homes.

Summary

The subject is well located in a market area that is dominated by rural residential and some traditional agricultural uses. A small portion of the market area is developed as commercial interstate related uses, primarily at the arterial and highway intersections. The area is easily commutable to the Portland city limits, with very good access to major transportation routes and services.

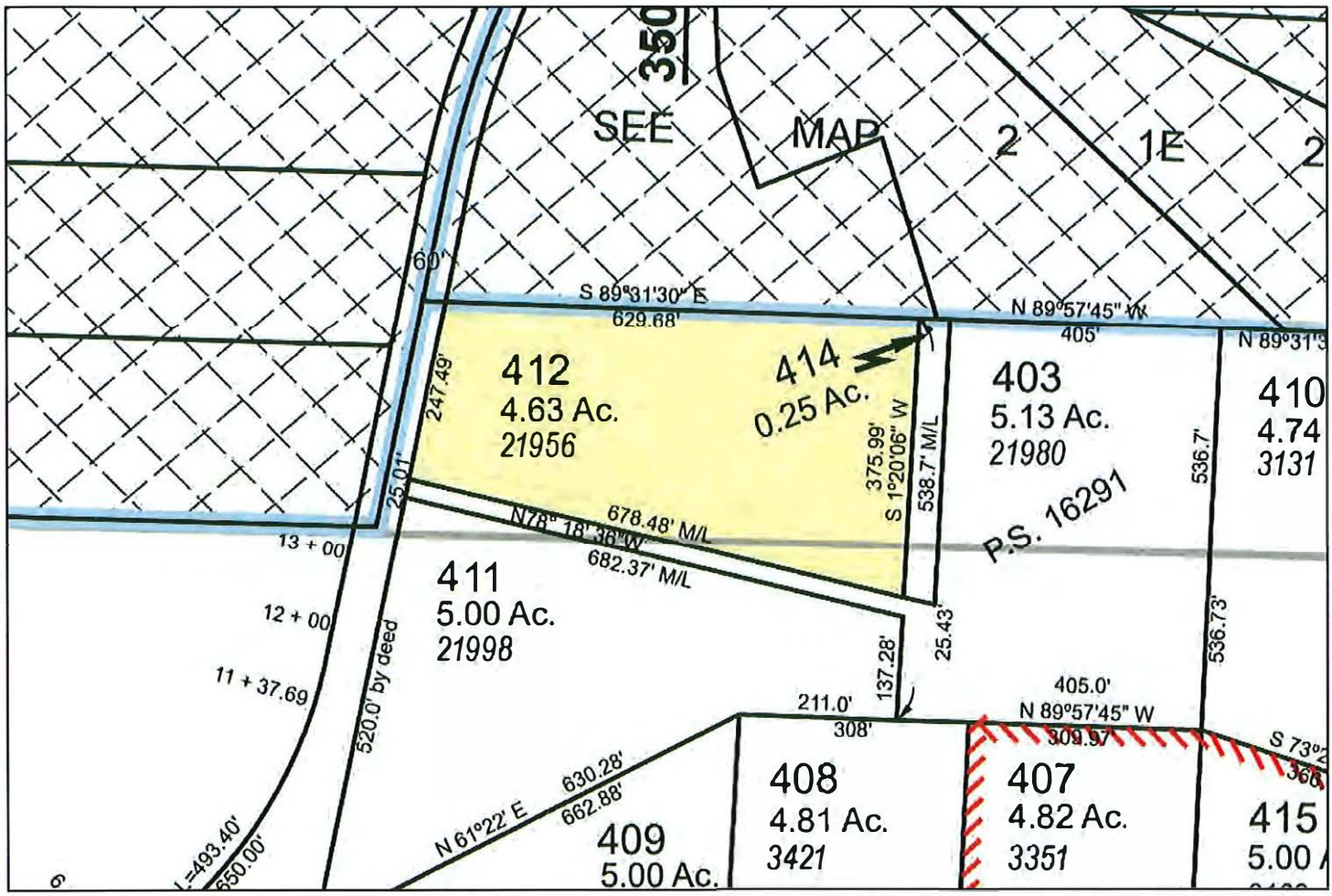
The Stafford Hamlet is a community that continues to witness gradual suburbanization due its highly accessible location near the confluence of the region's two major freeway systems. For rural (acreage) residential living, it has drawn some of the region's wealthiest households to both existing homes and new construction opportunities on vacant or under-utilized acreage. Portland continues to be the main employment and population center for the region. Based on soil quality, irrigation sources/capacity and Portland-Salem proximity, the subject property's surrounding area is rated modest in terms of agricultural and rural residential demand. Though suburbanization is becoming more and more likely, the demand for lots-of-record with home

site rights will continue to buoy land prices. To a lesser extent, the health of Oregon's agricultural industries will drive demand for medium- to large-scale farming operations in the greater Willamette Valley.

LOCATION & LEGAL REFERENCE

The subject property is addressed as 21956 SW Stafford Road, just outside of Tualatin, Oregon. The Clackamas County Plat Map is 2S-1E-32, Tax Lot 412. The site consists of a single parcel measuring 4.63 gross acres with trapezoidal dimensions.

The following map illustrates the subject property's shape and boundaries. A legal description of the subjet site is included in the Addenda of this report.



PROPERTY HISTORY

According to Clackamas County tax and assessment records, current ownership of the subject property is vested in John Lekas since acquisition on January 3, 2023, at a confirmed/recorded price of $2,550,000 (cash to seller). The home was never actively listed on the market. The buyer and seller were introduced by a mutual acquaintance and a deal was made privately. Post purchase, the buyer invested about $250,000 in curing deferred maintenance, replacement of wom mechanical systems and interior/décor upgrades.

Residents along SW Stafford Road began receiving notifications from Portland General Electric (PGE) in late-May 2023 about plans for the Tonquin: Rosemont-Wilsonville line project. In late-June 2023, Mr. Lekas received a letter from Universal Field Services (acting on behalf of PGE) for a proposed easement measuring approximately 3,497 SF along the property's western boundary and a compensatory offer of $8,212. The easement is for construction, operation, and maintenance of the new 115kv transmission corridor to be constructed along SW Stafford Road

The information presented above is all the information available regarding the five-year sale history of the subjet property.

TAX ASSESSMENT & DATA

The subject property is liable for annual real estate taxes levied by the Clackamas County Assessor's Office. The following table summarizes the applicable tax account(s), the real market assessed value, the maximum assessed tax value, and 2022-23 tax liability.

		Real Market Value (RMV)				
Tax Lot	*Account*	*Land*	*Improvements*	*Total RMV*	*Maximum Assessed Value*	*2022-23 Taxes*
412	**00398581**	$947,187	$631,010	$1,578,197	$1,045,547	$4,108.84

The 2022-23 total millage rate was just $13.0423 per $1,000 of assessed value for the real property components (land and improvements).

In the past, taxes were calculated based on real market value. Following passage of Measure 50, a new value limit called Maximum Assessed Value rolls back the 1997-98 assessed value to 90 percent of the 1995-96 real market value. The 1997-98 tax assessment statements show both real market value and maximum assessed value. The lower value (maximum assessed value) is the assessed value from which taxes are calculated. Starting in 1998-99, the assessed value was limited to a maximum of three-percent growth per year.

SUBJECT PHOTOGRAPHS

Photo #1

View of custom home from entry driveway

Photo #2
Street scene north along Stafford Road.
Subject property to right.

Photo #3
View east along entry driveway toward gazebo and home

Photo #4
View west toward Stafford Road from homesite (proposed powerline corridor0

Photo #5
View east of property from across Stafford Road

Photo #6
Street scene south along Stafford Road.
Subject property to right.

PROPERTY DESCRIPTION – Site & Improvements

Location

The subject property is identified by the street address of 21956 SW Stafford Road, outside of the city limits of Tualatin, Oregon. It is an upscale rural residential neighborhood of northern Clackamas County, also with a significant number of small-scale agricultural properties nearby. A legal description of the site is included in the Addenda of this report.

Size/Shape

According to measurements from the Clackamas County Assessor's map (prior section), the subject property consists of a single parcel totalling **4.63 gross acres** and has a trapezoidal shape. Going forward, our valuation analyses will utilize this gross site area. The following image and discussion summarize the subject site size and characteristics.

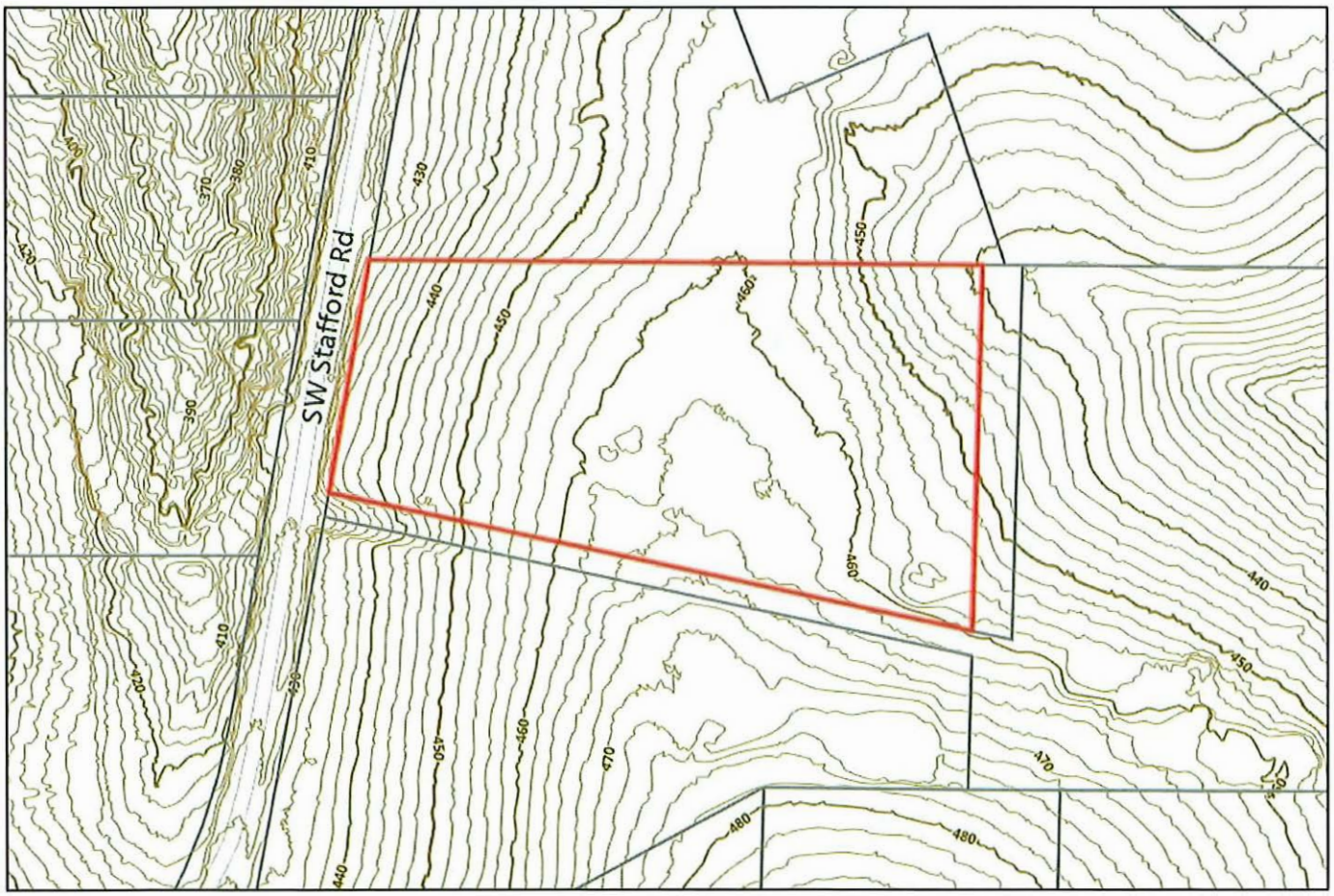
For purposes of this report the area outlined on the County Assessor's Tax Plat Maps is assumed correct. For a more detailed description of the site and depiction of shape/boundaries, a copy of the Plat Map is included in this report.

Access

General access is gained via Interstate 205 at Exit 3, south along SW Stafford Road less than one mile. SW Stafford Road is the primary arterial through the local rural residential area, with traffic totaling approximately 10,055 vehicles per day near the subject property. SW Stafford Road extends from Highway 43 in downtown Lake Oswego to the north and continues to Boeckman Road to Wilsonville (south) where it transitions to become SW Wilsonville Road. Overall, access is very good within the greater Portland metropolitan region, and exposure is medium from traffic along SW Stafford Road.

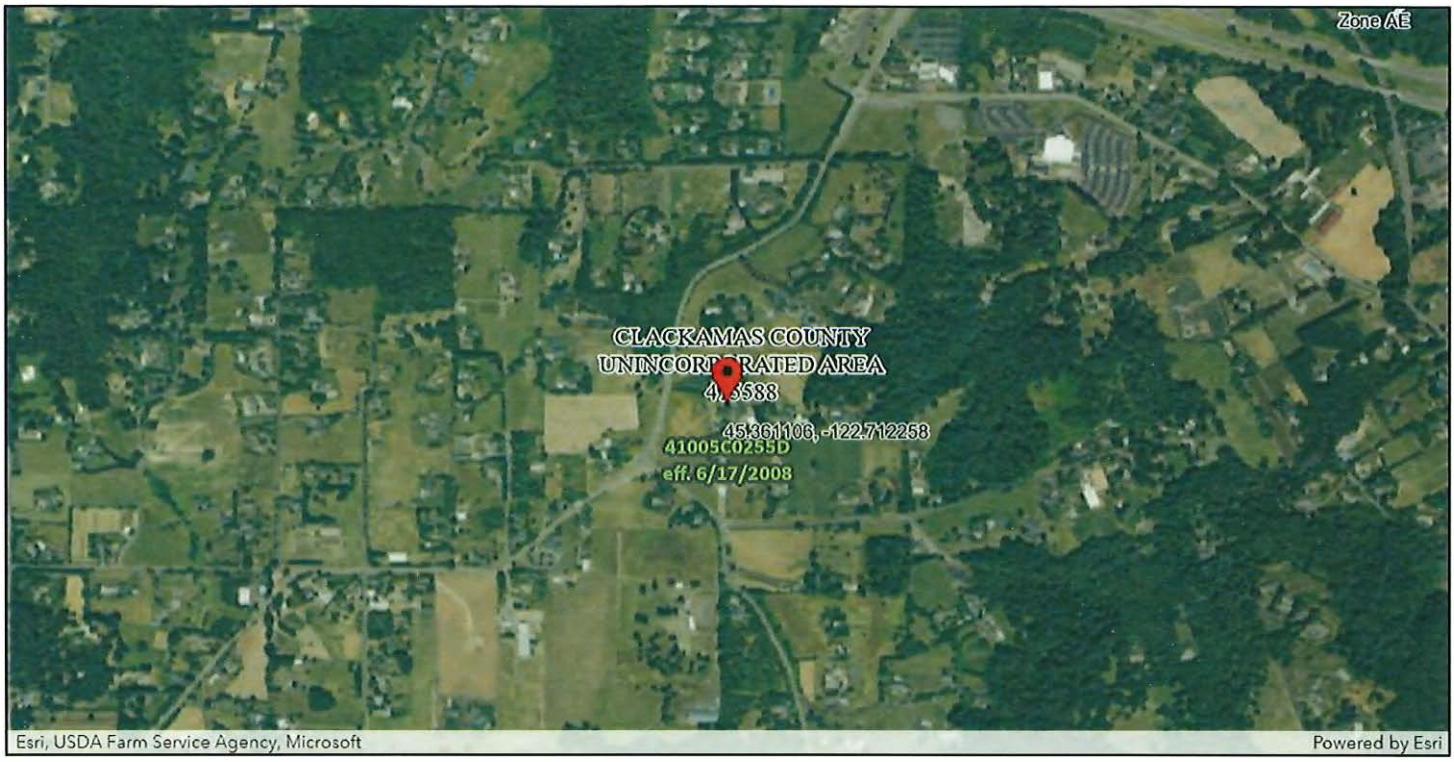
Topography

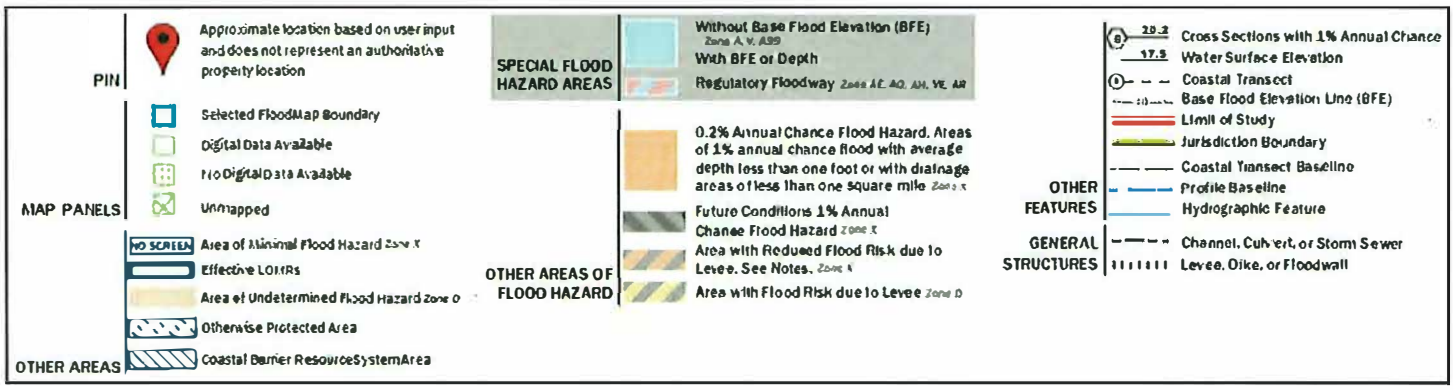
The subject site ranges from level to rolling, with an overall downward slope from the central position of the home; creating a maximal view in three directions (west, north, east). The following map displays the subject property's topography in further detail, with contour lines measured in two-foot increments.



Flood & Other Hazards

According to Flood Insurance Rate Map 41005C 0255D, effective June 17, 2008, the subject site is located entirely within Zone X, which indicates areas of minimal flood risk.





Soil & Subsoil Conditions

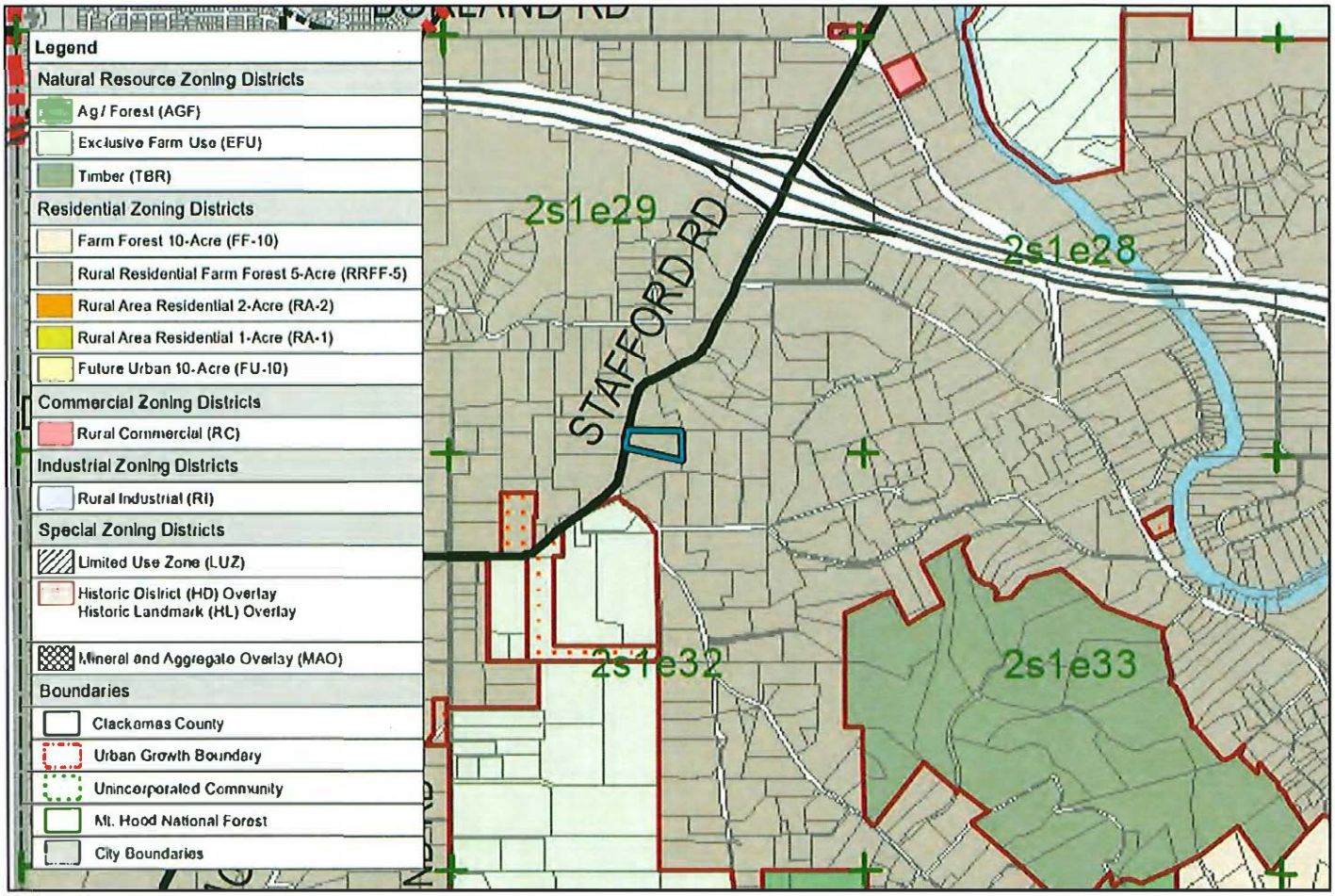
No apparent drainage problems exist on the parcel. Soil and subsoil conditions appear stable and suitable for development compatible with other properties in the area. **This appraisal assumes that the site is free of contamination.**

PROPERTY DESCRIPTION – Site & Improvements (Cont.)

Zoning

The subject site is zoned RRFF-5 (Rural Residential Farm Forest 5-Acre) by Clackamas County. The RRFF-5 zone is a broad range resource zone restricting use to farming, farm-support rural residential improvements.

Please reference the applicable ordinance excerpt within the Addenda.



Abutting Properties

North	Upscale rural residences, farmland
East	Upscale rural residences, farmland
South	Upscale rural residences, farmland
West	SW Stafford Road, upscale rural residences, farmland

Utilities

Water	On-site well (domestic only)
Storm Sewer	None, natural contours
Sanitary Sewer	On-site septic / drain field (assume average condition)
Natural Gas	Unknown
Electric Power	Portland General Electric (PGE)
Telephone	Multiple providers (wired/wireless)

Easements/Encroachments

A Preliminary Title Report was not provided for review. No obvious encroachments were evident during our on-site inspection. This appraisal assumes that no adverse easements negatively impact the subject property.

There is a proposal from PGE to acquire an approximately 3,497 SF easement for construction, operation, and maintenance of a new 115kv transmission line to be constructed along SW Stafford Road as part of the Tonquin: Rosemont-Wilsonville line project. At this time the easement is neither in force nor binding. It is our understanding that negotiations are underway to fully understand the implications of the easement and properly enumerate a market value-based consideration.

Improvements

An upscale rural residence, two-car garage and an array of outbuildings and site improvements accompanies the significant agricultural acreage. Therefore, the improvements possess significant contributory value on an "as is" basis.

The home was toured and reflects many upscale features and updated materials throughout. The largest improvement is a pole building at the site's low-point (southeast corner), which features storage bays and large doors.

PROPERTY DESCRIPTION – Site & Improvements (Cont.)

PHYSICAL CHARACTERISTICS

Finished Area: 4747
Attic: None
Basement: None

ROOFING
Material: Cedar Shake
Type: Hip
Framing: Std for class
Pitch: Not available

FLOORING
Slab 1.0
Sub and joists 2.0
Carpet 1.0

EXTERIOR COVER
Wood siding 1.0, 2.0

INTERIOR FINISH
Drywall 1.0

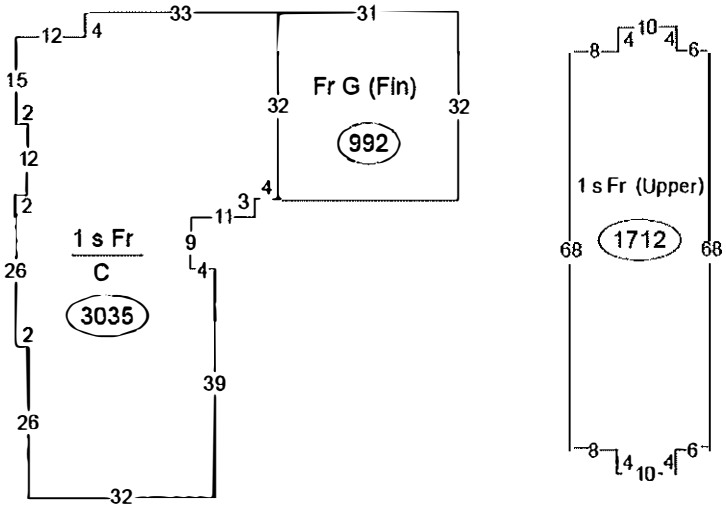
ACCOMMODATIONS
Finished Rooms 4
Bedrooms 4
Fireplaces: 1

HEATING AND AIR CONDITIONING
Primary Heat: Heat pump

	Lower /Bsmt	Full	Part Upper	Upper
3 Fixt. Baths	4	12		
TOTAL		12		

SUMMARY OF IMPROVEMENTS

ID	Use	Year Const	Size or Area
D	DWELL	1978	4747
G01	ATTGAR		31x 32
01	PAV	1975	1368
02	PAV	1975	4800
03	CONCP	1975	405
04	CNPY/	1975	405
05	SHEDGP	1975	864
06	LEANTO	1975	384
07	FENCERES	1960	100
08	GAZEBO	1970	324
09	PAV	1980	1120
10	CONCP	1980	1120
11	POOL	1950	800



Summary

The subject site is zoned RRFF-5 outside city limits. This location affords medium exposure to drive-by traffic, and very good access atypical of rural acreage. The area immediately surrounding the subject property is best described as upscale residential, small-scale farming, agribusiness and transitioning modest rural residential uses. A limited range of public utilities is available to the site. Use and development of the site is restricted by the in-place zoning (one home site).

HIGHEST & BEST USE ANALYSIS

Introduction

Highest and best use is a market driven concept that identifies the most profitable and competitive use to which a property can be put. It is further defined as follows:

> The reasonably probable and legal use of vacant land or an improved property, that is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity[1]

The concept of highest and best use is fundamental to real property value. In one application of the concept, a site is valued as though vacant and available for development to its highest and best use. In another application, the highest and best use of the property as improved is estimated. A site may have one highest and best use as though vacant, while the improved site may have another optimal use.[2]

Highest and best use is essentially a market driven concept that identifies the ideal use(s) of a property which follow logical market criteria. It attempts to mirror the thinking of a buyer in the marketplace. Analysis pertaining to the legal, physical, financial and most productive uses of the site, both as though vacant and as improved narrows, development options to those best fitting the demand for the property. Once highest and best use is established, the appraisal process focuses on the identified sub-market, selecting parameters for meaningful analyses.

The highest and best use of the subject land and improvements has been tested separately against the four criteria in the following analysis.

Vacant Site

> Among all reasonable, alternative uses, the use that yields the highest present land value, after payments are made for labor, capital, and coordination. The use of a property based on the assumption that the parcel of land is vacant or can be made vacant by demolishing any improvements.[3]

Legally Permissible

The subject site is zoned RRFF-5 (Rural Residential Farm Forest 5-Acre) by Clackamas County, Oregon. This zoning is restrictive with regard to allowed rural land uses. Development allowed is broad within the context of agriculture, agribusiness or rural residential. The intent of the zone is to preserve resource lands, while also allowing agricultural-related facilities integral to the local/regional markets. Residential development is allowed on a low-density basis (usually just one home site per parcel or contiguous holding). At present, just one home site would be allowed. Accessory dwelling units (ADUs) and non-

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[1] The Dictionary of Real Estate Appraisal, Sixth Edition. Chicago: Appraisal Institute, 2015. Page 109.

[2] The Appraisal of Real Estate, 14th Edition. Chicago: Appraisal Institute, 2013. Page 337.

[3] The Dictionary of Real Estate Appraisal, Sixth Edition. Chicago: Appraisal Institute, 2015. Page 109.

residential outbuildings are often constructed as complementary improvements in this submarket.

Geographic and government barriers have effectively limited suburbanization. METRO foresees increased residential and commercial development density through re-use of sites strategically located and under-improved.

Physically Possible

The total site area is 4.63 acres. Flood plain, topography and soil conditions support rural residential options within the parameters allowed by zoning and market demand. Slope enhances the acreage as a view home site.

Financially Feasible

Farmland and rural residential demand have experienced steady demand throughout the Willamette Valley and specific outer Clackamas County submarket. A significant demand segment is from rural residential buyers, in addition to an array of farmers/nurserymen. Agribusiness concerns exist throughout the County. Economically, Wilsonville/Tualatin are rated above average in terms of household demographics, employment rates and consistent housing demand in relation to the Portland metro area. Agribusiness real estate demand is derived from a mix of owner-users and investors, though the market inventory is limited.

User (owner) occupancy is the most common scenario; particularly for redevelopment from small/dated structures to upscale estate-quality residences. Assuming the subject site was vacant, development demand within the immediate market area is largely dependent upon the availability of existing homes. Generally, the cost/expense of occupying this inventory is preferred above new construction. There are typically only a handful of similar home sites available at one time, and virtually nothing listed for lease/sale in the immediate area.

The proximity to the I-5/205 corridors enhance the appeal of the Stafford hamlet as an upscale rural residential enclave. If vacant and available for development, it is reasonable to conclude upscale rural residential development (view) would yield the most significant economic returns and highest price from the local market. Overall, the Portland Metropolitan area is experiencing a wave of rural/semi-rural housing demand. New home demand in Stafford has been constrained by a very limited number of available home sites, which has buoyed land prices. A significant number of households remain in the buyer market, despite much higher construction loan and mortgage interest rates.

Stafford is priced considerably-higher than peripheral suburban cities by virtue of acreage parcel rather than traditional subdivisions. The subject property is an upscale suburban submarket characterized by larger than average lots and homes. The volume of employment, desirability of schools, neighborhood amenities and demographic characteristics combine to buoy home and lot values in the aftermath of the region-wide housing downturn. Since 2012-

13 price appreciation has been evident and forecast demand supports consideration of new subdivision projects locally. The number of development sites available for sale is also quite low. In general, few lots are being actively marketed for individual sale.

Maximally Productive

Overall, the empirical evidence supports a positive market sentiment regarding the current land market in the specific City of Wilsonville/Tualatin submarket(s). The availability of ready-to-develop residential land is very limited. Home sites are priced from about $750,000, most-often in the two to 10-acre size range. New home prices (on acreage) start at about $2,000,000, suggesting a base $750,000 allocated site value.

Based on the location and zoning, the maximally productive use of the subject property land, if vacant, would be suburban (acreage) residential development. Due to the subject property's location and access, the most probable uses are low/medium exposure and owner-occupied.

Conclusion

Based upon past, present and prospective market activity in the outer Tualatin/Wilsonville and greater Clackamas County markets, it is our opinion that **rural residential development** is an adequate expression of the highest and best use of the presumed vacant site.

As Improved

The subject site is improved as an updated/upscale residence recently acquired following very long-term ownership. The home and associated outbuildings are typical of the neighborhood and do not suggest a significant change of use such as expansion or redevelopment.

MARKETABILITY ANALYSIS

The subject property possesses restrictive RRFF-5 zoning, low-medium exposure and rural surroundings outside the cities of Wilsonville and Tualatin. The subject property is currently developed as an updated rural residence, a modest outbuilding, in-ground pool/poolhouse and mature landscaping. Market scarcity has increased demand for similar owner user properties, and the rising costs of land/financing/construction have combined to increase prices of upscale homes in the Stafford hamlet.

The subject property is unique in its acreage and excellent/quick access from the nearby I-205 interchange. It is also in close proximity to the I-5 corridor and the city limits of both Wilsonville and Tualatin. There is a severely limited inventory of vacant residential acreage nearby. The subject property would likely be marketed as a single acreage asset to a homebuilder or speculative buyer desiring to contract construction of a new home as soon as practical. As will be discussed more fully in the ensuing Site Analysis & Valuation section, the timing and specific deal points of home site land sales require considerable scrutiny when comparing end-prices paid to then-current market conditions. In many cases, prices and "perception of value" are projected by buyers and sellers many months prior to consummation of sale.

Exposure periods for similar parcels in the area have been short to very short. The number of similar acquisition targets (view acreage) are few, so buyers and homebuilders are highly cognizant if and/or when a site may be available for purchase. Buyers actively engage in dialogue with sellers directly; with or without broker representation. The demand for residential land in the outer Portland metropolitan area was approaching the frenzied level of the 2004-2007 market peak prior to the recent up-tick in mortgage interest rates.

Brief exposure periods for land are experienced market-wide and few similar parcels are actively listed for sale in or around Tualatin/Wilsonville. Scattered new homes continue to be built on a speculative or custom basis; approaching the pace of the peak 2004-07 years. Based on the subject property's outer location, good access/exposure and site size, we estimate a marketing period of up to six months, if listed at or near "as is" market value. We estimate the exposure time for the subject property at up to six months as well. The region's commitment to preventing urban sprawl via boundary constraints and promotion of high-density development is expected to insulate this submarket from owner exodus and over-building. Based on historic high demand for most I-5/205 corridor acreage, and tempered by the information cited above, we anticipate a marketing/exposure period of **about six months for the subject property, if listed at or near market value.** We estimate the exposure time for the subject property at six months as well.

APPRAISAL METHODOLOGY

There are three basic approaches that may be used to estimate market value.

The **Cost Approach** involves deducting accrued depreciation from the cost new of the improvements. Cost new is estimated on the basis of current prices for the components of the improvements. Depreciation is computed after analyzing the disadvantages or deficiencies of the improvements. Land value and entrepreneurial profit are added to the cost new of the improvements. Land value is developed using sales of similar sites. Entrepreneurial profit is the difference between the market value of the subject property and the cost to develop (cost of the improvements plus land value).

The **Income Capitalization Approach** is predicated on the assumption that there is a definite relationship between the income a property will earn and its value. Net income is the income generated before payment of any debt service. The process of converting it into value is called capitalization. Net income is divided by a capitalization rate. Factors such as risk, time, interest on the capital investment, and recapture of the depreciating asset are considered in the rate. Applying a capitalization rate based on indications from comparable sales reflects expectations of buyers and sellers in the market.

The **Sales Comparison Approach** analyzes sales of comparable properties with regard to the nature and condition of each sale. Logical adjustments and/or comparisons are made for varying physical characteristics. For land value, a common denominator is a price per SF or price per acre; for improved properties, it may be the price per SF, price per unit, or a gross income multiplier. This approach develops a good indication of value when sales of similar properties have occurred.

Reconciliation is the process by which the individual approach indications are weighed based on validity and applicability to the subject property market. The indications often indicate different values. After factors influencing each approach are carefully considered (i.e. quality and quantity of data, sophistication of the market, etc.), a final point estimate of value is concluded.

SCOPE OF APPRAISAL - Extent of Data Collection/Verification

During the course of this appraisal assignment, a number of steps were taken to arrive at the final value conclusions.

An inspection of the property was performed by Ryan S. Prusse, MAI prior to and on October 1, 2023. The most recent involved a complete walk-around of the acreage and viewing of all buildings. Conversations with the owner occurred to ascertain both historic and forward-looking conditions. A thorough search of all available resources including area real estate brokers, appraisers, office files, county records, and other property owners/managers was made to determine market trends, data, and other significant factors affecting the subject property. Market data including land sale comparables were verified, photographed and inspected.

In this appraisal, the Cost, Sales Comparison Approach and Income Capitalization Approaches were considered to estimate just compensation. The age of improvements and subjectivity associated with site valuation and depreciation calculation is judged to yield the Cost Approach inappropriate. The just compensation reported in this appraisal is the result of an on-site inspection of the subject property and the comparable properties, as well as complete analyses of the market.

Prior Appraisal Activity

Neither Ryan S. Prusse, MAI, nor RSP & Associates LLC have appraised the subject property during the prior three years.

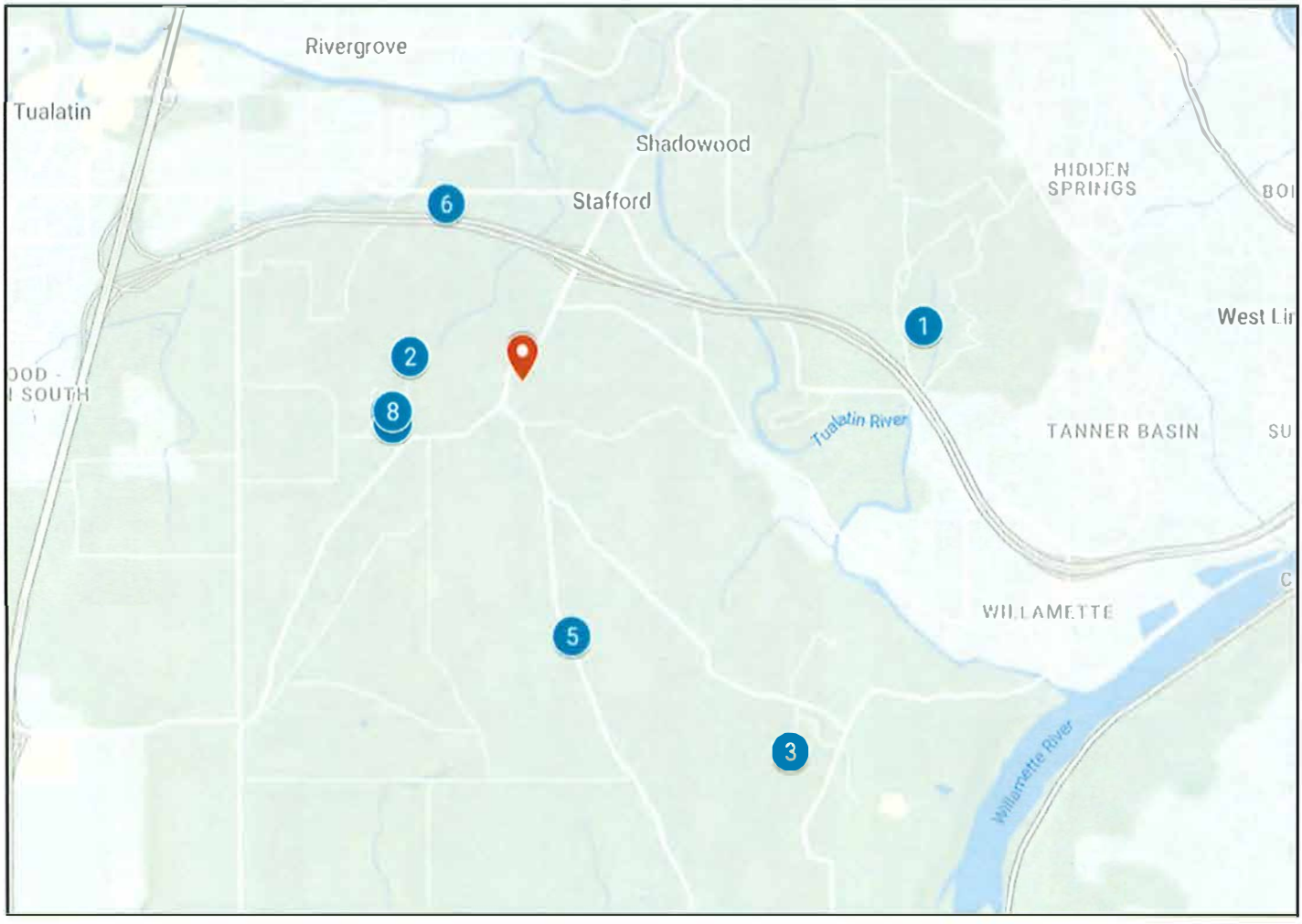
Land Valuation – Larger Parcel (Before)

To determine the underlying land value of the subject property, a sampling of land-heavy property transactions/listings were identified as similar to the subject property's rural acreage parameters, as well as potential for residential, farm/agribusiness use.

With regard to the proposed subject taking, the "larger parcel" is the entirety of the acreage only.

Semi-Rural Land Sales Summary

The following table summarizes the sale terms, as well as the general characteristics of the sites. A single comparability rating is assigned to the price per gross acre generated for each at the bottom of sale column on the Summary Table.



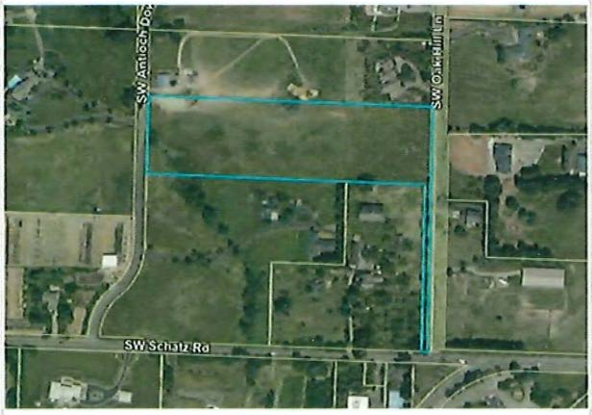
JUST COMPENSATION VALUATION – Takings & Damages (Cont.)

Home Site Sales	*Sale 1*	*Sale 2*	*Sale 3*	*Sale 4*	*Sale 5*	*Sale 6*	*Sale 7*	*Sale 8*	*Subject Property*
Address/Location	22288 South Grapevine Road	Oak Hill Lane (end of)	26420 SW French Oak Drive	22269 SW Oak Hill Lane	24568 SW Mountain Road	Borland Road	Rosemont Road & Whitten	22269 SW Oakhill Lane	21956 SW Stafford Road
Assessor Map &: Tax Lot IDs - County	Parcel 00393103 (Clackamas County)	Parcel 00397350 (Clackamas County)	Parcel 05030163 (Clackamas County)	Parcel 01380213 (Clackamas County)	Parcel 00754678 (Clackamas County)	Parcel 00395012 (Clackamas County)	Parcel 00310194 (Clackamas County)	Parcel 01380213 (Clackamas County)	Parcel 00398581 (Clackamas County)
City, ST	West Linn, OR	Tualatin, OR	West Linn, OR	Tualatin, OR	West Linn, OR	Tualatin, OR	West Linn, OR	Tualatin, OR	Wilsonville, OR
Source	County records, RMLS #21151564, broker	County records, RMLS #21633848, broker	County records, RMLS #21464028, broker	County records, RMLS #23473441, broker	County records, RMLS #22289947, broker	County records, RMLS #23432628, broker	County records, RMLS #23398676, broker	County records, RMLS #23473441, broker	
Date of Sale	8/13/2021	9/2/2021	4/19/2022	8/26/2022	12/14/2022	10/11/2023	Current listing	Current listing	As of 10/1/2023
Exposure Period	About 5 months @ $884,000; 2-week close	Just over 2 months @ $1,075,000 (multiple offers); 2-week close	About 9 months @ $1,750,000; immediate close	Less than 1 month @ $1,595,000; 1 month close	Just 1 week @ $900,000 (multiple offers); 60-day close	Nearly 2 years @ $995,000; 6-week close	1 month-to-date; also listed 3/2022 & 5/2021 @ same price	About 2 months to-date; previous sale (8/2022)	Assume up to 6 months
Total Sale Price	$800,000	$1,150,000	$1,500,000	$1,595,000	$900,000	$915,000	$2,300,000	$1,750,000	
Improvements	None	None	None	None	Clearing, grading, gravel driveway, partial foundation	None	None	None	Assume vacant
Adjustment	$0	$0	$0	$0	-$100,000	$0	$0	$0	TBD
Property Rights	Fee simple	Fee simple	Fee simple	Fee simple	Fee simple	Fee simple	Fee simple	Fee simple	Fee simple
Adjustment	$0	$0	$0	$0	$0	$0	$0	$0	
Sale Terms	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Assume cash or equivalent terms
Adjustment	$0	$0	$0	$0	$0	$0	$0	$0	
Sale Conditions	Arms' length	Arms' length	Arms' length	Arms' length	Arms' length	Arms' length	Listing (-5%)	Listing (-5%)	Assume arms' length
Adjustment	$0	$0	$0	$0	$0	$0	-$115,000	-$87,500	
Market Conditions	26 months	25 months	17 months	13 months	10 months	0 months	Current	Current	10/1/2023
Adjustment	10.67%	10.40%	7.26%	5.49%	3.99%	-0.14%	0.00%	0.00%	
Adjusted Land-Only Price	$885,370	$1,269,568	$1,608,904	$1,682,616	$831,890	$913,747	$2,185,000	$1,662,500	
Location	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet	Stafford Hamlet
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Land Area (Gross Acres)	5.21	5.85	3.44	6.13	4.95	6.16	13.88	6.13	4.63
Comparison	*Similar*	*Similar*	*Superior*	*Similar*	*Similar*	*Similar*	*Larger - Inferior*	*Similar*	
Vegetation / Tillable	Treed/pasture	Mixed treed/pasture	Finished lot in upscale rural/vineyard subdivision	Mostly cleared, partially fenced	Mostly treed; home site cleared	Mixed treed/pasture	Mostly pasture/treed	Mostly cleared, partially fenced	Limited, mostly uncleared or pasture
Comparison	*Similar*	*Similar*	*Superior*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Homesite / Development Rights	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)	1 home site	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Topography & View(s)	Level to sloping	Level to rolling	Rolling	Level to rolling	Sloping	Level to rolling	Level to sloping	Level to rolling	Level to sloping
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	*Inferior*	*Similar*	*Similar*	*Similar*	
Access	Rural collector	Rural collector; long strip	Semi-rural collector	Rural collector	Rural collector	Local artery	Off local artery	Rural collector	Local artery
Comparison	*Similar*	*Sl. Inferior*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Public Utilities	Power (req ext)	Power, natural gas	Power, natural gas, well, septic approved	Power only	Power, well/septic installed	Power only	Power only	Power only	Power only
Comparison	*Sl. Inferior*	*Similar*	*Sl. Superior*	*Similar*	*Superior*	*Similar*	*Similar*	*Similar*	
Zoning	RRFF5	RRFF5	AGF	RRFF5	EFU	RRFF5	EFU	RRFF5	RRFF5
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Highest & Best Use	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale) in neighborhood of $3M+ homes; 12.99-acre vineyard/clubhouse common areas added/apportioned to 2.00-acre fee simple acreage	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation	Rural-fringe home site (upscale); long-term future city annexation
Comparison	*Similar*	*Similar*	*Superior*	*Similar*	*Similar*	*Similar*	*Similar*	*Similar*	
Comments									
Price per Gross Acre	$169,937	$217,020	$467,705	$274,489	$168,059	$148,335	$157,421	$271,207	*Array Average*
Overall Comparison	***Sl. Inferior***	***Similar***	***Superior***	***Similar***	***Sl. Inferior***	***Sl. Inferior***	***Inferior***	***Similar***	*$234,272*

Rural Land Sale 1
22288 South Grapevine Road
West Linn, OR

Rural Land Sale 2
Oak Hill Lane (end of)
Tualatin, OR

Rural Land Sale 3
26420 SW French Oak Drive
West Linn, OR

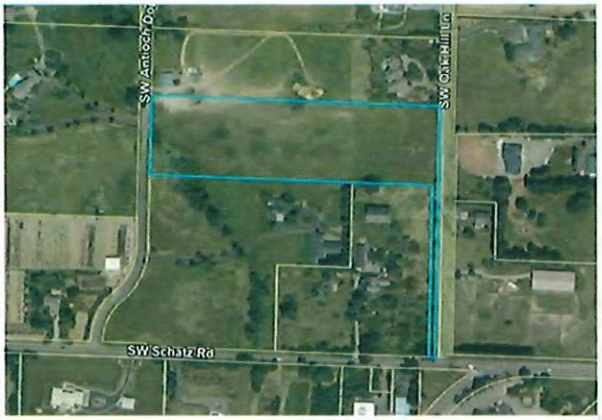


Rural Land Sale 4
22269 SW Oak Hill Lane
Tualatin, OR

Rural Land Sale 5
24568 SW Mountain Road
West Linn, OR

Rural Land Sale 6
Borland Road
Tualatin, OR

Rural Land Sale 7
Rosemont Road & Whitten
West Linn, OR



Rural Land Sale 8
22269 SW Oak Hill Lane
Tualatin, OR

The market comparables indicate wide-ranging gross prices ($800,000 to $1,595,000) prior to adjustments ($1,444,286 – array average).

Land Sale Adjustments

Improvements

Properties with significant contributing improvements on-site at time of sale require subjective adjustment to quantify the approximate component of value allocable to the land. For this analysis, the subject property and all comparable land transactions' improvements are similarly analyzed, via utilization of depreciated replacement cost new, lump sum estimates and paired-sales data. Generally, the degree of subjectivity required is high with most buyers/sellers rarely willing or able to provide contributory value assessments that correlate. Further, the presence of site utilities to include wells and drainfields may enhance land above a vacant status.

Adjustments applied to the Land Sales ranged from zero to $100,000 based upon an array of in-place improvements contributing (or detracting from) value in each transaction beyond the majority land component. The approximate contributory value basis assigned to each Land Sale will be utilized in the analysis of the subject property's improvement contribution(s) at the conclusion of this section.

Property Rights Conveyed

This appraisal estimates the market value of the fee simple interest of the subject site. All of the comparable sales involved the transfer of fee simple estates from the grantor to grantee. Sale 3 consisted of only a two-acre rural home site within an 11-lot subdivision that includes a shared vineyard/events building component. The land area was adjusted upward to reflect the proportionate share of common area(s). No other adjustments for conveyance of property rights are necessary.

Sale Terms

All sales represent cash equivalent property transfers. No further adjustments have been applied to any of the sale prices for financing terms. Non-cash sale terms are also weighed against a cash equivalency basis prior to comparison to the subject property. Sale conditions and property rights transferred are uniformly arms length and fee simple, respectively. Adjustments for seller-paid closing costs typical of FHA, VA and private contracts are made as appropriate.

Conditions of Sale

Another premise of market value relies upon "arms length" and "typical motivation" behavior between willing buyers and sellers. Sale conditions such as free rent-back provisions, seller-paid closing costs, inclusive personal property/equipment, trades or other forms of transaction consideration discovered have been analyzed where appropriate. No adjustments have been I amade for conditions of sale, as all are market rate transactions with no special circumstances affecting the negotiated prices.

Market Conditions (Time)

To the present day, market data/trends indicate steady appreciation in the three to 10 percent range when comparing back-to-back 12-month time periods. The most recent year-to-date 2023 market activity indicates far fewer listings/sales and low inventory levels in all price strata. The volume of acreage residential sale data is considerably lower than in-town home sale data; limiting the applicability of a precise market conditions adjustment. From mid-2021 through present day, rural land values have shown signs of appreciation at a slower pace than conventional homes (10 to 15 percent). For the purposes of this appraisal, a more-muted market conditions adjustment of five percent (annual) is applied to the land sales from closing to the current date of value to quantify the recent (COVID-19) market impacts.

Location

Most of the land sales are located in the same or similar rural or suburban-fringe areas as the subject site; most notably around the city limits of Wilsonville, Tualatin, West Linn and Sherwood (see Locator Map on prior page). Each of the properties is judged to be generally affected by similar socio-economic forces impacting value. It could be argued that the price/demand may increase as location moves north and westward based on residential market conditions around the suburban Portland region.

LandArea

The sales range from 3.44 to over 13.00 gross acres (6.47 acres – average). The comparables are both larger and smaller in size and effectively bracket the subject property's 4.63 gross acres. Generally, smaller sites often warrant higher prices per acre. In the realm of rural/semi-rural home sites, excess acreage beyond about three acres rarely earns a proportionate per acre premium. On a comparative basis, greater acreage is priced higher than lesser. Due to the

subjectivity involved, no precise adjustments or quantitative differences are assigned to the sale array on the basis of gross site size.

The subject property possesses significant buildable upland area with ample road frontage and very good access. Generally, dry pasture land is rated inferior to irrigated farmland, and timber land is often rated most inferior. For future suburban residential land, irrigation water rights are of little to no consequence.

Topography

Most of the land sales have level to rolling/sloping topography that is similar to the subject overall site. No specific adjustments for topographic differences have been assigned to the sale array, though it is recognized that the uneven topography of the subject site warrants mid-range valuation consideration on an average price per acre basis.

Access/Exposure

The subject site has a good semi-rural location less than five minutes to/from the I-5/205 corridors. While some of the comparables sales differ in access/exposure characteristics, no specific adjustments have been attempted. Sites with inferior access locations are subjectively weighted against any premiums associated with remote-privacy characteristics.

Public Utilities Available

No significant adjustments were applied for varying public utility availability. The subject property possesses access to the public electrical utility service which is typical of rural acreage that utilizes well pumps, agricultural processing equipment or other machinery. Limited well water (domestic) and telephone service is also available.

Irrigation/Soils and Crop Suitability

The sale properties are marginally comparable to the subject site based on lack of significant irrigation water rights.

Zoning

The subject property is zoned RRFF-5, outside the Urban Reserve Boundary established by METRO; signaling lower potential for future suburban development entitlements. The outlook is beyond 20 years with an array of contingent events required in order to achieve profitable exit via homebuilder sale. The land sale properties indicate an array of zonings/designations both in and outside of the existing UGBs. Highest and best use characteristics and future development plans indicate both superiority and inferiority to the subject site. Taking into consideration outright allowed uses, combined with conditional uses for each classification, most zones are similar. However, no explicit adjustments for variations in zoning or entitlements have been applied to the land sales; in favor of subjective analysis below.

Land Sale Analysis

The subject site is a significant tract (4.63-acre) adjacent to Stafford Road, less than one mile from the I-205 interchange. The Wilsonville and Tualatin city limits are each within about three miles, as are the I-5/I-205 freeway corridors. It is positioned in the midst of private lands with upscale home sites, agribusiness and permanent or row crops common. As noted, the rural land sales establish an adjusted price per gross acre range from just $150,000 to over $450,000. The adjustments focused on contributing improvements, appreciating market conditions, and other quantifiable features. The average of the adjusted transactions is $234,272 per gross acre. On an overall basis, the eight sales/listings suggest a $1,450,604 arithmetic mean.

The general Clackamas County inner rural region indicates a limited inventory of private holdings available for sale; particularly less than 10 acres. The subject property's immediate area is also characterized by strong rural residential demand and, to a lesser degree, an array of agri-business opportunities. The positive features of the land are its capacity for a rural dwelling, uneven topography (view) and suitable frontage/access. Compared to the array of land sales, the subject site is above average in terms of rural residential development potential and crop suitability. These features warrant mid-range valuation consideration. The going rate for similar sites is adequately expressed by the mid-range of the sales summarized and analyzed.

The extreme low-end of the market is about $150,000 per acre for close-in land appealing to rural residential buyers. Prices for future development land tend to be slightly to much higher, and land sales possessing near-to-mid-term entitlement potential also trade at premium prices around the METRO periphery. The high-end (3) of the sale range is established by the smallest sale, which was acquired in conjunction with a shared/common vineyard and events building in the luxury Tumwater project. The low-ends are from larger or inferior location home sites in peripheral Stafford. The limited number of home site sales/listings outside of Wilsonville/Tualatin in recent years indicate a current going rate in the range of $200,000 to nearly $400,000 per acre; regardless of specific agricultural potential. Overall, the subject site is rated dissimilar to both extreme points of the array. Based on an overall mid-range rating, we conclude about **$250,000 per gross acre is reasonable**.

Conclusion

After consideration of the physical, economic and legal attributes of the land sales/listings, compared to the subject site, it is our opinion that an appropriate value is $250,000 per acre on a fee simple basis. Multiplied by 4.63 acres, this equates to $1,157,500, rounded to **$1,158,000**. With a slightly below average site size, this conclusion is justifiably lower than the average adjusted land-only price of $1,450,604 derived from the eight-point sale array.

Taking(s) - Description of Proposed Easement

PGE's proposed easement along the subject property's western boundary is sought for construction, operation, and maintenance of the new 115kv transmission line to be constructed along SW Stafford Road. The following images display the approximate location of the upgraded pole to be constructed on the subject property, as well as a simulated view of the proposed transmission line upgrades along SW Stafford Road.

There is a proposal from PGE to acquire an approximately 3,497 SF easement for construction, operation, and maintenance of a new 115kv transmission line to be constructed along SW Stafford Road as part of the Tonquin: Rosemont-Wilsonville line project. The following map and description display the construction easement area in further detail.

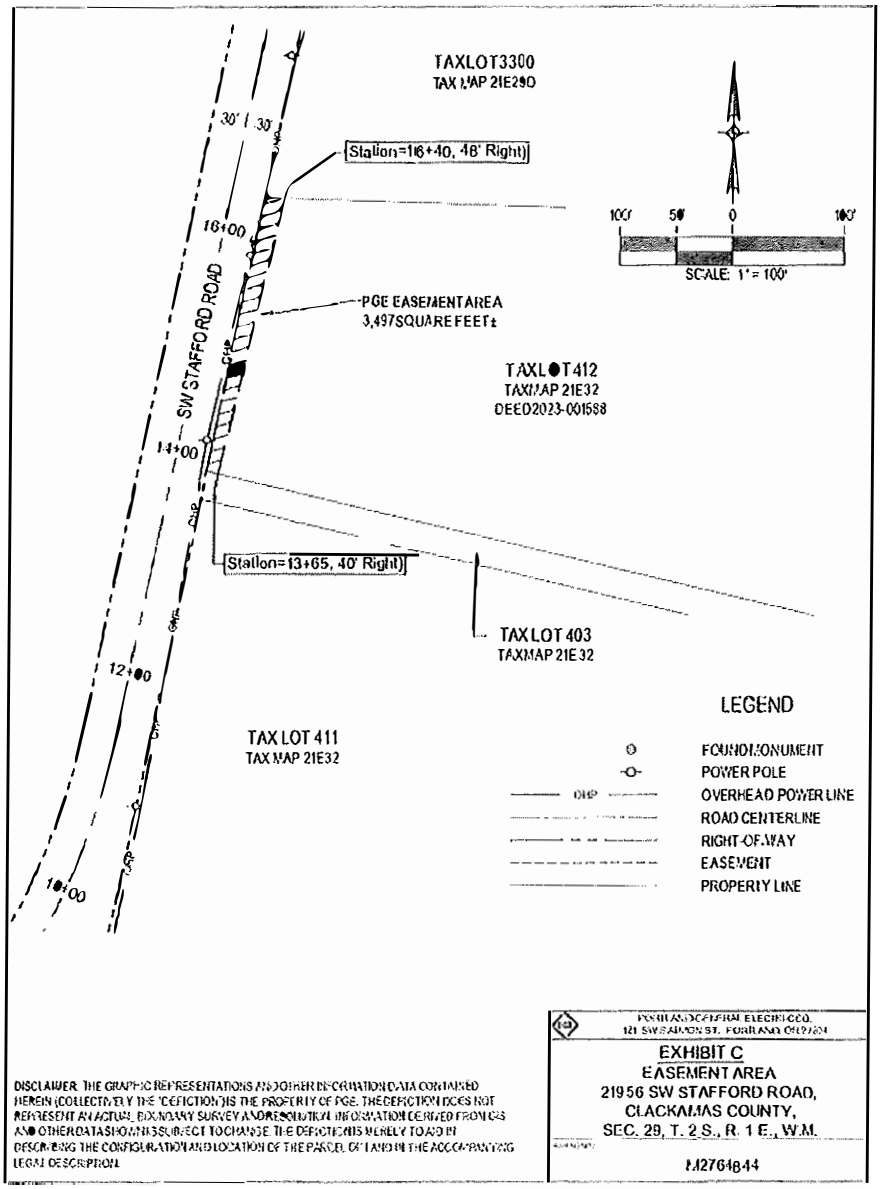


EXHIBIT "B"

EASEMENT AREA
21956 SW STAFFORD ROAD
LEGAL DESCRIPTION

A strip of land in a portion of Deed 2023-001588, Clackamas County Official records, in the southwest quarter of Section 29, Township 2 South, Range 1 East, Willamette Meridian, Clackamas County, Oregon, lying easterly of the centerline of SW Stafford Road, described in Exhibit "A" attached hereto, more particularly described as follows:

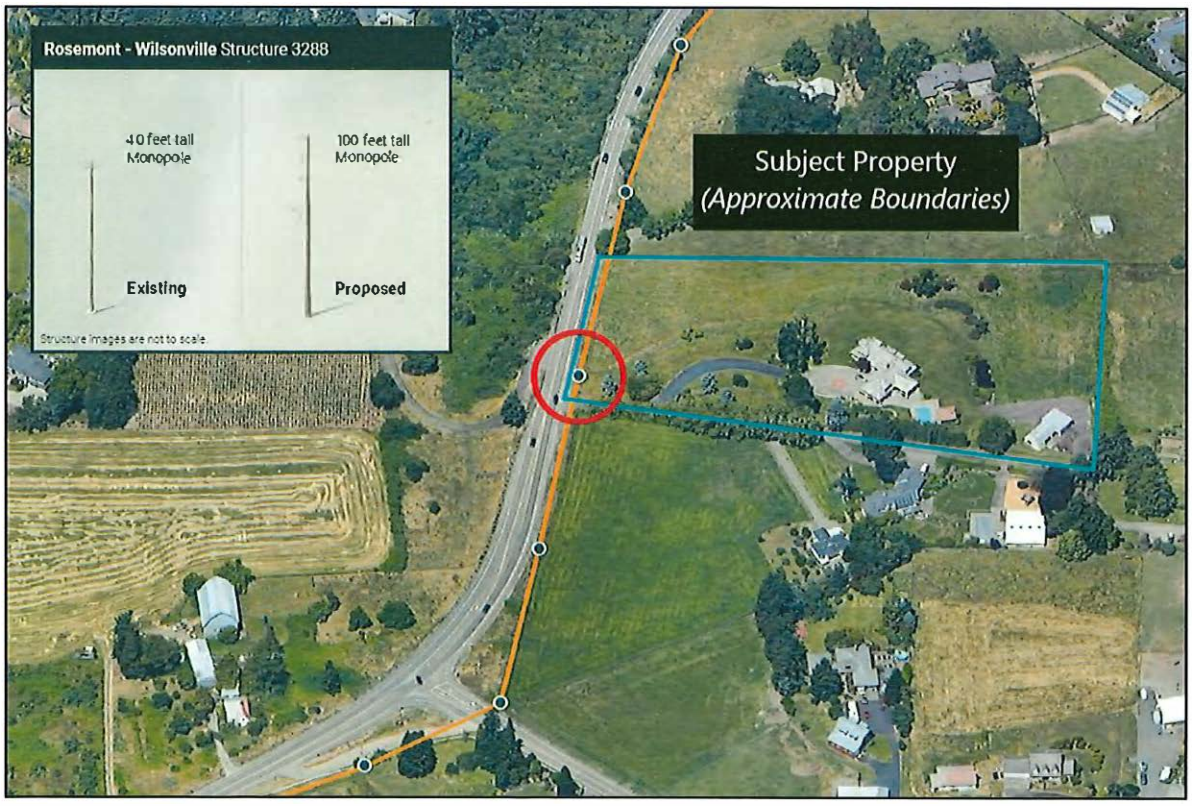
All of that parcel described in said Deed 2023-001588, lying westerly of, when measured at right angles or radial to, a line described as follows:

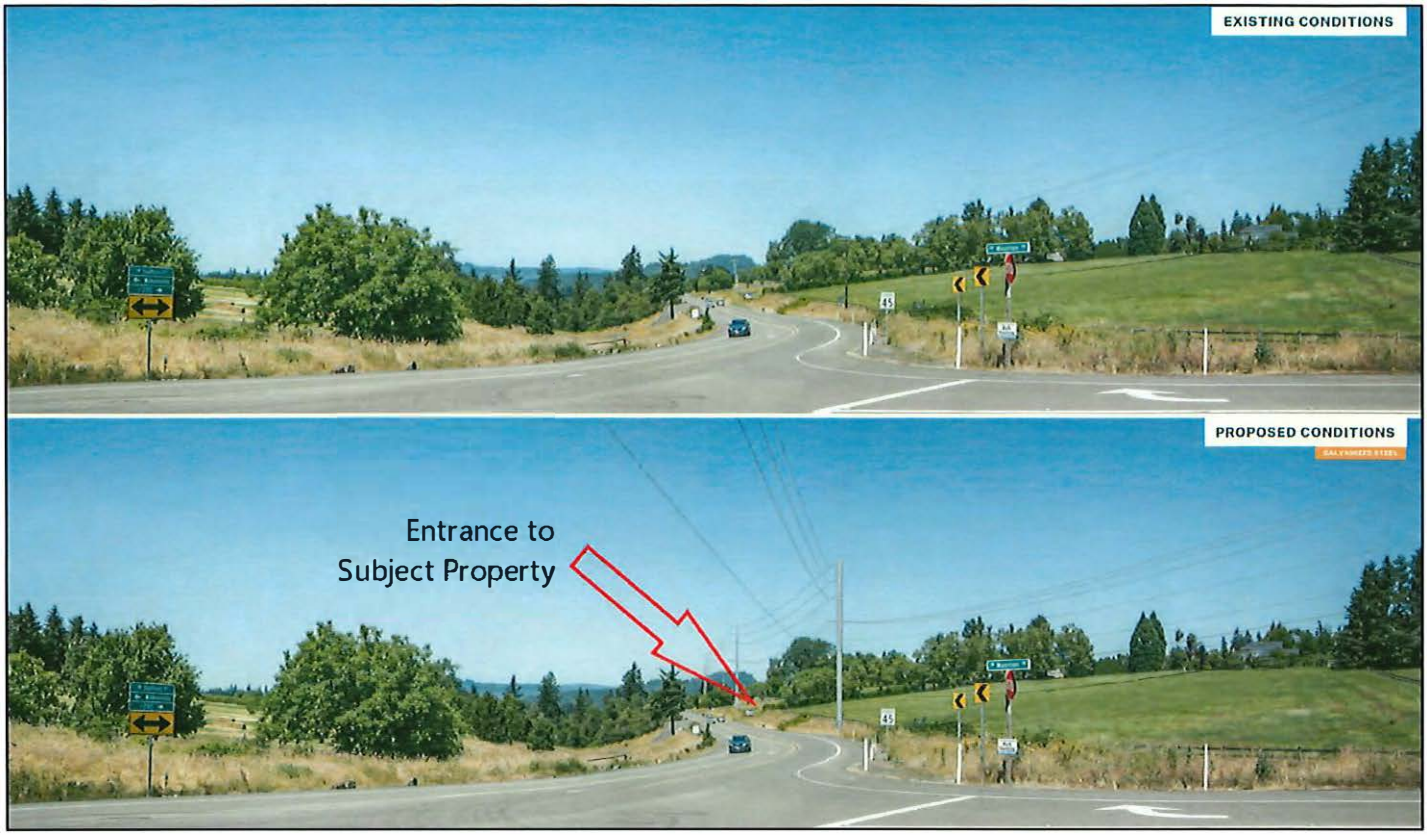
Beginning at Engineers station 13+65, 40 feet right, as per Clackamas County survey number 2011-176 to centerline Station 16+40, 48 feet right.

EXCEPT any portion lying within the right-of-way of SW Stafford Road.

The above described strip of land contains 3,497 square feet, more or less.

The above described parcel is shown on Exhibit "C" attached hereto, which by reference thereto is made a part hereof.





Valuation of Taking (Proposed Easement)

Based on the $250,000 per acre "before" valuation for the larger 4.63-acre parcel, a valuation basis of $5.7392 per SF is applicable for the 3,497 SF proposed utility easement. Little to no future use of the land will be afforded the property owner upon recordation of the easement. While landscaping may remain (or be enhanced) few other rights or development utility remains with the high-voltage powerline corridor in-place. For this analysis, it is reasonable to conclude 100 percent loss of the fee simple value based on the per SF figure shown above. By calculation, the proposed easement (taking) warrants a just compensation value of **$20,070** (3,497 SF x $5.7392).

Damages to Remainder

The applicable measurement of damages for just compensation purposes is via a before/after valuation methodology whereby the singular variable in the after condition is the proposed easement and its associated quantifiable impacts.

Property Description (After Condition)

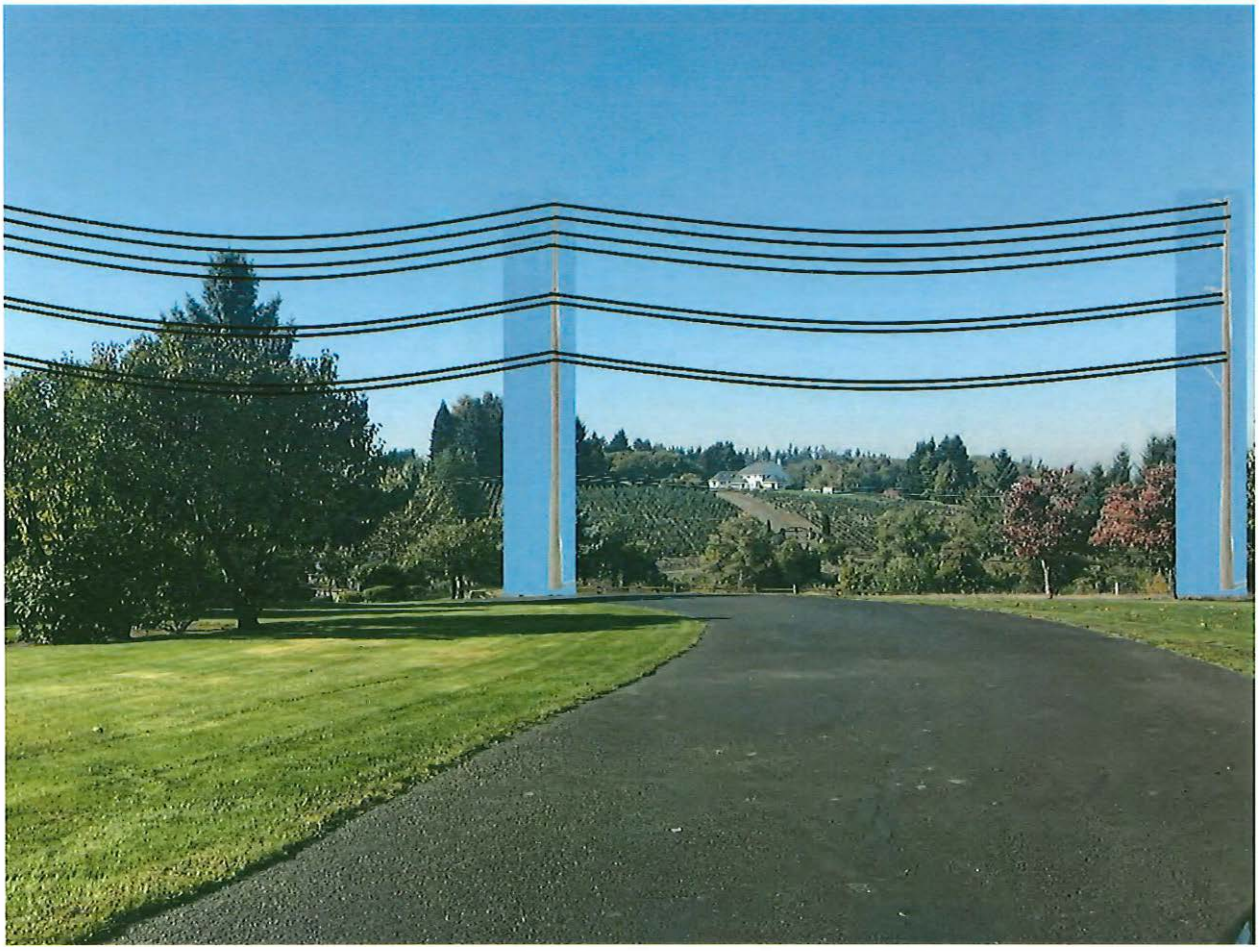
The subject property remains as described within the primary body of this appraisal report (before condition) with the exception of the proposed PGE easement. As noted, the easement will create (or perfect) a high-voltage powerline corridor along the existing Stafford Road

right-of-way and PGE utility easements. The added size/width of the easement corridor will allow construction of taller monopole-style towers with both transmission and distribution capabilities, as well as capacity for other cabled services below.

Careful review of the proposed easement language provided by PGE (via Universal Field Services) confirms that there are no stated limitations on the easement beneficiary in terms of pole height, pole location(s), pole diameter, pole color, number of wires/cables, thickness of wires/cables, guy wires (pole supports), connecting stancions, etc. Therefore, the powerline corridor easement has the potential to severely impair at least the western view of the subject property from the existing home site.

The prior project photographs depict the approximate location, scale and height of the proposed powerline corridor improvements. Specific to the subject property, the following current photograph is the before view from the home site toward Stafford Road and the location of the proposed high-voltage powerline corridor.

Conversely, the altered "proposed" photograph below is one visual representation of the impaired western view impacted by "potential" utility development enabled by the proposed PGE corridor easement.



In addition to the obvious visual and view impairments accompanying the easement and some of the potential utility improvements allowed, other property rights to be considered include audio interference (buzzing) typical of overhead high-voltage powerlines. As noted, there is no noise limitation or expressed warranty that the powerlines will not emanate sound at a level disruptive to the before condition.

Other negative market viewpoints also include ElectroMagnetic Fields (EMF) and increased risk of wildfires caused by downed lines.

Highest & Best Use Analysis (After Condition)

In the "before" scenario, the subject property was projected to possess a luxury/estate-quality rural residential highest and best use; given its location, access and physical features (views, privacy, and land area). A high-end new home value threshold is established by a typical 4:1

land-to-home price ratio common in the local (Stafford Hamlet) submarket. As noted in the prior "before" home site valuation section, the unimpacted land value was $1,158,000.

From the perspective of legally permissible, physically possible, economically feasible and maximally productive, the highest and best use of the subject property home site is analyzed in the specific "after" condition. Based primarily on the described visual and audio impacts of the high-voltage overhead powerline easement, an after highest and best use conclusion is rendered herein.

With the significantly-impaired westward view and unlimited noise potential from the overhead lines, the subject property would no longer be viewed as a premium semi-rural home site by much of the market. Further, the clear negative stigma associated with EMF typical of high-voltage lines, the site would no longer be considered for new construction of a luxury home in the $4,000,000-plus range. It is more likely that a more-modest (base-level) home would be constructed, which in the Stafford Hamlet submarket is only about $2,000,000. Therefore, we conclude that the highest and best use of the subject home site in the "after" condition is a moderately-priced rural residence priced from about $2,000,000.

"After" Valuation – Home Site Only

Similar to the prior "before" ("as is") home site valuation, we may determine the land value of the subject property via comparison of a sampling of land-heavy property transactions/listings identified to be similar to the subject property's ("after" – impaired) rural acreage parameters.

In addition, we have also consulted a wide-array of studies which focus on rural/residential value impacts associated with high-voltage powerline corridors, including both the health risks and market stigma attached to EMF exposure. Further, we have also consulted with local real estate brokers to gain pricing/preference insights of current buyer sentiment among rural home and home sites

Sales Comparison Approach ("After")

Semi-Rural Land Sales Summary

The following table summarizes the sale terms, as well as the general characteristics of the sites. A single comparability rating is assigned to the price per gross acre generated for each at the bottom of sale column on the Summary Table.

JUST COMPENSATION VALUATION – Takings & Damages (Cont.)

Rural Land Sales (Impaired)	*Sale 1*	*Sale 2*	*Sale 3*	*Sale 4*	*Subject Property*
Address/Location	SW Grahams Ferry Road	20300 SW 65th Avenue	10965 SW Tonquin Loop	4605 SW Homesteader Road	21956 SW Stafford Road
Assessor Map & Tax Lot IDs - County	Parcel R2121477 (Washington County)	Parcel 00396306 (Clackamas County)	Parcel R558881 (Washington County)	Parcel 00755613 (Clackamas County)	Parcel 00398581 (Clackamas County)
City, ST	Sherwood, OR	Tualatin, OR	Sherwood, OR	Wilsonville, OR	Wilsonville, OR
Source	County records, RMLS #20466368, broker	County records, RMLS #21009037, broker	County records, RMLS #23502158, broker	County records, RMLS #23408244, broker	
Date of Sale	12/30/2020	10/24/2022	Current listing	Current listing	As of 10/1/2023
Exposure Period	About 5 months @ $349,900; reduced to $339,900 (8/2020)	Mutiple years @ $395,000; reduced multiple times until $265,000 (6/2022)	About 8 months to-date @ $2,000,000; reduced 10/2023	About 1 month to-date	Assume up to 6 months
Total Sale Price	$323,800	$265,000	$1,400,000	$1,250,000	
Improvements	None	None	DW MH of little value, well/septic, dated outbuildings	2,065 SF ranch-style home (3BR-2BA, circa 1970s, partially-updated), RV/boat garage, 2,500 SF shop	Assume vacant
Adjustment	$0	$0	-$100,000	-$250,000	TBD
Property Rights	Fee simple	Feesimple	Fee simple	Feesimple	Fee simple
Adjustment	$0	$0	$0	$0	
Sale Terms	Cash to seller	Cash to seller	Cash to seller	Cash to seller	Assume cash or equivalent terms
Adjustment	$0	$0	$0	$0	
Sale Conditions	Arms' length	Arms' length	Listing (-15%)	Listing (-15%)	Assume arms' length
Adjustment	$0	$0	-$210,000	-$187,500	
Market Conditions	33 months	11 months	Current	Current	10/1/2023
Adjustment	13.77%	4.68%	0.00%	0.00%	
Adjusted Land-Only Price	$368,378	$277,415	$1,090,000	$812,500	
Location	Sherwood/Wilsonville fringe	Tualatin fringe	Sherwood/Wilsonville fringe	Stafford Hamlet	Stafford Hamlet
Comparison	*Sl. Inferior*	*Similar*	*Sl. Inferior*	*Similar*	
Land Area (Gross Acres)	5.00	2.22	4.85	3.94	4.63
Comparison	*Similar*	*Sl. Superior*	*Similar*	*Similar*	
Vegetation / Tillable	Mixed treed/pasture	Mixed treed/pasture	Mixed treed/pasture	Mostly cleared, partially fenced	Limited, mostly uncleared or pasture
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	
Homesite / Development Rights	1 home site; potential for inclusion in UGB (distant)	In city limits (Tualatin)	Currently 1 home site; in UGB	Currently 1 home site; potential for inclusion in UGB (distant)	1 home site; potential for inclusion in UGB (distant)
Comparison	*Similar*	*Superior*	*Superior*	*Similar*	
Topography & View(s)	Rolling to sloping	Rolling to sloping	Mostly level	Level to rolling	Level to sloping
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	
Access	Local collector	Local artery	Rural collector	Rural collector, long access strip	Local artery
Comparison	*Similar*	*Similar*	*Similar*	*Similar*	
Public Utilities	Power only (via extension)	All public (extension from adjacent subdivision)	Power only (water/sewer requires extension)	Power only	Power only
Comparison	*Sl. Inferior*	*Superior*	*Sl. Superior*	*Similar*	
Zoning	FD-20	RL	RL	RRFF5	RRFF5
Comparison	*Similar*	*Superior*	*Superior*	*Similar*	
Powerline Proximity / Impact	Up to 1/2 of acreage traversed by high voltage powerlines (no towers on-site)	Just south of Sagert Farms; adjacent I-205 freeway (noise)	About 1/2 of acreage traversed by high voltage powerlines (no towers on-site)	High voltage powerline tower at NWC of site; corridor traverses about 100' of northern (rear) boundary, mature trees block significantly	High voltage powerline corridor along entirety of road/access frontage impairing western view
Comparison	*More Impacted*	*More Impacted*	*More Impacted*	*Less Impacted*	
Highest & Best Use	Rural-fringe home site; long-term future city annexation	Low-density residential subdivision development (assemblage)	Future city annexation & low-density residential subdivision development (assemblage)	Rural-fringe home site (redevelopment); long-term future city annexation	Rural-fringe home site (base); long-term future city annexation
Comparison	*Sl. Inferior*	*Superior*	*Superior*	*Similar*	
Price per Gross Acre	$73,676	$124,962	$224,742	$206,218	*Array Average*
Overall Comparison	*Inferior*	*Similar*	*Superior*	*Sl. Superior*	*$157,399*

Sale 1
SW Grahams Ferry Road
Sherwood, OR

Sale 2
20300 SW 65th Avenue
Tualatin, OR

Sale 3
10965 SW Tonquin Loop
Sherwood, OR

Sale 4
4605 SW Homesteader Road
Wilsonville, OR

The second set of (impaired) market comparables indicate wide-ranging gross prices ($265,000 to $1,400,000) prior to adjustments ($971,667 – array average).

Land Sale Adjustments

The same adjustment methodology and parameters are employed in this second ("after") analysis as the initial home site valuation, including price treatment of on-site improvements, property rights differences, variation of sale terms/conditions and passage of time (inflation). Both Listings 3 and 4 were reduced by 15 percent to reflect a more reasonable meeting-of-the-minds, rather than the current asking prices.

The market-adjusted, land-only prices from the impaired land sale array suggest a price range from $277,415 to $1,090,000 ($637,073 – average).

Most of the land sales are located in the same or similar rural or suburban-fringe areas as the subject site; most notably around the city limits of Wilsonville, Tualatin, West Linn and Sherwood (see Locator Map on prior page). Each of the properties is judged to be generally affected by similar socio-economic forces impacting value.

The secondary land sales range from just 2.22 to 5.00 gross acres (4.00 acres – average). The comparables are both larger and smaller in size and effectively bracket the subject property's 4.63 gross acres. These land sales possess level to rolling/sloping topography that is similar to the subject site overall. The subject site has a good semi-rural location less than five minutes to/from the I-5/205 corridors. While some of the comparables sales differ in access/exposure characteristics, no specific adjustments have been attempted.

No significant adjustments were applied for varying public utility availability, though some of the sites are positioned at the edge of city service areas.

The subject property is zoned RRFF-5, outside the Urban Reserve Boundary established by METRO; signaling lower potential for future suburban development entitlements. The outlook is beyond 20 years with an array of contingent events required in order to achieve profitable exit via homebuilder sale. The land sale properties indicate an array of zonings/designations both in and outside of existing city limits or UGBs. Highest and best use characteristics and future development plans indicate both similarity and superiority to the subject site.

An additional comparative feature shown on the prior Land Sales Summary table is powerline (or other adversity) proximity/impact.

Land Sale Analysis

Sale 1 is a 5.00-acre home site with up to one-half of the acreage negatively impacted by traversing high-voltage powerlines; which is rated inferior to the subject property's "after" condition. The adjusted land-only price is $368,378 and rated inferior to the subject property in the "after" condition. Further, its low-end $73,676 per acre value indicator is also rated inferior.

Sale 2 is a 2.22-acre parcel with uneven topography directly abutting the ODOT I-205 freeway right-of-way. It sold for an adjusted price of $277,415 ($124,962 per acre) and possesses a low-density residential entitlement (Tualatin), that may allow some type of multi-lot subdivision. Based on the proximity to freeway noise, the negative impact is rated slightly more-significant than the impairments projected for the subject property herein. Superior zoning and inferior traffic noise warrant a similar overall price per acre rating.

Listing 3 is also within city limits (Sherwood) with similar low-density residential subdivision entitlement. It measures 4.85 acres with an adjusted land price of $1,090,000 ($224,742 per acre). There are high-voltage powerlines crossing the site; impacting about one-half of the acreage (no-build). This is a more-significant impact than those projected for the subject property, though the RL-zoning will allow for subdivision lots on the unimpaired acreage. Overall, this land price indicator is rated superior to the subject property.

Lastly, Listing 4 is a Stafford Hamlet home site (3.94 acres) with long/strip access off Homesteader Road. It has been on the market for just one month, and includes functional rural residential improvements deducted from price. There is a high-voltage powerline corridor along about 100 feet of the northern/rear boundary with mature trees around. Compared to the subject property, the view impacts are lesser, though the easement is wider/deeper. We rate the $206,218 per acre adjusted price to be slightly superior to the subject property's "after" condition.

The subject site is a significant tract (4.63-acre) adjacent to Stafford Road, less than one mile from the I-205 interchange. The Wilsonville and Tualatin city limits are each within about three miles, as are the I-5/I-205 freeway corridors. It is positioned in the midst of private lands with base to upscale home sites, agribusiness and permanent or row crops common. As noted, the rural land sales establish an adjusted price per gross acre range from just $73,676 to over $220,000. The adjustments focused on contributing improvements, appreciating market conditions, and other quantifiable features. The average of the adjusted transactions is $157,399 per gross acre. On an overall basis, the four sales/listings suggest a $637,073 arithmetic mean.

Compared to the array of land sales, the subject ("after") site is about average in terms of rural residential development potential. Its size is near the top of the range, which often suggests high-end overall price and lower-end price per acre conclusions. The extent of powerline/freeway impairment is rated less impacted than three of the four market examples, and slightly inferior to the two sites with low-density residential subdivision potential. The extreme low-end of the market is about $400,000 ($74,000 per acre) for close-in land with powerline easement(s); still offering appeal to rural residential buyers (base priced). Prices for future development land tend to be slightly to much higher. The top of the sale range is nearly $225,000 per acre (adjusted listing price) for a more-impacted parcel with subdivision potential. The most similar market examples are Sale 2 and Listing 4 ($125,000 and $206,000 per acre) at adjusted prices from $227,415 to $812,500. The low-end price is only 2.22 acres and positioned adjacent to I-205 in the Tualatin city limits. The higher price is 3.94 acres and impacted by a 100-foot wide high-voltage powerline corridor that is slightly less impactful than what is projected for the subject property.

The limited number of home site sales/listings outside of Wilsonville/Tualatin in recent years indicate a current going rate in the range of $125,000 to nearly $200,000 per gross acre. Overall, the subject site is rated more similar to the lower point of the array. Based on an overall mid-range rating, we conclude about **$150,000 per gross acre is reasonable**.

Conclusion

After consideration of the physical, economic and legal attributes of the land sales/listings, compared to the subject site, it is our opinion that an appropriate value is $150,000 per acre on a fee simple basis. Multiplied by 4.63 acres, this equates to $694,500, rounded to **$695,000**.

With a slightly above average site size, this conclusion is justifiably slightly higher than the average adjusted land-only price of $637,073 derived from the four-point alternative land sale array. In comparison to the prior "before" home site value concluded herein, the ***$463,000*** calculated discount is minus 40 percent. This diminution accrues to only the land component of the rural residential property, rather than its total value. As noted, the property owner acquired the home and acreage during early 2023 at a cash price of $2,550,000 and invested another $250,000 in repairs, upgrades and special features for a total investment of about $2,800,000. The same $463,000 calculated discount compared against the owners' whole investment suggests a *16.54 percent diminution.*

Market Studies

Historically, the acquisitions of powerline easements from private property owners by local/regional utilities have prompted a considerable number of theories on both sides of the valuation spectrum. The two sides include parties with positions that high-voltage overhead lines result in nearly zero negative to slightly positive enhancements (minority) and those insistent on slight to significant value diminution as the direct impact of traversing or proximate overhead power lines (majority). A significant number of position papers and market studies have been published in the litigation/valuation arena dating back to the mid-1900s. Each focus on one or more of the visual, audio and health/EMF issues that influence land and homeowner purchasing decisions. It should be noted that the sponsor of each study tends to be predictive of the general diminution conclusions reported. Specifically, studies from government or utility entities tend to minimize valuation impacts, while those prepared by (or for) property owners faced with eminent domain litigation tend to magnify valuation impacts.

Of the more than 20 articles, studies and fact sheets reviewed, we believe that the following excerpt from a study completed for the South Dakota Public Utilities Commission in 2013 provides a broad and even-handed description of the existing literature addressing the effects and perceptions of high voltage electric transmission lines on property values. It is titled Valuation Guidelines for Properties with Electric Transmission Lines, prepared by Kurt C. Kielisch, ASA, IFAS, SR/WA, R/W-AC; the entirety (21 pages) of which is included as an exhibit in the Addenda of this report.

> In 1990, the EMF debate was so prevalent that members of Congress passed a bill that would limit the public's exposure to EMFs. A couple years later, in response to public concern about EMFs, Congress established the EMF-RAPID program in 1992. Its purpose was to coordinate and execute a limited research program to fill information gaps concerning the potential health effects of exposure to EMFs, to achieve credibility with the public that previous research has not earned, and to coordinate and unify federal agencies' public messages about possible EMF effects....

Several years later in 1999, the National Institute of Environmental Health Sciences studied the health effects of EMF exposure and found conflicting results. Though they concluded that the evidence is weak linking EMFs to health risks, they also found that the most common health risk was leukemia (mostly appearing in children). They also found a fairly consistent pattern of a small, increased risk of childhood leukemia with increasing exposure. The majority of the panel's voting members voted to acknowledge EMFs as a possible human carcinogen. They concluded that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence.

In 2005, UK scientists conducted a case-control study on childhood cancer in relation to distance from high voltage power lines in England and Wales. They found an association between childhood leukemia and proximity of home address at birth to HVTLs. "The apparent risk extends to a greater distance than would have been expected from previous studies" although they have yet to discover an "accepted biological mechanism" to explain their results.

Though an accepted biological mechanism remains elusive, an early nineties case made it possible to link loss of property value to a fear of EMFs. In the 1993 case, Criscuola v. Power Authority of the State of New York, the court found that, "there should be no requirement that the claimant must establish the reasonableness of a fear or perception of danger or of health risks from exposure to high voltage power lines" and "Whether the danger is a scientifically genuine or verifiable fact should be irrelevant to the central issue of its market value impact."

Utilities say that landowners should not be able to recover damages or injunctive relief "based on myth, superstition or fear about an alleged health risk that is not supported by substantial scientific or medical evidence."

With the EMF debate unresolved, and evidence for both sides of the argument, some communities are reluctant to approve new HVTLs...and may even legally oppose them.

Fear can impact the public's buying habits. Residential homeowners' resistance to abutting high voltage electric transmission lines (HVTLs) is well documented. Though homeowners may fear negative effects on their community and environment, their first point of opposition is usually safety, especially if there are many children in the neighborhood. Though the 1979 Wertheimer study linking EMFs to childhood leukemia has long been contested, supported, and contested again, the very existence of a debate about the safety of EMFs sows enough doubt in residents' minds to justify the fear. And that fear can influence the values of nearby homes.

When given the choice to purchase two identical homes, one with such health concerns and the other without, most buyers will choose the home without the concern, forcing the homeowner to lower their price. Aesthetic impact can also influence a property's value. Many residents don't want to look at HVTLs, something they consider to be an "eyesore." One of the hardest properties to sell can be one encumbered by an HVTL. Unlike roadway proximity, its effect isn't readily noticeable or measurable. Though homes near HVTLs typically have larger lots (and that can be a benefit), the biggest disadvantage is the fear factor surrounding EMFs.

In the early nineties, when EMFs were just entering the public consciousness, it was difficult to find a measurable price difference between homes close to an HVTL and those that were not. However, two researchers (Hsiang-te Kung & Charles F Seagle) conducted a case study on the impact of power transmission lines on property values and found that such negligible results depended almost entirely on the public's ignorance of EMFs and their related issues. They also found that the amount of potential property loss increased dramatically the more homeowners were aware of the potential health impacts of EMFs.

The effect of HVTLs on property values has long been a matter of contention with many studies either proving a diminutive effect or none at all. Methodologies differ and different areas of the country register different results. Some markets (ex. high-end homes) are very sensitive to HVTLs whereas others (ex. low-end homes) hardly notice them. The size of the line and the pylons are also a factor. A 69kV power line will have less effect than will a 1,200kV power line. Distance from the easement also matters. Some studies combine homes thousands of feet from HVTLs with those directly encumbered. Research sponsors also may play a factor with many being funded by the utilities themselves.

For example, in a 2007 study funded by a utility, researchers Jennifer Pitts and Thomas Jackson conducted market interviews, literature research and empirical research and reported little (if any) impact of power lines on property values. However, they did note that there is an increasing recent opinion that proximity to power lines has a slight negative effect on property values.

Two California appraisers, David Harding and Arthur Gimmy, published a rebuttal to the Pitts-Jackson study that disagreed with their methodology, took issue with their sponsor, addressed omitted information, and failure to conduct before-and-after cost comparisons.

Pitts and Jackson responded to the rebuttal and defended their methodology, saying they purposely limited their literature research to only include empirical, peer-reviewed articles from The Appraisal Journal and the American Real Estate Society journals. They acknowledged they conducted the research for "a litigation matter" but did not elaborate on their sponsor.

In a similar case, researchers James A Chalmers and Frank A Voorvaart published a large study spanning nearly 10 years and over 1,200 properties in which they found that an encumbering HVTL had only a small negative effect on the sale price of a residential home. In half of their samples they found consistent negative property values mostly limited to less than 10 percent, with most between 3 percent-6 percent.

They summarized their findings as showing "no evidence of systematic effects of either proximity or visibility of 345kV transmission lines on residential real estate values." They did, however, say that "an opinion supporting HVTLs effects would have to be based on market data particular to the situation in question and could not be presumed or based on casual, anecdotal observation. It is fair to presume that the direction of the effect would in most circumstances be negative, but the existence of a measurable effect and the magnitude of such an effect can only be determined by empirical analysis of actual market transactions."

Appraiser Kerry M. Jorgensen disagreed with the authors' views that paired data analysis and retroactive appraisal were "too unrefined and too subjective to be of much value," and that only through objective statistics could the effect of HVTLs on property value be truly understood. He argued that relying too much on statistics can be dangerous as there could be problems with how the data is compiled and interpreted. For example, he points out that out of their set of 1,286 qualifying sales, only 78 (6 percent) are directly encumbered by a power line easement, and only 33 (2.6 percent) more are within 246 feet of a power line easement.

The Chalmers-Voorvaart study also attracted the interest of Washington Post Real Estate writer Elizabeth Razzi who wrote that the study was paid for by Northeast Utilities and completed before they proposed a high-voltage transmission grid in New England. She also wrote that both Chalmers and Voorvaart are appraisers and expert witnesses for the power industry.

Several studies have found that, over time, property value damages from nearby HVTLs diminish though properties near the pylons stay permanently damaged no matter the elapsed time. In the first case, though the property owner may grow accustomed to HVTLs and thus think less of them, new potential buyers aren't as desensitized and the diminutive impact is fresh to them.

Realtors usually oppose HVTLs. Nearly all surveyed realtors and appraisers in the Roanoke and New River valleys of Virginia said that close proximity to HVTLs would diminish property values by as much as $25,000, but mostly for high-end homes. Lower-end homes see little impact.

Diminished property values can also impact communities. In one case, Delaware residents were worried that a proposed 1,200MW HVTL would depress local property values, thus weakening the local tax base and leading to higher taxes to offset the losses. Kent Sick, author of a 1999 paper on power lines and property values, projects losses from a few percentage points to 53 percent.

In Atlanta, a local realty group named Bankston Realty ranked power lines as the number one item that damages resale value, followed closely by busy roads and inferior lot topography. They advise buyers to pay 15 percent less of the asking price if power lines are present, and they advise sellers to accept it as a logical perception of value.

Evidence suggests that HVTLs affect the health of residents in close proximity. Evidence also suggests that the power lines have little to no impact on property values because encumbered lots are often larger and more private than unencumbered lots, resulting in no diminution of purchase price. However, most studies did observe longer time on the market for encumbered properties.

Other factors to consider regarding the valuation of HVTL impacted rural properties are stray voltage, agricultural equipment concerns operating under and near the line, health issues of workers in close proximity of the lines, health concerns of farm animals in close proximity of the lines, stray voltage, the concerns of public in relation to electro-magnetic fields, safety issues

> regarding bare wires of the transmission line and other concerns addressed in the literature study to follow.
>
> In conclusion, it can be stated with a high degree of certainty that there is a significant negative effect ranging from -10 percent to -30 percent of property value due to the presence of the high voltage electric transmission line. The actual loss depends on factors of land use, location of the power line and its size.

Based upon the excerpted article and the multiple studies referenced therein, a reasonable conclusion is that combined visual, audio and EMF risks (or justs its market stigma) warrant value diminution conclusion(s) on a varying scale that considers the specifics of the property appraised, magnitude of the potential HVTL system and anticipated buyer profiles in the immediate submarket. For the subject property, all three of the major impacts are present and would likely result in considerable buyer hesitancy or outright exclusion when comparing its purchase to that of a comparable alternative.

Compared to the 40 percent (land-only) and 16.50 percent (whole property) diminution calculated in the prior Sales Comparison Approach section, there is a high-degree of correlation between the two perspectives.

Broker Opinions

We also conducted multiple local realtor interviews among those with either specialization or considerable transactional experience in the Stafford Hamlet submarket. As described, this rural residential neighborhood is home to a very high proportion of luxury/acreage homes for residents within the Portland metropolitan region. With top-end demographic characteristics, excellent freeway proximity and few negative externalities, the Hamlet possesses a finite supply of existing homes priced from about $1,000,000 to more than $5,000,000.

The low-end is typified by older/smaller homes on acreage that are often purchased with intent to demolish and replace with a larger/custom home. For new homes, $2,000,000 is the approximate low-end of the builder market when considering the price of two-to-10 acre parcels and the costs of construction; usually without any custom site improvements like pool/poolhouse, sport court, accessory dwelling unit (ADU), gated entry/fencing, barn/outbuilding, elaborate gardens, etc.

On the other end of the spectrum, there are dozens of residential estates with new or updated homes exceeding 6,000 SF and a wide-array of value contributing site improvements; priced in excess of $3,000,000. Even in the midst of a rising mortgage interest rate environment, the extreme shortage of move-in ready homes for sale has allowed prices to remain stable to slightly increasing at or greater than the pace of historic inflation.

We attempted to illicit responses from realtors that specifically to spoke to historic transactional experience, buyer/seller sentiment and/or site selection criteria in the arena of

rural residential properties with varying degrees of HVTL proximity. Of all the in-person, phone and email interviews conducted, the most complete and in-depth analysis of applicable homebuyer demand was offered by Nick Shivers, CEO and principal borker of Keller Williams Realty (Portland Central). The entirety of Mr. Shivers response is shown below:

> I wanted to discuss the potential implications of introducing high-voltage above-ground electrical wires in regions like Stafford, Oregon, particularly concerning property values.

Do power lines decrease property value? Indeed, power lines can have an adverse impact on property values for several reasons:

- **Aesthetics**: They are not typically considered visually appealing and can mar otherwise scenic views.
- **Noise**: Residences in proximity to these lines might have to endure a persistent humming noise.
- **Health Concerns**: Although no research conclusively ties power lines to health issues, the public's concerns cannot be ignored.
- **Land Use Restrictions**: Properties adjacent to or beneath these lines may face landscaping and developmental constraints due to potential interference with the lines.

Research Findings on Power Lines & Property Values:

- A 2018 study from the Journal of Real Estate Research indicated that vacant lots near such lines sold for 44.9 percent less compared to their counterparts away from these lines. Furthermore, lots within a 1,000 feet radius from these transmission lines saw a price drop of 17.9 percent.
- Rodríguez and Bustillo's 2016 study emphasized that properties closer to power lines generally have diminished values.
- The 2002 study by Des Rosiers in Quebec demonstrated that homes within 100 meters of high-voltage lines experienced a value dip of around 10 percent. The dip was 5.7 percent for properties situated between 100 to 200 meters from these lines.
- Kinnard and Geckler's 1991 Massachusetts study found that homes closer to high-voltage lines could see their property values decrease by 6-10 percent.

Pros of Proximity to Power Lines:

- **Affordability**: Such properties might have a lower entry price.
- **Less Buying Competition**: Potential buyers might find it easier to secure properties close to these lines due to reduced demand.

- **Lower HOA Fees**: Some older neighborhoods with these lines may have minimal or no HOA fees.

Cons of Proximity to Power Lines:

- **Reduced Property Value**: Proximity can diminish resale values.
- **Visual Concerns**: They can hinder scenic views and lack aesthetic appeal.
- **Perceived Health Risks**: Fears about the health implications, like potential links to cancer (though scientifically inconclusive), can stigmatize properties.
- **Developmental Restrictions**: Power lines can complicate landscaping and other construction endeavors.
- **Auditory Disturbances**: The humming sound they produce can be disruptive, especially for properties situated very close.

Conclusion: In premier locales such as Stafford, Oregon, renowned for its million-dollar estates, the introduction of high-voltage above-ground electrical wires poses a tangible threat to property valuations. This not only diminishes the region's allure to prospective high-end buyers but also introduces a formidable challenge in the sale of these properties. Discerning luxury buyers, with their rigorous criteria, are unlikely to favor the presence of overhead power lines. Drawing from over two decades of extensive experience in real estate, during which I have brokered over a billion dollars in transactions, In my humble opinion I believe that these power lines can precipitate a decline in home values ranging from 10 percent to 25 percent. Moreover, in the current market climate, they have the potential to shrink the prospective buyer pool by a staggering 50 percent.

Other realtors contacted for comment regarding the likely impacts of HVTLs along the Stafford Road corridor echo Mr. Shivers's sentiment, though not to the same degree of detail and specificity. Each cites the combinatorial effects of visual, audio, fire hazard and EMF/stigma as sufficient enough to notably curb buyer demand. Rather than offering predictions or projections regarding numeric or percentage discounts that may be realized, most realtors believe that educating and prepping sellers regarding hesitant buyer demand would be key to managing price expectations. Further, some realtor commentary also describes the high-voltage powerline issue as a deal-breaker for a segment of buyers, sometimes regardless of requisite price discounting. Lastly, there is also potential to mitigate many of the peripheral (boundary) HVTL impacts via planting of screening trees that could potentially obscure both visual and audio concerns. For 100-foot towers/lines, such a resolution would require a long-term grow-out horizon (10-20 years) that may or may not completely-eliminate the adverse externality.

RECONCILIATION & FINAL VALUE CONCLUSION(S)

As a result of the three-pronged approach employed to estimate hypothetical "after" value of the subject property home site in this appraisal, we place primary weight on the Sales Comparison Approach, which concluded a land-value diminution of roughly 40 percent (*$463,000*) based on the visual, audio and EMF/stigma issues observed. The library of both historic and contemporary literature focusing on the HVTL valuation issue supports slight to moderately high discounting among broad market participants. The subject property's characterization as a very high-value home site warrants inclusion in the subset of assets that are most significantly impacted by HVTLs (10 to 25 percent of home value). Realtor sentiment generally echoes the studies' broad conclusions and lends support to the Sales Comparison Approach. At the $2,550,000 to $2,800,000 acquisition/investment basis (2023) of the subject property, this suggests value diminution of *$255,000 to $700,000*, which effectively brackets the primary estimate from the Sales Comparison Approach.

In the final analysis and based largely on the premise of substitution, this appraisal develops a market value (diminution) indication using current land value trends. Because the subject property consists of a high-value home site in a popular rural setting, the quantity and quality of timely land sale data is lower than preferred. Diminution of improvement value was ignored in favor of home site focus only. In the final analysis, the Sales Comparison Approach is assigned primary weight with support from both peer-reviewed studies and local realtor interviews.

The subject property warrants a **just compensation value**, as of **October 1, 2023**, of about:

FOUR HUNDRED SIXTY-THREE THOUSAND DOLLARS…..$463,000.

As noted, the subject property owner received an offer from PGE (via Universal Field Services) of just $8,212 for the 3,497 SF HVTL easement proposed. It does not appear that the active offer considered any of the obvious adverse impacts from visual, audio, EMF/stigma common in the market. Therefore, the appraised just compensation estimate does not compare favorably.

APPRAISER CERTIFICATION - Ryan S. Prusse, MAI

The undersigned does hereby certify that, except as otherwise noted in this report:

1) The statements of fact contained in this report are true and correct.
2) The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and is my personal, impartial, unbiased professional analyses, opinions, and conclusions.
3) I have no present or prospective interest in the property that is the subject property of this report, and I have no personal interest or bias with respect to the parties involved.
4) I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5) I have no bias with respect to the party that is subject of this report of to the parties involved with this assignment.
6) My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
7) My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute.
8) The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
9) As of the date of this report I, Ryan S. Prusse, have completed the continuing education program for Designated Members of the Appraisal Institute.
10) I have personally inspected the subject property. I have also inspected all comparable properties identified in this report.
11) No one provided significant professional assistance beyond the signatories of this report.
12) This report is prepared in conformance with the Uniform Standards of Professional Appraisal Practice ("USPAP") as promulgated by the Appraisal Standards Board of the Appraisal Foundation.
13) My employment was not conditioned upon the consultation producing a specific price or a price within a given range. Future employment is not dependent upon reporting a specified price. Neither employment nor compensation is dependent upon the approval of a loan application.
14) I have acquired through study and practice the necessary knowledge and experience to complete this assignment competently.

Ryan S. Prusse, MAI
Oregon Appraiser Certification #C000498

FIRM QUALIFICATIONS

RSP & Associates LLC has been serving the Pacific Northwest since formation in 1998. Our firm concentrates on complex commercial, industrial and multi-family valuation assignments for mortgage lenders, government agencies and municipalities, corporations and individuals. Work has been performed on a national scale. A sample of clients served by Mr. Prusse while a principal of RSP & Associates LLC and prior employment is included below.

Financial:

Advanced Mortgage Resources
Albina Community Bank
American Pacific Bank
Apartment Lending Corporation
AT&T Capital Credit
Baker Mortgage, Inc.
Bank of America
Union Bank of California
Bank of the Cascades
Bank of Clark County
Bank of Portland
Bank of Salem
Bank of the West
Bank of Vancouver
Centennial Bank
Centennial Mortgage
Citizens Bank
Clackamas County Bank
Columbia River Bank
Commercial Mortgage Corporation
Continental Savings Bank
Countrywide Home Loans
Eagle Home Mortgage
Eykis Financial Services
First Mutual Bank
First Tennessee Bank
First Security Bank
First Security Leasing Company
First Union Small Business Lending
GE Capital Access
GMAC Commercial Mortgage
Hood River Bank
Imperial Capital
Intervest Mortgage & Investment
Intervest Mortgage
Juniper Banking Company
Key Bank of Oregon
LaSalle Bank (ABN AMRO)
Lexington Funding
LibertyBank
Linn-Benton Bank
The Money Store
M&T Bank
National Mortgage Company
Norris, Beggs & Simpson
Northern Bank of Commerce
Northwest Mortgage Group
Pacific Continental Bank
Pacific Crest Bank
Pacific Mortgage & Investment Co.
Pacific One Bank
Pioneer Trust Bank, N.A.
Prudential Mortgage Capital Company
Rainier Bank
Riverview Community Bank
Seafirst Real Estate Advisory
Southern Pacific Bank
Sterling Savings Bank
Umpqua Bank
U.S. National Bauk of Oregon
Valley of the Rogue Bank
Van Wijnen Canada
Ward Cook Inc.
Washington Federal Savings
Washington Mutual Bank
Wells Fargo Bank
West Coast Bank
Willamette Valley Bank
Yakima Valley Bank

Governmental:

Albany School District
Benton County
Bonneville Power Administration
City of Albany
City of Astoria
City of Hillsboro
City of Salem
City of Silverton
City of Woodburn
Clatsop County
Dallas School District
FDIC
Housing Authority of Portland
Marion County
METRO Open Spaces Division
Oregon Dept. of Transportation
Oregon Division of State Lands
Oregon Dept. of General Services
Network Oregon Affordable Housing
Port of Astoria
Port of Portland
Resolution Trust Corporation
Salem/Keizer School District
Tualatin Hills Parks & Recreation District
U.S. Army Corps of Engineers
U.S. Bureau of Land Management
U.S. Forest Service
Washington Dept. of Fish & Wildlife
Yamhill County Housing Authority

Insurance/Medical:

Mutual of Enumclaw
Mid-Valley Healthcare
Harvard Medical Northwest Life Assurance
GAB Robins North America, Inc.
Nationwide Insurance
Safeco Insurance
Salem Hospital
Corvallis Clinic
Good Samaritan Hospital (Corvallis)
MetLife Capital Insurance Company
Equitable of Iowa
Viking Insurance Company

General:

Agripac, Inc.
Aldrich Kilbride & Tatone
Archdiocese of Oregon
Atlantic Richfield Corporation
Boys & Girls Club of Albany
Boys & Girls Club of Salem
Brand "S" Corporation
Brown & Shay Partners
Bullivant Houser Bailey
Chevron, USA
Chrysler Realty
Colson & Colson Construction
Cushman & Wakefield
DAVIS Investments
George Suniga Enterprises
First American Title
First Princeton Corporation
First Virtual Properties LLC
Hanna Kerns & Strader
International Business Machines
McDonalds Corporation
Mennonite Mutual Aid Association
Morrow Crane Inc.
Mountain West Development
Neilsen Manufacturing
Nonpareil, Inc.
Oregon Glass Company
Pacific Conference Center
Portland General Electric
Portland Investments
Rite Aid Corporation
River Network
Saafeld, Griggs & Gorsuch
Sycan Development
Texaco Lubricants
3-H Construction

QUALIFICATIONS – Ryan S. Prusse, MAI

Ryan S. Prusse, MAI is the director of RSP & Associates, LLC. He has been engaged in complex valuation assignments since 1991. Appraisal assignments include a broad range of property types: multi-family, industrial, office, wetlands, wildlife habitat, agricultural, church, food processing, box retail, subsidized housing, aqua-culture and contaminated properties.

Professional Affiliations

State of Oregon Certified General Appraiser (#C000498)
State of Washington Certified General Appraiser (#1100869)
Member of the Appraisal Institute (#10667)
Appraisal Institute Young Advisory Council, 1994-1996
Environmental Assessment Association - Certified Environmental Specialist (CES)
Appraisal Journal Review Committee (Appraisal Institute) – 1996 - 1999
Director (AI - Greater Oregon Chapter) – 2004-2012
Chapter President (AI - Greater Oregon Chapter) – 2013

Community

Young Executive Board, Salem Boys & Girls Club
Finance Committee, Salem Boys & Girls Club
Assistant Varsity football coach, Regis High School
Youth Sports Coach, Salem Boys & Girls Club
Youth Sports Coach, Clackamas Little League
Youth Sports Coach, Wilsonville Parks & Recreation

Education

Willamette University, Salem, Oregon:
- Bachelor of Science, Major Economics, Minor Mathematics

Appraisal Institute, Chicago, Illinois:
- Course SPPA, Standards of Professional Practice, Part A
- Course SPPB, Standards of Professional Practice, Part B
- Course 1A1, Real Estate Appraisal Principles (challenged)
- Course 1A2, Basic Valuation Procedures (challenged)
- Course 1BA, Capitalization Theory and Techniques, Part A
- Course 1BB, Capitalization Theory and Techniques, Part B (challenged)
- Course II540, Report Writing and Valuation Analysis
- Course II550, Advanced Applications

American Society of Farm Managers & Rural Appraisers, Denver, Colorado:
- A-30, Advanced Rural Appraisal
- Rural Residential Appraisal

Chemeketa Community College, Salem, Oregon:
- Applied Residential Appraisal
- Appraisal I

Experience

Various positions from intern to owner at C. Spencer Powell & Associates (1990 – 1998)
Founder/Director – RSP & Associates, LLC (1998 – present).

Appraiser Certification and Licensure Board

State Certified General Appraiser

28 hours of continuing education required

RYAN S PRUSSE
PO BOX 365
WILSONVILLE, OR 97070

License No.: C000498
Issue Date: July 07, 2022
Expiration Date: June 30, 2024

Chad Koch, Administrator

CLACKAMAS COUNTY

Property Account Summary Barcode

mTaxesBeingCalculatedMessage

Account Number 00398581 **Property Address** 21956 SW STAFFORD RD , TUALATIN, OR 97062

General Information	
Alternate Property #	21E32 00412
Property Description	Section 32 Township 2S Range 1E TAX LOT 00412
Property Category	Land &/or Buildings
Status	Active, Locally Assessed
Tax Code Area	003-004
Remarks	

Tax Rate	
Description	**Rate**
Total Rate	17.1801

Property Characteristics	
Farm or Forest Tax Liability	$3,738.05
Neighborhood	15884: Rural Estates all other
Land Class Category	401: Tract Land Improved
Building Class Category	15: Single family res, class 5
Year Built	1978
Acreage	4.63
Change property ratio	4XX

Related Properties

No Related Properties Found

Parties

Role	Percent	Name	Address
Taxpayer	100	LEKAS JOHN	315 W MILL PLAIN BLVD STE 204, VANCOUVER, WA 98660
Owner	100	LEKAS JOHN	315 W MILL PLAIN BLVD STE 204, VANCOUVER, WA 98660

Property Values

Value Type	Tax Year 2022	Tax Year 2021	Tax Year 2020	Tax Year 2019	Tax Year 2018
AVR Total	$1,045,547	$1,015,095	$985,530	$956,826	$928,957
Exempt					
TVR Total	$1,045,547	$1,015,095	$985,530	$956,826	$928,957
Real Mkt Land	$947,187	$803,310	$763,344	$739,366	$719,383

Real Mkt Bldg	$631,010	$540,840	$514,060	$506,190	$458,460
Real Mkt Total	$1,578,197	$1,344,150	$1,277,404	$1,245,556	$1,177,843
M5 Mkt Land	$947,187	$803,310	$763,344	$739,366	$719,383
M5 Mkt Bldg	$631,010	$540,840	$514,060	$506,190	$458,460
M5 SAV					
SAVL (MAV Use Portion)					
MAV (Market Portion)	$1,045,547	$1,015,095	$985,530	$956,826	$928,957
Mkt Exception					
AV Exception					

Active Exemptions

No Exemptions Found

Events

Effective Date	Entry Date-Time	Type	Remarks
01/18/2023	01/19/2023 09:15:00	Taxpayer Changed	Property Transfer Filing No.: 423827 01/18/2023 by ACOUGHLIN
01/18/2023	01/19/2023 09:15:00	Recording Processed	Property Transfer Filing No.: 423827, Warranty Deed, Recording No.: 2023-001588 01/18/2023 by ACOUGHLIN
05/23/2007	05/29/2007 13:27:00	Taxpayer Changed	Property Transfer Filing No.: 160687 05/23/2007 by BARBARAHEN
05/23/2007	05/29/2007 13:27:00	Recording Processed	Property Transfer Filing No.: 160687, Warranty Deed, Recording No.: 2007-044774 05/23/2007 by BARBARAHEN
07/01/1999	07/01/1999 12:00:00	Ownership at Conversion	Warranty Deed: 88-39252, 9/1/88, $ 290000

The Tax Calculator is offline for annual Tax Certification until October 11th

No Charges are currently due. If you believe this is incorrect, please contact the Assessor's Office.

Total Due only includes the current 2022 taxes. Please select View Detailed Statement for a full payoff.

Receipts

Date	Receipt No.	Amount Applied to Parcel	Total Amount Due	Receipt Total	Change
01/26/2023 12:38:00	5358910	$18,122.27	$18,122.27	$18,122.27	$0.00
11/15/2021 00:00:00	5129968	$16,316.86	$16,316.86	$15,827.35	$0.00
11/24/2020 00:00:00	4974100	$16,381.86	$16,381.86	$15,890.40	$0.00
11/12/2019 00:00:00	4676383	$15,601.72	$15,601.72	$15,133.67	$0.00
11/08/2018 00:00:00	4481227	$14,705.85	$14,705.85	$14,264.67	$0.00

Sales History

Sale Date	Entry Date	Recording Date	Recording Number	Sale Amount	Excise Number	Deed Type	Grantee(Buyer)	Other Parcels
01/03/2023	01/19/2023	01/18/2023	2023-001588	$2,550,000.00	423827		LEKAS JOHN	No

05/10/2007	05/29/2007	05/23/2007	2007-044774		$0.00	160687	THOMPSON DAVID A TRUSTEE	No

Property Details

Living Area Sq Ft	Manf Struct Size	Year Built	Improvement Grade	Stories	Bedrooms	Full Baths	Half Baths
4747	0 X 0	1978	58	1.0	4	4	0

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
00398581

Parent Parcel Number

Property Address
21956 SW STAFFORD RD

Neighborhood
15884 RURAL ESTATES 400 - 641

Property Class
401 401 Rural Tract Improved

TAXING DISTRICT INFORMATION

Jurisdiction 003

Area 001

OWNERSHIP

LEKAS JOHN
315 W MILL PLAIN BLVD STE 204
VANCOUVER, WA 98660

Section 32 Township 2S Range 1E TAX LOT 00412

TRANSFER OF OWNERSHIP

Date		
01/03/2023	THOMPSON DAVID A TRUSTEE Doc #: 423827	$2550000
05/10/2007	THOMPSON DAVID A & ANN E Doc #: 160687	$0
09/01/1988	Doc #: 88-39252	$290000
04/01/1986	Doc #: 86-15663	$144000

AGRICULTURAL

VALUATION RECORD

Assessment Year		01/01/2018	01/01/2019	01/01/2019	01/01/2020	01/01/2021	01/01/2022	01/01/2023
Reason for Change		Reval	Reval	Reval	Reval	Reval	Reval	Reval
VALUATION	L	719383	719383	739366	763344	803310	947187	1023121
Market	B	458460	492540	506190	514060	540840	631010	678560
	T	1177843	1211923	1245556	1277404	1344150	1578197	1701681

Site Description

Legal Acres:
0.0000

LAND DATA AND CALCULATIONS

	Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor		Value
1	23 RURAL ACRES		4.6300		1.00	25877.00	25877.00	119811	1 202% L 156%		926282
2	22 OSD					22606.00	22606.00	22606	L 156%		57871
3	81 LAND ADJ		0.0		1.00	152220.00	152220.00	152220	4 -90% L 156%	SV	38968

R: Note of Record: R01
TAL ACRES 4.63 YEAR CLASSED
69 DECLASSED 1994 GOOD CLASS 5
ND ADJ = FAIR VIEW

FARMLAND COMPUTATIONS

Parcel Acreage
81 Legal Drain NV [-]
82 Public Roads NV [-]
83 UT Towers NV [-]
9 Homesite(s) [-]
91/92 Excess Acreage [-]
TOTAL ACRES FARMLAND 4.6300
TRUE TAX VALUE

Measured Acreage
Average True Tax Value/Acre
TRUE TAX VALUE FARMLAND
Classified Land Total
Homesite(s) Value (+)
Excess Acreage Value (+)

Supplemental Cards
TRUE TAX VALUE 984153

Supplemental Cards
TOTAL LAND VALUE 1023121

0 0 0 0 0 0 0 0 0 1 11

PHYSICAL CHARACTERISTICS

Style:
51 Houses built 1970 to 1979
Occupancy: Single family

Story Height:	1.0
Finished Area:	4747
Attic:	None
Basement:	None

ROOFING
Material: Cedar Shake
Type: Hip
Framing: Std for class
Pitch: Not available

FLOORING

Slab	1.0
Sub and joists	2.0
Carpet	1.0

EXTERIOR COVER

Wood siding	1.0, 2.0

INTERIOR FINISH

Drywall	1.0

ACCOMMODATIONS

Finished Rooms	4
Bedrooms	4
Fireplaces:	1

HEATING AND AIR CONDITIONING
Primary Heat: Heat pump

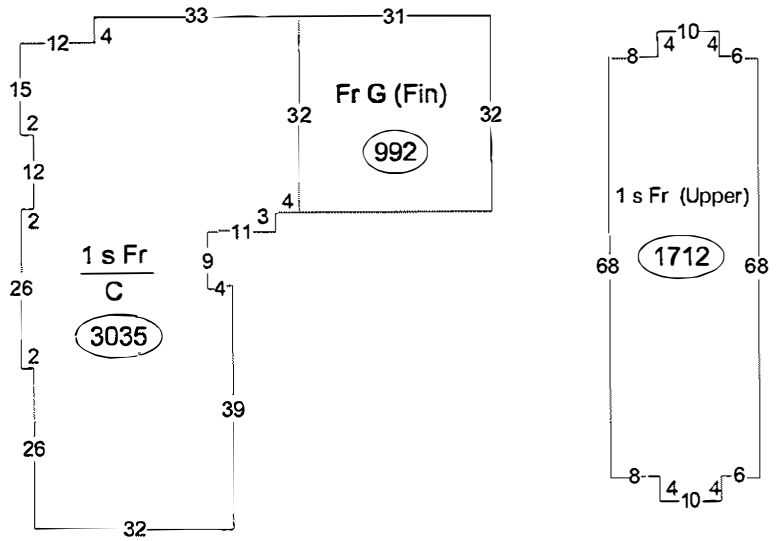
	Lower	Full	Part
	/Bsmt	1 Upper	Upper

PLUMBING

	#	
3 Fixt. Baths	4	12
TOTAL		12

REMODELING AND MODERNIZATION

	Amount	Date



	Construction	Base Area	Floor	Finished Area Sq Ft	Value
1	Wood frame w/sh	3035	1.0	3035	238170
1	Wood frame w/sh	1712	2.0	1712	102050
		3035	Crawl ____		0
	TOTAL BASE				340220
	Row Type Adjustment				1.00%
	SUB-TOTAL				340220
	0 Interior Finish				0
	0 Ext Lvg Units				0
	0 Basement Finish				0
	Fireplace(s)				4140
	Heating				12290
	Air Condition				0
	Frame/Siding/Roof				0
	Plumbing Fixt: 12				9400
	Other Features				2340
	SUB-TOTAL ONE UNIT				368390
	SUB-TOTAL 0 UNITS				368390

Exterior Features

Description	Value
Garages	
0 Integral	0
992 Att Garage	55090
0 Att Carports	0
0 Bsmt Garage	0
Ext Features	0

SUB-TOTAL	423480
Quality Class/Grade	5+
GRADE ADJUSTED VALUE	787670

(LCM: 100.0

SPECIAL FEATURES

Description	Value
D :MAS	4140
MISCFEAT	2340
G01:IF2	3

SUMMARY OF IMPROVEMENTS

ID	Use	Stry Hgt	Const Type	Grade	Year Const	Eff Year	Cond	Base Rate	Feat-ures	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
D	DWELL	2.00		5+	1978	1978	AV	0.00	Y	0.00	4747	787670	26	0	98	100	571220
G01	ATTGAR	0.00	1				AV	51.74	Y	55.54	31x 32	55100	0	0	0	100	0
01	PAV	0.00	85	4	1975	1975	AV	3.00	N	4.38	1368	5990	47	0	141	100	4480
02	PAV	0.00	85	4	1975	1975	AV	3.00	N	4.38	4800	21020	47	0	141	100	15710
03	CONCP	0.00		4	1975	1975	AV	0.00	N	0.00	405	1310	0	SV	141	100	1850
04	CNPY/	0.00		4	1975	1975	AV	0.00	N	0.00	405	6120	0	SV	141	100	8630
05	SHEDGP	0.00		5	1975	1975	AV	15.59	N	22.77	864	19670	47	0	141	100	14710
06	LEANTO	0.00		4	1975	1975	AV	4.00	N	5.84	384	2240	47	0	141	100	1680
07	FENCERES	0.00	19	4	1960	1960	AV	21.00	N	30.66	100	3070	60	0	141	100	1730
08	GAZEBO	0.00		4	1970	1970	AV	24.85	N	36.28	324	11750	52	0	141	100	7950
09	PAV	0.00	85	4	1980	1980	AV	3.00	N	4.38	1120	4910	42	0	141	100	4020
10	CONCP	0.00		4	1980	1980	AV	0.00	N	0.00	1120	3840	0	SV	141	100	5410
11	POOL	0.00		4	1950	1950	AV	62.50	N	91.25	800	73000	60	0	141	100	41170

Data Collector/Date	Appraiser/Date	Neighborhood	Supplemental Cards TOTAL IMPROVEMENT VALUE	678560
	92 03/01/1995	Neigh 15884 AV		

316 RURAL AREA RESIDENTIAL 1-ACRE (RA-1), RURAL AREA RESIDENTIAL 2-ACRE (RA-2), RECREATIONAL RESIDENTIAL (RR), RURAL RESIDENTIAL FARM FOREST 5-ACRE (RRFF-5), FARM FOREST 10-ACRE (FF-10), AND FUTURE URBAN 10-ACRE (FU-10) DISTRICTS

316.01 PURPOSE

Section 316 is adopted to implement the policies of the Comprehensive Plan for Unincorporated Community Residential, Rural, and Future Urban areas.

316.02 APPLICABILITY

Section 316 applies to land in the Rural Area Residential 1-Acre (RA-1), Rural Area Residential 2-Acre (RA-2), Recreational Residential (RR), Rural Residential Farm Forest 5-Acre (RRFF-5), Farm Forest 10-Acre (FF-10), and Future Urban 10-Acre (FU-10) Districts, hereinafter collectively referred to as the rural residential and future urban residential zoning districts.

316.03 USES PERMITTED

A. Uses permitted in each rural residential and future urban residential zoning district are listed in Table 316-1, *Permitted Uses in the Rural Residential and Future Urban Residential Zoning Districts*. Uses not listed are prohibited.

B. As used in Table 316-1:

1. "P" means the use is a primary use.
2. "A" means the use is an accessory use.
3. "C" means the use is a conditional use, approval of which is subject to Section 1203, *Conditional Uses*.
4. "CPUD" means the use is allowed as a conditional use in a planned unit development.
5. "X" means the use is prohibited.
6. "Type II" means the use requires review of a Type II application, pursuant to Section 1307, *Procedures*.
7. Numbers in superscript correspond to the notes that follow Table 316-1.

C. Permitted uses are subject to the applicable provisions of Subsection 316.04, *Dimensional Standards*; Section 1000, *Development Standards*; and Section 1100, *Development Review Process*.

316.04 DIMENSIONAL STANDARDS

A. General: Dimensional standards applicable in the rural and future urban residential zoning districts are listed in Table 316-2, *Dimensional Standards in the*

Rural Residential and Future Urban Residential Zoning Districts. As used in Table 316-2, numbers in superscript correspond to the notes that follow the table.

B. Modifications: Modifications to the standards in Table 316-2 are established by Sections 800, *Special Use Requirements*; 903, *Setback Exceptions*; 1012, *Lot Size and Density*; 1107, *Property Line Adjustments*; and 1205, *Variances.*

Table 316-1: Permitted Uses in the Rural Residential and Future Urban Residential Zoning Districts

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Accessory Buildings and Uses, Customarily Permitted, such as amateur (Ham) radio antennas and towers, arbors, bicycle racks, carports, citizen band transmitters and antennas, cogeneration facilities, courtyards, decks, decorative ponds, driveways, electric vehicle charging stations, family child care homes, fountains, garages, garden sheds, gazebos, greenhouses, HVAC units, meeting facilities, outdoor kitchens, parking areas, patios, pergolas, pet enclosures, plazas, property management and maintenance offices, recreational facilities (such as bicycle trails, children's play structures, dance studios, exercise studios, playgrounds, putting greens, recreation and activity rooms, saunas, spas, sport courts, swimming pools, and walking trails), rainwater collection systems, satellite dishes, self-service laundry facilities, shops, solar energy systems, storage buildings/rooms, television antennas and receivers, transit amenities, trellises, and utility service equipment	A	A	A	A	A	A
Accessory Historic Dwellings, subject to Section 843	A[2]	A[2]	A[2]	A[2]	A[2]	X
Accessory Kitchens	A[3]	A[3]	A[3]	A[3]	A[3]	A[3]
Aircraft Land Uses	X	X	X	C	C	C
Aircraft Landing Areas	X	C	C[4]	X	X	X
Bed and Breakfast Inns, subject to Section 832	C	C	C	C	C	X
Bed and Breakfast Residences, subject to Section 832	C	C	C	C	C	C
Bus Shelters	P	P	P	P	P	P

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Campgrounds	C	C	C	C	C	C
Cemeteries, subject to Section 808	C	C	X	C	C	C
Child Care Facilities	C	C	C	C	C	C[5]
Commercial or Processing Activities that are in Conjunction with Farm or Forest Uses[6]	X	X	X	C	C	X
Community Halls	CPUD	CPUD	CPUD	CPUD	CPUD	X[7]
Composting Facilities, subject to Section 834	X	X	X	C	C	X
Conservation Areas or Structures for the Conservation of Water, Soil, Forest, or Wildlife Habitat Resources	P	P	P	P	P	P
Crematories, subject to Section 808	C	C	X	X	X	X
Daycare Services, Adult	C	C	C	C	C	C[8]
Dwellings, including:						
Accessory Dwelling Units, subject to Section 839	A[1]	A[1]	X	A[1]	A[1]	A[1]
Detached Single-Family Dwellings	P[9]	P[9]	P[9]	P[9]	P[9]	P[9]
Duplexes	C[9]	X	X	X	X	X
Manufactured Dwellings	P[9]	P[9]	P[9]	P[9]	P[9]	P[9]
Energy Source Development	X	X	C	X	X	X
Farm Uses, including[6]**:**						
Raising, harvesting, and selling crops	P	P	P[10]	P	P	P
Feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals, or honeybees	X[11]	P	X[11]	P	P	P
Dairying and the sale of dairy products	X[11]	P	X[11]	P	P	P
Any other agricultural or horticultural use or animal husbandry or any combination thereof	X[11]	P	X[11]	P	P	P
Preparation, storage, and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use	P	P	P[10]	P	P	P

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Propagation, cultivation, maintenance, and harvesting of aquatic, bird, and animal species that are under the jurisdiction of the Oregon Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission	X[11]	P	X[11]	P	P	P
Growing cultured Christmas trees	P	P	P[10]	P	P	P
Farmers' Markets, subject to Section 840	A	A	A	A	A	A
Fish or Wildlife Management Programs	X	X	X	P	P	P
Forest Practices, including the following operations conducted on or pertaining to forestland: reforestation of forestland, road construction and maintenance, harvesting of forest tree species, application of chemicals, disposal of slash, and removal of woody biomass	P[12]	P[12]	P	P[12]	P[12]	P[12]
Fraternal Organization Lodges	C[13]	C[13]	C[13]	C[13]	C[13]	C[13]
Government Uses, unless such a use is specifically listed as a primary, accessory, conditional, or prohibited use in the applicable zoning district	C[13]	C[13]	C[13]	C[13]	C[13]	C[13]
Guest Houses, subject to Section 833	A	A	A	A	A	A
Guest Ranches and Lodges	X	X	C	X	X	X
Home Occupations, including bed and breakfast homestays, subject to Section 822[14]	A	A	A	A	A	A
Home Occupations to Host Events, subject to Section 806	C	C	C	C	C	C
Hydroelectric Facilities	C	C	C	C	C	C
Kennels	C[15]	C[15]	X	C[15]	C[15]	X
Libraries	CPUD	CPUD	CPUD	CPUD	CPUD	X[7]
Livestock, subject to Section 821	P	X[11]	A	X[11]	X[11]	X[11]
Marijuana Processing	X	X	X	X	X	X
Marijuana Production, subject to Section 841	X	X	X	A	A	X

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Marijuana Retailing	X	X	X	X	X	X
Marijuana Wholesaling	X	X	X	X	X	X
Operations Conducted for the Exploration, Mining, or Processing of Geothermal Resources or Other Subsurface Resources	X	X	X	C	C	X
Places of Worship, subject to Section 804	P	P	P	P	P	P
Produce Stands	A[16]	A[16]	A[16]	A[16]	A[16]	A[16,17]
Public Utility Facilities	C[13,18]	C[13,18]	C[13,18]	C[13,18]	C[13,18]	C[13,18]
Radio and Television Transmission and Receiving Towers and Earth Stations	C[13,19]	C[13,19]	C[13,19]	C[13,19]	C[13,19]	C[13,19]
Recreational Uses, including boat moorages, community gardens, country clubs, equine facilities, gymnastics facilities, golf courses, horse trails, pack stations, parks, playgrounds, sports courts, swimming pools, ski areas, and walking trails[20]	C[13]	C[13,21]	C[13]	C[13,21]	C[13,21]	C[13,21]
Recreational Uses, Government-Owned, including amphitheaters; arboreta; arbors, decorative ponds, fountains, gazebos, pergolas, and trellises; ball fields; bicycle and walking trails; bicycle parks and skate parks; equine facilities; boat moorages and ramps; community buildings and grounds; community and ornamental gardens; courtyards and plazas; fitness and recreational facilities, such as exercise equipment, gymnasiums, and swimming pools; horse trails; miniature golf, putting greens, and sports courts; pack stations; parks; picnic areas and structures; play equipment and playgrounds; nature preserves and wildlife sanctuaries; ski areas; tables and seating; and similar recreational uses[20]	P[22]	P[22]	P[22]	P	P	P

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Recreational Uses, Government-Owned Golf Courses[20]	P[22]	P[22]	P[22]	P	P	P
Recreational Vehicle Camping Facilities, subject to Section 813	C[13]	C[13]	C	C[13]	C[13]	X
Recyclable Drop-Off Sites, subject to Section 819	A[23]	A[23]	A[23]	A[23]	A[23]	A[23]
Retailing—whether by sale, lease, or rent—of any of the following new or used products: apparel, appliances, art, art supplies, beverages, bicycle supplies, bicycles, books, cameras, computers, computer supplies, cookware, cosmetics, dry goods, electrical supplies, electronic equipment, flowers, food, furniture, garden supplies, hardware, interior decorating materials, jewelry, linens, medications, music (whether recorded or printed), musical instruments, nutritional supplements, office supplies, optical goods, paper goods, periodicals, pet supplies, pets, plumbing supplies, photographic supplies, signs, small power equipment, sporting goods, stationery, tableware, tobacco, toiletries, tools, toys, vehicle supplies, and videos.	CPUD[24]	X	X	X	X	X
Roads	P	P	P	P	P	P
Sanitary Landfills and Debris Fills	X	X	X	C	C	X
Schools, subject to Section 805	C[25]	C[25]	C	C[25]	C[25]	C[26]
Services, Commercial—Food and Beverage, including catering and eating and drinking establishments	CPUD[24]	X	X	X	X	X

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Services, Commercial—Personal and Convenience, including barbershops, beauty salons, dry cleaners, laundries, photo processing, seamstresses, shoe repair, tailors, and tanning salons. Also permitted are incidental retail sales of products related to the service provided.	CPUD[24]	X	X	X	X	X
Services, Commercial—Studios of the following types: art, craft, dance, music, and photography	CPUD[24]	X	X	X	X	X
Sewer System Components that Serve Lands Inside an Urban Growth Boundary, subject to OAR 660-011-0060(3)	Type II[27]	Type II[27]	Type II[27]	Type II[27]	Type II[27]	Type II[27]
Sewer Systems and Extensions of Sewer Systems to Serve Land Outside an Urban Growth Boundary and Unincorporated Community, subject to OAR 660-011-0060(4)	Type II[28]	Type II[28]	Type II[28]	Type II[28]	Type II[28]	Type II[28]
Short-Term Rental in a dwelling unit or guest house permitted by this table	P	P[29]	P	P[29]	P[29]	P[29]
Signs, subject to Section 1010	A[30]	A[30]	A[30]	A[30]	A[30]	A[30]
Surface Mining, subject to Section 818	X	X	X	C	C	X
Telephone Exchanges	C[13]	C[13]	C[13]	C[13]	C[13]	C[13]
Temporary Buildings for Uses Incidental to Construction Work. Such buildings shall be removed upon completion or abandonment of the construction work.	A	A	A	A	A	A
Temporary Storage within an Enclosed Structure of Source-Separated Recyclable/Reusable Materials Generated and/or Used On-site Prior to On-site Reuse or Removal by the Generator or Licensed or Franchised Collector to a User or Broker	A	A	A	A	A	A

Use	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Transfer Stations, subject to Section 819	X	X	C	X	X	C
Utility Carrier Cabinets, subject to Section 830	P,C[31]	P,C[31]	P,C[31]	P,C[31]	P,C[31]	P,C[31]
Wireless Telecommunication Facilities, subject to Section 835	See Table 835-1	See Table 835-1	See Table 835-1	See Table 835-1	See Table 835-1	See Table 835-1

[1] This use is permitted only inside of an urban growth boundary.

[2] This use is permitted only outside of both an urban growth boundary and an urban reserve.

[3] An accessory kitchen is permitted only in a detached single-family dwelling or a manufactured dwelling. Only one accessory kitchen is permitted in each single-family dwelling or manufactured dwelling.

[4] Aircraft landing areas are permitted for use by emergency aircraft (e.g., fire, rescue) only.

[5] This use is limited to alteration or expansion of a lawfully established child care facility.

[6] As used in Table 316-1, farm uses do not include marijuana production, marijuana processing, marijuana wholesaling, or marijuana retailing. See separate listings in Table 316-1 for these uses.

[7] Even though it is prohibited in this category, this use is included in the "government use" category.

[8] This use is limited to alteration or expansion of a lawfully established adult daycare service.

[9] Except as allowed by Section 839, *Accessory Dwelling Units*, Section 843, *Accessory Historic Dwellings*, or Section 1204, *Temporary Permits*, each lot of record may be developed with only one of the following: detached single-family dwelling, duplex (only if approved as a conditional use in the RA-1 District), or manufactured dwelling.

[10] This use is permitted only on lots larger than five acres.

[11] In the RA-2, RRFF-5, FF-10, and FU-10 Districts, livestock is permitted as described under the use category of farm uses. In the RA-1 and RR Districts, livestock is permitted as described under the use category of livestock.

[12] For land inside the Portland Metropolitan Urban Growth Boundary, refer to Subsection 1002.02 regarding a development restriction that may apply if excessive tree removal occurs.

[13] Uses similar to this may be authorized pursuant to Section 106, *Authorizations of Similar Uses.*

[14] A use may be permitted as a home occupation, subject to Section 822, even if such use is also identified in another use listing in Table 316-1.

[15] The portion of the premises used shall be located a minimum of 200 feet from all property lines.

[16] A produce stand shall be subject to the parking requirements of Section 1015, *Parking and Loading*.

[17] In addition to selling produce grown on-site, a produce stand may sell agricultural products that are produced in the surrounding community in which the stand is located.

[18] Public utility facilities shall not include shops, garages, or general administrative offices.

[19] The base of such towers shall not be closer to the property line than a distance equal to the height of the tower.

[20] This use may include concessions, restrooms, maintenance facilities, and similar support uses.

[21] Equine facilities are a primary use, subject to the following standards and criteria:

a. The number of horses shall be limited to no more than one horse per acre or five horses in total, whichever is less. Horses owned by the operator of the equine facility, or owned by a 501(c)(3) organization and being temporarily fostered by the operator of the equine facility, do not count toward the maximum number of horses. The one-horse-per-acre standard shall be calculated based on the area of the lot of record or tract on which the equine facility is located.

b. Services offered at the equine facility, such as riding lessons, training clinics, and schooling shows, shall be provided only to the family members and nonpaying guests of the operator of the equine facility, the owners of boarded horses, or the family members and nonpaying guests of the owners of boarded horses.

[22] Any principal building or swimming pool shall be located a minimum of 45 feet from any other lot in a residential zoning district.

[23] Recyclable drop-off sites are permitted only if accessory to an institutional use.

[24] The use is subject to the following standards and criteria:

a. The use shall be located in a planned unit development (PUD) with a minimum of 100 dwelling units. No building permit for the use shall be issued until a minimum of 100 dwelling units are constructed within the PUD.

b. The area occupied by all uses subject to Note 23 and located in a single PUD, including their parking, loading, and maneuvering areas, shall not exceed a ratio of one-half acre per 100 dwelling units in the PUD.

c. The use shall be an integral part of the general plan of development for the PUD and provide facilities related to the needs of residents of the PUD.

d. The use shall be located, designed, and operated to efficiently serve frequent trade and service needs of residents of the PUD and not persons residing elsewhere.

e. The use shall not, by reason of its location, construction, manner or hours of operation, signs, lighting, parking arrangements, or other characteristics, have adverse effects on residential uses within or adjoining the PUD.

f. The maximum building floor space per commercial use is 4,000 square feet except that no maximum applies to uses authorized under Oregon Statewide Planning Goals 3 and 4 and uses intended to serve the community and surrounding rural area or the travel needs of people passing through the area.

[25] Schools are prohibited within the areas identified as Employment, Industrial, and Regionally Significant Industrial on the Metropolitan Service District's 2040 Growth Concept Map.

[26] This use is limited to alteration or expansion of a lawfully established school.

[27] Components of a sewer system that serve land outside urban growth boundaries or unincorporated community boundaries are prohibited.

[28] The use is limited to sewer systems that: are designed and constructed so that their capacity does not exceed the minimum necessary to serve the area within the boundaries described under OAR 660-011-0060(4)(b)(B), except for urban reserve areas as provided under OAR 660-021-0040(6); and do not serve any uses other than those existing or allowed in the identified service area on the date the sewer system is approved.

[29] This use is not permitted in an urban or rural reserve established pursuant to OAR 660, Division 27.

[30] Temporary signs regulated under Subsection 1010.13(A) are a primary use.

[31] Utility carrier cabinets are a conditional use if the combined volume of all cabinets located on a single lot exceeds the applicable maximum established pursuant to Subsection 830.01(A).

Table 316-2: Dimensional Standards in the Rural Residential and Future Urban Residential Zoning Districts

Standard	RA-1	RA-2	RR	RRFF-5	FF-10	FU-10
Minimum Lot Size[1]	1 acre[2,3]	2 acres[3]	2 acres	2 acres, provided that the minimum average lot size of all lots or parcels in a subdivision, partition, or replat is 5 acres[3,4,5,6]	10 acres[3,4,7]	10 acres[4]
Minimum Front Setback	30 feet[8]	30 feet[8]	15 feet, except 20 feet to garage and carport motor vehicle entries[9]	30 feet[8]	30 feet[8]	30 feet
Minimum Rear Setback	30 feet[10,11]	30 feet[10,12]	15 feet[10]	30 feet[10,12]	30 feet[10,12]	30 feet[12]
Minimum Side Setback	10 feet[10,13]	10 feet[10]	5 feet[10]	10 feet[10]	10 feet[10]	10 feet
Maximum Lot Coverage	None	None	40 percent	None	None	None
Minimum Building Separation above 3,500 Feet in Elevation	None	None	20 feet between buildings with contiguous snow slide areas	None	None	None

[1] The minimum lot size standards apply as established by Sections 1012 and 1107. Notwithstanding the minimum lot size standard, a lot of record may be developed subject to other applicable standards of this Ordinance, except minimum lot size standards of Section 800 apply.

[2] In a planned unit development, there is no minimum individual lot size. However, the minimum average lot size is one acre except for lots to be developed with a duplex, in which case the minimum average lot size is two acres. The average lot size is calculated by determining the lot area of the land proposed for subdivision, partition, or replat and dividing by the number of lots or parcels in the proposed planned unit development.

[3] The minimum lot size inside the Portland Metropolitan Urban Growth Boundary is 20 acres. The 20-acre minimum lot size is applicable to subdivisions, partitions, and Type II replats, but not to Type I replats or property line adjustments. Where this standard applies, it supersedes any other minimum lot size standard in Table 316-2.

[4] For the purpose of complying with the minimum lot size standard, lots with street frontage on County or public road rights-of-way may include the land area between the front lot line and the centerline of the County or public road right-of-way.

[5] The minimum lot size inside the urban growth boundaries of the cities of Canby, Estacada, Molalla, and Sandy is five acres.

[6] The average lot size is calculated by determining the lot area of the land proposed for subdivision, partition, or replat and dividing by the number of lots or parcels in the proposed partition, subdivision, or replat.

[7] In a planned unit development, the minimum individual lot size is two acres, except inside the urban growth boundaries of the cities of Canby, Estacada, Molalla, and Sandy, where the minimum individual lot size is five acres. In all cases, the minimum average lot size is 10 acres. The average lot size is calculated by determining the lot area of the land proposed for subdivision, partition, or replat and dividing by the number of lots or parcels in the proposed planned unit development.

[8] In a planned unit development, the minimum front setback is 20 feet.

[9] For a corner lot located above 3,500 feet in elevation, one of the minimum front setbacks is 10 feet, except 20 feet to garage and carport motor vehicle entries.

[10] In a planned unit development, there are no minimum rear and side setbacks except from rear and side lot lines on the perimeter of the final plat. Where this standard applies, it supersedes any other rear or side setback standard in Table 316-2.

[11] The minimum rear setback for an accessory building shall be five feet except as established by Note 10.

[12] The minimum rear setback for an accessory building shall be 10 feet except as established by Note 10.

[13] The minimum side setback for an accessory building shall be five feet except as established by Note 10.

[Added by Ord. ZDO-252, 6/1/15; Amended by Ord. ZDO-253, 6/1/15; Amended by Ord. ZDO-254, 1/4/16; Amended by Ord. ZDO-263, 5/23/17; Amended by Ord. ZDO-266, 5/23/18; Amended by Ord. ZDO-269, 9/6/18; Amended by Ord. ZDO-268, 10/2/18; Amended by Ord. ZDO-280, 10/23/21; Amended by Ord. ZDO-282, 7/1/22; Amended by Ord. ZDO-273, on remand, 5/30/23; Amended by Ord. ZDO-287, 8/3/23; Amended by Ord. ZDO-283, 9/5/23]

UNIVERSAL
FIELD SERVICES

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June 23, 2023

John Lekas
315 W Mill Plain Blvd. #204
Vancouver, WA 98660

RE: PGE Tonquin Project: Rosemont-Wilsonville line
Address: 21956 SW Stafford Rd., Tualatin, OR 97062
APN: 21E3200412

Dear Mr. Lekas:

Portland General Electric Company ("PGE") has an upcoming project in your area called the Tonquin: Rosemont-Wilsonville line project (the "Project"). The Project includes the construction of a new 115kV transmission line which will replace the existing distribution poles/line (12.5kV line) on or near your property with a new transmission pole(s)/lines. This Project is part of a larger project called the "Tonquin" Project which includes multiple phases, a new substation and two additional transmission lines in other areas.

The construction of the full Tonquin Project will provide more resilient power for the entire region. Additionally, based on projected load growth in the area, the expansion is necessary to mitigate overloads on other electrical systems serving the area. Construction for the Project is currently planned to begin in spring 2024.

PGE seeks to acquire an easement (the "Easement") on your above-described property to meet Project safety and clearance needs. The Easement is sought for construction, operation and maintenance of the new 115kV transmission line. The terms of the easement are provided in the enclosed Powerline Easement document and the Easement's location is shown on Exhibit C of the enclosed Powerline Easement document.

PGE hereby offers the sum of [**$8,212.00**], for the Easement. PGE will pay all recording costs, title insurance premiums, and all other normal costs of easement acquisition.

Concurrent with issuing payment for the purchase of this easement right, PGE is required to file a 1099-S form with the Internal Revenue Service. The enclosed W-9 form will need to be filled out and returned to PGE prior to payment being issued. It is PGE procedure to issue a check once we have received the signed easement and W-9 form.

This proposed Easement was designed to minimize the effect of the Project on your property. I look forward to discussing the offer with you at your earliest convenience. Universal Field Services has been retained as the agency acting on behalf of PGE to secure the easement(s) necessary for the project. If you have any questions or concerns, please feel free to call or email me at 503-399-8002 / bkirchner@ufsrw.com. I would be happy to meet on site with you to further go over the details of this request and will be available to assist you and work with you throughout the process.

Thank you for your cooperation and timely attention to this matter.

Sincerely,

Brenden Kirchner
Universal Field Services
Right of Way Agent

cc: tina.tippin@pge.com (PGE)

Enclosures: Powerline Easement
IRS Form W-9
PGE Tonquin Project Fact Sheet
Power Lines and vegetation brochure

UNIVERSAL
FIELD SERVICES

RE: AGENCY DISCLOSURE

Universal Field Services has been contracted by Portland General Electric Company ("PGE") to acquire property for the Tonquin: Rosemont-Wilsonville line project. This company represents PGE and its interest in acquiring your property or property rights. We will endeavor to ensure that all federal and state laws and regulations are followed pertaining to your rights. We are retained on an hourly fee schedule and no real estate commission will be paid to Universal Field Services by any part to this transaction.

Should you require legal assistance, please contact a representative to act on your behalf.

Sincerely,

Leslie Finnigan, Principal Broker/ Senior Right of Way Agent

By my signature below, I acknowledge that this letter was delivered and explained to me by Brenden Kirchner, Broker, and Right of Way Agent.

_____ _____

(Owner or owner's representative) Date

After Recording Please Return To:
Portland General Electric Company
Attn: Property Services
121 SW Salmon Street,1WTC1302
Portland, Oregon 97204-9951

Grantor's Mailing Address:
c/o Leader Financial
315 W Mill Plain Boulevard, Suite 204
Vancouver, WA 98660

(Space above this line for Recorder's use)

Grantor: **John Lekas**

Grantee: **Portland General Electric Company**

APN/APN2: **21E32 00412/00398581**

PGE UTILITY EASEMENT

For good and valuable consideration, the current receipt, reasonable equivalence, and sufficiency of which is hereby acknowledged by **JOHN LEKAS** ("**Grantor**") hereby grants, conveys and warrants to **PORTLAND GENERAL ELECTRIC COMPANY**, an Oregon corporation, and its successors and assigns ("**Grantee**"), a nonexclusive, perpetual easement and right-of-way (the "**Easement**") over, under, upon, through and across the real property situated in Clackamas County, Oregon (the "Property").

The Easement area is defined using the center line of SW Stafford Road described in Exhibit "A" attached hereto. The Easement affects a strip of land more particularly described in Exhibit "B" and depicted in Exhibit "C" attached hereto (the "**Easement Area**").

TERMS, CONDITIONS AND COVENANTS

1. Said Easement and right of way shall be for the following purposes: the non-exclusive, perpetual right to enter upon and to construct, maintain, repair, replace (of initial or any size), operate and patrol electric power lines, including the right to install such poles, wires, cables, guys and support as are necessary thereto, together with the present and future right to clear said right of way, without Grantee paying compensation, as necessary to accomplish the above purpose and as Grantee deems necessary to comply with state or federal regulations. Solely to the extent necessary to exercise its rights under the Easement, Grantee has ingress and egress rights over and across the Property and Grantor's adjoining property interests, in connection with or related to all or any portion of the foregoing.

2. Grantor shall have the right to use the Easement Area for all purposes, provided that such use does not unreasonably interfere with the use, enjoyment, or exercise by Grantee of any rights under the Easement. Grantor shall not build or erect any structure upon the Easement without the prior written consent of the Grantee, which consent shall not be unreasonably withheld.

3. Grantor hereby warrants that Grantor is possessed of a marketable title to the Property covered by this Easement and has the right to grant the same.

4. Grantee will repair any damage it causes to the Property and agrees to restore the Property as nearly as practicable to its condition immediately preceding Grantee's access to, and installation, repair or maintenance activities on the Easement Area, excepting vegetation management performed by Grantee per this Easement, normal wear and tear, and changes in the condition solely caused by Grantor or persons or entities other than Grantee, its agents or contractors.

5. In no event shall Grantee or Grantor be liable to the other party or any other person or entity for any lost or prospective profits or any other special, punitive, exemplary, consequential, incidental or indirect losses or damages (in tort, contract, or otherwise) under or in respect of this Easement or for any failure of performance related hereto howsoever caused, whether or not arising from a party's sole, joint or concurrent negligence.

6. Grantee shall indemnify, protect, defend and hold harmless Grantor, its heirs and assigns (each, an "indemnified person") for, from and against claims, liabilities, costs and expenses resulting from any act or omission of Grantee or its agents on or about the Easement. Notwithstanding the foregoing, Grantee shall not be liable in respect of (and the foregoing indemnity shall not cover) any claim, damage, loss, liability, cost or expense to the extent the same resulted from the negligence or willful misconduct of Grantor.

7. This Easement, along with any exhibits and attachments or other documents affixed hereto or referred to herein, constitutes the entire agreement between Grantee and Grantor relative to the Easement. The consideration acknowledged herein is accepted by Grantor as full compensation for all rights granted Grantee pursuant hereto and loss of value incidental to or in any way associated with the Property and/or the Easement. This Easement may be altered and/or revoked only by an instrument in writing signed by both Grantee and Grantor and recorded. This Easement shall run with the Property and shall be binding on Grantor and shall inure to the benefit of Grantee, and Grantee's successors, and assigns, as well as the tenants, sub-tenants, licensees, concessionaires, mortgagees in possession, customers, and invitees of such persons or entities. The Easement is an in-gross easement and is not appurtenant to any particular property of Grantee.

IN WITNESS WHEREOF, Grantor has executed this Easement effective as of the _____ day of _____, 20____.

GRANTOR:

By: _____
John Lekas

STATE OF _____)
) ss.
COUNTY OF _____)

I certify that I know or have satisfactory evidence that **John Lekas** is the person who appeared before me, and said person acknowledged that they were authorized to execute the instrument individually and acknowledged it to be their free and voluntary act for the uses and purposes mentioned in the instrument.

Dated: _____, 20__.

_____
Notary Public
My commission expires: _____

Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

EXHIBIT A

SW STAFFORD ROAD CENTERLINE DESCRIPTION
(VICINITY OF MOUNTAIN ROAD)
LEGAL DESCRIPTION

A strip of land being a portion of SW Stafford Road (Market Road No. 12), new centerline alignment, per Clackamas County survey number 2011-176, lying in the Southwest 1/4 of Section 29 and the Northwest 1/4 of Section 32, of Township 2 South, Range 1 East, Clackamas County, Oregon, the centerline more particularly described as follows:

Beginning at a found 1-3/16" copper disk in monument box, on centerline of Clackamas County Roll Map of Market Road 12, Unit 3, Oswego to Wilsonville, Sharp Hill Section, marking the new Engineer's centerline Station 0+00, per said survey 2011-176, said station being North 42°08'02" East 2187.86 feet of a 3" Brass Disk in monument box marking the west 1/4 corner of Section 32, Township 2 South, Range 1 East, Willamette Meridian;

thence North 55°09'58" East, leaving said centerline of Clackamas County Roll Map of Market Road 12, 644.29 feet to the beginning of a tangent curve to the left, having a radius of 650.00 feet; thence northeasterly 493.40 feet along said curve, through a central angle of 43°29'30" to the point of tangency; thence North 11°40'28" East 654.18 feet to a point on said centerline of Clackamas County Roll Map of Market Road 12 and the terminus of said new centerline.

Bearings are based on Oregon State Plane Coordinate system NAD83(2011), epoch 2010.000.

Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

EXHIBIT "B"

EASEMENT AREA

21956 SW STAFFORD ROAD

LEGAL DESCRIPTION

A strip of land in a portion of Deed 2023-001588, Clackamas County Official records, in the southwest quarter of Section 29, Township 2 South, Range 1 East, Willamette Meridian, Clackamas County, Oregon, lying easterly of the centerline of SW Stafford Road, described in Exhibit "A" attached hereto, more particularly described as follows:

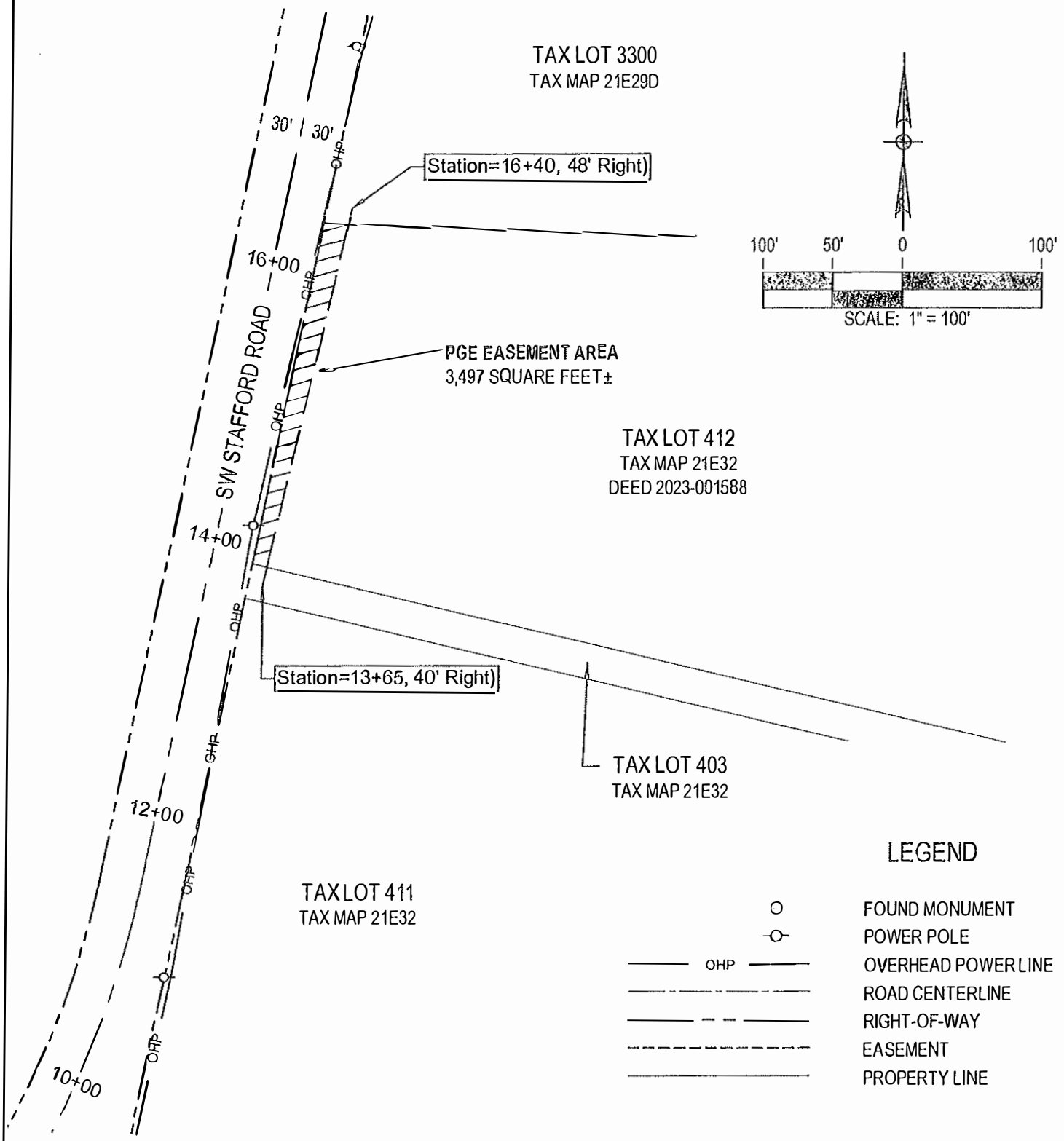
All of that parcel described in said Deed 2023-001588, lying westerly of, when measured at right angles or radial to, a line described as follows:

Beginning at Engineers station 13+65, 40 feet right, as per Clackamas County survey number 2011-176 to centerline Station 16+40, 48 feet right.

EXCEPT any portion lying within the right-of-way of SW Stafford Road.

The above described strip of land contains 3,497 square feet, more or less.

The above described parcel is shown on Exhibit "C" attached hereto, which by reference thereto is made a part hereof.



DISCLAIMER: THE GRAPHIC REPRESENTATIONS AND OTHER INFORMATION/DATA CONTAINED HEREIN (COLLECTIVELY THE "DEPICTION") IS THE PROPERTY OF PGE. THE DEPICTION DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY AND RESOLUTION. INFORMATION DERIVED FROM GIS AND OTHER DATA SHOWN IS SUBJECT TO CHANGE. THE DEPICTION IS MERELY TO AID IN DESCRIBING THE CONFIGURATION AND LOCATION OF THE PARCEL OF LAND IN THE ACCOMPANYING LEGAL DESCRIPTION.

PORTLAND GENERAL ELECTRIC CO.
121 SW SALMON ST. PORTLAND, OR 97204

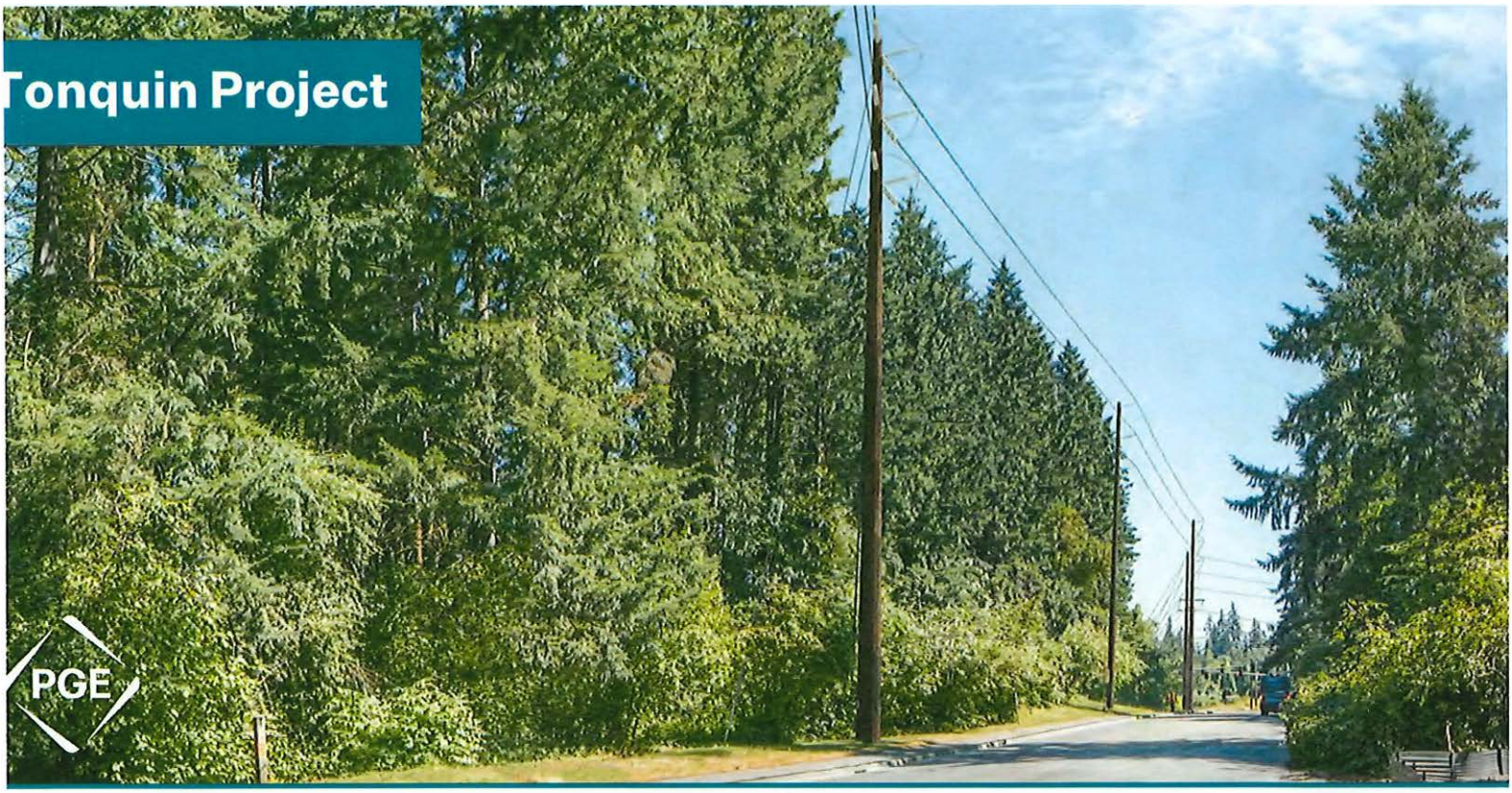
EXHIBIT C

EASEMENT AREA
21956 SW STAFFORD ROAD,
CLACKAMAS COUNTY,
SEC. 29, T. 2 S., R. 1 E., W.M.

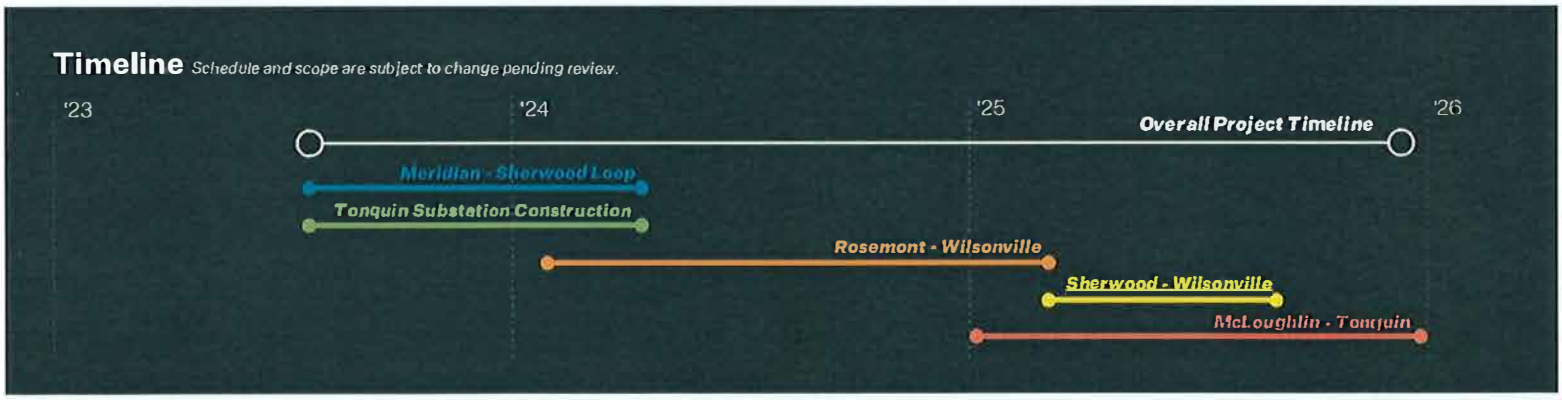
DRAWING NO.:

M2764844

Tonquin Project



A multi-phase project that will build a substation on existing PGE property and upgrade 11 miles of 115kV transmission lines in Tualatin, Sherwood, Stafford, Wilsonville and unincorporated Clackamas County.



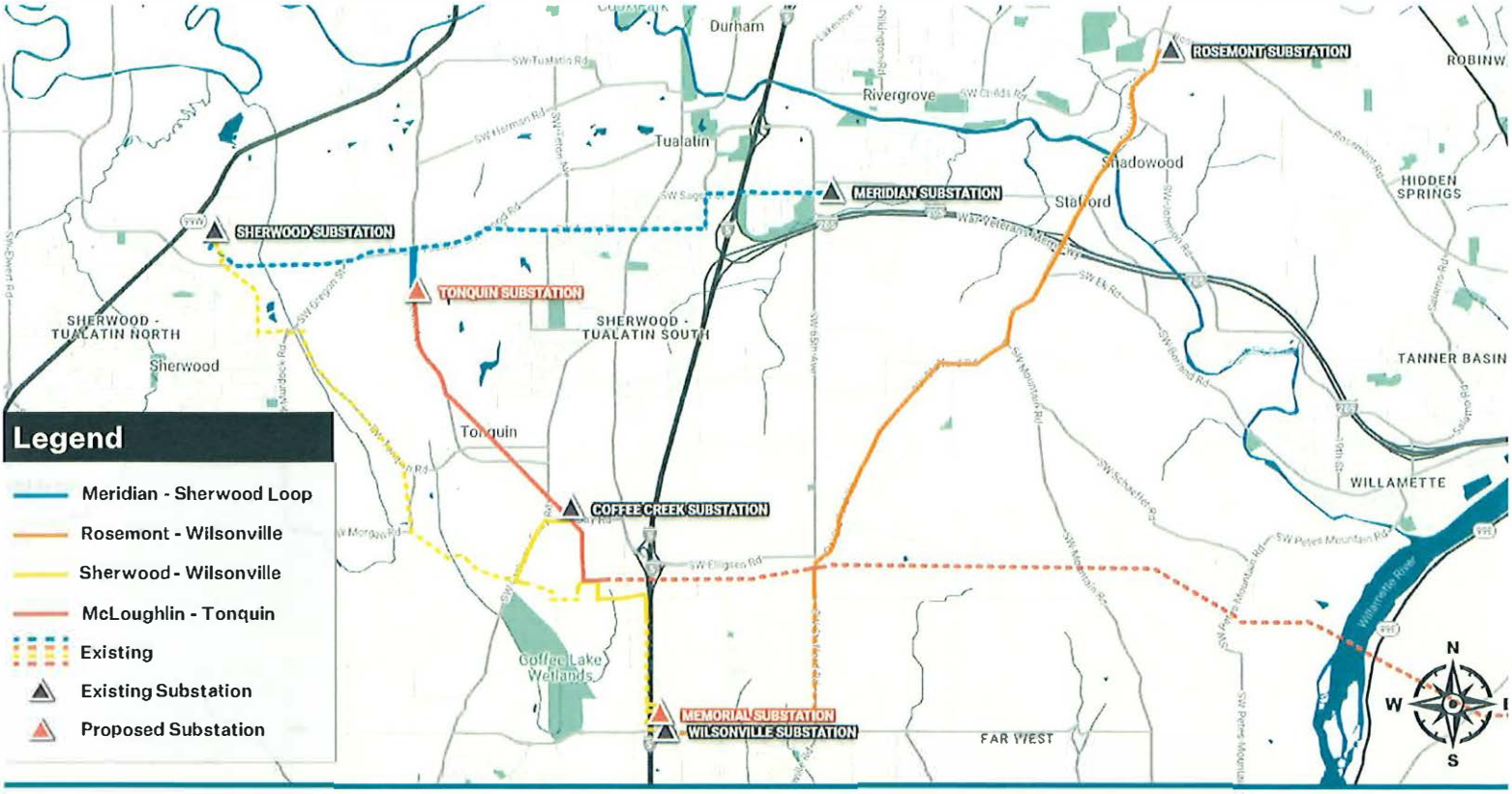
Purpose and Need

PGE is working toward Oregon's clean energy future, building a smarter, stronger and more flexible grid to deliver the power customers need today and into the future.

PGE's energy grid is the backbone of a system that brings reliable, cost-effective clean energy solutions to all customers. When complete, this project will strengthen PGE's system for generations to come.

Key Community Benefits

- *Reduce power outages*
- *Strengthen system resiliency*
- *Meet growing energy demand*



Typical Proposed Structures

This image helps illustrate the types of project elements, although final engineering and construction details may change pending public, regulatory and utility review.

Weathering Steel Monopole

Routes

The first project segment will split an existing line along Tualatin Sherwood Road into a loop, creating two lines that will run along SW 124th Avenue into the new Tonquin Substation. Next, a new line will be built, using monopole structures along 124th Avenue, from the Tonquin Substation toward Wilsonville. We will then upgrade structures within a power line corridor, connecting the Coffee Creek and McLoughlin substations. PGE will also add or replace structures along SW Grahams Ferry, Ridder and Boones Ferry roads. From there, the line will eventually cross Interstate Highway 5 and connect the Coffee Creek and proposed Memorial substations. The final segment will begin at PGE's Rosemont Substation and travel down SW Stafford Road toward Wilsonville. Along this route, taller poles will be installed to accommodate the existing and new lines. The new line will connect the Rosemont and Wilsonville substations, near Elligsen Road.

Questions? Comments?

More project information and updates are online, including a tool that allows you to ask questions or share comments about the project.

portlandgeneralprojects.com/tonquin

PGE

PGEProjects@pgn.com

Oregon Department of Transportation

APPLICATION AND PERMIT TO OCCUPY OR PERFORM OPERATIONS UPON A STATE HIGHWAY

See Oregon Administrative Rule, Chapter 734, Division 55

PERMIT NUMBER: 2BM47424

CLASS: | KEY#:

GENERAL LOCATION

HIGHWAY NAME AND ROUTE NUMBER: I-205 / 64 / East Portland Freeway

HIGHWAY NUMBER: 64

COUNTY: Clackamas

BETWEEN OR NEAR LANDMARKS: Stafford Road - I-205

HWY. REFERENCE MAP: Straightline

DESIGNATED FREEWAY: [ ] YES [X] NO

IN U.S. FOREST: [ ] YES [X] NO

APPLICANT NAME AND ADDRESS:

Portland General Electric Company, ATTN: Tina Tippin
121 SW Salmon St., 1WTC1302
Portland, OR 97204

M2764884 Eng: Andy Brewer D21-29A

PURPOSE OF APPLICATION (TO CONSTRUCT/OPERATE/MAINTAIN)

[X] POLE LINE — TYPE: Electrical — MIN. VERT. CLEARANCE:

[ ] BURIED CABLE — TYPE:

[ ] PIPE LINE — TYPE:

[ ] NON-COMMERCIAL SIGN AS DESCRIBED BELOW

[ ] MISCELLANEOUS OPERATIONS AND/OR FACILITIES AS DESCRIBED BELOW

FOR ODOT USE ONLY

BOND REQUIRED: [ ] YES [X] NO — REFERENCE: OAR 734-055-0035(2) — AMOUNT OF BOND:

INSURANCE REQUIRED: [X] YES [ ] NO — REFERENCE: OAR 734-055-0035(1) — SPECIFIED COMP. DATE: 5/30/2025

DETAIL LOCATION OF FACILITY (For more space attach additional sheets)

MILE POINT	TO MILE POINT	ENGINEERS STATION	TO ENGINEERS STATION	SIDE OF HWY OR ANGLE OF CROSSING	DISTANCE FROM CENTER OF PVMT	DISTANCE FROM R/W LINE	BURIED CABLE OR PIPE DEPTH/VERT.	BURIED CABLE OR PIPE SIZE AND KIND	SPAN LENGTH
3.17(P37)	3.37(P38)			180	71' (PL37)				362'
3.37(P38)	3.27(P40)			180	86' (PL38)				597'
3.27(P40)	3.19(P43)			180	35' (PL 40)				263'
					67'(PL 43)				

DESCRIPTION OF DESIRED USE

New 115kV crossing at SW Stafford Road, plan and profile and traffic control are attached.
14 day notice required for the use of the approved traffic control plan. Mark Rahman will make signal timing adjustments (allow more green)to allow the mainline I-205 traffic to use the Stafford on and off ramps NB and SB as an up and over detour allowing PGE to work across I-205 without any traffic issues.

SPECIAL PROVISIONS (FOR ODOT USE ONLY)

TRAFFIC CONTROL REQUIRED

- [X] YES [OAR 734- 055-0025(6)] [ ] NO

OPEN CUTTING OF PAVED OR SURFACED AREAS ALLOWED

- [ ] YES [OAR 734- 055-0100(2)] [X] NO [OAR 734-055-0100(1)]

- AT LEAST 48 HOURS BEFORE BEGINNING WORK, THE APPLICANT OR HIS CONTRACTOR SHALL NOTIFY THE DISTRICT REPRESENTATIVE Jim Bailey AT PHONE NO.: D2Bup@odot.oregon.gov OR EMAIL OR FAX THIS PAGE TO THE DISTRICT OFFICE AT: D2Bup@odot.oregon.gov, SPECIFY TIME AND DATE WORK IS TO OCCUR.
- A COPY OF THIS PERMIT AND ALL ATTACHMENTS SHALL BE AVAILABLE AT THE WORK AREA DURING CONSTRUCTION.
- ATTENTION: Oregon Law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0001 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503) 232-1987. *CALL BEFORE YOU DIG 1-800-332-2344*

COMMENTS (FOR ODOT USE ONLY)

t the time of lane and/or complete roadway closure and again when the lane and/or complete roadway is opened on a state highway the Applicant or ıeir Contractor is required to notify ODOT Traffic Management Operations Center (TMOC) 503-283-5859. If during the course of their permitted work ıe Applicant or their Contractor come across personal property in their work zone they need to contact their permit specialist. The personal property ay not be removed by the Applicant or their Contractor. ODOT is not responsible to collect and/or dispose of sharps or biohazard material found within ·oject limits.

IF THE PROPOSED APPLICATION WILL AFFECT THE LOCAL GOVERNMENT, THE APPLICANT SHALL ACQUIRE THE LOCAL GOVERNMENT OFFICIAL'S SIGNATURE BEFORE ACQUIRING THE DISTRICT MANAGER'S SIGNATURE.

LOCAL GOVERNMENT OFFICIAL SIGNATURE		TITLE	DATE
X			
APPLICANT SIGNATURE	APPLICATION DATE	TITLE	TELEPHONE NO.
X [signature]	5/15/23	Property Specialist	503.464.7672
When this application is approved by the Department, the applicant is subject to, accepts and approves the terms and provisions contained and attached: and the terms of Oregon Administrative Rules, Chapter 734, Division 55, which is by this reference made a part of this permit.		DISTRICT MANAGER OR REPRESENTATIVE X [signature]	APPROVAL DATE 5-30-23

734-3457 (11/2019)

Oregon Department of Transportation

GENERAL PROVISIONS FOR POLELINE, PIPELINE, BURIED CABLE, AND MISCELLANEOUS PERMITS

Revised April 2022

APPLICANT: PORTLAND GENERAL ELECTRIC COMPANY	PERMIT NO.: 2BM47424
HIGHWAY: I-205/64/East Portland Freeway	MP: 3.17-3.44

These permit provisions are in addition to the requirements described in Oregon Administrative Rule, Chapter 734, Division 55 and may be supplemented by permit special provisions. In the event of a conflict, the Administrative Rule will apply then these provisions followed by any permit special provisions. Unless otherwise specified, all documents referenced are references to the current version, with any revisions or supplements, in place when the work is conducted.

All checked (☒) provisions apply.

WORKSITE

☒ 1. Access control fence must be maintained during permitted work and restored to its original or better condition after permitted work is complete.

☒ 2. The Applicant shall not use state highway right of way to display advertising signs or to display or sell merchandise of any kind.

☒ 3. The stopping and parking of vehicles upon state highway right of way for the maintenance of adjoining property or in furtherance of any business transaction or commercial establishment is prohibited.

☐ 4. All grass and small brush within the work area shall be rotary or flail mowed to ground level prior to the beginning of work to facilitate clean up.

☒ 5. Disturbed areas shall be reseeded with grass native to the area in an appropriate seeding time.

☒ 6. The spreading of mud or debris upon any state highway is prohibited and violation shall be cause for immediate cancellation of the permit. Clean up shall be at the Applicant's expense. The highway shall be cleaned of all dirt and debris at the end of each work day, or more frequently as directed by the District Manager or representative.

☒ 7. Applicant shall replace any landscape vegetation or fences that are damaged or destroyed. Any damage that is not fully restored within 30 days may be replaced by ODOT at the expense of the Applicant. A "plant establishment" shall be understood to be part of the planting work to assure satisfactory growth of planted materials. The plant establishment period will begin when the original planting has been completed and approved. The length of the establishment period will be one calendar year or as defined in the permit Special Provisions.

☐ 8. Applicant shall install and maintain the landscaped area as shown on the attached drawings. Plantings shall be limited to non-invasive, low-growing shrubs, grass or flowers that do not attain sufficient height to obstruct clear vision in any direction. ODOT may remove plantings without liability or loss, injury, or damage of any nature whatsoever if in the future it is determined to be in the public interest to do so.

TRAFFIC

☒ 9. The work area shall be protected in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and the Oregon Temporary Traffic Control Handbook as supplemented or amended by ODOT.

☒ 10. For work requiring traffic control devices to be in place continuously for longer than three days, Applicant shall provide a site specific traffic control plan developed based on the principles of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) and ODOT Standards. The traffic control plan may be reviewed by ODOT before work begins. The ODOT review does not relieve the Applicant of responsibility for the accuracy of the traffic control plan.

☒ 11. For permitted utility work, the Applicant shall take measures necessary to maintain the accessibility of the state highway including sidewalks and pedestrian areas by individuals with disabilities to the ODOT

Americans with Disability Act (ADA) standard during the course of the work by following the Oregon Temporary Traffic Control Handbook, Section 1.6.

☒ 12. When constructing a new utility service line, Applicant shall ensure that advance notice of any temporary pedestrian route is provided in an accessible format to the public, people with disabilities, and disability organizations to the greatest extent possible. The Notice is to be sent to the organizations on the contact list of Centers for Independent Living at https://www.oregon.gov/odot/Engineering/DOCS_ADA/AOCIL-Contacts.pdf

☒ 13. All damaged or removed highway signs shall be replaced by the Applicant. Installation shall be according to MUTCD and ODOT standards, and shall be completed as soon as possible but no later than the end of the work shift.

☐ 14. No lane restrictions are permitted on the roadway during the hours of darkness, on weekends, or between 6:00 AM and 9:00 AM, or 3:00 PM and 6:00 PM (Monday through Friday) without prior approval by ODOT.

☒ 15. Hours of work shall be 9:00am to 3:00pm work off of roadway
11:00pm to 5:00am work in roadway.

DRAINAGE

☐ 16. On-site storm drainage shall be controlled within the permitted property. No blind connections to existing state facilities are allowed.

☐ 17. Excavation shall not be done on ditch slopes. Trench excavation shall either be at ditch bottom or outside ditch area. (Minimum depth at bottom of ditch shall be 36 inches; minimum depth outside of ditch shall be 42 inches).

☒ 18. Only earth or rock shall be used as fill material and shall slope so as not to change or adversely affect existing drainage. Fine grade and seed the finished fill with native grasses to prevent erosion.

☐ 19. A storm drainage study stamped by an Oregon Registered Professional Engineer (PE) is required. The study must meet standards of the National Pollution Discharge Elimination Systems (NPDES) when any of the following conditions apply:

- whenever a four inch pipe is inadequate to serve the developed area,
- development site is one acre or larger in size and directly or indirectly affects state facilities, or
- as directed by the District Manager or representative.

☐ 20. Applicant shall provide on-site retention for storm water runoff that exceeds that of the undeveloped site.

☒ 21. All water discharged to an ODOT drainage system must be treated prior to discharge. All requests for connection to an ODOT storm system must meet any requirements of the National Pollutant Discharge Elimination System (NPDES). This may include local jurisdiction approval of on-site water quality treatment facilities and/or development of an operation and maintenance plan for any on-site water quality treatment facility, as determined by local jurisdiction.

EXCAVATION / CONSTRUCTION

☒ 22. "Oregon Standard Specifications for Construction" and ODOT "Standard Drawings" where applicable and not otherwise superseded by the permit, shall be incorporated for use in the permit; https://www.oregon.gov/odot/engineering/pages/index.aspx. These documents apply only to the extent they provide standards and performance requirements for work to be performed under the permit. In the event of a conflict, the permit provisions will take precedent.

☐ 23. Trench backfill shall be according to the attached typical drawing, marked as Exhibit A.

☐ 24. When open cutting of the highway is allowed, all excavation in paved areas shall be backfilled and the roadway surface patched before the end of each shift.

☐ 25. Steel plates shall be pinned and a temporary cold patch applied to the edges. The Applicant shall be responsible for monitoring and maintenance of temporary patching and steel plating.

☐ 26. Compaction tests shall be required for each open cut per Oregon Standard Specifications for Construction. Compaction tests shall be conducted once for every 300 lineal feet per lift of continuous trench according to the Manual of Field Test Procedures (MFTP), published by ODOT. Percent Compaction shall be at least 95%. Results of compaction test shall be provided upon request of the District Manager or representative at Applicants' expense.

☐ 27. Control Density Fill (CDF) shall be used as surface backfill material in place of crushed rock in open trenches that impact the travel portions of the highway. A ¾"-0, or 1"-0 rock will be used for the aggregate. The amount of cement used shall not exceed 3.0% of the total mixture's weight. Maximum compressed strengths must not exceed 250 pounds per square inch (psi).

☐ 28. Surface restoration shall be a minimum of four inches of hot asphalt-concrete (AC), compacted in two inch lifts, or to match existing pavement depth, whichever is greater. Sand-seal all edges and joints.

☐ 29. Any area of cut or damaged asphalt shall be restored in accordance with the attached "T-Cut Typical Section" drawing. For a period of two years following the patching of the paved surface, Applicant shall be responsible for the condition of the pavement patches, and during that two year period shall repair to District Manager or representative's satisfaction any of the patches which become settled, cracked, broken, or otherwise faulty.

☐ 30. An overlay to seal an open-cut area shall be completed prior to the end of the construction season, or when minimum temperature allows per the Oregon Standard Specification for Construction. The overlay shall be 1.5 inches deep and cover the affected area from edge of pavement to edge of pavement, and taper longitudinally at a fifty feet to one inch (50':1") ratio. Taper may be adjusted by the District Manager as required. For a period of two years following this patching of the paved surface, the Applicant shall be responsible for the condition of said pavement patches, and during that time shall repair to the District Manager or representative's satisfaction any of the patches which become settled, cracked, broken or otherwise faulty.

☐ 31. Highway crossings of utility lines shall be bored, or jacked. Bore pits shall be located behind the ditch line unless otherwise specified in the permit. Unattended pits shall either be protected by a six-foot fence, backfilled, or steel plated and pinned.

☒ 32. Any non-conductive, un-locatable, underground facility shall have a tracer wire or other similar conductive marking tape or device placed the full length of the installed underground facility in compliance with the Oregon Utilities Notification Center rules, OAR Chapter 952.

☐ 33. Trench backfill outside of ditch line may be native soil compacted at optimum moisture in twelve inch layers to not less than 95% relative maximum density.

☒ 34. Native material that is unsatisfactory for compaction shall be disposed of off the work site and granular backfill used.

☐ 35. Trench backfill in rock slope or shoulder shall be crushed 1"-0 or ¾"-0 size rock compacted at optimum moisture in eight-inch layers. Compaction tests shall be conducted according to the Manual of Field Test Procedures (MFTP), published by ODOT. Percent compaction shall be at least 95%maximum density. At the request of the District Manager or representative, results of compaction tests shall be provided to District Manager or representative at Applicant's expense.

☐ 36. Where excavation is on fill slope steeper than a two to one (2:1) ratio, slope protection shall be provided using four-inch size rock laid evenly to a minimum depth of twelve inches.

☐ 37. No more than 300 feet of trench longitudinally along the highway shall be left open at any one time and no trench shall be left in an open condition overnight.

☐ 38. Areas of disturbed cut and fill slopes shall be restored to a condition suitable to the District Manager or representative. Areas of erosion to be inlaid with an acceptable riprap material.

☒ 39. All underground utilities shall be installed with three-foot or more of horizontal clearance from existing or contract plans guardrail posts and attachments.

☐ 40. Any area of cut or damaged concrete shall be restored in accordance with the attached Typical Section-Pipe Section under sidewalk.

☒ 41. Utility markers, pedestals, and vaults shall be placed as near the highway right-of-way line as practical. In no case shall pedestals, vaults, and line markers be located within the area where highway maintenance activities regularly occur including mowing operations, or nearer the pavement edge than any official highway sign in the same general location.

☐ 42. No cable plowing is allowed within the lateral support of the highway asphalt (e.g. at six feet lower than the edge of the asphalt, no plowing within nine feet of the edge of the asphalt).

☐ 43. Review by the ODOT Bridge Engineer is required for all proposed bridge and structure attachments and for any facilities to be installed within sixteen feet of bridge foundations, supports, walls or related elements, or within the influence zone of bridge facilities.

MISCELLANEOUS

☒ 44. Applicant shall be responsible and liable for (1) investigating presence/absence of any legally protected or regulated environmental resource(s) in the action area; (2) determining any and all restrictions or requirements that relate to the proposed actions, and complying with such, including but not limited to those relating to hazardous material(s), water quality constraints, wetlands, archeological or historic resources(s) state and federal threatened or endangered species, etc., (3) complying with all federal, state, and local laws, and obtaining all required and necessary permits and approvals.

☒ 45. If the Applicant impacts a legally protected/regulated resource, Applicant shall be responsible for all costs associated with such impact, including, but not limited to all costs of mitigation and rehabilitation, and shall indemnify, and hold ODOT harmless for such impacts and be responsible and liable to ODOT for any associated costs or claims that ODOT may have.

☒ 46. Plans are reviewed by ODOT in general only and do not relieve the Applicant from completing roadway improvements in a manner satisfactory to ODOT. The District Manager or representative may require field changes. When revisions are made in the field, Applicant is responsible to provide "as built" drawings, within 60 days from completion of roadway improvements, and shall submit them to the District Office issuing the permit.

☒ 47. Applicant shall be responsible for locating and preserving all existing survey monumentation within the work area in accordance with ORS 209.150 and/or 209.155. If monumentation or its accessories are inadvertently or otherwise disturbed or destroyed, Applicant shall be responsible for all costs and coordination associated with its reestablishment by a professional licensed surveyor.

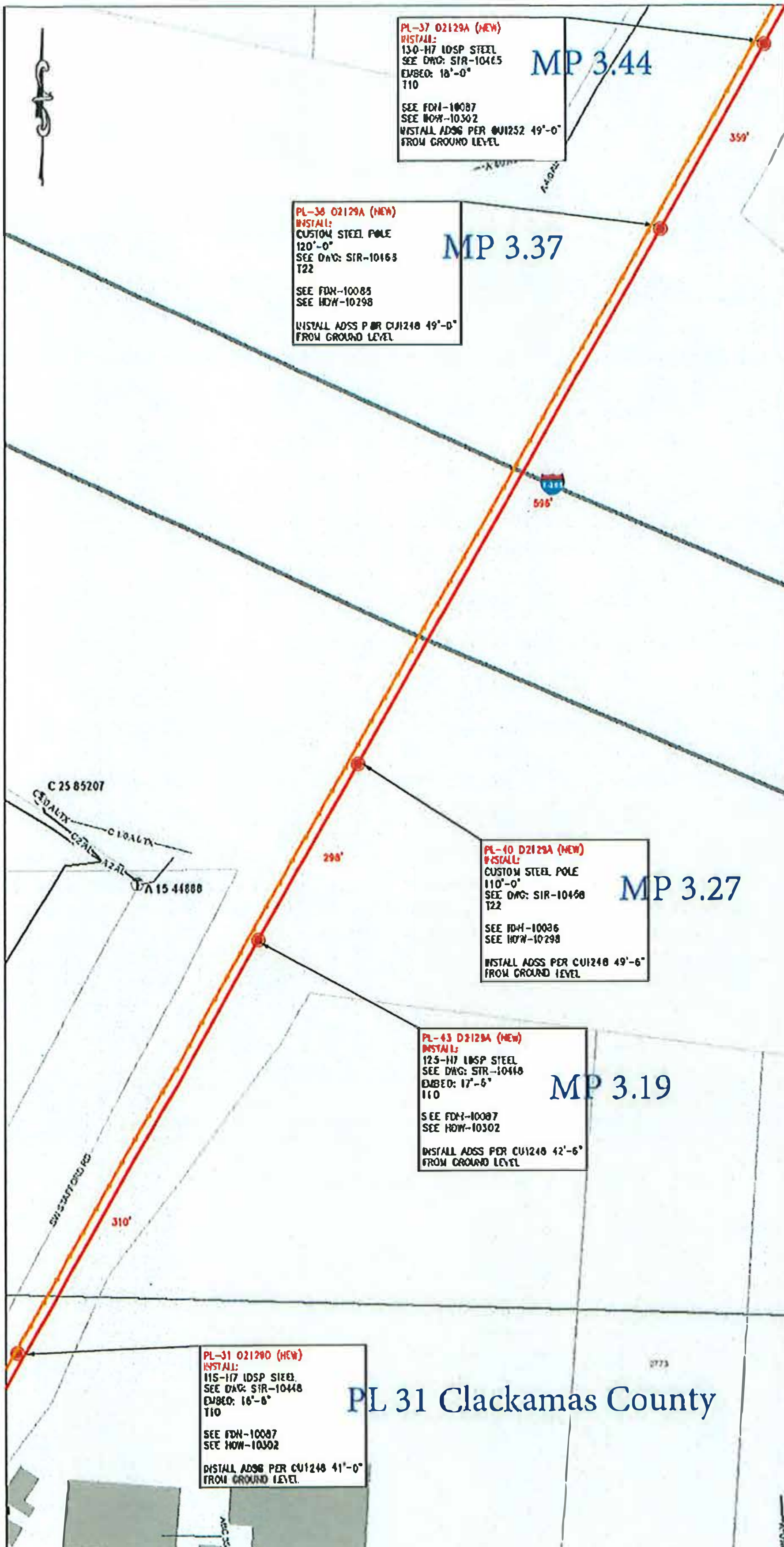
☒ 48. Applicant shall be responsible to restore or replace any curbs or curb ramps damaged by the permitted activity according to ODOT's ADA Standards available at https://www.oregon.gov/ODOT/Engineering/Pages/Accessibility.aspx. Any review or inspection of the curbs or curb ramps conducted by ODOT does not relieve the Applicant of the responsibility to comply with any other aspect of federal, state, and local laws, rules and regulations applicable to the work allowed under the permit including but not limited to the Americans with Disabilities Act of 1990.

☒ 49. When constructing a minor roadway improvement, Applicant shall comply with all federal, state, and local laws, regulations, executive orders and ordinances applicable to the work under this permit, including, without limitation, the provisions of ORS 276.071. If Applicant chooses to assign their permitted responsibilities to a consultant or contractor, Applicant shall inform the consultant or contractor of the requirements of ORS 276.071.

☒ 50. Upon completion of the permitted minor roadway improvement, Applicant shall notify ODOT and request final inspection. If all structures and appurtenances constructed under this permit are found to be in compliance with permit provisions and state standards, ODOT will accept ownership of the permitted structures and appurtenances by written notice to the Applicant.

By this signature Applicant acknowledges that the Applicant is subject to and accepts all checked (☒) provisions (4 pages).

Applicant Representative's Signature:	Applicant Representative's Title:	Date:
[signature]	Senior Property Specialist	5/15/2023



2BM47424

OVERHEAD LEGEND:

- INSTALL FACILITIES
- REMOVE FACILITIES
- TRANSFER / MODIFY FACILITIES

POLES:

HT-CL — POLE CLASS (1, 2, 3, 4, H1, H2, S); POLE HEIGHT (FEET)

ANCHORS:

A (LEAD) (LBS)	10" SGL HELIX	10" TRIPLE HELIX	14" SGL H/T	10" EXPANDING	28" PLATE
ANCHOR CODE	A1	A3	A5	A7	A8

GUYING:

G (POS.-LBS.)	5/16" O.H.	3/8" O.H.	7/16" O.H.	1/2" O.H.	3/8" D.G.	7/16" D.G.	1/2" D.G.
1 GUY	01	04	07	010	016	019	022
2 GUYS	02	05	08	011	017	020	023
3 GUYS	03	06	09	012	018	021	024

FRAMING: TRANSMISSION & DISTRIBUTION (SEE COMMENTS BELOW)

- T10 — FRAME TRANSMISSION – SID LC10754 APS FRAMING POLY INSULATORS WMS MU 1013
- T22 — FRAME TRANSMISSION – SID LC10753 OVS FRAMING WITH POLYMER INSULATORS WMS MU 1016
- CU1248 — FRAME COMMUNICATION – ADSS FIBER OPTIC CABLE – LC11410: ANGLE SUSPENSION UNIT
- CU1252 — FRAME COMMUNICATION – ADSS FIBER OPTIC CABLE – LC11410; DOUBLE DEAD END

NOTES:

1. IT IS ASSUMED THE UNDERGROUND SERVICE DROPS ARE DIRECT BURIED CABLE. THERE IS A POSSIBILITY OF CABLE REPLACEMENT, OR AN IN GROUND SPLICE WILL NEED TO BE INSTALLED. THESE ISSUES WILL BE DEALT WITH ON A CASE BY CASE BASIS ON THE RECOMMENDATION OF PGE ENGINEERING.
2. THE FIRST STRUCTURE ADJACENT TO THE MAINLINE ON ALL OVERHEAD TAPS MAY REQUIRE ADDITIONAL WORK. THESE ISSUES WILL BE DEALT WITH ON A CASE BY CASE BASIS ON THE RECOMMENDATION OF PGE ENGINEERING.
3. CONTRACTOR SHALL PERFORM FULL UTILITY LOCATES PRIOR TO ANY EXCAVATION WORK, IN ACCORDANCE TO OREGON STATUTE.

ADA NOTES:

1. A THRU-WAY CLEARANCE OF 48.0" IS TO BE MAINTAINED WITHIN SIDEWALKS FOR ALL NEW/REPLACEMENT POLES. IF 48.0" IS NOT OBTAINABLE THE SIDEWALK MUST BE EXTENDED TO ABIDE ALL ADA REGULATIONS.
2. WHEN REPLACING AND INSTALLING STRUCTURES WITHIN A PEDESTRIAN SIDEWALK RAMP, THE RAMP MUST BE REPLACED/REPAIRED AND ABIDE BY ALL ADA REGULATIONS.
3. WHEN REPLACING AND INSTALLING STRUCTURES WITHIN A PEDESTRIAN DRIVEWAY, THE DRIVEWAY MUST BE REPLACED/REPAIRED AND ABIDE BY ALL ADA REGULATIONS.
4. WHEN REPLACING AND INSTALLING STRUCTURES CONTAINING A CONDUIT RISER, THE CONDUIT MUST BE REPLACED/RECONFIGURED AND ABIDE BY ALL ADA REGULATIONS.

CONDUCTORS:

- INSTALL 795 KCMIL ACSS "DRAKE" (TRANSMISSION)
- INSTALL OFS-AT-3BE270Y-144-1POE ADSS FIBER OPTIC CABLE (COMMUNICATION)

THINK SAFETY FIRST!

P1

REGISTERED PROFESSIONAL ENGINEER 78907PE OREGON DECEMBER 31, 2007 SAUMYA RAO

EXPIRATION DATE 12.31.2024

CALL 811 BEFORE YOU DIG

811 Know what's below. Call before you dig.

BLACK & VEATCH

ANY DEVIATION FROM THIS DESIGN MUST BE APPROVED BY PGE PROJECT MANAGER

0 | ISSUED FOR CONSTRUCTION

NO. | DATE | REVISION AND RECORD OF ISSUE | CHK | APP | DH

AS-BUILT VERIFICATION & NESC VIOLATIONS CORRECTED

Foreman ______ Date ______

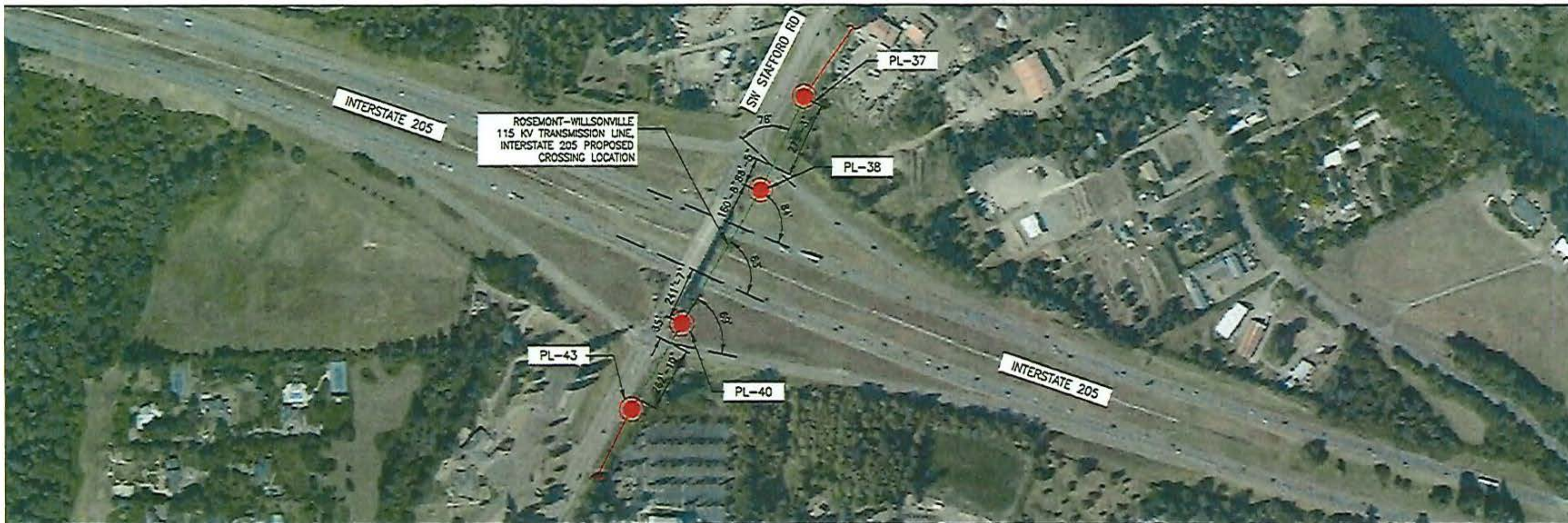
General Foreman ______ Date ______

(Signature only required for field construction changes)

ENGINEERING REVIEW | ASBUILT BY DESIGNER

DATE 01/01/23	SCALE NTS	N/A	1000010702	JOB NO. V2764844
TITLE OVERHEAD JOB SKETCH				DRAWING NO. DH-10242
CIRCUIT ROSEMONT-WILSONVILLE 115 KV TRANSMISSION LINE				SIZE 22X34
LOCATION VARIES				
DESCRIPTION 115 KV TRANSMISSION LINE WITH 12.5 KV UNDERBUILD JOB SKETCH				
COUNTY CLACKAMAS	VARIES		V2764844	SHEET 19 OF 31
DESIGN BY ERIN BONSALL	PHONE (503)443-4482	DRAWN BY BLACK & VEATCH		REV 0

PGE



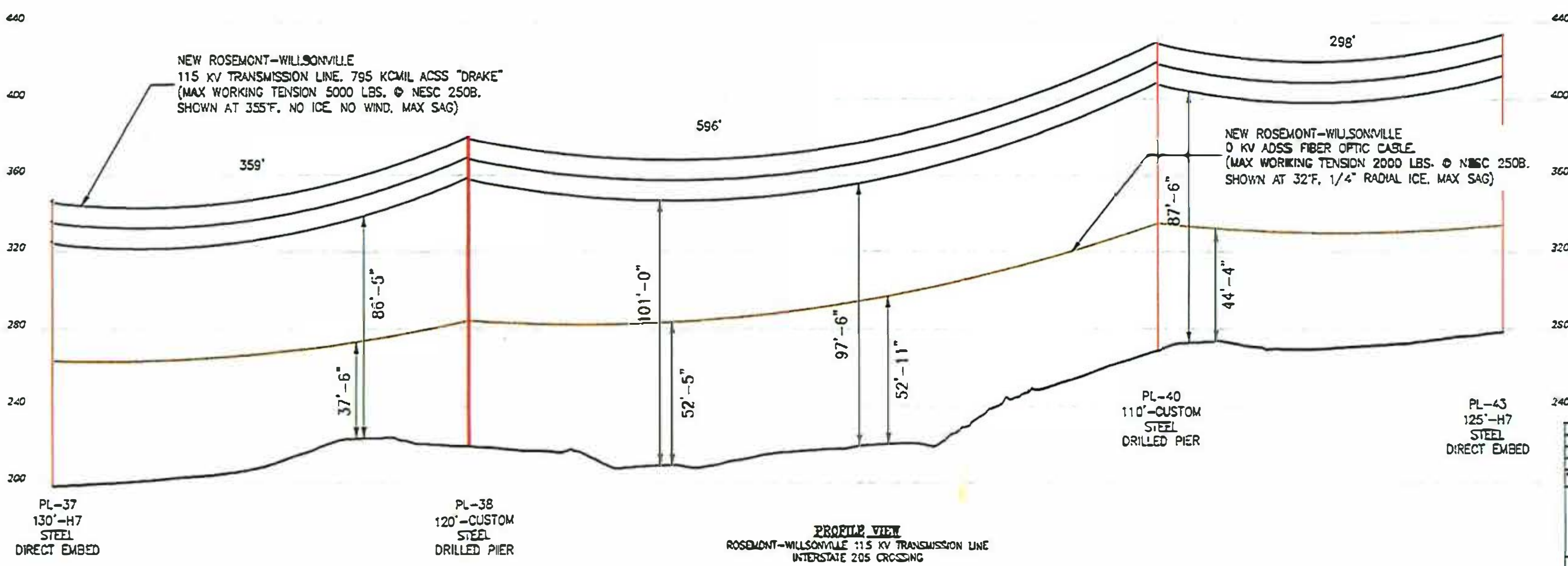
LEGEND:

- ROSEMONT-WILLSONVILLE 115 KV TRANSMISSION LINE
- ROSEMONT-WILLSONVILLE 115 KV TRANSMISSION LINE, I-205 PROPOSED CROSSING LOCATION
- PROPOSED STEEL POLE

NOTES:

1. BACKGROUND IMAGE EXTRACTED FROM DIGITAL GLOBE FOR REFERENCE ONLY.

PLAN VIEW
ROSEMONT-WILLSONVILLE 115 KV TRANSMISSION LINE
INTERSTATE 205 CROSSING



PROFILE VIEW
ROSEMONT-WILLSONVILLE 115 KV TRANSMISSION LINE
INTERSTATE 205 CROSSING

BLACK & VEATCH

REV	DESCRIPTION	DATE	DRN	DSGN	CKD	APPD
0	ISSUE FOR PERMITTING	05/05/23	[illegible]	AKP	[illegible]	

PGE PERMITTING DRAWINGS

05/05/23 | N.T.S. | ODOT X-ING

ROSEMONT-WILSONVILLE ODOT CROSSING EXHIBIT OPTION 1

ROSEMONT-WILSONVILLE 115 KV TRANSMISSION LINE

VARIES, OREGON

CLACKAMAS | 013-29A

SAUMYA NAG (B&V)

ERIN BONSALL (B&V) (503)-443-4482 BLACK & VEATCH

1 OF 1

Work on Shoulder Diagram 210

Diagram 210 covers stationary work with work or parked equipment on the shoulder. This diagram does not cover work on a freeway shoulder. See Diagram 710 for Freeway Shoulder work.

1. Vehicles should be parked as far off the roadway as practical.
2. Use truck-mounted flashing warning lights on work and protection vehicles. See Section 4.3 – Lights and Lighted Signs for exceptions.
3. For added visibility, truck-mounted arrow boards or PCMS in caution mode may be used.
4. Arrow panels in caution mode are recommended for work on roads with posted speeds of 45 mph or greater and high traffic volumes, greater than 2000 average daily traffic (ADT).
5. Requirements for signing and devices are shown in Table 5-2, below.

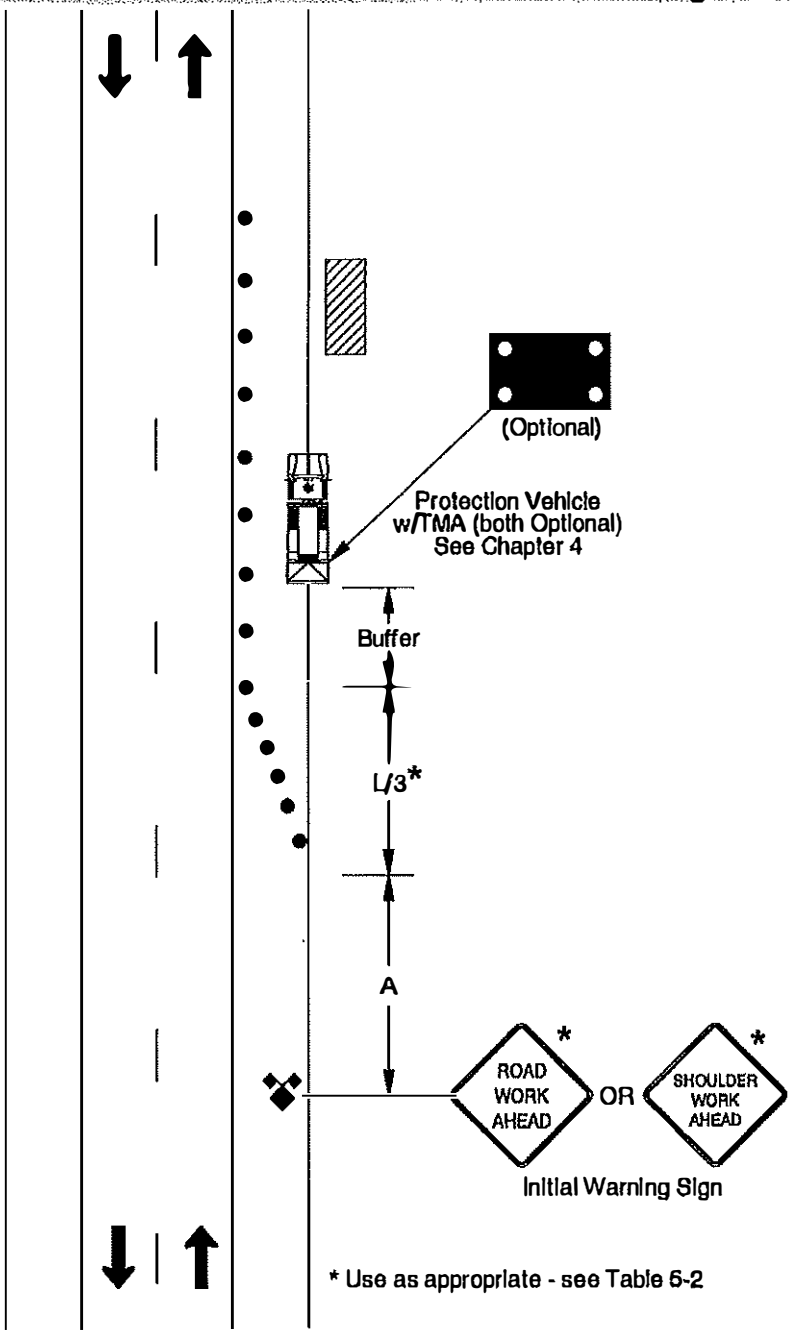
Table 5-2: Device and Signage Guidelines

	Proximity to Edge of Traveled Way	
	More than 15 feet or behind Barrier or Guardrail	Less than 15 feet
Work in Place More than 1 Hour	Advance warning signs, devices, and flashing warning lights are optional.	One advance warning sign is required and two signs are recommended. Cone taper is required. Cones along the edge of traveled way are optional.
Work in Place Less than 1 Hour	Advance warning signs and devices are optional.	

Sign Spacing and Buffer Lengths (feet)

Posted Speed	Spacing Between Signs A	B	C	Buffer Space
20	100	100	100	50
25				75
30				100
35	350	350	350	125
40				150
45	500	500	500	180
50				210
55				250

Work on Shoulder Diagram 210

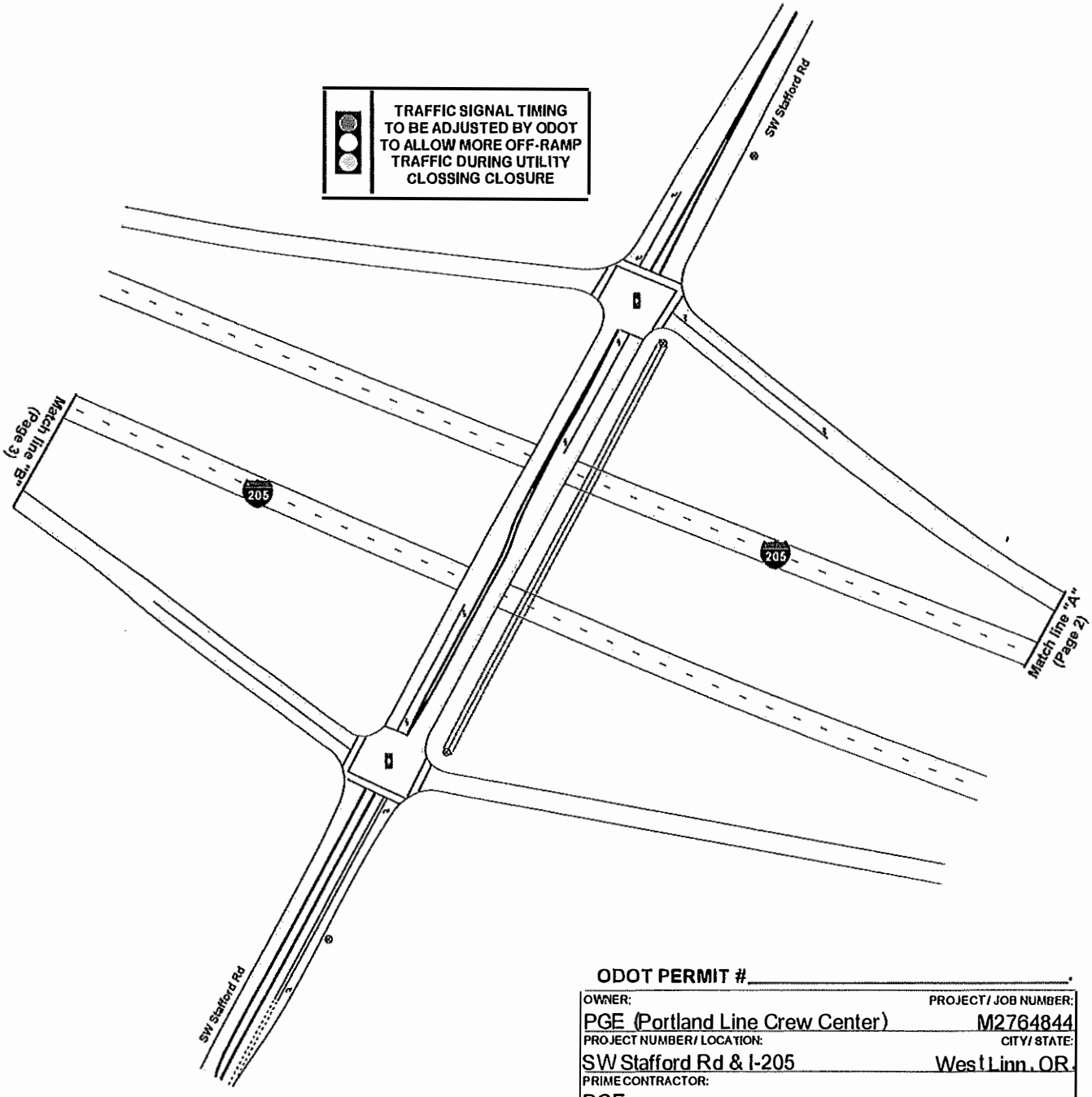


2BM47424

Northwest Traffic Control Inc.
Portland (503) 262-6500
Vancouver (360) 604-5655
Fax (503) 262-0357
Toll Free (800) 783-9733

N
W E
S

I-205 Closure
(Page #1)



ODOT PERMIT #_____

OWNER:	PROJECT / JOB NUMBER:
PGE (Portland Line Crew Center)	M2764844
PROJECT NUMBER/ LOCATION:	CITY/ STATE:
SW Stafford Rd & I-205	West Linn, OR
PRIME CONTRACTOR:	
PGE	
CONTACT NAME / NUMBER:	E MAIL:
Andrew / 503-915-9441	andy.brewer@pgn.com
PREPARED BY:	TRAFFIC CONTROL CONTRACTOR:
Nathan Burris 503-262-6500	Northwest Traffic Control Inc.
OR Cert # Exp: 11/30/2022 WA Cert# Exp: 04/30/2025	E-MAIL:
07634 012780	Nathan@nwtcl.com

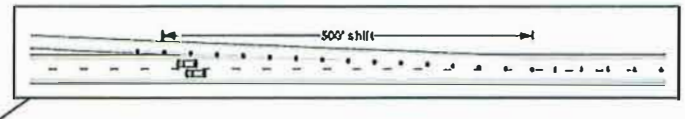
FILE DATE: 12/29/2022 EDITED:05/23/2023

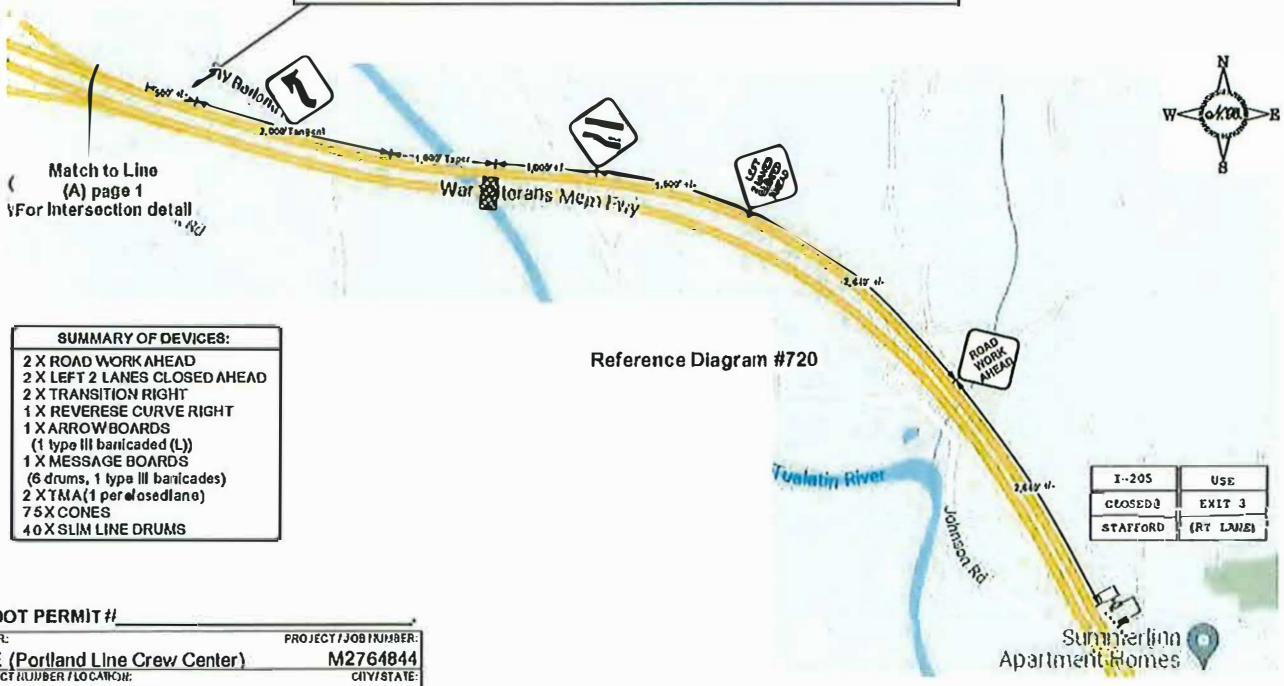
All signs and devices SHALL conform to the MUTCD / OTTCH.
Will adjust to fit field conditions.
Plan NOT to scale.

2BM47424

DEVICE SPACING:
TAPER: 40' Maximum
TANGENT: 40' Maximum

Northwest Traffic Control Inc.
Portland (503) 262-6500
Vancouver (360) 604-6666
Fax (503) 262-0367
Toll Free (800) 783-9733





SUMMARY OF DEVICES:
2 X ROAD WORK AHEAD
2 X LEFT 2 LANES CLOSED AHEAD
2 X TRANSITION RIGHT
1 X REVERESE CURVE RIGHT
1 X ARROW BOARDS (1 type III barricaded (L))
1 X MESSAGE BOARDS (6 drums, 1 type III barricades)
2 X TMA (1 per closed lane)
75 X CONES
40 X SLIM LINE DRUMS

Reference Diagram #720

ODOT PERMIT #_____

OWNER:	PROJECT / JOB NUMBER:
PGE (Portland Line Crew Center)	M2764844
PROJECT NUMBER / LOCATION:	CITY / STATE:
SW Stafford Rd & I-205	West Linn, OR.
PRIME CONTRACTOR:	
PGE	
CONTACT NAME / NUMBER:	E-MAIL:
Andrew / 503-915-9441	andy.brewer@pgn.com
PREPARED BY:	TRAFFIC CONTROL CONTRACTOR:
Nathan Burris 503-262-6500	Northwest Traffic Control inc.
ORCert # Exp: 11/30/2022 WA Cert # Exp: 04/30/2025	E-MAIL:
07634 012780	Nathan@nwtcl.com

FILE DATE: 01/03/2023 EDITED: 05/23/2023

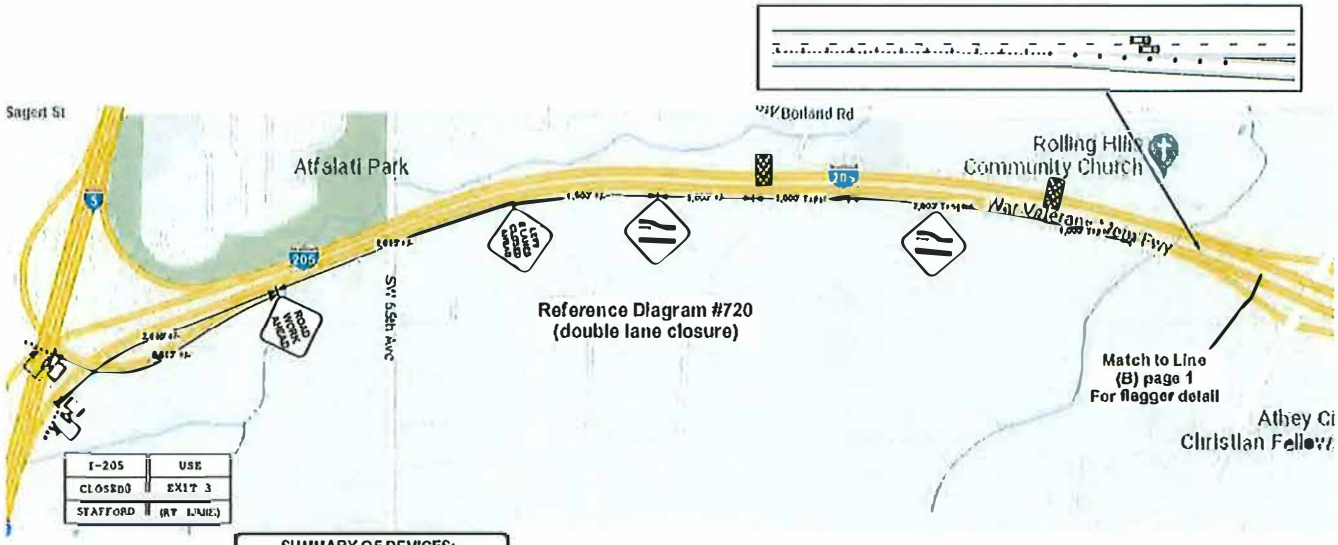
All signs and devices SHALL conform to the MUTCD / OTTCH.
Will adjust to fit field conditions.
Plan NOT to scale.

2BM474424

DEVICE SPACING:

TAPER: 40' Maximum
TANGENT: 40' Maximum

Northwest Traffic Control INC
Portland (503) 262-6500
Vancouver (360) 604-5655
Fax (503) 262-0367
Toll Free (800) 763-9733



SUMMARY OF DEVICES:

2 X ROAD WORK AHEAD
2 X LEFT 2 LANES CLOSED AHEAD
4 X TRANSITION RIGHT
2 X ARROWBOARDS
(2 type III barricaded (L))
2 X MESSAGE BOARDS
(12 drums, 2 type III barricades)
2 X TMA (1 per closed lane)
100 X CONES
60 X SLIM LINE DRUMS

All signs and devices SHALL conform to the MUTCD / OTTCH.
Will adjust to fit field conditions.
Plan NOT to scale.

ODOT PERMIT#_____

OWNER:	PROJECT / JOB NUMBER:
PGE (Portland Line Crew Center)	M2764844
PROJECT NUMBER / LOCATION:	CITY/STATE:
SW Stafford Rd & I-205	West Linn, OR.
PRIME CONTRACTOR:	
PGE	
CONTACT NAME/PHONE NUMBER:	E-MAIL:
Andrew / 503-915-9441	andy.brewer@pgn.com
PREPARED BY:	TRAFFIC CONTROL CONTRACTOR:
Nathan Burris 503-262-6500	Northwest Traffic Control Inc.
OR Cert# Exp: 11/30/2022 WA Cert# Exp: 04/30/2025	E-MAIL:
07634 012780	Nathan@nwtcl.com

FILE DATE: 01/04/2023 EDITED:05/23/2023

Oregon Department of Transportation 48HR. Work Notice

District 2B Permit Work Information

Permit #: 2B M47424

Please return this form via email to address shown at right:
Or Fax to 503.653.5655

d2bup@odot.oregon.gov (District 2B Permitting)

Applicant Name:_____

Phone: _____

Received Info From: _____

Contractor:_____

Contractor Phone:_____

Contractor Contact:_____

24-Hr Emergency#:_____

Highway Name & Route #:_____#:____

Mile points: _____--_____ (On Permit)

Direction of Travel:_____

Nature of work being done:_____

Is a Traffic Signal shut off required (Yes☐ / No☐)?

Signal shut off 72 hour Notice submitted? ☐ Yes ☐ No

Type of traffic control / restriction / lane closures: _____

Work Duration (Start/Finish Dates and Work Hours): Dates: Start:_____ Finish:_____

Hours: Start:_____ Finish:_____

Will Traffic Impacts remain in place after work hours (i.e. steel plates, cones, etc.)?

No? ☐

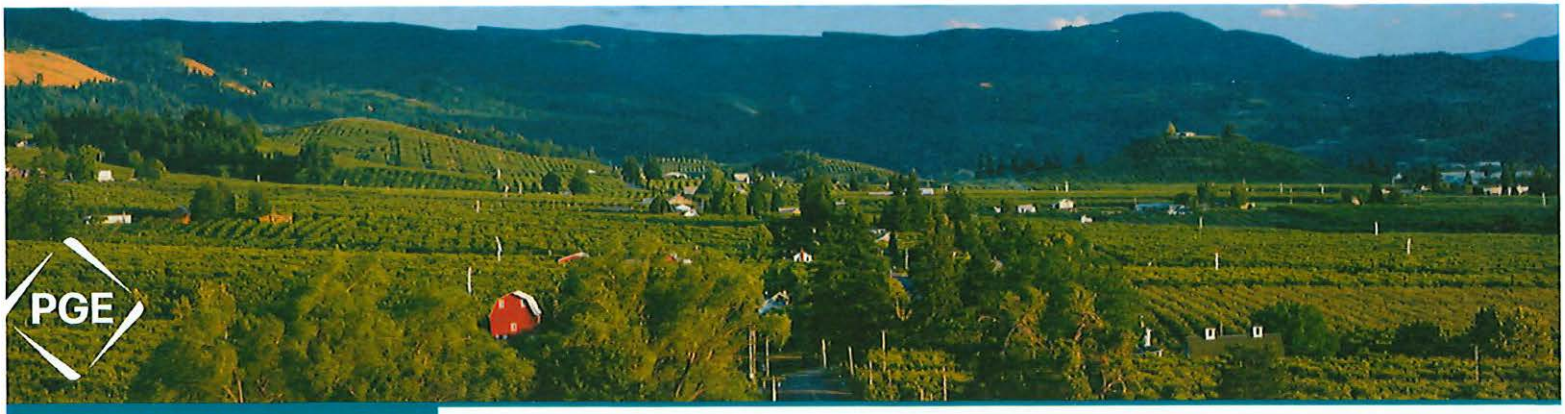
Yes? ☐ If "yes" please explain:_____

_____

NOTICE:
All sections must be completed.
Forms with incomplete or inaccurate
information will be returned for correction.
Strikethrough or "N/A" sections which do not apply.

ODOT DISTRICT 2B | 9200 SE Lawnfield Rd. Clackamas OR 97015 | (971) 673.6200 office | (503) 653.5655 fax

Updated 8/9/22



Tonquin Project

Why is PGE doing the Tonquin Project?

The Tonquin Project will add a new substation and upgrades to 11 miles of 115 kV transmission lines in Tualatin, Sherwood, Stafford, Wilsonville and unincorporated Clackamas County. These improvements will strengthen the grid, making it more resilient and reliable while adding capacity to meet future needs. Added flexibility will enable energy to flow from different substations, reducing power outages and enhancing system redundancy.

Is SW Stafford Road being widened to accommodate PGE's project?

No. Clackamas County is widening the road north of the Tualatin River from Pattulo Way to Rosemont.
More information is available at https://www.clackamas.us/engineering/st-rd-improvements/

What is the benefit of the Tonquin Substation?

Substations serve as electrical intersections that reduce power voltage and act as distribution and switching systems to homes and businesses. The Tonquin substation will help meet increased growth in Sherwood, Tualatin and surrounding areas. It will also provide relief to two nearby substations that are nearing their electric load capacity, improving the reliability of power for the surrounding area and region.

What is the benefit of the Memorial Substation?

The Memorial Substation will be located on PGE property in Wilsonville. It is a distribution substation that will receive electricity from the existing transmission line along SW Boones Ferry Road through two new line crossings over Interstate 5. This new substation will connect to the existing distribution infrastructure that is already underground, to support growing electrical demand in Wilsonville to increase capacity and ensure reliable service.

What does it mean for PGE to "upgrade" lines along SW Stafford Road?

The existing 7.4 miles of power lines along SW Stafford Road are being upgraded from distribution power lines to distribution and transmission lines. The current poles will be upgraded to support three transmission cables at the top, three distribution lines in the middle and non-PGE utility lines (typically for phones, internet, etc.) at the bottom. PGE is required to lease our towers and poles to utilities. Taller poles are required to accommodate the additional lines and maintain required clearances.

Tonquin Project

How does PGE plan transmission projects?

For transmission, PGE is required to meet mandatory reliability standards and planning requirements set by federal regulators and regional coordinators, which includes an obligation to collaboratively plan with Bonneville Power Administration and others. To meet these standards, planning requirements and directives, PGE regularly assesses system performance to determine where improvements are needed to meet customer needs reliably. This assessment and planning encompass PGE's system, our interaction with BPA's system and regional systems to help bring electricity from different locations and generation resources, like solar or wind, into PGE's service area. They also help make sure that our systems function as planned in an interconnected electric grid.

When upgrades are needed, we begin a multi-phase planning process involving different engineering and project teams with different areas of expertise. At a high level, these teams evaluate potential pathways for electricity to flow reliably from generation resources through the grid to customers; examine existing infrastructure and options for physical routes that will deliver electrons where they're needed; and plan and design lines and substations factoring a wide range of variables that include right of way, terrain, permitting needs, construction constraints – including limits on where PGE can place lines, competing infrastructure, and more.

How did PGE determine the pathway for the Tonquin project, including along SW Stafford Road?

The Tonquin Project evolved from PGE's local transmission planning process, which considered a range of factors including PGE's right of way access along existing distribution lines. This pathway is the least costly way to deliver energy reliably to where it is needed. When PGE invests in equipment upgrades, the Oregon Public Utility Commission will review those expenditures to determine if they were reasonable and prudent, because they result in price increases to all customers.

Property Values

How will PGE's project impact property values?

PGE cannot provide definitive information about how the addition of 115 kV transmission lines may impact property values as part of this upgrade to the existing 7.4 miles of distribution power lines along SW Stafford Road. The vast majority of poles are within the public right of way and will generally remain within five feet of their current locations. The transmission wires will appear fine and dull, helping them to blend into the background. Some poles will remain wood, and some will be upgraded from wood to either galvanized or weathering steel, typically in areas where the line has more curves. PGE's team will always work with landowners to find a suitable replacement for any impacted trees, shrubs and plans, as we try to restore the property to its original condition or better.

Undergrounding

Why isn't PGE placing the Rosemont-Wilsonville transmission lines underground?

There are a number of tradeoffs when it comes to installing 115 kV transmission lines underground. While every project is unique, with undergrounding, the most significant tradeoff is cost – which is in the order of 10x more expensive than installing overhead lines. When PGE invests in equipment upgrades, the Oregon Public Utility Commission will review those expenditures to determine if they were reasonable and prudent because they result in price increases to all PGE customers. For this project, PGE is working within existing public right of way. To underground, PGE would want a dedicated easement to protect underground facilities along this corridor in order to protect customers from the prospect of paying for the lines to be buried, and then potentially paying to relocate them should future public works projects so require.

Some of the tradeoffs when it comes to undergrounding transmission lines are:

1. The need for more easements. Undergrounding transmission lines usually involves burying large vaults at regular intervals, in addition to the cables and conduits.
2. More vegetation removal. To prevent roots from intruding into the electrical conduits in a transmission corridor, limited vegetation is allowed to grow above the lines and in the surrounding area.
3. Longer construction times, more heavy equipment and impacts to vegetation and roads.
4. More extensive maintenance inspections. Underground transmission lines can require patrolling to assess changes in soil depth, cover type, vegetation and other variables that can impact the ability of the line to effectively dissipate heat. They are more susceptible to water ingress, which can lead to equipment degradation and faults that in turn require more significant repairs.
5. Lengthier problem-solving and repair process. If lines are damaged or experience a fault, the process of identifying the issue, accessing it and repairing it requires more time, resources and heavy equipment, leading to longer outages.
6. Supply chain challenges. The cables and hardware used for underground transmission are often designed based on the unique soil and operating conditions, which can affect their availability for installation and repairs.

Poles And Lines

Will 115 kV transmission wires be thicker and more visually prominent than the existing distribution wires?

No. The transmission wires will appear fine and dull, helping them to blend into the background.

What kind of poles will be used along SW Stafford Road?

Some poles will remain wood, and some will be upgraded from wood to either galvanized or weathering steel, typically in areas where the line has more curves. More than 20 photo simulations of the Rosemont – Wilsonville segment are available on https://portlandgeneralprojects.com/Tonquin under the Photo Simulations tab to provide a look at the current and proposed changes.

How does PGE make sure the electric equipment plan, design, installation and maintenance meets industry standards?

PGE standards meet or exceed standards set by the National Electrical Safety Code (NESC), which IEEE keeps up to date with industry and technology changes. The NESC establishes ground rules and guidelines for practical safeguarding of the public and utility workers during the installation, operation and maintenance of electric supply and associated equipment. PGE and contractor engineers are seasoned professionals with experience designing structures to PGE standards and NESC requirements. All PGE design documents are stamped by a professional engineer registered in the state of Oregon.

Because safety is a top priority, PGE conducts annual patrols to visually inspect structures, insulators, hardware, conductors and static wire. If PGE identifies any issues, we perform the work necessary to maintain compliance with NESC standards. Every ten years, PGE inspects utility poles that support overhead equipment to assess pole condition. Depending on the pole's condition, PGE will either apply remedial preservatives to help maintain pole condition, or we will replace the pole.

An informational video about how overhead power lines are constructed is available under the Resources tab on https://portlandgeneralprojects.com/Tonquin.

Electric Magnetic Fields

What does the research say about electric and magnetic fields associated with electricity infrastructure?

Over the years, public concern has arisen about the research on electric and magnetic fields (EMF) in everyday life. Scientists have been researching potential health effects from EMF exposure since the 1960s. Multidisciplinary review studies have consistently concluded that there is insufficient evidence to establish causality between EMF and adverse human health hazards. Because of the lack of evidence, no "safe" or "unsafe" levels of exposure to EMF have been established by the government or health organizations.

Safety is a main focus at PGE, and we appreciate concerns about EMF around power lines. We work to address those concerns by employing EMF industry best practices in siting power facilities; keeping informed on the latest research from universities, federal and state health agencies, industry-sponsored programs and international health organizations.

More information is available in an EMF Fact Sheet posted on https://portlandgeneral.com/Tonquin under the 'Resources' tab.

Easements And Public Right-of-Way

What is a public right-of-way? What is an easement?

A public right of way is a right of way that has been dedicated to the public for use, that is controlled by either a local, state or federal entity. Utilities that are located in a public right of way get approval from the controlling entity to locate the utility in that public right of way. Overhead lines, poles and other equipment can be located within this right of way. If the utility needs to be located on private property, it will typically be covered by an easement, which is a perpetual agreement that gives PGE the right to access and work on lines and equipment. This provides a safe and documented path from our generation sites to homes and businesses.

Where are the poles on SW Stafford Road currently located, and will those locations change?

The vast majority of poles are in the public right of way and will generally remain within five feet of their current locations. PGE is meeting with every landowner where an easement may be involved to discuss the project. We bring a collaborative mindset to those conversations, which are unique to every landowner and property. We listen to concerns about what poles or other equipment might look like and whenever possible and may move a pole (within certain limits) to address the landowner's concerns.

Is PGE seeking easements along SW Stafford Road?

Because of the upgrades, PGE's footprint on a particular property may change. In those instances, PGE seeks an easement to compensate an impacted property owner and document any encumbrances on their property. When we seek easements, we share with a landowner the factors that inform the compensation amount offered. The easements involved on SW Stafford Road are largely because of aerial and vegetation impacts.

- Aerial impacts will occur on a small number of properties where PGE lines or cross-arms may cross over the property. The remaining easements for aerial impacts are being offered because a line could cross a property in certain conditions, for example, exceptionally high winds exceeding 75 MPH could cause the line to blow out over the property.

- PGE is seeking easements to address vegetation on private property that could interfere with its equipment. The easement will allow PGE to remove vegetation that does not meet PGE's required clearances or is at risk of growing into the line. PGE maintains clearances for safety, to help reduce the risk of outages and potential for vegetation to contact our lines and equipment. PGE will work with the property owner on appropriate landscape options that will not cause clearance issues.

Is PGE condemning anyone's property?

PGE has not commenced any condemnation actions as part of the Tonquin Project. PGE's goal is to work collaboratively with property owners to resolve concerns. Most poles are within the public right of way and will generally remain within five feet of their current locations. The easements involved on SW Stafford Road are largely aerial and vegetation easements and should have limited impact to properties. PGE is meeting with every landowner where an easement may be involved to discuss the project. Because PGE has not commenced any condemnation action, PGE has not sought a Certificate of Public Convenience and Necessity (CPCN) from the Public Utility Commission of Oregon.

Natural Habitat

Will the upgrades along SW Stafford Road affect the avian and wildlife habitat?

During project planning, PGE environmental personnel work with project teams to assess potential impacts to wildlife and habitat resources. Considerations include site-specific factors such as local wildlife species and habitat, local land use, topography, line and equipment configuration, and other project details. PGE biologists have reviewed available internal, state, and federal data on wildlife and habitat in the project vicinity and the possible impacts of this project. Overall, the area is low-risk for sensitive species and habitats. The proposed project follows existing roadway and utility corridors which further minimizes impacts to avian and wildlife species and habitat. Additional measures around vegetation removal will be implemented to further reduce any potential impacts. PGE documents and monitors any reports related to bird and wildlife impacts from our facilities.

PGE has an Avian Protection Plan which implements several measures used to evaluate and reduce risks to avian species while increasing system reliability. Key measures include training employees on bird protection issues and procedures; tracking bird and nest issues to assist in minimizing impacts; building nest platforms to reduce pole-top nesting and outages; implementing design features to poles and transformers that reduce bird risk; and, collaborating with the U.S. Fish & Wildlife Service and the Avian Power Line Interaction Committee on strategies that reduce bird and power interactions.

Trees And Vegetation

Will PGE remove trees and vegetation along SW Stafford Road as part of this project?

When we plan new infrastructure construction or a major upgrade, we consider a range of variables so power lines have a safe path from where power is generated to the homes and businesses they serve. As a rule of thumb, the right of way under distribution power lines must be clear of trees. Trees inside the right of way should not be taller than 20-30 feet when fully mature. Trees around high-voltage transmission lines should not exceed 20 feet in height when fully mature, and they should be at least 30 feet away from our equipment. Sometimes, PGE will need to remove a tree before it becomes a hazard to power lines, if it's encroaching in our clearance area, or showing signs of damage or disease. We make those determinations with the help of certified arborists and forestry staff. In those instances, we reach out to tree owners to discuss tree removal and potential replacement.

PGE's team will always work with landowners to find a suitable replacement for any impacted trees, shrubs and plants. PGE tries to restore the property to its original condition or better. There are limitations in some instances, for example, if large trees are within the easement area. In those instances, PGE will work with the landowner to find a suitable alternative that meets clearance requirements and doesn't impede access to the lines for inspection, maintenance and repairs.

An informational video on Power Lines, Trees and Vegetation is available under the Resources tab on https://portlandgeneralprojects.com/Tonquin.

Does PGE need permits to remove trees for the Rosemont-Wilsonville segment?

Permits to remove trees from this portion of the project are largely 'Right of Way' use permits. All required permits are posted on https://portlandgeneralprojects.com/Tonquin under the 'Resources' tab.

Wildfire Assessment And Risk

How does PGE evaluate wildfire risk?

As part of our ongoing evaluation of High Fire Risk Zones, we've identified 10 areas within PGE's service area that scientific data and risk modeling using thousands of data points, variables and scenarios have identified as being at higher wildfire risk. The Tonquin Project is not within these 10 areas. Even still, the safety of our customers and community is always a top concern. It's important to know that PGE stands ready to turn off power for public safety in the areas beyond our higher wildfire risk areas.

When it comes to wildfire, there is no single solution to protect power lines from the effects of climate change. Our year-round efforts and 2023 Wildfire Mitigation Plan are rooted in protecting people, property and natural environments. Our strategy is informed by ongoing system assessments and data-driven risk analysis, and includes year-round prevention work, such as using enhanced designs based on industry best practices, upgrading equipment and expanding tree-trimming and vegetation management in high-risk areas.

What steps does PGE take to mitigate fire danger around overhead power lines and equipment?

PGE's 2023 Wildfire Mitigation Plan identifies a holistic strategy to mitigate wildfire risk through ongoing system hardening, advances in situational awareness tools and assets, operational changes and vegetation management. For example, PGE is using high-definition cameras with artificial intelligence that allows local public safety agencies to respond quickly to fire through real-time detection and triangulation. PGE vegetation crews also routinely inspect trees and vegetation around our power lines in order to maintain necessary clearances and reduce the likelihood of trees or debris making contact with our lines.

What are your routine vegetation management standards?

PGE has prescribed standards for the clearance of vegetation located under, near and around our overhead and underground infrastructure near our poles on a site-specific and construction-specific basis. Additionally, PGE subscribes to the principles of Integrated Vegetation Management (IVM) in the right of way. This promotes the retention of desirable vegetation species as a means of biological control, which helps in response to climate change and fuel loading.

Other IVM methods may include a combination of chemical, cultural, mechanical, and/or manual treatments. PGE's FITNES program identifies vegetation within proximity to certain types of assets (expulsion fuse, etc.) and prescribes treatment to the site as needed to maintain necessary clearances.

Is PGE undergrounding transmission lines as part of its wildfire mitigation efforts?

PGE has no current plans to underground transmission lines as part of our wildfire mitigation efforts. All undergrounding is of distribution lines.

Will PGE be changing High Fire Risk Zones every year?

Annually PGE assesses High Fire Risk Zones using wildfire risk modeling. Changes are certainly possible as we continue to learn more about climate change and its impacts, and adapt accordingly.

Valuation Guidelines for Properties with Electric Transmission Lines

By: Kurt C. Kielisch, ASA, IFAS, SR/WA, R/W-AC

Before a discussion can be entered about the perception of electric transmission lines and their effect on property value, it is important to understand what a transmission line is and how it differs from a distribution line.

An electric *transmission* line is an electric line that transports electrical power from one substation to another. These lines are typically 100kV (kilovolts) or larger exceeding one mile in length[1], have large wood or steel support towers over 45ft in height, and often have more than one set of wires (3 wires per circuit plus the static wire). Electric transmission lines do not directly serve electric utility customers: their power is distributed from distribution point to distribution point. Transmission line wires are not insulated and are "bare". Typically, they constructed to have at least 20ft of clearance between the ground elevation and wire at low sag.

An electric *distribution* line is a power line that transports electricity from the substation to the electric utility customers. These lines are of less voltage, typically under 65kV, carried on wood poles of 45ft in height or less and hold one pair of wires. The voltages of these lines are downgraded before the electricity is brought to the customer's residence or commercial building. The focus of this report is on "transmission" lines, not "distribution" lines

Perception = Value

The valuation of properties that have an electric transmission line requires an understanding of the basic principles of Market Value. Market Value is defined, in layman's terms, as the value a property would sell for at a given date considering an open market. (A complete definition of this term is included in the body of the appraisal report.) An open market assumes that the property is available for purchase by the public, being properly marketed for maximum exposure, and that the buyer is well informed, fully knowledgeable and acting in their best interest. Included in this definition is that the buyer has full knowledge of the pros and cons of the property, and then acts with that knowledge in a way that will benefit them. In other words, the value of the property is based on the perception of the buyer. Understanding that perception drives value is the foundation in analyzing the effect that electric transmission lines have on property value.

The key point of the Market Value definition, which gives guidance to answer the "impact" question, is the "willing buyer" part of the equation. In appraising a property the appraiser attempts to reflect the potential buyer of the subject property and estimate their action as to the subject property with all its advantages and disadvantages (knowledgeable buyer). To accurately reflect this buyer, the appraiser must determine the typical profile of such a buyer of the property in question. An example of this

1 Wis. Stat. 196.491(1)(f)

would be a one bedroom condominium along a lake may indicate a typical buyer to be a retired couple who is looking for a recreational retreat for themselves and their guests. Another example would be a parcel with the best use being a dairy farm; the typical buyer would be a person either currently engaged in dairy farming looking to expand or relocate, or one who desires to enter into this field -- in either case a "dairy farmer." Such an analysis should be obvious, yet often overlooked when appraising properties.

For rural properties that are utilized for agricultural purposes, the most likely buyer would be one who: (1) prefers the rural lifestyle over the urban lifestyle; (2) typically generates their income from working in the agricultural field; (3) would be sensitive to environmental issues that affect the uses of the land and the view shed of the land; and (4) would be sensitive to health and safety issues relating to the land and its use.

It is most likely that such a person, when confronted with an electric transmission line traversing the property, would view such an improvement as aesthetically "ugly," potentially hazardous to their health, disruptive to rural lifestyle and potentially harmful to the use of the land for agricultural purposes.

Research Format

Our research into the impact of electric transmission lines followed several stages. The first was a "literature" study. This study involved investigating, collecting, indexing and reading many of the published articles, news stories and published transcripts relating to the topics of EMFs and stray voltage. Stray voltage was included in this research due to the concern dairy farmers have relating to its presence from high voltage power lines. This research resulted in over 2,500 pages of information collected and analyzed. The purpose of this study was to discover "what is the public's perception of high voltage transmission lines." Overall, the majority of the articles indicated a "fear" of these power lines, citing health concerns as the primary factor. Other concerns included stray voltage issues (mainly with rural publications) and aesthetics. It was clear that most of the information the public receives about these matters is negative. The literature study will follow these "guidelines."

The second part of our study involved researching studies completed on the effects on property value due to the presence of electric transmission lines. This included collecting many of the published research studies on this topic found in the public domain. Additionally, the study reviewed trade journals not available to the public, but available only to real estate professionals. Again, to be fair, some of the studies indicated that there was no measurable effect. However, there were a number of studies (mostly recent) that indicated there was a measurable effect and that effect ranged from a loss of 10% to over 30% of the overall property value. These studies included both improved and vacant land.

Empirical Studies

Below is a sampling of some studies we have reviewed regarding the impact that electric transmission lines have on land value and were utilized to formulate our opinion of value when a property is impacted by a high voltage transmission line.

- *Study of the Impact of a 345kV Electric Transmission Line in Clark County, Town of Hendren.*

(Appraisal Group One, Kurt C. Kielisch, 2006, revised 2009) This study was limited to Hendren Township, Clark County, and covered a five year time period from January 1st, 2002 to June 1st, 2006. This study included 22 land sales of agricultural and recreation land, of which 4 were encumbered with a 345kV electric transmission line having wood H-pole design, 60ft height and 150ft wide easement. The other 18 land sales were considered comparable to the power line encumbered sales. The conclusion of this study was that: (a) the land sales with an electric transmission line sold for 23% less than comparable land sales without a transmission line; and, (b) the more severe the location of the power line the greater was the loss of value.

- *An Impact Study of a 345kV Electric Transmission Line on Rural Property Value in Marathon County - Wisconsin.* (Appraisal Group One, Kurt C. Kielisch, 2006) This study focused on the impact a 345kV line, known as the Arrowhead-Weston line, had on property value. This power line was a 345kV electric transmission line, having steel single poles ranging in height from 110ft to 150ft, single and double circuit lines, having a 120ft wide easement. The study compared sales within a 2 year time period (January 1st, 2004 to December 31st, 2005) in Marathon County, Wisconsin, focusing the area to the Townships of Cassel and Mosinee. This study used 14 land sales, of which 5 were encumbered with the power line and 9 were not. A simple regression technique and matched pair analysis was used to extract the value impact. The study concluded with a finding that when the power line traversed the property along the edge, such as a back fence line, the loss was as low as -15%, and when it bisected a large parcel the loss was as high as -34%. The properties were all raw land sales with either agricultural or residential land use.

- *Transmission Lines and Property Values State of the Science* (Electric Power Research Institute [EPRI}, 2003). This study completed by EPRI for the benefit of its electric utility clients reviewed the issue of property values being impacted by electric transmission lines by summarizing research they had on the subject. Essentially they concluded that the results are mixed, some cases showing a loss in value ranging from 7-15% with appraisers who had experience with valuing such properties, to having no effect. Interestingly, it appeared in their survey that appraisers who did not have experience valuing such properties tended to overrate the negative effects.

- *American Transmission Company, Zone 4, Northeast Wisconsin - High Voltage Transmission Line Sales Study* (Rolling & Company, 2005). This study researched the impact that high voltage electrical transmission lines have on property value in the northeast Wisconsin area. They collected information on 682 land sales of which 78 involved lots near a transmission line corridor, but not directly encumbered by the transmission line. Their conclusions were: (a) easement lots sold at about 12% less than lots located over 200ft from the transmission lines; and (b) no clear impact on "proximity" lots those that lie within 200ft from the easement area but are not directly subject to the easement.

- *Properties Near Power Lines and Valuation Issues: Condemnation or Inverse Condemnation* (David Bolton, MAI. Southwestern Legal Foundation. 1993). This study cites a number of studies that prove a loss of property value due to proximity to an electric transmission line and then cites his own study. His own study found that in the Houston area assessed values of properties that adjoined a power line easement had a 12.8% to 30.7% lower assessment than the average homes not on the line, but in the same area. He also found that: (1) many buyers refused to even look at such properties; (2) such properties took at least twice as long to sell; (3) some brokers said such properties can take three times longer and finally sell at a 25% loss of value; and (4) overall homes adjoining transmission line easements took six times longer to sell and experienced a 10% to 30% loss in value.

- *Power Line Perceptions: Their Impact on Value and Market Time* (Cheryl Mitteness and Dr Steve Mooney. ARES Annual Meeting paper. 1998) The authors interviewed homeowners on or near electric transmission lines and found: (1) that in relation to the average impact of overall property value, 33% said 2-3% loss and 50% said a 5% loss or greater; (2) nearly 66% said the power line negatively affected their property value; (3) 83% of real estate appraisers surveyed said the presence of the power lines negatively affected the property values, most saying the loss was 5% or greater.

- *Analysis of Severance Damages (James Sanders, SRA, 2007)* This study completed an analysis of the impact of a transmission line through the middle of the Continental Ranch subdivision outside of the Tucson, Arizona area. This subdivision had a wood H-pole high voltage electric transmission line running through a portion of the subdivision. The author compared the residential lots abutting the easement to ones that were not. All lots abutting the easement were much bigger than the non-easement abutting lots. The author used improved properties for his study and by the use of regression analysis isolated many variables of value for an improved property to remove them from the analysis. In conclusion, through extensive use of the regression technique, the author finds an overall loss to the improved properties abutting the power line easement at -12%. This loss is attributed to both the land and improvements. However, the author notes that the lots are typically twice the size of the non-easement lots. When the size of lots was factored the overall loss to the land only was factored at -40%. It should be noted that the residences were at a distance from the power line.

- *The Peggy Tierney property: A Comparative Study of the Impact of a 69kV Transmission Line v. 345kV/69kV Transmission Line (Kurt C. Kielisch).* This was a brief study on the impact difference, if any, between an existing 69kV transmission line and a new proposed 345kV and 69kV transmission line on the same property. The property was a 3.70 acre residential lake front improved property that had an existing 69kV transmission line crossing the west half of the parcel along the road and required the property owner to cross under the power line to enter the parcel. The 69kV line had an easement width of approximately 100ft, wood H-poles at 50-60ft in height. The new 345kV line was to be placed within the existing easement, more or less, would have 140ft monopoles and carries both a 345kV and 69kV line. The seller attempted to sell the property at its full list price after an experienced lake front home Realtor established the list price from a comparative sales analysis. The home eventually sold for 27% less than the list price and took longer to sell in a relatively strong lake front home market. The buyer cited the pending 345kV line as the principle reason for their low offer.

- A comparative sales analysis to isolate the percentage of loss a residential and/or agricultural

land use property suffers due to the presence of a high voltage electric transmission line (HVTL). This study was found in an appraisal completed by Aari K. Roberts for American Transmission Corporation (ATC) on the Herbert Bolz property located in the Town of Rubicon, Dodge County, Wisconsin. Mr. Roberts compared the sale of a rural agricultural 24 acre land parcel that had an HVTL crossing the property, to three comparable agricultural land sales of comparability that did not have a HVTL. His sales comparison study concluded that the property with a HVTL suffered a 29% loss of value due to the presence of the HVTL. This study was completed in September 2007.

- A sales analysis of the property located at: N8602 CTH D, Town of Deer Creek, Outagamie County, Wisconsin. This is a single family home located on 3.19 acres in the rural area of Outagamie County. The home was a ranch style residence with 1,S00sf GLA, attached 2-car garage, 8/3/2 room count, full basement and was in average condition overall. The property also had a 104ft x 52ft pole barn and two other outbuildings. There were two appraisals completed on this property, one by the condemnor (ATC) and one by the property owner. The average Before taking value of the two appraisals was $221,000. The property was then improved with a 345kV & 138kV electric transmission line having 126ft pole height and was placed along the roadside reaching 68ft into the property. The edge of the easement was in less than 20ft to the residence, however the placement of the pole was as close to the roadway right-of-way as possible. The condemnor American Transmission Company (ATC) purchased the property and installed the transmission line. Then they upgraded the property with new paint, doors, sinks, dishwasher and flooring, plus cleaned the premises and outbuildings. ATC put the property on the market asking $179,900 a number established by the appraiser for ATC as the After value. It was sold for $128,500 10 months after ATC purchased it.

  The Before taking average value was $221,000. The property was then improved and upgraded at an expense estimated to be $8,000-$10,000, then resold 10 months later with the transmission lines in place for $92,500 less or 42% less. The only differences between the Before taking market value and After taking sale price were the transmission line and time. A review of the Outagamie County market between November 2008 and September 2009 shows only a small downward trend in rural residential property value, therefore the biggest part of the loss is attributed to the presence and near proximity of the transmission line that being 38%-40%.

- *The Gene Laajala property: A Comparative Study of the Impact of a 161kV Transmission Line v. 345kV/161kV Transmission Line (Kurt C. Kielisch)*. This was a brief sales study on the impact difference, between an existing 161kV transmission line and a new 345kV/161kV transmission line on the same property. The property was a 20 acre rural agricultural and residential property that had an existing 161kV transmission line bisecting the parcel along the east side. The 161kV line had an easement width of approximately 120ft, wood H-poles at S0ft± in height. This line was replaced with an upgraded easement comprised of 345kV/161kV line which was to be placed within the existing easement, more or less, and had (2) 110ft and (3) 120ft steel H-poles. The property was appraised in January 2007 with a Before condition value of $204,500 using the Cost approach and $185,500 using the Comparable Sale approach, by Ted Morgan, MAI. (The whole property appraised was 40 acres and the 20 acre parcel was portion out of this whole). The ATC appraiser did not appraise the home in the Before condition, but did conclude the Before taking land value was $44,000 for 20 acres (using his $2,200/acre conclusion for 40 acres) and the assessed value of the improvements were $107,600, indicating a $151,600 Before

value. The property sold and closed in October 2007 for $120,000. The seller attributes the loss to the new power line, it being larger and more lines. The loss indicated was $65,500 (using Morgan's Comparable Sales value) or $31,600 (using ATC's land plus assessed improvement value), indicating a loss range of 35% to 21%.

- *An Impact Study of the Effect of High Voltage Power Lines on Rural Property Value in Southwestern Indiana (Kurt C. Kielisch, Appraisal Group One, 2010).* This study was based in southwest Indiana in Gibson County. It was focused on large agricultural land and the impact of a high voltage transmission lines (HVTL) varying in size from monopole to large steel lattice towers. The study included 32 land sales of which10 were HVTL sales. The time period was January 1st, 2006 to December 31st, 2009. Adjustments were made for time, location and other utility easements (if any) and the results were graphed to compare the non-HVTL land sales to the HVTL land sales. The study concluded that the power lines negatively impacted the property with an impact range from -5% to -36% with the average impact being -20%.

Other Value Issues

Another issue relating to the presence of the transmission line is potential for the creation of an "utility" corridor. Such a corridor is a where several utility transmission lines are placed, such as gas transmission pipelines and communication lines. Indeed, the State of Wisconsin made it a legislative rule that future placement of such utilities are to be given preference to "existing utility corridors."[2] An electric transmission line meets the definition in this statute as an existing corridor. This "corridor" concept continues to grow in the perception of the public as such rules become more commonly known. The reality of such an event happening is the placement of the Arrowhead-Weston Power line, which was often placed within an existing utility corridor such as an oil transmission pipeline, smaller electrical transmission lines or abandoned electric transmission line easements. The very power line that is the focus of this analysis is further proof of the corridor effect for it has been expanded, enlarged and added circuits within the existing easement.

Other factors to consider regarding the valuation of HVTL impacted rural properties are agricultural equipment concerns operating under and near the line, health issues of workers in close proximity of the lines, health concerns of farm animals in close proximity of the lines, stray voltage, the concerns of public in relation to electro-magnetic fields, safety issues regarding bare wires of the transmission line and other concerns addressed in the literature study to follow.

In conclusion, it can be stated with a high degree of certainty that there is a significant negative effect ranging from -10% to -30% of property value due to the presence of the high voltage electric transmission line. The actual loss depends on factors of land use, location of the power line and its size.

2 Wis. Stats 1.12(6)(a).

Literature Study

HVTL Impacts on Rural and Agricultural Properties

Throughout the nation's rural communities, literature research suggests that the presence of an HVTL easement can have a noticeable impact on both the use and appeal of rural properties and farms. Common concerns include stray voltage, health risks to livestock and cattle, diminished livelihoods and heritage, limited land use, and lessened aesthetic appeal. As the following literature survey will show, many different issues play a role in shaping one's perception of the impact of HVTLs on rural property values.

Stray Voltage

To understand the potential impact of HVTLs on rural land, it's important to discuss a key component in many farmers' apprehension about HVTLs: stray voltage.

Stray voltage is the rural equivalent of the high-profile residential Electromagnetic Field (EMF) factor, but instead of fearing leukemia or brain cancer, farmers fear their animals will become unproductive, ill, and even die.

Whenever energy is transferred, some is lost along the way. If metal buildings are near leaking energy, they can act as a conduit for voltage to find its way to feeding systems, milking systems and stalls.

In their 1995 presentation, "Stray Voltage: The Wisconsin Experience," a team of researchers led by Mark Cook and Daniel Dascho stated that farmers most worry that stray voltage will increase somatic cell count in their animals, make cows nervous, reduce milk production, and increase clinical mastitis.[3]

"Few issues are more upsetting to dairymen than fighting case after case of clinical mastitis with more and more cows in the sick pen," writes Dr. Winston Ingalls. "It represents extra time to properly handle such cows, lost production, vet calls, treatment products, concern about contaminated milk and an occasional dead or culled cow."[4]

In Cook & Dascho's presentation, they discuss their findings from a non-random sampling study of farms with stray voltage complaints stemming from a nearby substation. Their research team found no significant relationship between cow contact current and distance from the substation or contact currents. However, they also noted that cow contact current depends on many physical factors from on-farm and off-farm electrical power systems. They say, "There are many confounding factors that may outweigh the impacts of stray voltage which makes it difficult to draw conclusions from field studies about its effects on production and animal health."[5]

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3 **Stray Voltage: The Wisconsin Experience.** Written for presentation at the 1995 International Meeting by Mark A Cook, Daniel M Dascho, Richard Reines and Dr. Douglas J Reinemann.

4 **Clinical Mastitis.** Winston Ingalls, Ph.D. GoatConnection.com. August 2, 2003. http://goatconnection.com/articles/publish/article_173.shtml

5 **Stray Voltage: The Wisconsin Experience.** Written for presentation at the 1995 International Meeting by Mark A Cook, Daniel M Dascho, Richard Reines and Dr. Douglas J Reinemann.

In a 2003 study prepared for the NRAES Stray Voltage and Dairy Farms Conference, a research team conducted by the University of Wisconsin-Madison and led by Dr. Douglas J Reinemann studied the effects of stray voltage on cows at four dairy farms over a two-week time period. He and his team found that after the first few days of exposure, cows quickly acclimated to the presence of stray voltage. They also found that stray voltage of 1mA had little effect on the immune system of a cow.[6]

Concerning EMF levels, they noted that "even though man-made signals were larger than the naturally occurring currents, levels are significantly lower than what is considered sufficient earth current strength to develop step potential anywhere near the Public Service Commission 'level of concern.'"[7]

Stray voltage is usually undetectable by humans, and some researchers believe it occurs when electricity escapes a power line or wiring system and emits a secondary current. The problem intensifies with older barns that add automated electrical equipment, "raising ambient levels of current. Soon the cumulative effect of these secondary currents becomes harmful to cows." Though stray voltage can be measured, experts don't know how and why it happens or what conclusive effect (if any) it has on animals.[8]

Despite little concrete evidence, courts have compensated farmers for their losses due to stray voltage when all other factors are eliminated. In 1999 a jury awarded Peterson Bros. Dairy $700,000 after deciding that stray voltage from an automated feeding system from Maddalena's Dairy Equipment of Petaluma, California slashed the herd's milk output and increased the cow's death rate.[9]

The company's defense attorney called stray voltage "junk science," the Petersons' claim of stray voltage in the milk barn a "harebrained theory" unsupported by electrical engineers, and blamed the herd's health problems on the Petersons' own mismanagement.[10]

In a similar case in Wisconsin in 2004, a dairy operation owned by George and Kathy Muth successfully sued Wisconsin Electric Power Co. (now We Energies) for negligence in the maintenance and operation of a distribution system on their farm. They claimed that the system led to stray voltage that injured and killed several of their dairy cows and damaged their milk production. The utility said that the levels of stray voltage were "extremely low" and were levels you could find anywhere.[11]

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6 **Dairy Cow Response to the Electrical Environment: A Summary of Research conducted at the University of Wisconsin-Madison.** Paper presented at the NRAES Stray Voltage and Dairy Farms Conference. Dr. Douglas J. Reinemann. April 2003.

7 **Results of the University of Wisconsin Stray Voltage Earth-Current Measurement Experiment.** A revised version of a report submitted to the State of Wisconsin Legislature on June 25, 2003. Written by David L Alumbaugh and Dr. Louise Pellerin.

8 **Jury gives $700,000 to dairy farmers for losses blamed on "stray voltage."** Author Unknown. The Associated Press. April 21, 1999.

9 **Ibid.**

10 **Ibid.**

11 **Power company negligent in dairy suit; Jury awards $850,000 to couple over effect of stray voltage on cows.** Lauria Lynch-German. Milwaukee Journal Sentinel. February 27, 2004.

The farmers said that shortly after moving to their new location, they faced low milk production, excessive illnesses, and deaths of cows. [12] The cows didn't walk right or act normal. They didn't want to go into the barn, inside, or into the stalls. The Muths examined everything from the animals' food to their bedding until consultants told them it could be stray voltage. In one year, they lost 15-18 cows and calves. Autopsies were inconclusive.[13]

After reviewing herd management and nutrition, they hired a consultant who detected stray voltage. Later that year the utility found no stray voltage problems. The farmers further consulted with veterinarians and tested and ruled out all the other factors except for stray voltage.[14]

The farmers hired an electrician to upgrade the farm's wiring, but it didn't decrease the stray voltage. After being asked, the utility made some other changes, but this also had no effect. Further consultants still found stray voltage from a conductor on the utility's distribution lines. A couple years later the utility removed a piece of underground electrical equipment and the herd immediately recovered…though the level of stray voltage remained the same.[15]

The utility's attorney stated that being able to measure something doesn't make it harmful. He cited several federal and state studies that say the current must be 2 milliamps or higher to adversely affect cattle and said no reading on their farm reached that level.[16]

The jury awarded the dairy farm $850,000 in damages.[17]

Stray voltage fears aren't limited to dairy or cattle operations. Max Hempt, a horse farm owner in Pennsylvania, tried to oppose a proposed 9-mile 138kV HVTL because he feared that the line's EMFs caused by stray voltage could cause sterility and death among his horses.[18]

Though it's difficult to prove a significant presence of stray voltage, and even more difficult to prove a direct correlation between stray voltage and poor health, courts have awarded farmers sizable judgments to compensate them for damaging stray voltage from nearby power lines.

In 2002, one such case in Iowa made it to the state supreme court where the court upheld a $700,000 judgment to a dairy farmer who argued that stray voltage from nearby power lines injured his herd. A substation sits less than a quarter mile from his farm. He said he often got electric shocks from the metal buildings on the farm. Also, he said his herd acted oddly, appearing frightened and refusing to enter barns. Milk production also suffered.[19]

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12 **Jury must decide in voltage complaint; Farm family says stray power harmed dairy herd.** Lauria Lynch-German. Milwaukee Journal Sentinel. February 5, 2004.

13 **Dairy farm owner testifies that stray voltage killed cows in his herd.** Lauria Lynch-German. Milwaukee Journal Sentinel. February 10, 2004.

14 **Jury must decide in voltage complaint; Farm family says stray power harmed dairy herd.** Lauria Lynch-German. Milwaukee Journal Sentinel. February 5, 2004.

15 **Ibid**.

16 **Ibid**.

17 **Power company negligent in dairy suit; Jury awards $850,000 to couple over effect of stray voltage on cows.** Lauria Lynch-German. Milwaukee Journal Sentinel. February 27, 2004.

18 **Farmer Fears Stray Voltage From PP&L 138 kV Line Could Harm His Horses.** Author Unknown. Northeast Power Report. June 24, 1994.

19 **Court upholds stray voltage judgment.** Mike Glover. The Associated Press. October 10, 2002.

The defendant, Interstate Power Co., said that "there's an inherent risk to transmitting electricity" and it shouldn't be vulnerable to such lawsuits unless they were negligent. The court ruled in favor of the dairy farmer, citing the lack of a statute exempting electric utilities from nuisance claims.[20]

One year later the Wisconsin Supreme Court similarly found "that a utility can be held responsible for harming the health of a dairy herd with stray voltage even though state-recommended voltage tests did not find potentially damaging levels where the animals congregated."[21]

As the preceding case studies show, courts have acknowledged stray voltage and its possible effects. However, to fully understand the apprehension surrounding power lines, one must examine the EMF debate and its fear factor.

EMFs and Fear

In 1990, the EMF debate was so prevalent that members of Congress passed a bill that would limit the public's exposure to EMFs.[22] A couple years later, in response to public concern about EMFs, Congress established the EMF-RAPID program in 1992. Its purpose was to coordinate and execute a limited research program to fill information gaps concerning the potential health effects of exposure to EMFs, to achieve credibility with the public that previous research has not earned, and to coordinate and unify federal agencies' public messages about possible EMF effects.[23] The program originally was to receive $65 million in funding, but total funding is expected to be $46 million.[24]

Several years later in 1999, the National Institute of Environmental Health Sciences studied the health effects of EMF exposure and found conflicting results. Though they concluded that the evidence is weak linking EMFs to health risks, they also found that the most common health risk was leukemia (mostly appearing in children). They also found a fairly consistent pattern of a small, increased risk of childhood leukemia with increasing exposure. The majority of the panel's voting members voted to acknowledge EMFs as a possible human carcinogen. They concluded that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence.[25]

In 2005, UK scientists conducted a case-control study on childhood cancer in relation to distance from high voltage power lines in England and Wales. They found an association between childhood leukemia and proximity of home address at birth to HVTLs. "The apparent risk extends to a greater distance than

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20 **Ibid.**

21 **Utility liable for stray voltage, high court says.** Don Behm. Milwaukee Journal-Sentinel. June 26, 2003.

22 **Electric Powerlines: Health and Public Policy Implications** – Oversight Hearing before the Subcommittee on General Oversight and Investigations of the Committee on Interior and Insular Affairs House of Representatives, 101st Congress, second session on electric powerlines: health and public policy implications. March 8, 1990.

23 **Electric and Magnetic Fields Research Program** by Mr. Mukowski from the Committee on Energy and Natural Resources. 105th Congress, first session. June 12, 1997.

24 **Ibid.**

25 **NIEHS Report on Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields.** Released by the National Institute of Environmental Health Sciences on May 4, 1999.

would have been expected from previous studies" although they have yet to discover an "accepted biological mechanism" to explain their results.[26]

Though an accepted biological mechanism remains elusive, an early nineties case made it possible to link loss of property value to a fear of EMFs. In the 1993 case, *Criscuola v. Power Authority of the State of New York*, the court found that, "there should be no requirement that the claimant must establish the reasonableness of a fear or perception of danger or of health risks from exposure to high voltage power lines" and "Whether the danger is a scientifically genuine or verifiable fact should be irrelevant to the central issue of its market value impact."[27]

Utilities say that landowners should not be able to recover damages or injunctive relief "based on myth, superstition or fear about an alleged health risk that is not supported by substantial scientific or medical evidence."[28]

With the EMF debate unresolved, and evidence for both sides of the argument, some communities are reluctant to approve new HVTLs...and may even legally oppose them.

In an effort to preempt public opposition, Public Service Enterprise Group offered hundreds of thousands of dollars to New Jersey towns opposing its proposed HVTL project if the towns dropped all opposition and didn't comment on the payments. Opponents called them "bribes." The utility called them "settlements" to help minimize impacts of the project on towns and residents.[29]

Some towns accepted payment, but the majority did not. Either they said they didn't have enough time to respond to the offer, or they rejected them as payoffs. One of the opposing mayors, Mayor James Sandham of Montville, said it's not about the money; "It's about safety and property values."[30]

HVTLs and Property Values

Fear can impact the public's buying habits. Residential homeowners' resistance to abutting HVTLs is well documented. Though homeowners may fear negative effects on their community and environment,[31] their first point of opposition is usually safety, especially if there are many children in the neighborhood. Though the 1979 Wertheimer study linking EMFs to childhood leukemia has long been contested, supported, and contested again, the very existence of a debate about the safety of EMFs sows enough doubt in residents' minds to justify the fear.[32] And that fear can influence the values of nearby homes.[33] [34] [35] [36]

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26 **Childhood cancer in relation to distance from high voltage power lines in England and Wales: a case-control study.** Gerald Draper, Tim Vincent, Mary E Kroll, John Swanson. British Medical Journal (bmj.com). June 3, 2005.
27 **'Criscuola' – The Sparks Are Still Flying.** Michael Rikon. New York Law Journal. April 24, 1996.
28 **High Court Hears Arguments Today on EMF Claims.** Todd Woody. The Recorder. June 6, 1996.
29 **Opponents of $750M N.J. power line project argue towns were paid to drop opposition.** Lawrence Ragonese. The Star-Ledger. January 31, 2010.
30 **Ibid.**
31 **NY Power Line Opponents Win Court Fight.** Associated Press. New York Post. February 20, 2009.
32 **Lines in Sand and Sky.** B.Z. Khasru. Fairfield County Business Journal. September 3, 2001. Vol. 40 Issue 36, p3, 2p.
33 **Power line plan concerns metro residents.** Melissa Maynarich. News 9 (Oklahoma). July 22, 2008.

When given the choice to purchase two identical homes, one with such health concerns and the other without, most buyers will choose the home without the concern,[37] forcing the homeowner to lower their price. Aesthetic impact can also influence a property's value. Many residents don't want to look at HVTLs,[38] something they consider to be an "eyesore."[39]

One of the hardest properties to sell can be one encumbered by an HVTL. Unlike roadway proximity, its effect isn't readily noticeable or measurable. Though homes near HVTLs typically have larger lots (and that can be a benefit), the biggest disadvantage is the fear factor surrounding EMFs.[40]

In the early nineties, when EMFs were just entering the public consciousness, it was difficult to find a measurable price difference between homes close to an HVTL and those that were not.[41] However, two researchers (Hsiang-te Kung & Charles F Seagle) conducted a case study on the impact of power transmission lines on property values and found that such negligible results depended almost entirely on the public's ignorance of EMFs and their related issues. They also found that the amount of potential property loss increased dramatically the more homeowners were aware of the potential health impacts of EMFs.[42]

The effect of HVTLs on property values has long been a matter of contention with many studies either proving a diminutive effect or none at all. Methodologies differ and different areas of the country register different results. Some markets (ex. high-end homes) are very sensitive to HVTLs whereas others (ex. low-end homes) hardly notice them. The size of the line and the pylons are also a factor. A 69kV power line will have less effect than will a 1,200kV power line. Distance from the easement also matters. Some studies combine homes thousands of feet from HVTLs with those directly encumbered. Research sponsors also may play a factor with many being funded by the utilities themselves.

For example, in a 2007 study funded by a utility, researchers Jennifer Pitts and Thomas Jackson conducted market interviews, literature research and empirical research and reported little (if any) impact of power lines on property values. However, they did note that there is an increasing recent opinion that proximity to power lines has a slight negative effect on property values.[43]

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34 **Power Line Worries Landowners.** Ben Fischer. The Wisconsin State Journal. June 3, 2006.
35 **Lines in Sand and Sky.** B.Z. Khasru. Fairfield County Business Journal. September 3, 2001. Vol. 40 Issue 36, p3, 2p.
36 **Commissioners voice opposition to transmission lines.** David Rupkalvis. The Graham Leader. February 9, 2010.
37 **Real Estate Agents on Property Value Declines.** 4 Realtor opinion letters submitted to residents in the Sunfish, MN area whose properties are being affected by an HVTL.
38 **Ibid.**
39 **Power line plan concerns metro residents.** Melissa Maynarich. News 9 (Oklahoma). July 22, 2008.
40 **High Voltage Transmission Lines, Electric and Magnetic Fields (EMF's) And How They Affect Real Estate Prices.** David Blockhus. January 3rd, 2008. http://siliconvalleyrealestateinfo.com/electric-and-magnetic-fields-emfs-and-how-they-effect-real-estate-prices.html
41 **Impact of power transmission lines on property values: A case study.** Hsiang-te Kung & Charles F Seagle. Appraisal Journal. Vol. 60, Issue 3, p.413, 6p. July 1992.
42 **Ibid.**
43 **Power lines and property values revisited.** Jennifer M. Pitts & Thomas O. Jackson. Appraisal Journal. Fall, 2007.

Two California appraisers, David Harding and Arthur Gimmy, published a rebuttal to the Pitts-Jackson study that disagreed with their methodology, took issue with their sponsor, addressed omitted information, and failure to conduct before-and-after cost comparisons.[44]

Pitts and Jackson responded to the rebuttal and defended their methodology, saying they purposely limited their literature research to only include empirical, peer-reviewed articles from The Appraisal Journal and the American Real Estate Society journals. They acknowledged they conducted the research for "a litigation matter" but did not elaborate on their sponsor.[45]

In a similar case, researchers James A Chalmers and Frank A Voorvaart published a large study spanning nearly 10 years and over 1,200 properties in which they found that an encumbering HVTL had only a small negative effect on the sale price of a residential home. In half of their samples they found consistent negative property values mostly limited to less than 10%, with most between 3%-6%.[46]

They summarized their findings as showing "no evidence of systematic effects of either proximity or visibility of 345-kV (kilovolt) transmission lines on residential real estate values."[47]

They did, however, say that "An opinion supporting HVTLs effects would have to be based on market data particular to the situation in question and could not be presumed or based on casual, anecdotal observation. It is fair to presume that the direction of the effect would in most circumstances be negative, but the existence of a measureable effect and the magnitude of such an effect can only be determined by empirical analysis of actual market transactions."[48]

Appraiser Kerry M. Jorgensen disagreed with the authors' views that paired data analysis and retroactive appraisal were "too unrefined and too subjective to be of much value," and that only through objective statistics could the effect of HVTLs on property value be truly understood. He argued that relying too much on statistics can be dangerous as there could be problems with how the data is compiled and interpreted. For example, he points out that out of their set of 1,286 qualifying sales, only 78 (6%) are directly encumbered by a power line easement, and only 33 (2.6%) more are within 246 feet of a power line easement.[49]

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44 **Comments on "Property Lines and Property Values Revisited."(Letter to the editor)** David M. Harding & Arthur E. Gimmy & Thomas O. Jackson & Jennifer M. Pitts. Appraisal Journal. Winter, 2008. http://www.entrepreneur.com/tradejournals/article/176131510.html

45 **Ibid.**

46 **High-Voltage Transmission Lines: Proximity, Visibility, and Encumbrance Effects.** James A Chalmers and Frank A Voorvaart. The Appraisal Journal via the Appraisal Institute website. Volume 77, Issue 3; Summer, 2009; pages 227-246. Reposted by CostBenefit of the Environmental Valuation and Cost-Benefit News blog - http://www.envirovaluation.org/index.php/2009/11/09/high-voltage-transmission-lines-proximity-visibility-and-encumbrance-effects

47 **Power Lines Don't Affect Property Values. The Appraisal Journal.** July 30, 2009. http://www.appraisalinstitute.org/about/news/2009/073009_TAJ.aspx

48 **High-Voltage Transmission Lines: Proximity, Visibility, and Encumbrance Effects.** James A. Chalmers, PhD and Frank A. Voorvaart, PhD. The Appraisal Journal. Summer 2009. Pgs. 227-245.

49 **Letters to the Editor**. Kerry M. Jorgensen. Appraisal Journal. January 1, 2010. http://www.thefreelibrary.com/Comments+on+"high-voltage+transmission+lines:+proximity,+visibility,...-a0220765052

The Chalmers-Voorvaart study also attracted the interest of Washington Post Real Estate writer Elizabeth Razzi who wrote that the study was paid for by Northeast Utilities and completed before they proposed a high-voltage transmission grid in New England. She also wrote that both Chalmers and Voorvaart are appraisers and expert witnesses for the power industry.[50]

Several studies have found that, over time, property value damages from nearby HVTLs diminish though properties near the pylons stay permanently damaged no matter the elapsed time.[51] In the first case, though the property owner may grow accustomed to HVTLs and thus think less of them, new potential buyers aren't as sensitized and the diminutive impact is fresh to them.

Realtors usually oppose HVTLs. Nearly all surveyed realtors and appraisers in the Roanoke and New River valleys of Virginia said that close proximity to HVTLs would diminish property values by as much as $25,000, but mostly for high-end homes. Lower-end homes see little impact.[52]

Diminished property values can also impact communities. In one case, Delaware residents were worried that a proposed 1,200 megawatt HVTL would depress local property values, thus weakening the local tax base and leading to higher taxes to offset the losses. Kent Sick, author of a 1999 paper on power lines and property values, projects losses from a few percentage points to 53%.[53]

In Atlanta, a local realty group named Bankston Realty ranked power lines as the number one item that damages resale value, followed closely by busy roads and inferior lot topography. They advise buyers to pay 15% less of the asking price if power lines are present, and they advise sellers to accept it as a logical perception of value.[54]

Evidence suggests that HVTLs affect the health of residents in close proximity to lines 345kV and higher. Evidence also suggests that the power lines have little to no impact on property values because encumbered lots are often larger and more private than unencumbered lots, resulting in no diminution of purchase price. However, most studies did observe longer time on the market for encumbered properties.[55]

Rural Impact

Now that the reader is aware of stray voltage, EMFs, and property values, the reader will have a deeper understanding of the potential effects of HVTLs on rural land throughout the United States.

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50 **Do High-Voltage Lines Zap Property Values?** Elizabeth Rassi. Local Address. August 4, 2009. http://voices.washingtonpost.com/local-address/2009/08/do_high-voltage_lines_zap_prop.html

51 **The Effect of Public Perception on Residential Property Values in Close Proximity to Electricity Distribution Equipment.** Sally Sims, B.Sc. Paper presented to the Ph.D. Forum at the Pacific Rim Real Estate Society Conference. January 2002. This is the first part to the study.

52 A Question of Power: Part III – Realtors: High voltage lines lower property values. Leslie Brown. Roanoke Times. 1998. http://www.vapropertyrights.org/articles/98lineslowervalues.html

53 **Expert: Power lines hurt property value, market research shows sellers lose up to 53 percent.** Elizabeth Cooper. Gannett News Service. May 20th, 2006.

54 **Atlanta Homes and Resale Value... Power lines are a definite NO.** The Bankston Group. July 17, 2008. http://atlantaintheknow.com/2008/07/17/atlanta-homes-and-resale-value-power-lines-are-a-definite-no/

55 **High Voltage Power Lines Impact On Nearby Property Values.** Ben Beasley. Right of Way Magazine. February 1991.

In Goodhue County, Minnesota, an area locally known for protecting agriculture, CapX2020 (a utility consortium) is proposing to build a 345kV HVTL through the county that may be doubled to 690kV. Local landowner Linda Grovender voiced her concern in a 2010 letter to the editor of the Cannon Falls Beacon. She worries that the line, proposed to traverse residential and agricultural lands instead of following existing utility right-of-way, will have an adverse effect on her family's health (due to EMFs), jeopardize agricultural interests, result in lost agricultural productivity, and damage property values.[56] She wrote that if the proposed 345kV HVTL is doubled to 690kV (as it legally could be) it could have an adverse effect on her family's health, jeopardize agricultural interests, result in lost agricultural productivity, and damage property values.[57]

Elsewhere n Minnesota, Dairyland Power Cooperative (one of the chief members of CapX2020) surveyed rural landowners for their opinion regarding the proposed HVTL in their area. Whether they were crop or dairy farmers, each had several reasons why the proposed line would impact their business. The unnamed respondents shared Grovender's views and said they prefer to use highway corridors and woodlands to avoid impacts to productive agricultural land; protect livestock; avoid interference with large farm equipment, GPS, and navigation systems used in farm machinery; preserve open channels for crop-dusting; protect farm buildings; protect pasture land, tree farms, and timber production.[58]

The Dairyland survey also found that livestock operations are concerned that the HVTL will generate stray voltage, impacting livestock and feedlots. Cattle, horses, and other livestock will not go near transmission lines due to stray voltage. And stray voltage can impact the health of beef cattle and hogs. Farmers also fear potential impacts on dairy operations, poultry, livestock mortality, horse boarding facilities, and herd reproduction. [59]

HVTLs also pose potential technological obstacles. For example, The GPS equipment used in the farm equipment may not be able to steer around transmission poles, potentially making farming around the towers extremely difficult. [60]

One major concern was the routing the HVTLs through the middle of properties or fields. The surveyed farmers quoted many repercussions for bisecting a property. They include: Interrupted irrigation and tile drainage equipment and practices; decreased food production; fragmented existing cropland and dairy operations; diminished lease value: the addition of transmission lines would make it difficult to lease farm land for the top rental price; compacted soil from construction of the HVTLs and access roads: it would take 3–5 years to restore.[61]

Across the border in Wisconsin, the state's Department of Agriculture validated many of the Minnesota respondents' concerns when it found that HVTL construction could compact soil, making it difficult to

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56 **No CAPX2020.** Letter to the Editor by Linda Grovender. The Cannon Falls Beacon. March 23, 2010.
57 **Ibid.**
58 **SE Twin Cities-Rochester-La Crosse Transmission System Improvement Project Macro-Corridor Study, Appendix A: Summary of Public Comments regarding a proposed HVTL.** Dairyland Farm Cooperative. September 2007.
59 **SE Twin Cities-Rochester-La Crosse Transmission System Improvement Project Macro-Corridor Study, Appendix A: Summary of Public Comments regarding a proposed HVTL.** Dairyland Farm Cooperative. September 2007.
60 **Ibid.**
61 **Ibid.**

plow and plant those areas, naturally resulting in reduced crop yields. The HVTLs force farmers to change planting patterns to avoid support structures. Since farm land is only as valuable as its ability to yield good crops, rural property values suffer from the limitations and effects of HVTLs on their land.[62]

Potential compaction, forced building changes, and lower property values equally threaten dairy operations as much as agricultural farmers. Susan and Robert Herckendorf, dairy farmers in the path of the proposed A-W HVTL, are worried that the line could put local dairies out of business.[63]

In researching the possible negative factors of the then-proposed Arrowhead-Weston HVTL in Wisconsin in 2000, the state's Public Service Commission found that rural property values may decrease from "concern or fear of possible health effects from electric or magnetic fields; The potential noise and visual unattractiveness of the transmission line; Potential interference with farming operations or foreclosure of present or future land uses."[64] They also found that the value of agricultural property will likely decrease if the pylons inhibit farm operations."[65] However, they also found that adverse effects appear to diminish over time.[66]

The impact report further states that, on farmland, HVTL installation can remove land from production, interfere with operation of equipment, create safety hazards, and deprive landowners the opportunity to consolidate farmlands or develop the land for another use. The greatest impact on farm property values is likely to occur on intensively managed agricultural lands.[67]

Nearly a decade later in 2009, the Wisconsin Public Service Commission conducted another study on the environmental impacts of transmission lines and found that "in agricultural areas, the number of poles crossing a field may be the most significant measure of impact," and "agricultural values are likely to decrease if the transmission line poles are in a location that inhibits farm operations."[68] Beyond the impact of pole placement, the PSC found that "the overall aesthetic effect of a transmission line is likely to be negative to most people, especially where proposed lines would cross natural landscapes. The tall steel or wide 'H-frame' structures may seem out of proportion and not compatible with agricultural landscapes or wetlands."[69] They further explained that "Transmission lines can affect farm operations and increase costs for the farm operator. Potential impacts depend on the transmission line design and the type of farming. Transmission lines can affect field operations, irrigation, aerial spraying, wind breaks, and future land development."[70]

The study further examines how rural HVTL pole placements can affect agricultural land values: They can create problems for turning field machinery and maintaining efficient fieldwork patterns; expose

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62 **Line could affect farms, property values.** Author Unknown. Oshkosh Northwestern. June 26, 2000.
63 **Ibid.**
64 **Property Values (pages 212-215) from Final Environmental Impact Statement, Arrowhead-Weston Electric Transmission Line Project, Volume 1.** Public Service Commission of Wisconsin. Docket 05-CE-113. Date issued, October 2000.
65 **Ibid.**.
66 **Ibid.**
67 **Property Values (pages 212-215) from Final Environmental Impact Statement, Arrowhead-Weston Electric Transmission Line Project, Volume 1.** Public Service Commission of Wisconsin. Docket 05-CE-113. Date issued, October 2000.
68 **Environmental Impacts of Transmission Lines.** Public Service Commission of Wisconsin. March 2009.
69 **Ibid.**
70 **Ibid.**

properties to weed encroachment; compact soils and damage drain tiles; result in safety hazards due to pole and guy wire placement; hinder or prevent aerial activities by planes or helicopters; interfere with moving irrigation equipment; hinder future consolidation of farm fields or subdividing land for residential development.[71]

To oppose these potentially diminutive effects on their land, landowners sometimes organize against them. In Ohio, a group of concerned citizens formed the group, Citizens Advocating Responsible Energy (CARE), to oppose FirstEnergy's proposed Geauga County power line. On their website they state the reasons for their opposition. They fear the HVTL will devalue the properties it crosses, force affected property owners to continue paying taxes on damaged property, damage natural beauty and local ecology, lessen agricultural productivity of impacted land, thus reducing farm income and local purchasing power, and create a thorough-fare for snowmobiles and off-road vehicles.[72]

Other times, concerned landowners are united in voice, but not in form. In 2010, Idaho property owners in Bonneville County are nervously following the progress of Idaho Falls Power's proposed 161kV HVTL that would pass close to their homes.[73]

Lynn Pack, a Bonneville County dairy farmer, has educated himself on HVTLs and said he's most concerned with stray voltage. "It causes so many problems with cow's production. They won't feed, they won't drink water, they dry up and when they dry up they just don't give any milk." [74] Another property owner, Sharon Nixon, fears the HVTL could harm her husband's health after his recent victory over bone cancer. She also fears the value of her home will fall. "It is not something we want in our backyard. We worked all our lives. This is our dream home." [75]

Idaho Falls Power General Manager Jackie Flowers said the HVTL is a necessary step to meet new federal energy reliability standards and that the utility is open to the public's input. [76]

A year earlier in Idaho, a coalition of Rockland County farmers tried to convince Idaho Power Company to avoid routing a new HVTL through their land, citing environmental and development concerns.[77] Doug Dokter, Idaho Power project leader, said the new lines are required because the existing lines are at their capacity.[78] Because of their concerns, utility representatives say they're looking at other options and hope for a compromise to avoid invoking eminent domain to take the land. [79]

Sometimes opposition to a proposed HVTL route can alter its course. In 1994, Public Service Company of New Mexico abandoned plans to take new right-of-way through the Jemez Mountains for a 50-mile long HVTL extension that Indian groups and environmentalists argued would cut through several miles

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71 **Ibid.**
72 **We oppose FirstEnergy's proposed Geauga County power line.** Website posting by Citizens Advocating Responsible Energy (CARE). Date unknown but website copyright suggests sometime from 2008-2009.
73 **Transmission Lines Worry Property Owners.** Brett Crandall. Local News 8. March 5, 2010.
74 **Ibid.**
75 **Ibid.**
76 **Ibid.**
77 **Headway being made on proposed route for power transmission line.** Author Unknown. The Power County Press and Aberdeen Times. April 8, 2009.
78 **Ibid.**
79 **Ibid.**

of pristine vistas and Native American ruins.[80] The utility instead re-routed the extension to follow an existing utility corridor, bringing the decade-long dispute to a close.[81]

In 2008, California farmers and ranchers found themselves in a similar situation. San Diego Gas & Electric proposed a 150-mile long, 500kV HVTL (in conjunction with several 230kV HVTLs) across San Diego and surrounding counties to meet increasing energy needs and transport required renewable energy.[82]

Affected landowners are worried the line will have "huge" impacts on their properties. Katie Moretti, an affected cattle rancher, and other farmers worry that building construction access roads across untouched land will limit their land's future use. She also worries that the utility won't compensate her for the loss of use.[83]

Another rancher, Glen Drown, also worries about the impact the line will have on land-use and property values since the proposed route bisects several of his parcels subdivided for future development.[84]

Local dairy producer, Richard Van Leeuwen, is worried that stray voltage from the line would damage the health of his calves and milking cows. To protect his herd's health he said he would have to relocate the calf farm to another part of his property, costing millions.[85]

San Diego County Farm Bureau Executive Director Eric Larson acknowledges that the farming community won't be able to stop the project, but he's trying to make it compatible with the area's farming interests by recommending burying the line underground in some areas, going around some areas, and utilizing existing right-of-way.[86]

Elsewhere in the state, the City of Brentwood researched the potential impact of HVTLs on agricultural land values by interviewing several of their local and experienced Real Estate brokers. All the brokers said that "Agricultural land with power lines above ground is worth less than properties with below-ground utilities."[87]

However, in a 2007 report, the California Department of Conservation's Farmland Mapping and Monitoring Program reported that HVTLs installed on agricultural land for a wind farm will result in a temporary disturbance of 10 acres of farmland and permanently affect 1 acre. Since the affected areas are mainly grazing land, the report concluded that the HVTL would not significantly impair productivity. Though the impact to agricultural productivity during construction would be negative, they claimed it would be mostly insignificant.[88]

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80 **PNM Scraps Jemez Power Line Plan.** Keith Easthouse. Sante Fe New Mexican. December 16, 1994.
81 **Ibid.**
82 **Proposed power line would impact farms.** Christine Souza. California Farm Bureau Federation. May 28, 2008.
83 **Proposed power line would impact farms.** Christine Souza. California Farm Bureau Federation. May 28, 2008.
84 **Ibid.**
85 **Ibid.**
86 **Ibid.**
87 **City of Brentwood, California.** Website page explaining their approaches to valuing agricultural land. Date and author unknown.
88 **3.3 Agricultural Resources.** Part of the public draft by The California Department of Conservation's Farmland Mapping and Monitoring Program. July 2007.

Across the country in Leesburg, Virginia, 26 landowners opposed Dominion Energy's proposed 230kV HVTL, saying it will damage their property values, thus decreasing their tax base and thus affect the county as a whole. They also fear its impact on Blue Ridge tourism.[89]

Bill Hatch, owner of a 400-acre farm was upset to learn the line would run through his farm. He said the proposed line would so affect his farm that he could only afford to keep it by direct marketing or agro-tourism, but he admitted that few people would want to visit a farm with power lines.[90]

Landowners want the utility to bury the lines, but the utility says it will cost 10 times more than traditional overhead lines. However, Harry Orton, an underground power line expert, testified that while the initial costs of burying the lines are higher, the lower cost of maintenance over the years evens the cost along the lines' lifecycle.[91]

A year later in 2006, Dominion proposed an additional 500kV HVTL to meet growing demand and routed it through northern Virginia because it was the most efficient route. However, the area is also one of the state's most pristine, and the proposal met with fierce resistance from landowners, environmentalists, Congressman Frank Wolf, and actor Robert Duvall.[92]

In the path of the HVTL are landowners of some of the most valuable land in Virginia, and they were bothered that the utility plans to erect the 40-mile, 15-story HVTL in their back yards.[93]

One landowner, Cameron Eaton, fears the line will bring financial ruin and "sink" her investment into her 100-acre Fauquier County property and horse business. "No one will buy that land if some ugly power line could run right over their house. I'm broken off at the knees."[94]

Real estate agents consider the area's picturesque countryside to be its most valuable quality. Matt Sheedy, a land developer and president of Virginians for Sensible Energy Policy, said that the very proposal that the line will soon dominate the countryside has already "sent land values plummeting." Brokers confirmed that the market froze. People backed out of real estate contracts, unwilling to live anywhere under the line. Sheedy's groups estimated that land immediately affected could lose as much as 75% of its value.[95]

"When you're out in the country and you're selling property, what you're selling is the open space and the bucolic views and the history," Sheedy said. "Running power lines through an area like this is just devastating." To landowners Gene and Deborah Bedell, who were trying to sell their 223-acre farm to pay for their retirement, it was a hard blow. Their agent old them no one would buy their property if they knew "that it could have a power line looming over it."[96]

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89 **Committee Hears Debate Over Underground, Overhead Power Lines.** Megan Kuhn. Leesburg Today. May 20, 2005.
90 **Ibid.**
91 **Committee Hears Debate Over Underground, Overhead Power Lines.** Megan Kuhn. Leesburg Today. May 20, 2005.
92 **Landowners Fear Ruin from Power Line Route.** Sandhya Somashekhar. Washington Post Staff Writer. December 11, 2006.
93 **Ibid.**
94 **Ibid.**
95 **Ibid.**
96 **Ibid.**

Further north in New York, over 50 landowners and local officials spoke before the state's Public Service Commission in opposition to Upstate NY Power Corp's proposed construction of a 230kV HVTL in their community.[97]

Sharon B. Rossiter, co-owner of Doubledale Farms in Ellisburg, said the HVTL will damage their crop cycle, remove 100 acres from use, and make planting difficult by having to navigate around the poles. Also worried is Roberta F. French, owner of Farnham Farms in Sandy Creek. The proposed line will bisect her blueberry farm, eliminating two-thirds of it.[98]

Jay M. Matteson, Jefferson County agricultural coordinator, advocated routing the HVTL through public land to avoid damaging productive, private land. "The burden should be on New York state and the developer to prove to local landowners why their land is less valuable than public land," he said.[99]

The Town of Henderson opposed it because the town's foundation is tourism and agriculture, and the community is "very concerned about the visual impacts of this project."[100]

Robert E. Ashodian, chairman of the Henderson Harbor Area Chamber of Commerce's Economic Development Committee, agreed. "The scenic resources of the community and the natural resources are at the heart of the value of the community."[101]

In an effort to appease worried or angry landowners, agricultural property owners in Montana with HVTLs encumbering their land will be exempt from paying taxes on land within 600 feet on either side of the HVTL Right-of-Way.[102]

In the 2002 study, "The Impact of Transmission Lines on Property Values: Coming to Terms with Stigma," authors Peter Elliott and David Wadley cite a 1978 Canadian study that, according to one commentary, found "the per acre values from more than 1,000 agricultural property sales in Eastern Canada were 16-29% lower for properties with easements for transmission lines than for similar properties without easements." The impact was greater on smaller properties. The 1978 study found little difference in impact from 230kV or 500kV HVTLs. The study also found that the impacts didn't seem influenced by time.[103]

Three more Canadian studies on the impact of HVTLs on agricultural land values found different results.[104] Brown 1976 studied the effect of low-voltage power lines on agricultural land in Saskatchewan and found no measurable impact on property values. The Woods Gordon 1981 study focused on the effects of 230kV to 500kV HVTLs on Ontario farmland and found some areas had an average of a 16.9% negative impact, two areas had a positive effect, and others showed no statistically

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97 **Transmission line gets no support.** Nancy Madsen. Watertown Daily Times. November 17, 2009.
98 **Transmission line gets no support.** Nancy Madsen. Watertown Daily Times. November 17, 2009.
99 **Ibid.**
100 **Ibid.**
101 **Ibid.**
102 **Tax facts on proposed power line.** The Montana Standard Staff. The Montana Standard. July 11, 2009.
103 **The Impact of Transmission Lines on Property Values: Coming to Terms with Stigma.** Peter Elliott & David Wadley. Property Management, pgs.137-152. 2002.
104 **The Effects of Overhead Transmission Lines On Property Values: A Review And Analysis Of The Literature.** Edison Electric Institute Siting & Environmental Planning Task Force. 1992.

significant effect. The third study, a master's thesis referred to as Thompson 1982 found sales prices lower for properties crossed by HVTLs but only where the land has potential for irrigation.(pgs. 56-57)[105]

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105 **Ibid.**

Demographic and Income Comparison Profile

21956 SW Stafford Rd, Tualatin, Oregon, 97062
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

	1 mile	3 miles	5 miles
Census 2010 Summary			
Population	564	35,617	132,972
Households	201	13,859	53,125
Families	161	9,870	35,756
Average Household Size	2.81	2.52	2.46
Owner Occupied Housing Units	179	9,258	35,312
Renter Occupied Housing Units	22	4,601	17,812
Median Age	47.0	39.6	40.7
Census 2020 Summary			
Population	622	38,570	147,021
Households	205	14,950	57,863
Average Household Size	3.03	2.53	2.49
2023 Summary			
Population	628	38,789	148,768
Households	204	14,995	58,763
Families	159	10,265	37,836
Average Household Size	3.08	2.54	2.49
Owner Occupied Housing Units	173	10,103	39,612
Renter Occupied Housing Units	31	4,892	19,151
Median Age	50.8	42.7	43.2
Median Household Income	$162,503	$114,693	$109,379
Average Household Income	$249,846	$163,333	$153,413
2028 Summary			
Population	632	38,993	150,873
Households	205	15,154	59,890
Families	160	10,332	38,394
Average Household Size	3.08	2.52	2.47
Owner Occupied Housing Units	175	10,275	40,694
Renter Occupied Housing Units	30	4,879	19,197
Median Age	50.8	43.4	43.8
Median Household Income	$176,496	$128,062	$122,995
Average Household Income	$277,595	$183,644	$174,371
Trends: 2023-2028 Annual Rate			
Population	0.13%	0.10%	0.28%
Households	0.10%	0.21%	0.38%
Families	0.13%	0.13%	0.29%
Owner Households	0.23%	0.34%	0.54%
Median Household Income	1.67%	2.23%	2.37%

Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

21956 SW Stafford Rd, Tualatin, Oregon, 97062
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

	1 mile		3 miles		5 miles	
2023 Households by Income	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
<$15,000	4	2.0%	763	5.1%	3,098	5.3%
$15,000 - $24,999	9	4.4%	725	4.8%	2,735	4.7%
$25,000 - $34,999	13	6.4%	633	4.2%	2,835	4.8%
$35,000 - $49,999	13	6.4%	1,075	7.2%	4,185	7.1%
$50,000 - $74,999	8	3.9%	1,464	9.8%	6,320	10.8%
$75,000 - $99,999	10	4.9%	1,606	10.7%	6,935	11.8%
$100,000 - $149,999	36	17.6%	3,161	21.1%	12,403	21.1%
$150,000 - $199,999	32	15.7%	2,048	13.7%	7,541	12.8%
$200,000+	81	39.7%	3,519	23.5%	12,711	21.6%
Median Household Income	$162,503		$114,693		$109,379	
Average Household Income	$249,846		$163,333		$153,413	
Per Capita Income	$84,325		$61,961		$60,657	
2028 Households by Income	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
<$15,000	3	1.5%	641	4.2%	2,583	4.3%
$15,000 - $24,999	6	2.9%	522	3.4%	1,998	3.3%
$25,000 - $34,999	10	4.9%	486	3.2%	2,098	3.5%
$35,000 - $49,999	10	4.9%	849	5.6%	3,351	5.6%
$50,000 - $74,999	6	2.9%	1,303	8.6%	5,632	9.4%
$75,000 - $99,999	9	4.4%	1,587	10.5%	6,808	11.4%
$100,000 - $149,999	36	17.6%	3,323	21.9%	13,236	22.1%
$150,000 - $199,999	37	18.0%	2,468	16.3%	9,461	15.8%
$200,000+	88	42.9%	3,974	26.2%	14,722	24.6%
Median Household Income	$176,496		$128,062		$122,995	
Average Household Income	$277,595		$183,644		$174,371	
Per Capita Income	$93,538		$69,989		$69,282	

Data Note: Income is expressed in current dollars.

Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

21956 SW Stafford Rd, Tualatin, Oregon, 97062
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

	1 mile		3 miles		5 miles	
2010 Population by Age	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Age 0 - 4	25	4.4%	2,085	5.9%	7,324	5.5%
Age 5 - 9	42	7.5%	2,548	7.2%	8,753	6.6%
Age 10 - 14	46	8.2%	2,666	7.5%	9,598	7.2%
Age 15 - 19	38	6.7%	2,456	6.9%	8,846	6.7%
Age 20 - 24	19	3.4%	1,768	5.0%	6,568	4.9%
Age 25 - 34	29	5.2%	4,088	11.5%	15,383	11.6%
Age 35 - 44	65	11.5%	5,138	14.4%	18,363	13.8%
Age 45 - 54	103	18.3%	5,937	16.7%	21,989	16.5%
Age 55 - 64	116	20.6%	5,260	14.8%	19,320	14.5%
Age 65 - 74	53	9.4%	2,280	6.4%	9,280	7.0%
Age 75 - 84	21	3.7%	943	2.6%	4,871	3.7%
Age 85+	8	1.4%	449	1.3%	2,680	2.0%
2023 Population by Age	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Age 0 - 4	23	3.7%	1,901	4.9%	6,987	4.7%
Age 5 - 9	41	6.5%	2,286	5.9%	8,178	5.5%
Age 10 - 14	47	7.5%	2,613	6.7%	9,306	6.3%
Age 15 - 19	36	5.7%	2,547	6.6%	9,141	6.1%
Age 20 - 24	19	3.0%	2,137	5.5%	8,103	5.4%
Age 25 - 34	32	5.1%	4,113	10.6%	17,093	11.5%
Age 35 - 44	67	10.7%	5,033	13.0%	19,057	12.8%
Age 45 - 54	93	14.8%	5,356	13.8%	19,309	13.0%
Age 55 - 64	140	22.3%	6,023	15.5%	22,537	15.1%
Age 65 - 74	89	14.2%	4,464	11.5%	17,729	11.9%
Age 75 - 84	31	4.9%	1,678	4.3%	7,814	5.3%
Age 85+	10	1.6%	638	1.6%	3,514	2.4%
2028 Population by Age	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Age 0 - 4	24	3.8%	1,948	5.0%	7,221	4.8%
Age 5 - 9	40	6.3%	2,202	5.6%	7,982	5.3%
Age 10 - 14	46	7.3%	2,444	6.3%	8,805	5.8%
Age 15 - 19	35	5.5%	2,289	5.9%	8,295	5.5%
Age 20 - 24	19	3.0%	2,134	5.5%	8,031	5.3%
Age 25 - 34	32	5.1%	4,406	11.3%	18,229	12.1%
Age 35 - 44	70	11.1%	4,923	12.6%	19,215	12.7%
Age 45 - 54	92	14.5%	5,222	13.4%	19,132	12.7%
Age 55 - 64	129	20.4%	5,582	14.3%	20,411	13.5%
Age 65 - 74	95	15.0%	4,844	12.4%	18,902	12.5%
Age 75 - 84	39	6.2%	2,252	5.8%	10,551	7.0%
Age 85+	12	1.9%	747	1.9%	4,096	2.7%

Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

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Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

	1 mile		3 miles		5 miles	
2010 Race and Ethnicity	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White Alone	516	91.5%	30,628	86.0%	116,214	87.4%
Black Alone	3	0.5%	322	0.9%	1,280	1.0%
American Indian Alone	1	0.2%	212	0.6%	763	0.6%
Asian Alone	27	4.8%	1,219	3.4%	5,531	4.2%
Pacific Islander Alone	0	0.0%	193	0.5%	502	0.4%
Some Other Race Alone	5	0.9%	1,839	5.2%	4,323	3.3%
Two or More Races	12	2.1%	1,204	3.4%	4,360	3.3%
Hispanic Origin (Any Race)	22	3.9%	3,815	10.7%	10,579	8.0%
2020 Race and Ethnicity	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White Alone	514	82.6%	29,716	77.0%	115,036	78.2%
Black Alone	3	0.5%	409	1.1%	1,606	1.1%
American Indian Alone	3	0.5%	248	0.6%	908	0.6%
Asian Alone	36	5.8%	1,829	4.7%	8,155	5.5%
Pacific Islander Alone	1	0.2%	256	0.7%	776	0.5%
Some Other Race Alone	10	1.6%	2,027	5.3%	5,806	3.9%
Two or More Races	54	8.7%	4,085	10.6%	14,734	10.0%
Hispanic Origin (Any Race)	27	4.3%	4,604	11.9%	14,448	9.8%
2023 Race and Ethnicity	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White Alone	515	81.9%	29,499	76.0%	114,973	77.3%
Black Alone	4	0.6%	426	1.1%	1,710	1.1%
American Indian Alone	3	0.5%	259	0.7%	941	0.6%
Asian Alone	38	6.0%	1,904	4.9%	8,498	5.7%
Pacific Islander Alone	1	0.2%	255	0.7%	793	0.5%
Some Other Race Alone	11	1.7%	2,147	5.5%	6,254	4.2%
Two or More Races	57	9.1%	4,299	11.1%	15,599	10.5%
Hispanic Origin (Any Race)	30	4.8%	4,904	12.6%	15,597	10.5%
2028 Race and Ethnicity	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White Alone	508	80.4%	28,909	74.1%	113,738	75.4%
Black Alone	4	0.6%	460	1.2%	1,870	1.2%
American Indian Alone	3	0.5%	267	0.7%	985	0.7%
Asian Alone	42	6.6%	2,099	5.4%	9,457	6.3%
Pacific Islander Alone	1	0.2%	261	0.7%	825	0.5%
Some Other Race Alone	12	1.9%	2,333	6.0%	6,905	4.6%
Two or More Races	62	9.8%	4,663	12.0%	17,092	11.3%
Hispanic Origin (Any Race)	33	5.2%	5,285	13.6%	17,075	11.3%

Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

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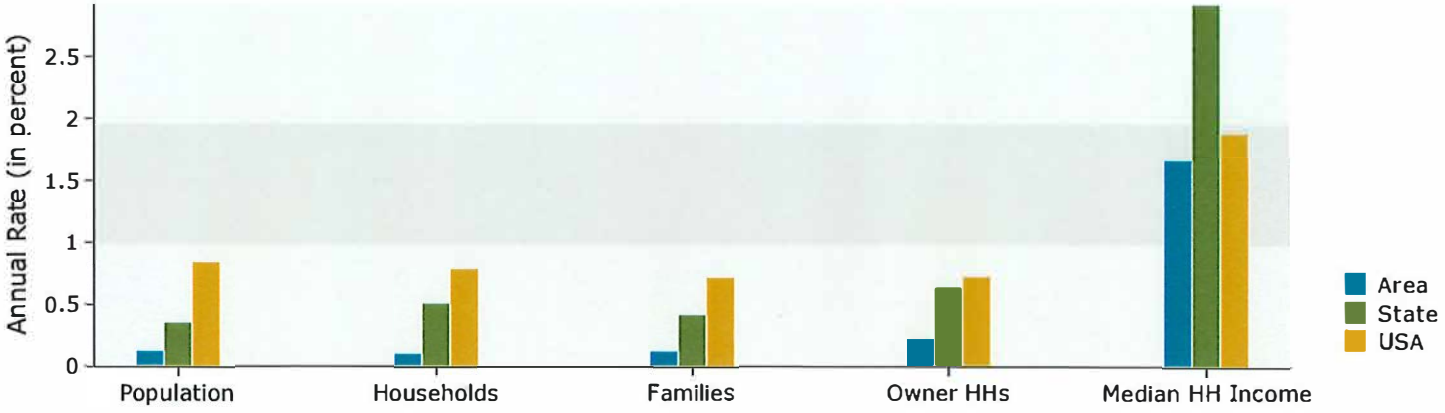
Rings: 1, 3, 5 mile radii

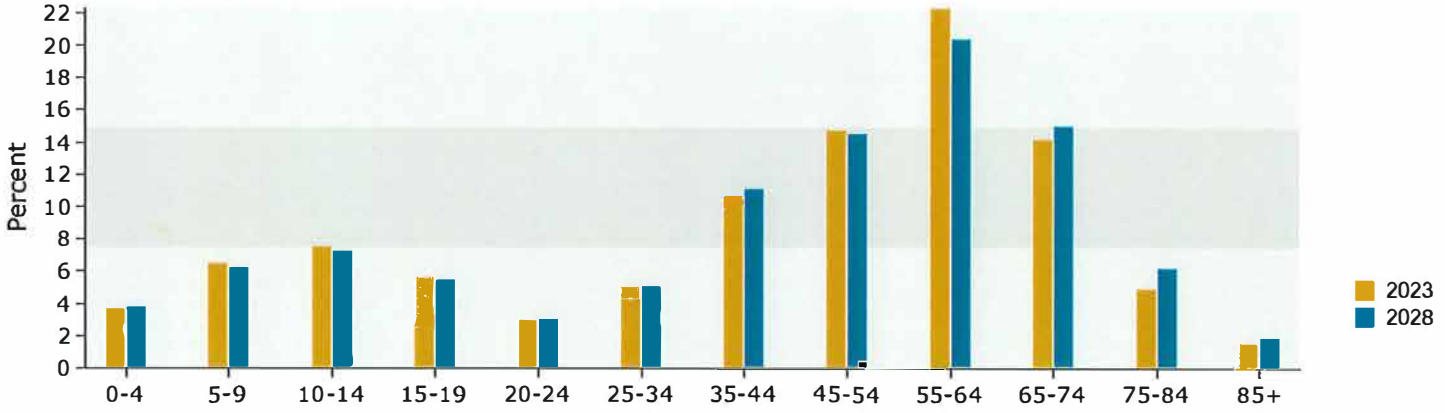
Prepared by Esri
Latitude: 45.36111
Longitude: -122.71226

1 mile

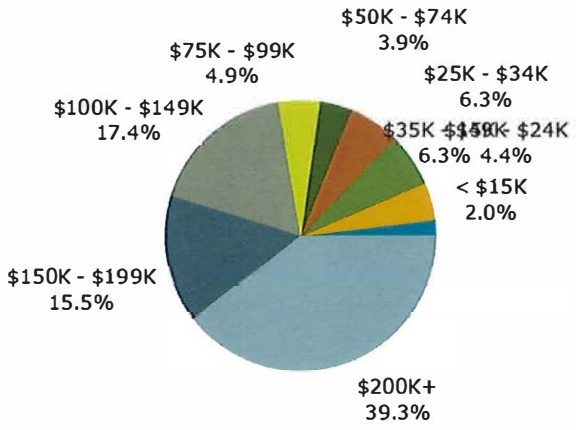
Trends 2023-2028



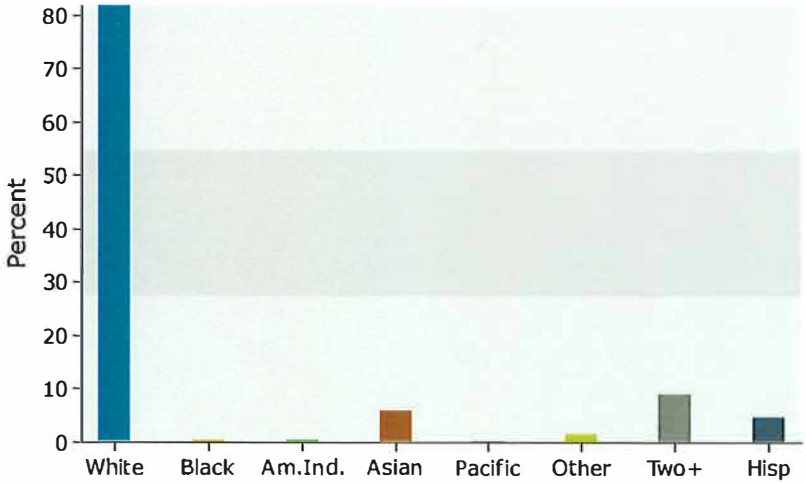
Population by Age



2023 Household Income



2023 Population by Race



Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

21956 SW Stafford Rd, Tualatin, Oregon, 97062
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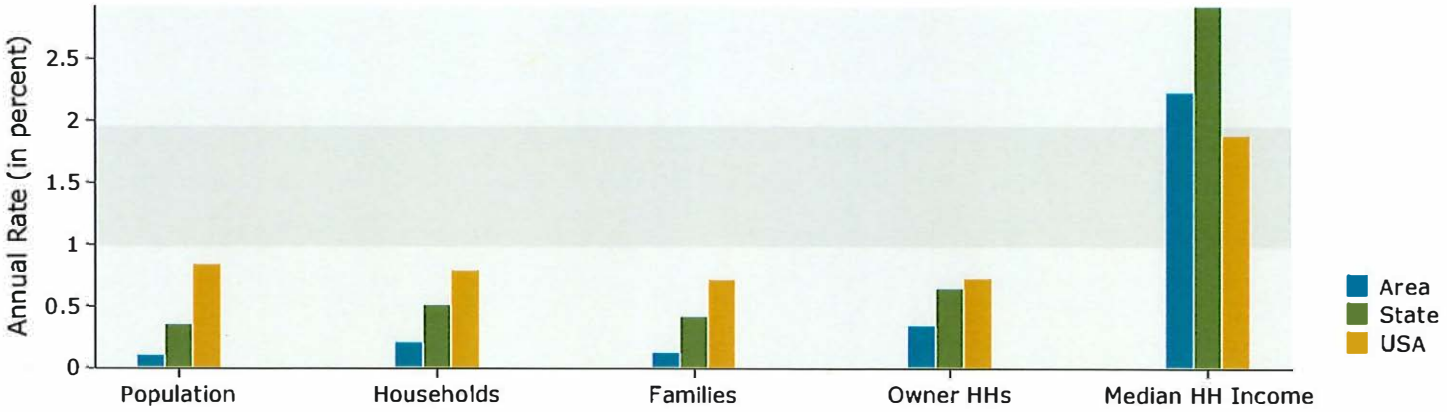
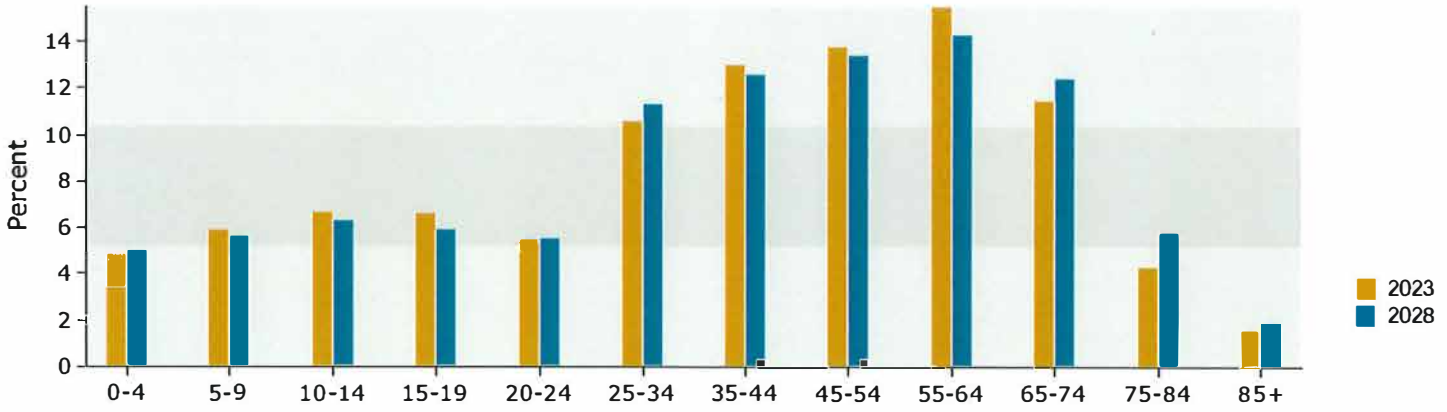
3 miles

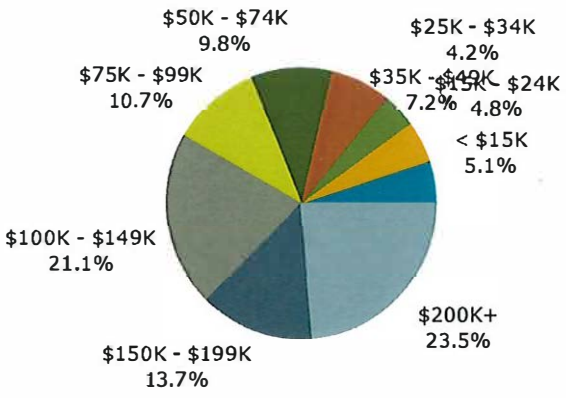
Trends 2023-2028



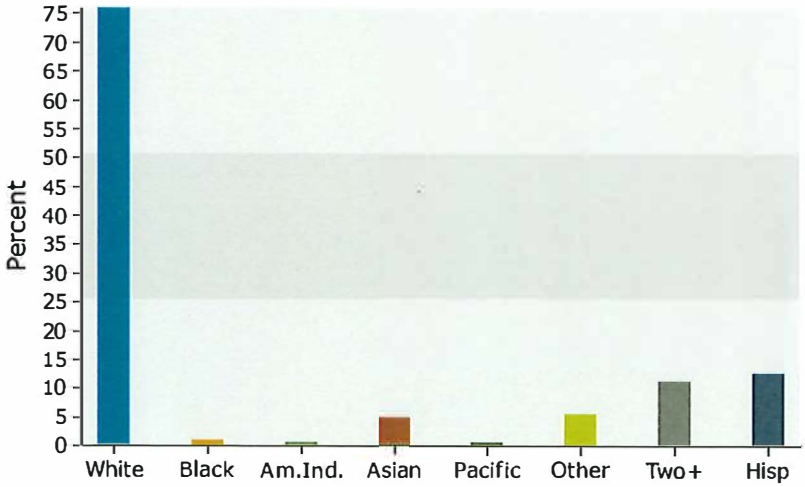
Population by Age



2023 Household Income



2023 Population by Race



Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

Demographic and Income Comparison Profile

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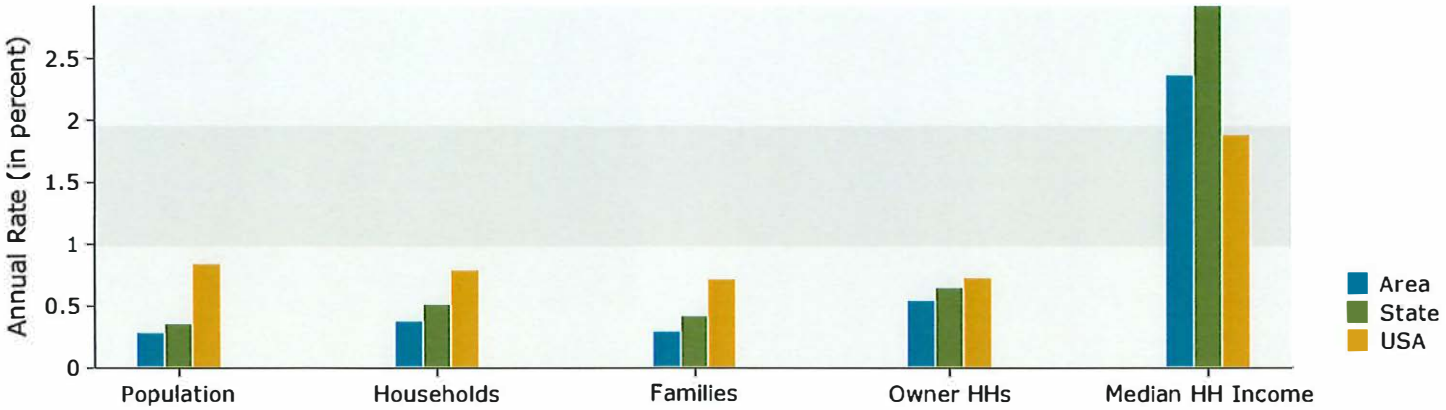
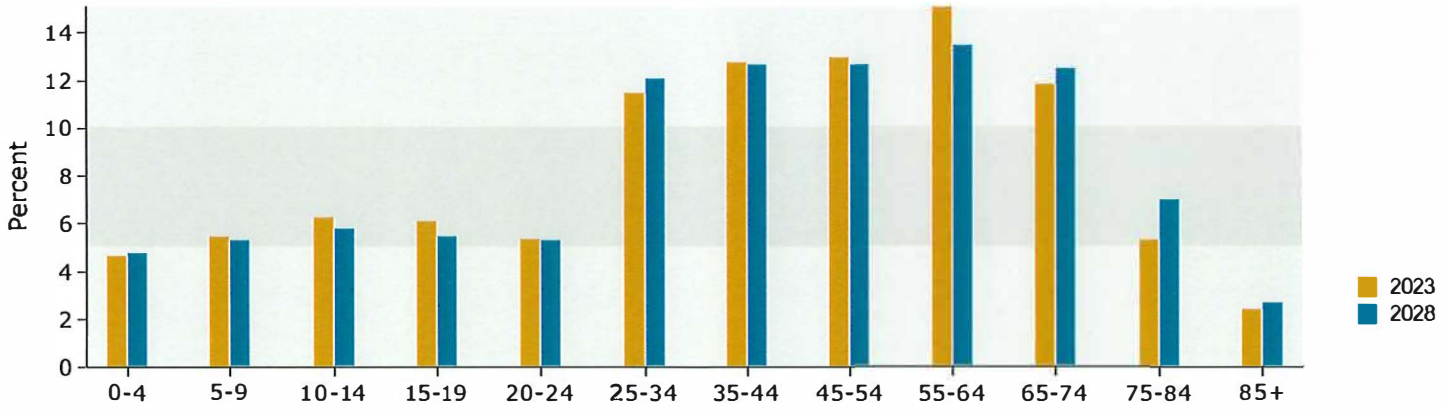
5 miles

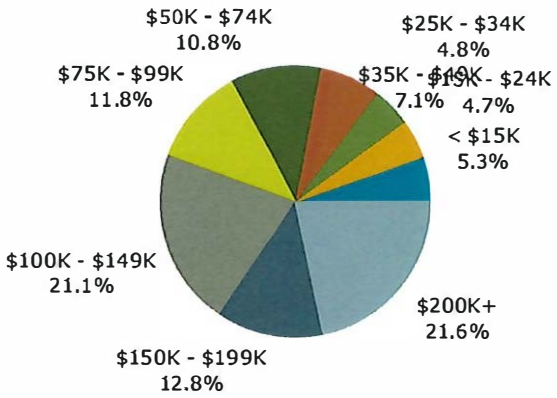
Trends 2023-2028



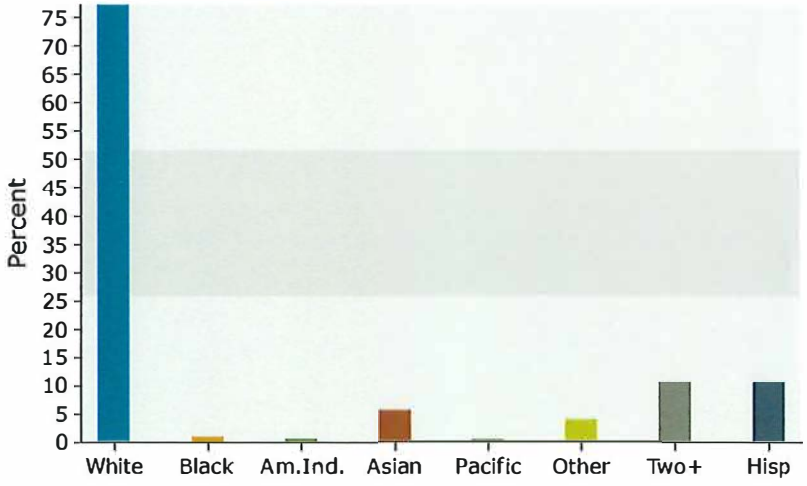
Population by Age



2023 Household Income



2023 Population by Race



Source: Esri forecasts for 2023 and 2028. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 13, 2023

To	publiceditor@oregonian.com newsroom@oregonian.com julia.brim-edwards@multco.us councilclerk@portlandoregon.gov
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Bcc	
Subject	Oregonlive publishes blood-libel, misquoting MultCo Board's "cease-fire" resolution

Originally sent 8th March 2024, engrossed version published as open letter 11th March additions indented, in support of **Engrossed RESOLUTION NO. 2024-016 with Amendments -3-16**

The Multnomah County Board of Commissioners adopted a “de-escalation and ceasefire” resolution *2024-016 -2* last Thursday, 7th March 2024, that called for *“an immediate cease-fire, return of hostages, safe passage and free access for humanitarian [relief] to Gazan civilians”*. Although the board did not explicitly mention Israeli hostages, this was clearly implied, and the amended resolution deliberately rejected a key demand of pro-Palestinian activists, over their vocal protests in the meeting itself, that a call for the release of “Palestinian prisoners” be included in the final version. However, the following day’s Oregonian newspaper mistakenly reports that the final version called for the “release of Israeli and *Palestinian* hostages”.

It is true that this falsely equivalent language was requested by all the activists aligned with the PFLP/Samidoun Palestinian prisoner solidarity network, who’ve been shutting down bridges and streets for the last couple months, and flooding public meetings with their demands. It’s also perhaps the language that the Oregonian reporters and editors would liked to have seen, but it’s not what the resolution actually says. The Oregonian should allow its readers to do the analysis themselves, and to decide whether the Palestinian criminals, rioters, and suspects held in Israeli prisons and jails - many of whom have been financially incentivized through the “PA martyr’s fund” and its egregious “pay-to-slay program” - are “hostages” to be accounted in the same category as random Israeli civilians snatched off the street or from their homes and held as collateral to ransom Palestinian warriors and criminals. It is the civic duty for the newspaper of record to report the known facts, and to let readers make moral judgements, or not, once all relevant facts are established.

For Oregonlive to assume that its own biased and ignorant opinion is shared by its readers by and the Board of Commissioners is mere journalistic hubris. But to actually put its own imagined words into their mouths, and to deliberately misquote or mis-paraphrase their published resolution by interpolating editorial opinions and attributing those to the Commission, is an act of journalistic malpractice. The malpractice is done in pursuit of a decisively partisan, anti-Israel editorial stance, and one begins to suspect that the ethical breach is endemic.

Oregonlive has creatively invented two libels in one - they libel the County Board of Commissioners by falsely attributing the anti-Israel blood-libel originated to their resolution, when in fact it originated in the editorial rooms of Oregonlive, or from the PFLP/Samidoun activists from whom they apparently get both their news tips, their political theory, and their journalistic ethics. Assuming facts not in evidence - that Israel is holding Palestinians for ransom, the paper makes a false moral equivalence, which projects the perpetrator's guilt onto the victim in order to deny, attack, and reverse blame. This is how they bamboozle you with fast talk and physical intimidation - a common tactic of con-men, domestic abusers, anti-Jewish hate groups, and terrorist organizations. If Israel has taken Palestinians hostage, the logical inference from this premise implies that Palestinians are justified in using "any means necessary" to free them - including presumably the acts of massacre, mayhem, rape, and mutilation which they undertook - which the County Commission, to its discredit, did not condemn. To that reticence and moral confusion, the Oregonlive has now issued a clear dog-whistle to Islamist and Marxist-Leninist terror groups, justifying in advance any future acts of war against Israel to "free Palestine" - much like the protest chants so frequently heard on the streets of Portland and other big cities do, saying "resistance is justified", and "globalize the intifada". The Oregonian declines to report these chants in its coverage of the "peaceful" demonstrations, in its apparent effort to put a friendly face on what are, essentially, pro-terrorism war rallies in solidarity with Hamas and Palestinian Islamic Jihad, calling for "cease-fire" in a war they started and which they show no desire to stop. Are these the activists that Commissioner Stegman thanks for "lifting up their voices"? Or why does she neglect to condemn the massacre? When Hamas warriors die at the barrel of Israeli guns, their bloodguilt will not only be on their own heads, it will be on the heads of all the useful idiots in the west who've published these lies, inciting and encouraging them to the war they are destined to lose.

I humbly call for Oregonlive to publicly retract and apologize for the inaccurate and morally perverse article, and ask for the resignation of the responsible reporter and news editor from all future stories in this subject matter field, if not from the paper as a whole.

I call for a re-evaluation of the editorial stance on these protests, for other local media to hold our newspaper of record to account for its vacuous and erroneous reporting. All of our journals should do better historical analyses and comparative politics in general, and in the present case better investigative journalism into the PFLP/Samidoun and into the local affiliate parties that are fronting it - which the paper has entirely declined to report on and which civic leaders have neglected to investigate.

Which came first - the indifference and contempt for the lives of Israelis and of Portlanders who support Jewish national liberation, and the apparent support for terrorist massacre as just an average act of political speech and community empowerment? Or the indifference and contempt for truth - in the form of dishonest reporting to enable the false moral equivocations? The direction of causal influence cannot be determined with certainty, but as in so much of the Palestinian narrative as amplified by local

Marxist-Leninists and anarcho-bolsheviks, the frequent correlation is undeniably evident, as the Oregonian in its complicity has now demonstrated.

> I thank Commissioner Brim-Edwards for her reproof to Oregonlive and her prompt reply to an earlier version of this email on 8th March, but three days later, the media firm has not replied. The Board of Commissioners must now in order to avoid complicity adopt an amendment to the resolution, explicitly stating what was originally implied, and call for “an immediate return of **the Israeli** hostages **held in Gaza**”. If Hamas were willing to do this, we could have a cease-fire tomorrow.
>
> Furthermore, the County Commission should follow the leadership of the Portland City Council, and condemn the Oct 7th “Al-aqsa flood” massacres. And they should follow the leadership of the 50+ democratic and republican congresspeople who signed a letter on 18th July 2023 calling for an end to the American tax dollars that are still going to finance Palestinian terrorism. By voting to adopt our amendments to the MultCo “ceasefire” resolution of 7th March, this is what they will do. A statement of moral clarity in condemnation of terrorist massacres, is one act the Commission can take to mitigate the murder and crime epidemic over which it presides, and will help bring about the local “cease-fire” that Portland and Multnomah County so desperately need.

Jared Essig ben Noah
RoseCityIronFront.org

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

Fully Engrossed RESOLUTION NO. 2024-016 with Amendments -3-16

*-3-16 Amendments drafted by the RoseCityIrontFront.org Proposed ~~redactions struck through~~ and **additions in bold.***

See also: 2024-016 as proposed, 2024-016 -2 as adopted

Calling for an immediate de-escalation, **hostage release**, and ceasefire in Palestine and Israel.

The Multnomah County Board of Commissioners finds:

1. ~~Social justice~~ **Maintaining the peace and effective administration of our County** is a core ~~value~~ **mission and obligation** of our Board. ~~Leaning into that value~~,**Therefore** we strive for ~~peaceful~~ **socially just** conflict resolutions that mitigate the impact of ~~those~~ **external or international conflicts** on our **local** communities. **Leaning into the conversation about the current war between Hamas and Israel and its impacts, the board acknowledges the following**:

2. All human life is precious. ~~and~~ The targeting of civilians, **and the use of civilians as human shields**, no matter their faith or ethnicity, is a violation of international humanitarian law.

2.1 On Oct. 7th, 2024 Hamas and its allies Palestinian Islamic Jihad and the PFLP launched the "Al-Aqsa flood" operation, including a military invasion and indiscriminate terrorist attack on Israel, massacring ~1,200 people, including children, women, elderly, and civilians in addition to soldiers and police, and took ~230 hostages, ~100 of whom are still held as of 11th Mach 2024.

2.2 In response, Israel has bombed and invaded Gaza, seeking the redemption of its hostages, the eradication of Hamas, and the comprehensive de-radicalization of Gazan civil society, education, religion, and media, in order to bring about its goal of a more durable peace on its own terms.

3. **Tens of thousands have died, and** Hundreds of thousands of lives **in Gaza** are at imminent risk if a ceasefire is not achieved and humanitarian aid is not delivered without delay.

4. The United States, as a long-standing ally and supporter of both Israel **and of the Palestinian Liberation Organization**, has the ability to influence the actions of Israel's government **and of the Palestinian Authority**. **America has no influence to make demands of Hamas, except by virtue of the Israeli force of arms.**

The Multnomah County Board of Commissioners resolves:

0. **Keeping with Multnomah County's values, we endorse the unanimously resolved statement of the Portland City Council given on Oct. 11th, in condemning the Oct 7th "Al-aqsa flood" attack on Israel and its citizens. *"Terrorism in all its forms is a threat to peace, prosperity, and the values of our [County]. We vehemently oppose and denounce the actions of Hamas"***

0.1 Further more, we condemn all acts of murder, rape, mutilation, desecration of corpses, hostage-taking, and terrorism, regardless of whether they are done for criminal gain, for political intimidation, or as acts of war. These have no place in our County, and will not be tolerated. In order to recover from the crime wave and murder epidemic that our County has been suffering, we ask all leaders of civil society to join us in renouncing this "myth of redemptive violence".

0.2 Although the Board, the District Attorney, and the Sheriff's Department along with municipal police departments, have generally observed an informal policy decision to not prosecute for unlawful assemblies that disrupt transportation and put pedestrians and bikers at heightened risk of speeding motorists and road rage incidents, we reserve the right to revise this policy at any time in the future, with or without further notice. Our neglect of any official civic duty-to-care in the matter of arrests and prosecutions, should not be construed as endorsement of these unpermitted demonstrations of "globalized intifada". Insofar as they have involved justification of war crimes and terrorism against Israel and its citizens, incitement to further such acts, and expressions of solidarity with foreign terrorist organizations seeking its total destruction, we condemn and morally abhor the unlawful assemblies that have recently taken place.

0.3 In lieu of arrest and prosecution, we request that the organizers voluntarily cease-and-desist, that attendees renounce and repudiate "global intifada", that locally active parties dis-affiliate from the Marxist-Leninist terror group PFLP which participated in the "Al-aqsa flood" massacres, and dis-affiliate from its international Samidoun Palestinian prisoner solidarity network, which has organized these demonstrations and war-rallies worldwide, while simultaneously calling for Israel to unilaterally "cease-fire" and abandon efforts to redeem its hostages. In the meantime we ask civil society to educate the simple, and subject the defiant to public rebuke until terrorism is renounced. Renunciation is an affirmative defense against inchoate crimes such as attempt, incitement, conspiracy, aiding-and-abetting, and complicity, and sincere penitents should be treated with leniency.

1. Keeping with Multnomah County's values, we call for an immediate ~~ceasefire~~ return of **the Israeli** hostages **held in Gaza**, **ceasefire,** safe passage and free access for humanitarian organizations to provide medical aid, food, water, clothing, fuel, power, and shelter to Gazan civilians.

2. **In order to bring about a permanent cease-fire and an end to the war, and to prevent further Palestinians from being taken into Israeli jails and prisons for acts of intifada, we endorse the bipartisan congressional letter of 18th July 2023 to the Biden Administration's State Department under Secretary Blinken, signed by over 50 prominent U.S. Congresspeople, requesting a financial investigation into the "PA martyr's fund", and enforcement of the 2018 "Taylor Force Act" 115th H.R. 1146., and an end to the egregious "pay-to-slay" program currently still funded by our ally the Palestinian Authority. No more American tax dollars should go to finance Palestinian terrorism.**

2. On passage, this resolution will be sent to our U.S. Senators Ron Wyden and Jeff Merkley; our U.S. Representatives Earl Blumenauer, Suzanne Bonamici, Lori Chavez-DeRemer; and President Joe Biden; **and Secretary of State Anthony Blinken. It will also be sent to the leaders of local and state governments, community colleges and universities, school boards, and teachers, parents, and students unions.**

ADOPTED this 7th day of March, 2024. Amendments proposed 11th March, 3024

BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

_____

~~Jessica Vega Pederson, Chair~~

REVIEWED:
JENNY M. MADKOUR, COUNTY ATTORNEY
FOR MULTNOMAH COUNTY, OREGON

By

_____
Jenny M. Madkour,
County Attorney

Congress of the United States

Washington, DC 20515

July 18, 2023

The Honorable Antony Blinken
U.S. Department of State
2201 C Street NW
Washington, D.C. 20451

Dear Secretary Blinken:

We write to you at a time of great instability in Israel and the West Bank. Over the past few weeks, we have witnessed disturbing violence in the region as innocent civilians in Israel fall victim to terrorist attacks. Since the start of the year, cold-blooded murders of Israelis have been celebrated by perpetrators and supporters of Palestinian terror. Deeply concerned by the Palestinian Authority's refusal to condemn these senseless killings, and in particular, their ongoing incentivizing of terror through the egregious "pay for slay" program, we ask that you report to Congress on ongoing efforts to end this practice.

For some Palestinians, terrorism literally pays. As you know, the Palestinian Authority has for decades provided financial compensation and other benefits to families of terrorists jailed in Israeli prisons and "martyrs" killed while carrying out attacks against Israelis. These payments cost the PA more than $300 million annually, at 8% of its budget.[1] In an attempt to reform this practice, the U.S. ended direct budgetary support to the PA in 2014. The PA refused to change its behavior, and, in 2018, Congress passed the bipartisan Taylor Force Act. In an effort to cut off "pay for slay" at the source, many of us helped pass this much-needed, bipartisan legislation that prohibits U.S. assistance to the West Bank directly benefiting the PA.

In January 2023, following an attack by a Palestinian terrorist that killed 7 in a Jerusalem synagogue, Palestinians in the West Bank and Gaza celebrated the carnage by handing out sweets, blasting festive music from their cars, and lighting fireworks.[2] Days earlier, Akram Rajoub, the mayor of Jenin, said that the "PA will not stop the transfer of funds…President Abbas made it clear that the Palestinian Authority will not stop funding the families of our martyrs even if we are down to the last penny."[3] Lone-wolf and organized attacks show little sign of stopping, and know no bounds. In late February, a Palestinian terrorist killed Columbia University graduate Elan Ganeles, a native of Connecticut. In early April, a Palestinian terrorist killed British-Israeli mother Lucy Dee and her two daughters in an ambush in the West Bank. Those behind these heinous acts are lauded by Palestinian society, and it is abundantly clear that these payments continue to reward and incentivize terror.

The Palestinian Authority has clearly continued down the path of more hatred, violence, and terror, without regard for the damage inflicted, or for their role in diminishing the prospects for peace. But, so long as they pay citizens to murder civilians, they will do so without benefiting from the support of United States taxpayers.We know that the Administration shares the view that support for terrorism and the Palestinians' characterization of the martyr payment system as a form of social welfare is unacceptable[4]. Yet, five years after the Taylor Force Act was signed into law, the PA continues to bolster the Martyrs' Fund. To maintain a political horizon in

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1 https://israelpolicyforum.org/2021/04/02/palestinian-prisoner-and-martyr-payments-explained/

2https://apnews.com/article/politics-israel-government-palestinian-territories-benjamin-netanyahu-fb2251b5b6c8ef73a21f87620d20090c

3https://www.i24news.tv/en/news/middle-east/palestinian-territories/1674127560-exclusive-defending-pay-for-slay-jenin-mayor-says-pa-will-always-fund-martyrs

4 https://www.jpost.com/israel-news/biden-envoy-talked-with-pa-about-dropping-pay-for-slay-681392

support of a viable two-state solution, the PA cannot continue this depraved practice. U.S.-Palestinian ties have improved in recent years, and the Biden Administration is uniquely positioned to change the status quo.

As such, we encourage the State Department to update Congress on the status of negotiating an end to the "pay for slay" program, and urge the Administration to continue to raise this issue with Palestinian officials. The United States is a trusted regional partner, and must utilize this unique position to bring an end to a system that has harmed so many.

Sincerely,

Josh Gottheimer
Member of Congress

Brian Fitzpatrick
Member of Congress

Juan Vargas
Member of Congress

Jim Costa
Member of Congress

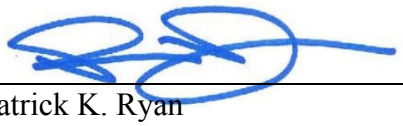
Donald Norcross
Member of Congress

Grace Meng
Member of Congress

Michael Waltz
Member of Congress

Ritchie Torres
Member of Congress

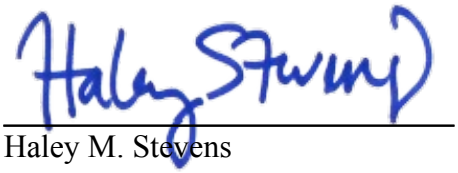
Jared Moskowitz
Member of Congress



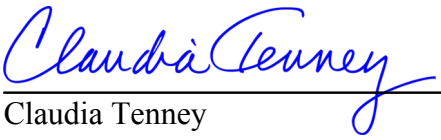
Patrick K. Ryan
Member of Congress

Wiley Nickel
Member of Congress

Darren Soto
Member of Congress

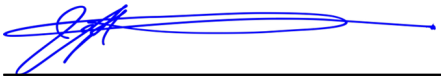


Haley M. Stevens
Member of Congress

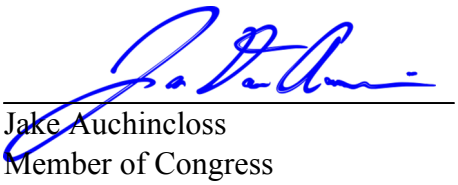


Claudia Tenney
Member of Congress

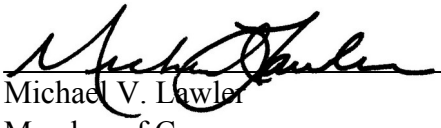
David Scott
Member of Congress



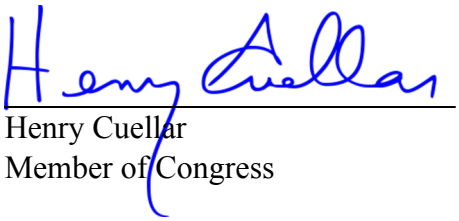
Jefferson Van Drew
Member of Congress



Jake Auchincloss
Member of Congress



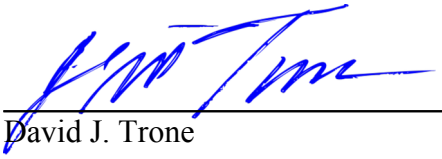
Michael V. Lawler
Member of Congress



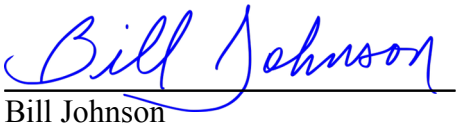
Henry Cuellar
Member of Congress

Susie Lee
Member of Congress

Bradley Scott Schneider
Member of Congress

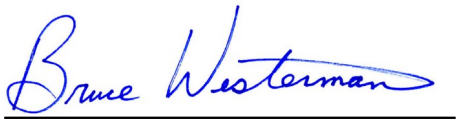


David J. Trone
Member of Congress

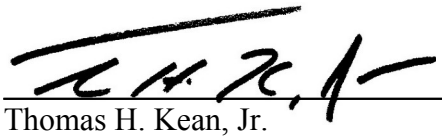


Bill Johnson
Member of Congress

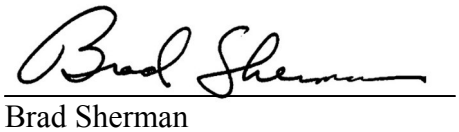
Daniel Meuser
Member of Congress



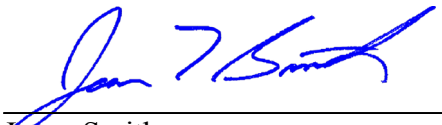
Bruce Westerman
Member of Congress



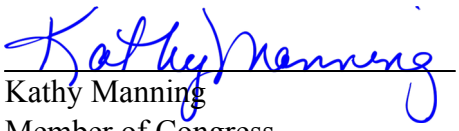
Thomas H. Kean, Jr.
Member of Congress



Brad Sherman
Member of Congress



Jason Smith
Member of Congress

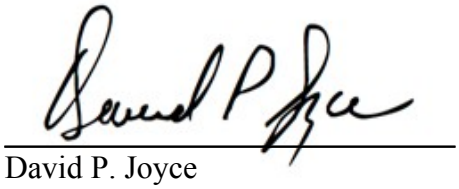


Kathy Manning
Member of Congress

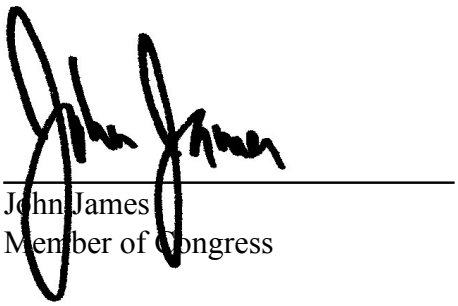
Mike Gallagher
Member of Congress

Donald G. Davis
Member of Congress

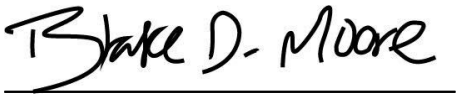
David G. Valadao
Member of Congress



David P. Joyce
Member of Congress



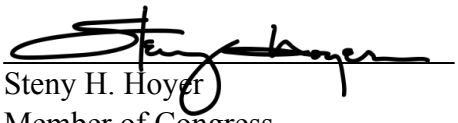
John James
Member of Congress



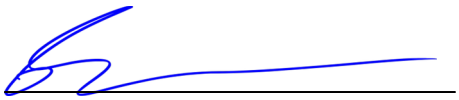
Blake D. Moore
Member of Congress

Mike Thompson
Member of Congress

Dusty Johnson
Member of Congress

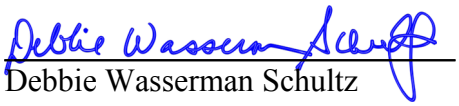


Steny H. Hoyer
Member of Congress



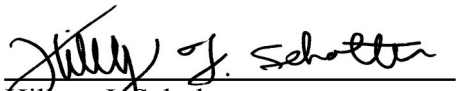
Brian J. Mast
Member of Congress

Andrew R. Garbarino
Member of Congress



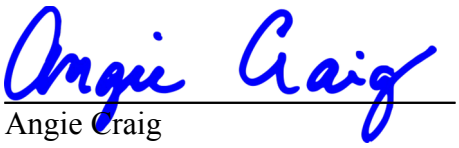
Debbie Wasserman Schultz
Member of Congress

Lois Frankel
Member of Congress



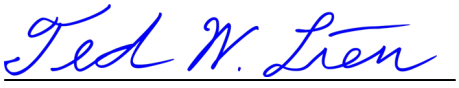
Hillary J. Scholten
Member of Congress

Brad R. Wenstrup, D.P.M.
Member of Congress



Angie Craig
Member of Congress

Robert J. Menendez
Member of Congress



Ted W. Lieu
Member of Congress

Anthony D'Esposito
Member of Congress

Shontel M. Brown
Member of Congress

Elissa Slotkin
Member of Congress