MILWAUKIE PLANNING
6101 SE Johnson Creek Blvd
Milwaukie OR 97206
503-786-7630
planning@milwaukieoregon.gov

Application for Land Use Action

Master File #: MLP-2022-001

Review type*: ☐ I ☒ II ☐ III ☐ IV ☐ V

CHECK ALL APPLICATION TYPES THAT APPLY:

- ☐ Amendment to Maps and/or Ordinances:
  - ☐ Comprehensive Plan Text Amendment
  - ☐ Comprehensive Plan Map Amendment
  - ☐ Zoning Text Amendment
  - ☐ Zoning Map Amendment
- ☐ Code Interpretation
- ☐ Community Service Use
- ☐ Conditional Use
- ☐ Development Review
- ☐ Director Determination
- ☐ Downtown Design Review
- ☐ Extension to Expiring Approval
- ☐ Historic Resource:
  - ☐ Alteration
  - ☐ Demolition
  - ☐ Status Designation
  - ☐ Status Deletion
- ☐ Land Division:
  - ☐ Final Plat
  - ☐ Lot Consolidation
  - ☒ Partition
  - ☐ Property Line Adjustment
  - ☐ Replat
  - ☐ Subdivision
- ☐ Miscellaneous:
  - ☐ Barbed Wire Fencing
- ☐ Mixed Use Overlay Review
- ☐ Modification to Existing Approval
- ☐ Natural Resource Review**
- ☐ Nonconforming Use Alteration
- ☐ Parking:
- ☐ Quantity Determination
  - ☐ Quantity Modification
  - ☐ Shared Parking
  - ☐ Structured Parking
  - ☐ Planned Development
- ☐ Residential Dwelling:
- ☐ Accessory Dwelling Unit
  - ☐ Duplex
  - ☐ Manufactured Dwelling Park
  - ☐ Temporary Dwelling Unit
  - ☐ Sign Review
- ☐ Transportation Facilities Review
- ☐ Variance:
- ☐ Use Exception
  - ☐ Variance
  - ☐ Willamette Greenway Review
- ☐ Other: _____
- ☐ **Use separate application forms for:**

Annexation and/or Boundary Change
- Compensation for Reduction in Property
- Value (Measure 37)

Daily Display Sign
- Appeal
- Appeal

RESPONSIBLE PARTIES:

APPLICANT (owner or other eligible applicant—see reverse): Nile Hagen

Mailing address: 3650 SE Johnson Creek Blvd. Portland State/Zip: Oregon 97222

Phone(s): 503-290-8539 Email: nilehagen@gmail.com

Please note: The information submitted in this application may be subject to public records law.

APPLICANT'S REPRESENTATIVE (if different than above): Ryan O'Brien

Mailing address: 1862 NE Estate Drive, Hillsboro State/Zip: Oregon 97124

Phone(s): 503-780-4061 Email: ryanobrien1@frontier.com

SITE INFORMATION:

Address: 4215 SE King Road Map & Tax Lot(s): 1S2-30CC, Tax Lot 5301

Comprehensive Plan Designation: MD & MED- Zoning: R-3 Size of property: 1.78 acres

PROPOSAL (describe briefly):

2-lot partion to separate the vacant and developable portion of the site from an exsiting office building that will remain on the site.

SIGNATURE:

ATTEST: I am the property owner or I am eligible to initiate this application per Milwaukie Municipal Code (MMC) Subsection 19.1001.6.A. If required, I have attached written authorization to submit this application. To the best of my knowledge, the information provided within this application package is complete and accurate.

Submitted by: Date:

IMPORTANT INFORMATION ON REVERSE SIDE

*For multiple applications, this is based on the highest required review type. See MMC Subsection 19.1001.6.B.1.

WHO IS ELIGIBLE TO SUBMIT A LAND USE APPLICATION (excerpted from MMC Subsection 19.1001.6.A):

Type I, II, III, and IV applications may be initiated by the property owner or contract purchaser of the subject property, any person authorized in writing to represent the property owner or contract purchaser, and any agency that has statutory rights of eminent domain for projects they have the authority to construct.

Type V applications may be initiated by any individual.

PREAPPLICATION CONFERENCE:

A preapplication conference may be required or desirable prior to submitting this application. Please discuss with Planning staff.

REVIEW TYPES:

This application will be processed per the assigned review type, as described in the following sections of the Milwaukie Municipal Code:

- Type I: Section 19.1004
- Type II: Section 19.1005
- Type III: Section 19.1006
- Type IV: Section 19.1007
- Type V: Section 19.1008

****Note**: Natural Resource Review applications **may require a refundable deposit.** Deposits require completion of a Deposit Authorization Form, found at www.milwaukieoregon.gov/building/deposit-authorization-form.

THIS SECTION FOR OFFICE USE ONLY:

FILE TYPE	FILE NUMBER	AMOUNT (after discount, if any)	PERCENT DISCOUNT	DISCOUNT TYPE	DATE STAMP
Master file	MLP-2022-001	$ 2,000	—	—	RECEIVED MAR 18 2022 CITY OF MILWAUKIE PLANNING DEPARTMENT
Concurrent application files		$			
		$			
		$			
		$			
Deposit (NR only)				☐ Deposit Authorization Form received	
TOTAL AMOUNT RECEIVED: $			RECEIPT #:		RCD BY:
Associated application file #s (appeals, modifications, previous approvals, etc.):					
Neighborhood District Association(s): Lewelling					
Notes: 2-lot partition — pre-app conference waived due to multiple informal conversations between Engineering staff and applicant in addition to 2019 pre-app conference for similar action (19-017PA).					

Applicant's Narrative for a 2-Lot Partition on 43rd Avenue 3-9-22

Applicant's Representative: Ryan O'Brien, Planning Consultant
Planning & Land Design LLC
1862 NE Estate Drive
Hillsboro, Oregon 97124
Ryanobrien1@frontier.com
503-780-4061

Property Owner: and Property Address Shears & Callahan LLC
4215 SE King Road
Milwaukie, Oregon 97206

Applicant: Nile Hagen

Request: 2-Lot Land Partition

Zoning: R-3, Medium Density Residential

Size: 1.76 acres - 76,670 sf

Comprehensive Plan Designation: MD – Moderate Density MED.D – Medium Density

Legal Description: Tax Lot 5301, Tax Map 1S2-30CC. City of Milwaukie, Oregon

INTRODUCTION

The purpose of the partition is to separate the vacant and developable portion of the site (Parcel 2) from the existing office building (Parcel 1). The existing office building will remain with slight modifications to the parking lot and access on 43rd Avenue as shown by Sheet PP-5. Parcel 2 will be developed with multiple family houses. A specific development plan has not been designed.

The partition plat is shown by PP-2. Sheet PP-3 show the topo, existing trees, street and parking lot pavement and existing utilities. Sheet PP-4 is the Record of Survey. Sheet PP-6 is the Tax Map and Sheet PP-7 shows the surrounding houses and commercial buildings. Sheet PP-5 shows the small portion of the existing office parking lot that will be removed, and a new driveway built along the north property line. This driveway located was chosen to remove the access as far as possible from the 43rd Avenue and King Road intersection. Access and public improvements required by Chapters 19.500, 19.600 and 19.700 will be addressed when Parcel 2 is developed.

The GeoTech report indicates the soils are suitable for development. Infiltration test pits show on-site show storm sewer dry wells will be acceptable.

Applicable Zoning Codes

17.12.040 APPROVAL CRITERIA FOR PRELIMINARY PLAT

A. Approval Criteria

The approval authority may approve, approve with conditions, or deny a preliminary plat based on the following approval criteria:

1. The proposed preliminary plat complies with Title 19 of this code and other applicable ordinances, regulations, and design standards.

2. The proposed division will allow reasonable development and will not create the need for a variance of any land division or zoning standard.

3. The proposed subdivision plat name is not duplicative and the plat otherwise satisfies the provisions of ORS 92.090(1).

4. The streets and roads are laid out so as to conform to the plats of subdivisions already approved for adjoining property as to width, general direction, and in all other respects unless the City determines it is in the public interest to modify the street or road pattern.

5. A detailed narrative description demonstrating how the proposal conforms to all applicable code sections and design standards.

B. Conditions of Approval

The approval authority may attach such conditions as are necessary to carry out the applicable ordinances and regulations and may require access control strips be granted to the City for the purpose of controlling access to adjoining undeveloped properties.

RESPONSE: This partition complies with Title 19 of the Milwaukie Development Code. Development of Parcel 2 can occur without variances to the land division or zoning codes. An access exception in accordance with Code Section 12.16.040 is required for proposed access to Parcel 2. This partition will receive a unique number rather than a subdivision name. No new streets are proposed. A narrative is provided demonstrating compliance with city codes. The city will provide Conditions of Approval.

17.16.060 PRELIMINARY PLAT FOR PARTITION AND SUBDIVISION

The following shall accompany applications for partition:

A. Completed application form signed by all owners of property included in the proposal;

B. Application fee as adopted by the City Council;

C. Completed and signed "submission requirements" and "partition checklist" or "subdivision checklist" forms as appropriate;

D. All information specified on the "submission requirements" and "partition checklist" or "subdivision checklist" forms as appropriate;

E. Requirements and information specified in Chapter 17.20; and

F. Any additional information as may be needed to demonstrate compliance with approval criteria.

RESPONSE: All information and documentation has been provided.

17.28.040 GENERAL LOT DESIGN

This section does not apply to units of land that are created for purposes other than land development including parks, natural areas, right-of-way dedications, or reservations of a similar nature. Lots and tracts created for cottage cluster housing development, per Subsection 19.505.4, are also exempt from the requirements of this section.

A. Size and Shape

Lot size, width, shape, and orientation shall be appropriate for the location and the type of use contemplated. Minimum lot standards shall conform to Title 19.

B. Rectilinear Lots Required

Lot shape shall be rectilinear, except where not practicable due to location along a street radius, or existing lot shape. The sidelines of lots, as far as practicable, shall run at right angles to the street upon which the lots face. As far as practicable, the rear lot line shall run parallel to the street.

C. Limits on Compound Lot Line Segments

Changes in direction alongside and rear lot lines shall be avoided. Cumulative lateral changes in direction of a side or rear lot line exceeding 10% of the distance between opposing lot corners along a given lot line may only be permitted through the variance provisions of MMC Subsection 19.911. Changes in direction shall be measured from a straight line drawn between opposing lot corners.

D. Adjustments to Lot Shape Standard

Lot shape standards may be adjusted subject to Section 19.911 Variances.

E. Limits on Double and Reversed Frontage Lots

Double frontage and reversed frontage lots should be avoided, except where essential to provide separations of residential development from railroads, traffic arteries, or adjacent nonresidential uses, or to overcome specific disadvantages of topography and orientation.

F. Measurement of Required Frontage

Pursuant to the definition and development standards contained in Title 19 for frontage, required frontage shall be measured along the street upon which the lot takes access.

RESPONSE: This partition complies with all above requirements.

17.32.020 UTILITY UNDERGROUNDING

All utility lines, including, but not limited to, those required for electric, communication, lighting, cable television services, and related facilities shall be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets, temporary utility service facilities during construction, high-capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant shall make all necessary arrangements with the serving utility to provide the underground services.

RESPONSE: The overhead utility lines need to be placed underground when the site is developed in the future.

19.300 R-3 ZONING STANDARDS

RESPONSE: Parcels 1 and 2 both comply with the minimum lot size and dimensions of the R-3 zone

TABLE 19.605.1 - ON-SITE PARKING

RESPONSE: The floor area of the existing office building is 3,683 sf. Table 19.605.1 requires 2 parking space for every 1,000 sf of floor area. Therefore, 8 parking spaces are required. After a small portion of the pavement for the existing office parking is removed, 12 parking spaces remain. This exceeds the minimum city parking requirement.

TABLE 19.708.1 - INTERSECTION SPACING

RESPONSE: This Table requires 300' spacing between intersections. An access exception in accordance with Code Section 12.16.040 is required for proposed access to Parcel 2.

PARTITION PLAT
4215 SE KING ROAD

LOCATED IN TOWNSHIP 1S, RANGE 2E, W.M., SECTION 30CC, TAX LOT 5301
MILWAUKIE, OREGON
MARCH 10, 2022

CONTENTS

SITE AERIAL

SITE DATA

SITE AREA:	1.76 AC (76,670 SF)
NUMBER OF LOTS:	2
TAX MAP:	T1S, R2E, SECTION 30CC TAX LOT 5301
ZONING:	RESIDENTIAL ZONE R–3

VICINITY MAP
N.T.S.

PROJECT CONTACTS

OWNER:	SHEARS & CALLAHAN, LLC 4215 SE KING ROAD PO BOX 22677 PORTLAND, OR 97269–2667	APPLICANT'S REPRESENTATIVE:	PLANNNING & LAND DESIGN 1862 NE ESTATE DRIVE HILLSBORO, OREGON 97124 ATTN: RYAN O'BRIEN 503–780–4061 (M) ryanobrien1@frontier.com
APPLICANT:	Nile Hagen 3650 SE Johnson Creek Blvd. Portland, Oregon 97222 503-290-8539 nilehagen@gmail.com	SURVEYOR:	CMT SURVEYING & CONSULTING 20330 SE HIGHWAY 212 DAMASCUS, OREGON 97089 ATTN: MICHAIL GATES, PLS (503) 850–4672
ENGINEER:	Engineer is not identified at the present time	MILWAUKIE PLANNING:	6101 SE JOHNSON CREEK BLVD. MILWAUKIE, OREGON 97206 (503) 786–7600

43RD & KING SITE
TAX MAP T1S, R2E, SEC. 30CC, TAX LOT 5301
MILKAUKIE, OREGON 97222

COVER SHEET
PARTITION PLAT
4215 SE KING ROAD

NO.	DATE	REVISIONS DESCRIPTION

PLANNING & LAND DESIGN, LLC
1862 NE ESTATE DRIVE
HILLSBORO, OREGON 97124
RYAN O'BRIEN
(503)780–4061

SHEET PP-1 OF 7
MARCH 10, 2022

50 0 25 50 100

1 inch = 50 ft.
11"x17" PLOT

N

TAX LOT 3401 | TAX LOT 3400 | TAX LOT 3403 | TAX LOT 5200 | TAX LOT 5800 | TAX LOT 5700 | TAX LOT 5600

LOT 5 | "ENGEL ADDITION" | LOT 1

SE 43RD AVENUE

25.00' | 30.00' | 20.00' | 30.00'

S 01°01'38" E 474.77'

276.41' | 183.36'

15.00'

S 44°34'43" W 20.99'

CITY OF MILWAUKIE DOCUMENT NOS. 90-26006 & 2005-081675

9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

"MARCHBANKS" NO. 3 PLAT

S 89°45'15" E 161.61'

DEED DOCUMENT NO. 98-003756

PARCEL 2
44,670 SF

76,670 SF
1.76 AC

S 271°01'38" E 161.72'

PARCEL 1
31,700 SF

EXISTING BUILDING
FF ELEV=175.16'
3,683 SF

N 89°48'57" W 146.86'

N 89°48'57" W 146.86'

N 89°48'57" W 161.86'

SE KING ROAD

280.00' | 194.94'

30.00' | 36.50'

EXISTING DECK | EXISTING DECK | N 00°59'44" W 474.94'

EXISTING BUILDING

DEED DOCUMENT
NO. 2013-074558

43RD & KING SITE

TAX MAP T1S, R2E, SEC. 30CC, TAX LOT 5301
MILKAUKIE, OREGON 97222

PROPOSED PARTITION PLAT

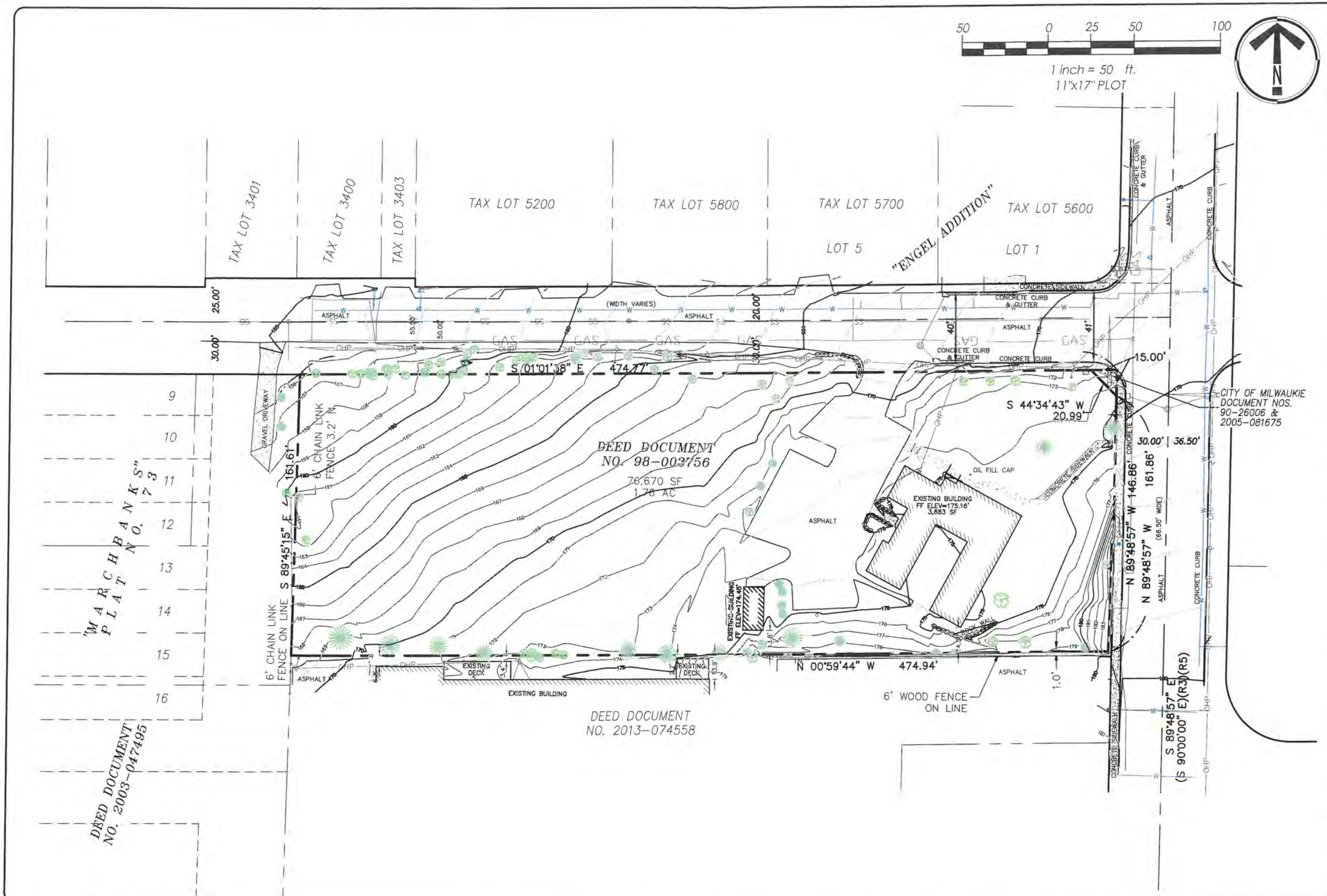
REVISIONS

NO.	DATE	DESCRIPTION

PLANNING & LAND DESIGN, LLC
1862 NE ESTATE DRIVE
HILLSBORO, OREGON 97124
RYAN O'BRIEN
(503)780-4061

SHEET
PP-2
OF
7

MARCH 10, 2022



43RD & KING SITE

TAX MAP T1S, R2E, SEC. 30CC, TAX LOT 5301
MILKAUKIE, OREGON 97222

EXISTING CONDITIONS

REVISIONS

NO.	DATE	DESCRIPTION

PLANNING & LAND DESIGN, LLC
1862 NE ESTATE DRIVE
HILLSBORO, OREGON 97124
RYAN O'BRIEN
(503)780-4061

SHEET
PP-3
OF
7
MARCH 10, 2022

SN2019-269

RECORD OF SURVEY

IN THE SOUTHWEST ONE-QUARTER OF SECTION 30,
TOWNSHIP 1 SOUTH, RANGE 2 EAST, OF THE WILLAMETTE MERIDIAN,
CITY OF MILWAUKIE, CLACKAMAS COUNTY, OREGON

DECEMBER 12, 2019

SURVEYED FOR: LITTAA DEVELOPMENT

CLACKAMAS COUNTY SURVEYOR
DATE RECEIVED: 11-20-19
DATE ACCEPTED/FILED: 12-12-19
SURVEY NUMBER: SN2019-269

REFERENCES

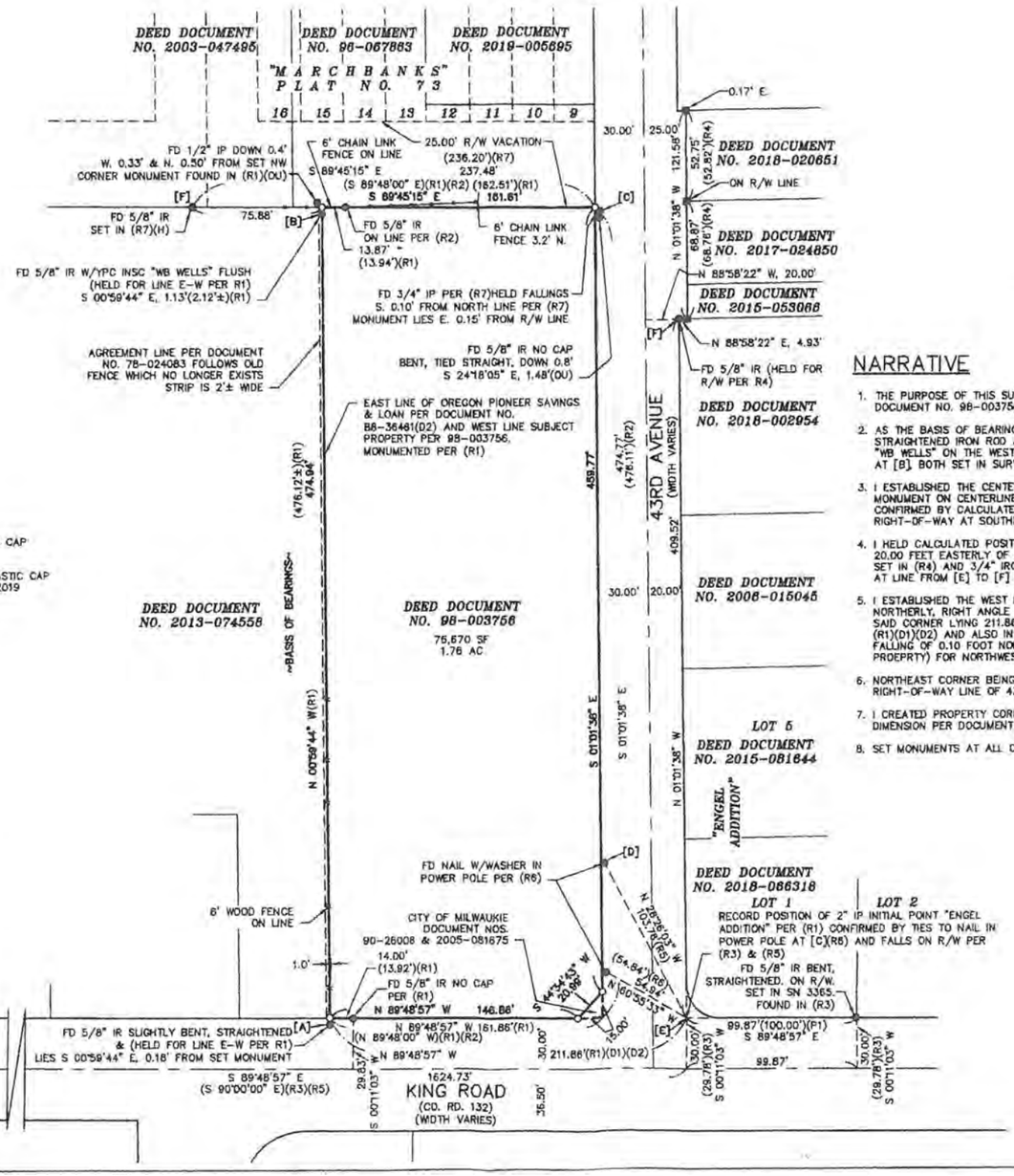
(R1) SN 21140
(R2) SN 15772
(R3) SN 29583
(R4) SN 18573
(R5) SN 29882
(R6) SN 24076
(R7) SN 11535
(P1) PLAT OF "ENGEL ADDITION

(D1) DOCUMENT NO. 98-003756
(D2) DOCUMENT NO. 88-36461

LEGEND

- FOUND MONUMENT AS NOTED
- FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP INSCRIPTION ILLEGIBLE PER (R4)
- SET 5/8" X 30" IRON ROD WITH ORANGE PLASTIC CAP INSCRIBED "CMT PLS 2449" SET ON 11/19/2019

FD FOUND
IR IRON ROD
IP IRON PIPE
YPC YELLOW PLASTIC CAP
RPC RED PLASTIC CAP
INSC INSCRIBED
E-W EAST-WEST
N-S NORTH-SOUTH
R/W RIGHT-OF-WAY
OU ORIGIN UNKNOWN
(R#) REFERENCE NUMBER
(P#) PLAT NUMBER
(D#) DEED NUMBER
[A] CORNER REFERENCE (SEE NARRATIVE)
SF SQUARE FEET
AC ACRES



SCALE
50 0 25 50
1 INCH = 50 FEET

NARRATIVE

1. THE PURPOSE OF THIS SURVEY IS TO SURVEY AND MONUMENT THE PROPERTY DESCRIBED IN DEED DOCUMENT NO. 98-003756, CLACKAMAS COUNTY RECORDS, FOR A FUTURE PARTITION PLAT.
2. AS THE BASIS OF BEARINGS, I HELD A BEARING OF NORTH 00°59'44" WEST BETWEEN A FOUND AND STRAIGHTENED IRON ROD AT [A] AND A FOUND IRON ROD WITH YELLOW PLASTIC CAP INSCRIBED "WB WELLS" ON THE WEST LINE SOUTH 00°59'44" EAST 1.13 FEET FROM THE NORTHWEST CORNER AT [B], BOTH SET IN SURVEY NO. 21140(R1).
3. I ESTABLISHED THE CENTERLINE OF KING ROAD (COUNTY ROAD NO. 132) PER (R5), HOLDING MONUMENT ON CENTERLINE AT [G] AND ON NORTH RIGHT-OF-WAY LINE AT [H] PER (R5), CONFIRMED BY CALCULATED POSITION OF 2" IRON PIPE AT [E] AND FOUND 5/8" IRON ROD ON THE RIGHT-OF-WAY AT SOUTHEAST CORNER LOT 1 "ENGLE ADDITION."
4. I HELD CALCULATED POSITION AT [E] AND FOUND MONUMENT AT [F] FOR EAST RIGHT-OF-WAY 20.00 FEET EASTERLY OF CENTERLINE OF 43RD AVENUE. COMPARES FAVORABLY WITH MONUMENTS SET IN (R4) AND 3/4" IRON PIPE FOUND AT [C]. I ESTABLISHED A LINE 50.00 FEET WESTERLY OF AT LINE FROM [E] TO [F] FOR EAST LINE SUBJECT PROPERTY.
5. I ESTABLISHED THE WEST LINE FROM [A] TO [B], INTERSECTING WITH A LINE 30.00 FEET NORTHERLY, RIGHT ANGLE MEASURE, OF CENTERLINE OF KING ROAD FOR THE SOUTHWEST CORNER, SAID CORNER LYING 211.86 FEET ALONG SAID NORTH RIGHT-OF-WAY LINE FROM [E] PER (R1)(D1)(D2) AND ALSO INTERSECTING A LINE FROM [A] TO [B] WITH A LINE FROM [F] WITH A FALLING OF 0.10 FOOT NORTH FROM 3/4" IRON PIPE FOUND AT [C] (NORTH LINE OF SUBJECT PROEPRTY) FOR NORTHWEST CORNER.
6. NORTHEAST CORNER BEING AN INTERSECTION OF NORTH LINE WITH EAST LINE (WEST RIGHT-OF-WAY LINE OF 43RD AVENUE).
7. I CREATED PROPERTY CORNERS AT SOUTHEAST CORNER BY HOLDING 15.00 FOOT CORNER CHORD DIMENSION PER DOCUMENT NO. 90-26006 CONVEYED TO CITY OF MILWAUKIE.
8. SET MONUMENTS AT ALL CORNERS AS SHOWN.

REGISTERED PROFESSIONAL LAND SURVEYOR
Michael R. Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449
EXPIRES: 6-30-21

CMT SURVEYING AND CONSULTING
20330 SE HIGHWAY 212
DAMASCUS, OR 97089
PHONE (503) 850-4672 FAX (503) 850-4590
Y:\500-689\DWG\500689ROS.DWG

43RD & KING SITE
TAX MAP T1S, R2E, SEC. 30CC, TAX LOT 5301
MILWAUKIE, OREGON 97222

RECORD OF SURVEY

REVISIONS		
NO.	DATE	DESCRIPTION

PLANNING & LAND DESIGN, LLC
1862 NE ESTATE DRIVE
HILLSBORO, OREGON 97124
RYAN O'BRIEN
(503)780-4061

SHEET
PP-4
OF
7
MARCH 10, 2022

Proposed Partiton Tax Lot 5301, Tax Map 1S2E-30CC

10-13-21

1" = 50' at 11" x 17"

PROPOSED ACCESS

RELOCATE DW @ 90°

PARKING

161.61'

22'

16'

Parcel 2
45,251 sf - 1.04 ac.

Parcel 1
0.72 ac.

90°

CUT AC.

280'

194.94'

474.94'

43RD AVENUE
(WIDTH VARIES)

KING ROAD
(66.50' WIDE)

ASPHALT

CONCRETE SIDEWALK

CONCRETE CURB & GUTTER

CONCRETE CURB

GRAVEL DRIVEWAY

FOUND 3/4" IRON ROD NO CAP BENT, TIED STRAIGHT, DOWN 0.6' ELEV.=169.0'

FOUND 3/4" IRON PIPE DOWN 0.3' ELEV.=169.4'

FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP INSCRIBED "WB WELLS" FLUSH ELEV.=161.4'

6' CHAIN LINK FENCE

EXISTING BUILDING FF ELEV=174.45'

EXISTING DECK

EXISTING BUILDING

TAX LOT 3300

TAX LOT 5400

TAX LOT 5401

S 00°86'00" E

N 00°58'48" W

476.12'

6' WOOD FENCE ON CONCRETE WALL

FOUND NAIL WITH WASHER IN POWER POLE ELEV.=171.3'

FOUND NAIL WITH WASHER IN POWER POLE ELEV.=172.4'

OIL FILL CAP

EXISTING BUILDING FF ELEV=175.16'

FOUND 3/4" IRON ROD NO CAP, BENT, TIED STRAIGHT DOWN 0.7' ELEV.=176.1'

FOUND 3/4" IRON ROD NO CAP BENT, TIED STRAIGHT DOWN 0.7' ELEV.=179.0'

LEGEND

- EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING CONIFEROUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING SIGN
- EXISTING TRAFFIC SIGNAL POLE
- EXISTING ELECTRIC METER
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING LIGHT POLE
- EXISTING UNDERGROUND POWER LINES
- EXISTING OVERHEAD POWER LINES
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING UNDERGROUND WATER
- EXISTING GAS VALVE
- EXISTING UNDERGROUND GAS LINE
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING UTILITY RISER
- EXISTING FENCE
- EXISTING CONCRETE WALL
- EXISTING ROCK WALL
- FOUND MONUMENTS
- EXISTING GRAVEL
- EXISTING CONCRETE
- EXISTING ASPHALT

NOTES

1. THE PURPOSE OF THIS MAP WAS TO SHOW THE EXISTING CONDITIONS FOR 4215 S.E. KING ROAD.
2. THE BASIS OF BEARINGS WAS PER SURVEY NO. 21140 MULTNOMAH COUNTY RECORDS.
3. LOCAL DATUM WAS ESTABLISHED BY CITY OF MILWAUKIE BENCHMARK NO. 59. "O" IN "WORKS" ON THE FIRE HYDRANT ON THE SOUTHWEST CORNER OF THE INTERSECTION OF S.E. KING ROAD & S.E. 42ND AVENUE. ELEVATION=181.396
4. THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF LIRAA DEVELOPMENT.
5. THIS MAP WAS PREPARED BY PLAT RECORDS, CALCULATED DATA, AND FIELD MEASUREMENTS, A RECORDED BOUNDARY SURVEY WILL BE FILED AT A DATE TO BE DETERMINED.
6. ALL UTILITY LOCATIONS ARE SHOWN BY ABOVE GROUND FEATURES AND LOCATION OF PAINT MARKS SUPPLIED BY THE LOCAL UTILITY COMPANIES. CMT TAKES NO RESPONSIBILITY OF UNDERGROUND LOCATION. PLEASE NOTIFY THE UTILITY NOTIFICATION CENTER BEFORE ANY DIGGING 1-800-332-2344.

REGISTERED PROFESSIONAL LAND SURVEYOR
Michael Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449
EXPIRES: 6-30-19

EXISTING CONDITIONS

4215 SE KING RD

TAX LOT 5301, 1 2 E 30 CC
SW 1/4 SEC 30, T 1 S, R 2 E, W.M.
CITY OF MILWAUKIE
CLACKAMAS COUNTY, OREGON
APRIL 18, 2019
DRAWN: RLMc CHECKED: MRG
SCALE 1"=30' ACCOUNT # 500-689
Y:\500-689\DWG\500689BASE.DWG

CMT SURVEYING AND CONSULTING
20330 SE HIGHWAY 212
DAMASCUS, OR 97089
PHONE (503) 850-4672 FAX (503) 850-4690

SITE

12-02

Sheet PP-6 of 7

S.W.1/4

D. L. C
HECTC
GEOR

SEE MAR 1 2E 30CB

SEE MAP 1 2E 30CD

SEE MAP 1 2E 30CC

SEE P.S. 3365

SEE P.S. 4640

SEE P.S. 5411

SEE P.S. 6314

SEE P.S. 5557

SEE P.S. Z-119

SEE P.S. 4640

DRAKE ST.

LOGUS RD

CO. RD. NO. 2341

RHODESA AVE

CO. RD. NO. 2208

WHITE LAKE RD

CO. RD. NO. 173

CO. RD. NO. 1673

CO. RD. NO. 132

KING RD

(GROVER RD)

43RD AVE.

45TH AVE.

45TH CT.

46TH AVE.

AKA CO. RD. 2219

(MILWAUKIE SANDY)

BERWYN

MARCHBANKS

VILLA

JANET PARK

ENGEL ADDITION

CODAY ADDITION

BLK.1

BLK.2

R7

R5

R3

10

9

735

739

1495

3111

4200

4500

4700

10000

10300

5401 1.30 Ac. 4205

5301 1.76 Ac. 4215

5200 0.59 Ac. 10244

5100 0.38 Ac. 4446

5800 1.44 Ac. 10288

5500 0.30 Ac. 4199

4900 0.17 Ac. 4526

4901 0.24 Ac. 4554

4600 0.92 Ac.

6300 0.41 Ac. 4401

0.17 Ac. 5400

SE Cor. DLC 59

SW Cor. DLC 41

NW Cor. DLC 60

NW Cor. DLC 40

S LINE HECTOR CAMPBELL DLC NO 41

N LINE DANIEL HATHAWAY DLC NO 40

Riverground

Wilso

Sheet
PP-7
of
7

Fw: 43rd & King Road Geotech Contract

From: Ryan O'Brien (ryanobrien1@frontier.com)

To: brett@brettschulz.com

Cc: ironpartner@gmail.com; homestead623@yahoo.com

Date: Sunday, September 1, 2019, 1:26 AM PDT

Brett,

Below is a summary of the geotech soil test pits. We have good storm water infiltration. After the civil engineer determines the size of the dry wells, we can drill deeper than 15 feet if we need additional infiltration. The description from GeoPacific in this email chain shows infiltration increasing with the test pit depth. Infiltration increases significantly from 10 to 15 feet.

Secondly, the soil is stiff at 7 to 8 feet with no rocks. At 8 to 11-feet, the soil changes to sandy silt and then to poorly graded sand at 11 to 13 feet. The maximum cuts for the garages along the west property line will probably be 6 to 9 feet. Trench cave in may be a problem for the utilities. The uncompacted fill with debris ranges from 1 to 4 feet at the south end of the site. this soil will be will be hauled away. No ground water was encountered at 15 feet.

According to the chart on page 2 of the attached DEQ report, dry wells in Milwaukie need to be 5-feet above the seasonal high ground water level. There is is no horizontal distance to an existing water well like other cities.

The final geotech report should be finished by 9-26-19.

Ryan O'Brien
Planning & Land Design LLC
1862 NE Estate Drive
Hillsboro, Oregon 97124
503-780-4061 cell
ryanobrien1@frontier.com

----- Forwarded Message -----
From: Ben Cook <bcook@geopacificeng.com>
To: Ryan O'Brien <ryanobrien1@frontier.com>
Cc: Thomas Brennan <homestead623@yahoo.com>
Sent: Friday, August 30, 2019, 11:45:25 AM PDT
Subject: RE: 43rd & King Road Geotech Contract

Good afternoon gentlemen,

Ryan I wanted to give you some of the results of our testing and exploration yesterday at the Milwaukie site.

- Infiltration testing was conducted in the north and the south ends of the site in the planned roadways. Unfactored results are as follows:

Test Pit TP-1 (southeast corner)

Depth = 4 ft, 5.25 in/hr

Depth = 10 ft, 5.33 in/hr

Depth = 15 ft, 63.7 in/hr

Test Pit TP-5, (northeast corner)

Depth = 10 ft, 10.75 in/hr

Depth = 15 ft, 42.4 in/hr

- Native soils are very stiff to hard SILT extending approximately 7-8 feet, then soils transition to sandy silt, and by 11-13 feet poorly graded sand. The infiltration was low until we got down into the sandy layers, you may need to take the systems down to 15 feet or so to get to where it drains well. Unfortunately we couldn't dig past that point. The city may require us to explore 5 feet beyond the bottom depth of whatever systems are constructed.
- There is some fill on the site. The neighboring building to the south spread spoils across the parcel when they built. The fill was 1-4 feet thick, had minor amounts of bricks, tile, concrete, piping, some plastic. The fill is spread largely on the western part of the parcel, is thickest at the south, and decreases to the north. Based on what you've told me about cuts in the west, the cuts may remove the fill. It looks like if they clean the trash out of the fill they could reuse the soil as engineered fill.
- No groundwater encountered to 15 feet.

I've submitted soils to our lab and should be able to get a report to you within two weeks.

Thank you,

Benjamin L. Cook, CEG, LG

Senior Geologist

14835 SW 72nd Avenue

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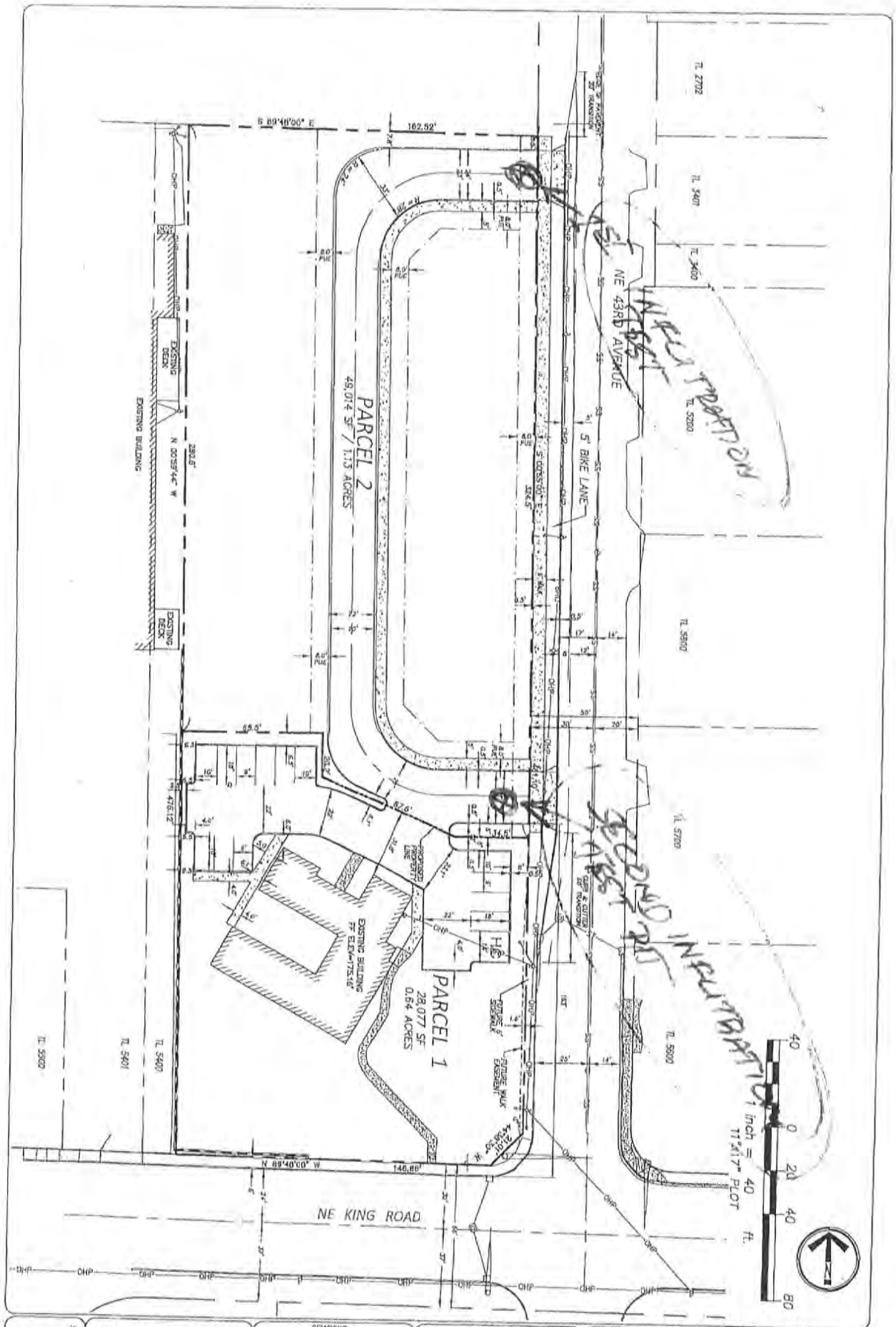

SHEET X of X	PLANNING & LAND DESIGN 1862 NE ESTATE DRIVE HILLSBORO, OREGON 97124 RYAN O'BRIEN (503)780-4061	REVISIONS NO. DATE DESCRIPTION	PROPOSED MIXED HOUSING 43RD & KING ROAD AUGUST 1, 2018	OWNER: LIITAA DEVELOPMENT, LLC CONTACT: TOM BRENNAN 19321 SE RIVER DRIVE CT., MILWAUKIE, OR CELL: (503) 446-0910 TL 5301, TAX MAP 1S2E-30CC 4215 NW KING ROAD, MILWAUKIE, OR 97222

GeoPacific Engineering, Inc.

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

Preliminary Geotechnical Engineering Report

43rd and King Road Condominiums

4215 SE King Road
Milwaukie, Oregon 97222

GeoPacific Engineering, Inc. Job No. 19-5298
September 11, 2019

14835 SW 72nd Avenue
Portland, Oregon 97224

Tel (503) 598-8445
Fax (503) 941-9281

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GeoPacific Engineering, Inc.

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

September 11, 2019
Project No. 19-5298

Mr. Tom Brennan
Liitaa Development, LLC
19321 SE River Drive Ct.
Milwaukie, Oregon 97222
Phone: (503) 446-0910
Email: homestead623@yahoo.com

SUBJECT: PRELIMINARY GEOTECHNICAL ENGINEERING REPORT
43RD AND KING ROAD CONDOMINIUMS
4215 SE KING ROAD
MILWAUKIE, OREGON 97222

1.0 PROJECT INFORMATION

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site, and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-7075, dated August 9, 2019, and your subsequent authorization of our proposal and *General Conditions for Geotechnical Services*.

Site Location:	4215 SE King Road Milwaukie, Oregon 97222 Clackamas County Parcel No. 01367265 (see Figures 1 through 3)
Developer:	Liitaa Development, LLC 19321 SE River Drive Ct. Milwaukie, Oregon 97222
Jurisdictional Agency:	City of Milwaukie, Oregon
Geotechnical Engineer:	GeoPacific Engineering, Inc 14835 SW 72nd Avenue Portland, Oregon 97224 Phone: (503) 598-8445 Fax: (503) 941-9281

2.0 SITE AND PROJECT DESCRIPTION

As indicated on Figures 1 through 3, the subject site is located at 4215 SE King Road in Milwaukie, Oregon. The site is comprised Clackamas County Parcel No. 01367265 totaling approximately 1.67-acres in size. The site latitude and longitude are 45.449076, -122.618495, and the legal description is the SW ¼ SW ¼ of Section 30, T1S, R2E, Willamette Meridian. The site is bordered by SE 43rd Avenue to the east, by SE King Road to the south, and by existing properties to the north, and west. The site contains an existing office building and asphalt parking lot in the southern portion of the property. We understand that the property will be partitioned into two parcels, with the existing building and parking area remaining as Parcel 1, totaling approximately 0.64-acres in size. The remaining northern portion of the property will be considered Parcel 2. Vegetation within Parcel 2 currently consists of open grassy area with trees present on the margins. Historically the site contained a horse stable. A remnant building slab from the stable is still present at the approximate location indicated on Figure 2. Topography at the site is gently sloping to the northeast with site elevations ranging from approximately 156 to 178 feet above mean sea level (amsl).

At this time site planning is preliminary. GeoPacific has not reviewed a grading plan. Based upon review of preliminary conceptual site plans and communication with the client, and as indicated on Figure 3, GeoPacific understands that the proposed development of Parcel 2 may consist of construction of up to 19 condominiums, a new public street, parking areas, stormwater infiltration systems, and new underground utilities. We anticipate that the condominiums will be constructed with typical spread foundations and wood framing, with maximum structural loading on column footings and continuous strip footings on the order of 10 to 35 kips, and 2 to 4 kips respectively. We anticipate that cuts and fills will be proposed on the order of 10 feet, primarily consisting of cut along the western half of the site to bring the grade relatively level with NE 43rd Avenue. We understand that the cuts will be retaining will either foundation retaining walls or MSE retaining walls.

3.0 REGIONAL GEOLOGIC SETTING

Regionally, the subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded, structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

According to the *LiDAR-Based Surficial Geologic Map of the Greater Portland Area, Clackamas, Columbia, Marion, Multnomah, Washington, and Yamhill Counties, Oregon and Clark County Washington (State of Oregon Department of Geology and Mineral Industries, 2012)*, the site is underlain by Late Pleistocene-aged (approximately 12,000 to 21,000 years ago), fine-grained soils deposited by the catastrophic outburst flooding of Glacial Lake Missoula, commonly referred to as Missoula Flood Deposits (Mff). The fine-grained flood deposits commonly consist of tan or light brown sands and silts deposited in a series of distinct layers, ranging from a few inches to a few feet.

4.0 REGIONAL SEISMIC SETTING

At least three major fault zones capable of generating damaging earthquakes are thought to exist in the vicinity of the subject site. These include the Portland Hills Fault Zone, the Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone.

4.1 Portland Hills Fault Zone

The Portland Hills Fault Zone is a series of NW-trending faults that include the central Portland Hills Fault, the western Oatfield Fault, and the eastern East Bank Fault. These faults occur in a northwest-trending zone that varies in width between 3.5 and 5.0 miles. The combined three faults reportedly vertically displace the Columbia River Basalt by 1,130 feet and appear to control thickness changes in late Pleistocene (approx. 780,000 years) sediment (Madin, 1990). The Portland Hills Fault occurs along the Willamette River at the base of the Portland Hills and is located approximately 0.5 miles west of the site. The Oatfield Fault occurs along the western side of the Portland Hills and is located approximately 2.7 miles west of the site. The East Bank Fault occurs along the eastern margin of the Willamette River, and is located approximately 2.75 miles northeast of the site. The accuracy of the fault mapping is stated to be within 500 meters (Wong, et al., 2000).

According to the USGS Earthquake Hazards Program, the fault was originally mapped as a down-to-the-northeast normal fault but has also been mapped as part of a regional-scale zone of right-lateral, oblique slip faults, and as a steep escarpment caused by asymmetrical folding above a south-west dipping, blind thrust fault. The Portland Hills fault offsets Miocene Columbia River Basalts, and Miocene to Pliocene sedimentary rocks of the Troutdale Formation. No fault scarps on surficial Quaternary deposits have been described along the fault trace, and the fault is mapped as buried by the Pleistocene aged Missoula flood deposits. No historical seismicity is correlated with the mapped portion of the Portland Hills Fault Zone, but in 1991 a M3.5 earthquake occurred on a NW-trending shear plane located 1.3 miles east of the fault (Yelin, 1992). Although there is no definitive evidence of recent activity, the Portland Hills Fault Zone is assumed to be potentially active (Geomatrix Consultants, 1995).

4.2 Gales Creek-Newberg-Mt. Angel Structural Zone

The Gales Creek-Newberg-Mt. Angel Structural Zone is a 50-mile-long zone of discontinuous, NW-trending faults that lies about 20.25 miles southwest of the subject site. These faults are recognized in the subsurface by vertical separation of the Columbia River Basalt and offset seismic reflectors in the overlying basin sediment (Yeats et al., 1996; Werner et al., 1992). A geologic reconnaissance and photogeologic analysis study conducted for the Scoggins Dam site in the Tualatin Basin revealed no evidence of deformed geomorphic surfaces along the structural zone (Unruh et al., 1994). No seismicity has been recorded on the Gales Creek Fault or Newberg Fault (the fault closest to the subject site); however, these faults are considered to be potentially active because they may connect with the seismically active Mount Angel Fault and the rupture plane of the 1993 M5.6 Scotts Mills earthquake (Werner et al. 1992; Geomatrix Consultants, 1995).

According to the USGS Earthquake Hazards Program, the Mount Angel fault is mapped as a high-angle, reverse-oblique fault, which offsets Miocene rocks of the Columbia River Basalts, and Miocene and Pliocene sedimentary rocks. The fault appears to have controlled emplacement of

the Frenchman Spring Member of the Wanapum Basalts, and thus must have a history that predates the Miocene age of these rocks. No unequivocal evidence of deformation of Quaternary deposits has been described, but a thick sequence of sediments deposited by the Missoula floods covers much of the southern part of the fault trace.

4.3 Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year (Goldfinger et al., 1996). A growing body of geologic evidence suggests that prehistoric subduction zone earthquakes have occurred (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). This evidence includes: (1) buried tidal marshes recording episodic, sudden subsidence along the coast of northern California, Oregon, and Washington, (2) burial of subsided tidal marshes by tsunami wave deposits, (3) paleoliquefaction features, and (4) geodetic uplift patterns on the Oregon coast. Radiocarbon dates on buried tidal marshes indicate a recurrence interval for major subduction zone earthquakes of 250 to 650 years with the last event occurring 300 years ago (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). The inferred seismogenic portion of the plate interface lies approximately along the Oregon Coast at depths of between 20 and 40 kilometers below the surface.

5.0 FIELD EXPLORATION AND SUBSURFACE CONDITIONS

Our subsurface explorations for this report were conducted on August 29, 2019. Six exploratory test pits (TP-1 through TP-6) were excavated at the site to a maximum depth of approximately 15 feet bgs using a Case 580 backhoe subcontracted by GeoPacific. Explorations were conducted under the full-time observation of a GeoPacific geologist. During the explorations, pertinent information including soil sample depths, stratigraphy, soil engineering characteristics, and groundwater occurrence were recorded. Soils were classified in accordance with the Unified Soil Classification System (USCS). Soil samples obtained from the explorations were placed in relatively air-tight plastic bags. Upon completion of excavation and testing the explorations were loosely backfilled with onsite soils. The approximate locations of the explorations are indicated on Figures 2 and 3. It should be noted that exploration locations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate. Summary exploration logs are attached. The stratigraphic contacts shown on the individual test pit logs represent the approximate boundaries between soil types. The actual transitions may be more gradual. The soil and groundwater conditions depicted are only for the specific dates and locations reported, and therefore, are not necessarily representative of other locations and times. Soil and groundwater conditions encountered in the explorations are summarized below.

5.1 Soil Descriptions

Topsoil:

At the locations of our test pit explorations the topsoil horizon was typically observed to consist of grassy areas underlain by 8 inches of moderately organic SILT (OL-ML), containing fine roots and tree roots. The topsoil horizon will likely contain coarse tree roots extending to depths up to 36 inches in areas where there are trees present.

Undocumented Fill Soil: As indicated on Figure 2 undocumented fill soil was spread across the western portion of the property, generated from foundation and roadway excavations conducted on Parcel 1 to the south. At the locations of test pits TP-1, TP-2, TP-3, TP-4, and TP-6, we encountered fill soils ranging in thickness from approximately 2 to 3 feet, primarily consisting of SILT with varying amounts of concrete, piping, bricks, roots, and woody debris. In general, the soil type was damp to moist, medium stiff, and displayed low plasticity. Pocket penetrometer measurements conducted within the fill averaged approximately 2.0 tons/ft^2.

SILT: Underlying the topsoil and undocumented fill soils within our test pit explorations, soils were observed to consist of brown, hard, dry to desiccated, low plasticity, SILT (ML). The soil type was observed to extend to depths ranging from approximately 6 to 9 feet bgs. Soils laboratory testing conducted on a representative sample collected from test pit TP-1 indicated that the soil type classified as SILT (ML) according to the USCS soil classification system, and as A-7-6(13) according to AASHTO standards. Sieve analysis indicated 85.5 percent by weight passing the U.S. No. 200 sieve, and moisture content of 15.3 percent. Atterberg Limit testing indicated a liquid limit of 40, and a plasticity index of 13. Pocket penetrometer measurements conducted within the upper four feet of the ground surface averaged approximately 4.0 tons/ft^2.

Silty SAND: Underlying the SILT soil type within test pits TP-1, TP-4, and TP-5, soils were observed to consist of brown, medium dense, dry, non-plastic, Silty SAND (SM), containing fine sand. The soil type was observed to extend to depths ranging from approximately 8 to 12 feet bgs. Soils laboratory testing conducted on representative samples collected from test pits TP-1 and TP-5 indicated that the soil type classified as Silty SAND (SM) according to the USCS soil classification system, and as A-4(0), and A-2-4(0), according to AASHTO standards. Sieve analysis indicated 18 to 37 percent by weight passing the U.S. No. 200 sieve, and moisture content of 12 to 16 percent. Atterberg Limit testing indicated the soil type is non-plastic.

Poorly Graded SAND with Silt: Underlying the Silty SAND soil type within test pits TP-1, and TP-5, soils were observed to consist of gray, medium dense, damp, Poorly Graded SAND with Silt (SP-SM). The soil type was observed to extend to the maximum depth of exploration within our test pits (15 feet bgs). Soils laboratory testing conducted on representative samples collected from test pits TP-1 and TP-5 indicated that the soil type classified as Poorly Graded SAND with Silt (SP-SM) according to the USCS soil classification system, and as A-1-b, according to AASHTO standards. Sieve analysis indicated 5 to 15 percent by weight passing the U.S. No. 200 sieve, and moisture content of 7 to 12 percent. Atterberg Limit testing indicated the soil type is non-plastic.

5.2 Shrink-Swell Potential

Stiff, fine-grained soils, and non-plastic granular soils were encountered within test pit explorations conducted at the site. Based upon the results of our soils laboratory testing and our local experience with the soil layers in the vicinity of the subject site, the plasticity of the soils is low, and the shrink-swell potential of the soil types is considered to be low. Special design measures are not considered necessary to minimize the risk of uncontrolled damage of foundations as a result of potential soil expansion at this site.

5.3 Groundwater and Soil Moisture

On August 29, 2019, observed soil moisture conditions were generally dry to damp. Groundwater seepage was not observed within our test pits which extended to a depth of 15 feet bgs, (approximately 143 feet amsl). According to the Estimated Depth to Groundwater in the Portland, Oregon Area Website (USGS, Oregon Water Science Center, htts://or.water.usgs.gov) static groundwater is expected to be located at an approximate depth of 83 feet below the site. Perched groundwater may be encountered in localized areas. Seeps and springs may exist in areas not explored and may become evident during site grading.

5.4 Infiltration Testing

Soil infiltration testing was performed using the encased falling-head test method, and the open-pit method within test pits TP-1 and TP-5 in accordance with the methodology of ASTM standards, and the 2016 City of Portland Stormwater Management Manual. The approximate locations of the subsurface explorations are indicated on Figures 2 and 3. The test locations were pre-saturated prior to testing. During testing the water level was measured to the nearest 0.01 foot (1/8 inch) from a fixed point, and the change in water level was recorded at regular intervals until three successive measurements showing a consistent infiltration rate were achieved.

Table 1 summarizes the results of the infiltration testing. Infiltration rates have been reported without applying a factor of safety. Soils at the test locations were observed and sampled in order to characterize the subsurface profile. Tested native soils classified as Sandy SILT (ML), Silty SAND (SM), and Poorly Graded SAND with Silt (SP-SM).

Table 1: Summary of Infiltration Test Results

Test Location	Test Designation	Depth (feet)	Soil Type	% Passing U.S. No 200 Sieve	Infiltration Rate (inches/hr)	Hydraulic Head Range (inches)	Test Type
TP-1	IT-1.1	4	ML	85.5	5.2	0-12	Encased-Falling Head
TP-1	IT-1.2	10	SP-SM	5.7	5.3	0-12	Encased-Falling Head
TP-1	IT-1.3	15	SP-SM	15.6	63.7	0-12	Open-Pit
TP-5	IT-2.1	10	SM	37.6	10.7	0-12	Open-Pit
TP-5	IT-2.2	15	SP-SM	12.0	42.4	0-12	Open-Pit

Low to moderate infiltration rates were measured at the locations and depths tested. Based upon the results of our testing it appears that stormwater infiltration systems are geotechnically feasible at the subject site. It appears that infiltration rates increase sharply below a depth of approximately

12 to 13 feet. This study was conducted during the seasonal low elevation of the groundwater table. If more detailed information is needed regarding fluctuations of the groundwater table at the site, piezometers may be installed and monitored throughout the wet season.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned disposal systems. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies. Evaluating environmental implications of stormwater disposal at this site are beyond the scope of this study.

6.0 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Our site investigation indicates that the proposed construction appears to be geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. The primary geotechnical concern associated with development at the site is the presence of two to three feet of undocumented fill soil containing unsuitable levels of deleterious materials, debris, and organic content across portions of the site (see Figure 2).

6.1 Site Preparation Recommendations

As noted above and as indicated on Figure 2, approximately 24 to 36 inches of undocumented fill soils consisting of SILT with varying amounts of concrete, piping, bricks, roots, and woody debris were spread across the western portion of the site. Based on our observations of the fill material, it appears that the fill soils are unsuitable for placement of foundations and roadways and may only be used as structural fill provided it is screened. At this time, we have not reviewed a grading plan, however, based on communication with the client, we anticipate that the western portion of the site will be cut up to 9 feet deep to level the site with SE 43rd Avenue. Where cuts are proposed on the order of two to three feet or greater, we anticipate the undocumented fill soils will be removed grading.

Areas of proposed construction and areas to receive fill should be cleared of any organic and inorganic debris, and loose stockpiled soils. Inorganic debris and organic materials from clearing should be removed from the site. Organic-rich soils and root zones should then be stripped from construction areas of the site or where engineered fill is to be placed. Depth of stripping of existing organic topsoil is estimated to be approximately 8 to 12 inches at the site, however depth of organic soil layers may increase in areas where trees and vegetation are present.

The final depth of soil removal should be determined by the geotechnical engineer or designated representative during site inspection while stripping/excavation is being performed. Stripped topsoil should be removed from areas proposed for placement of engineered fill and structures. Any remaining topsoil should be stockpiled only in designated areas and stripping operations should be observed and documented by the geotechnical engineer or his representative.

Where/if encountered, except as noted above, undocumented fills and any subsurface structures (dry wells, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be completely removed and the excavations backfilled with engineered fill. The concrete slab in the northern portion of the site was measured to be 5-inches thick (see Figure 2).

Understanding of the extent and types of undocumented fill is based on the observed conditions within our subsurface explorations. Experience has shown that soil conditions can change greatly over short distances. It is possible fill exists in areas and extents other than those identified in our subsurface explorations. It is our understanding that the existing home does not have a basement.

Site earthwork may be impacted by wet weather conditions. Stabilization of subgrade soils may require aeration and recompaction. If subgrade soils are found to be difficult to stabilize, over-excavation, placement of granular soils, or cement treatment of subgrade soils may be feasible options. GeoPacific should be onsite to observe preparation of subgrade soil conditions prior to placement of engineered fill.

6.2 Engineered Fill

We anticipate that engineered cuts and fills will be conducted on the order of 10 feet. Where incorporated into the project, all grading for the proposed construction should be performed as engineered grading in accordance with the applicable building code at the time of construction with the exceptions and additions noted herein. Site grading should be conducted in accordance with the requirements outlined in the 2012 International Building Code (IBC), Chapter 18 and Appendix J. Areas proposed for fill placement should be prepared as described in Section 6.1, *Site Preparation Recommendations*. Surface soils should then be scarified and recompacted prior to placement of structural fill. Site preparation, soil stripping, and grading activities should be observed and documented by a geotechnical engineer or his representative. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill.

Onsite native soils appeared to be suitable for use as engineered fill. Undocumented fill soils may be considered for re-use as engineered fill provided debris and organic material is removed from the soil. Soils containing greater than 5 percent organic content should not be used as structural fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 12 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 95 percent of the maximum dry density determined by ASTM D698 (Standard Proctor) or equivalent. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd^3, whichever requires more testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork may be impacted by shallow groundwater, soil moisture and wet weather conditions. Earthwork in wet weather would likely require extensive use of additional crushed aggregate, cement or lime treatment, or other special measures, at considerable additional cost compared to earthwork performed under dry-weather conditions.

6.3 Excavating Conditions and Utility Trench Backfill

We anticipate that onsite soils can generally be excavated using conventional heavy equipment. Bedrock was not encountered within our subsurface explorations which extended to a maximum depth of 15 feet bgs. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926) or be shored. The existing native soils classify as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. These cut slope inclinations are applicable to excavations above the water table only.

Shallow, perched groundwater may be encountered at the site and should be anticipated in excavations and utility trenches. Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

Underground utility pipes should be installed in accordance with the procedures specified in ASTM D2321 and City of Milwaukie standards. We recommend that structural trench backfill be compacted to at least 95 percent of the maximum dry density obtained by the Modified Proctor (ASTM D1557, AASHTO T-180) or equivalent. Initial backfill lift thicknesses for a ¾"-0 crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibration-induced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, at least one density test is taken for every 4 vertical feet of backfill on each 100-lineal-foot section of trench.

6.4 Erosion Control Considerations

During our field exploration program, we did not observe soil conditions which are considered highly susceptible to erosion. In our opinion, the primary concern regarding erosion potential will occur during construction in areas that have been stripped of vegetation. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw waddles, fiber rolls, and silt fences. If used, these erosion control devices should remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control

netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

6.5 Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and will be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will require expensive measures such as cement treatment or imported granular material to compact areas where fill may be proposed to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than 5 percent passing the No. 200 sieve. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Geotextile silt fences, straw waddles, and fiber rolls should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

6.6 Spread Foundations

Based upon review of preliminary conceptual site plans and communication with the client and as indicated on Figure 3, GeoPacific understands that the proposed development of Parcel 2 may consist of construction of up to 19 condominiums. We anticipate that the condominium will be constructed with typical spread foundations and wood framing, with maximum structural loading on column footings and continuous strip footings on the order of 10 to 35 kips, and 2 to 4 kips respectively.

The proposed structures may be supported on shallow foundations bearing on stiff, native soils and/or engineered fill, appropriately designed and constructed as recommended in this report. Foundation design, construction, and setback requirements should conform to the applicable building code at the time of construction. For maximization of bearing strength and protection against frost heave, spread footings should be embedded at a minimum depth of 12 inches below exterior grade. If soft soil conditions are encountered at footing subgrade elevation, they should be removed and replaced with compacted crushed aggregate.

The anticipated allowable soil bearing pressure is 1,500 lbs/ft^2 for footings bearing on competent, native soil and/or engineered fill. The recommended maximum allowable bearing pressure may be increased by 1/3 for short-term transient conditions such as wind and seismic loading. For loads heavier than 35 kips, the geotechnical engineer should be consulted. If heavier loads than described above are proposed, it may be necessary to over-excavate point load areas and replace with additional compacted crushed aggregate to achieve a higher allowable bearing capacity. The coefficient of friction between on-site soil and poured-in-place concrete may be taken as 0.42, which includes no factor of safety. The maximum anticipated total and differential footing movements (generally from soil expansion and/or settlement) are 1 inch and ¾ inch over a span of 20 feet, respectively. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. Excavations near structural footings should not extend within a 1H:1V plane projected downward from the bottom edge of footings.

Footing excavations should penetrate through topsoil and any disturbed soil to competent subgrade that is suitable for bearing support. All footing excavations should be trimmed neat, and all loose or softened soil should be removed from the excavation bottom prior to placing reinforcing steel bars. Due to the moisture sensitivity of on-site native soils, foundations constructed during the wet weather season may require over-excavation of footings and backfill with compacted, crushed aggregate.

Our recommendations are for residential construction incorporating raised wood floors and conventional spread footing foundations. After site development, a Final Soil Engineer's Report should either confirm or modify the above recommendations.

6.7 Concrete Slabs-on-Grade

Preparation of areas beneath concrete slab-on-grade floors should be performed as described in Section 6.1, *Site Preparation Recommendations* and Section 6.6, *Spread Foundations*. Care should be taken during excavation for foundations and floor slabs, to avoid disturbing subgrade soils. If subgrade soils have been adversely impacted by wet weather or otherwise disturbed, the surficial soils should be scarified to a minimum depth of 8 inches, moisture conditioned to within about 3 percent of optimum moisture content and compacted to engineered fill specifications. Alternatively, disturbed soils may be removed and the removal zone backfilled with additional crushed rock.

For evaluation of the concrete slab-on-grade floors using the beam on elastic foundation method, a modulus of subgrade reaction of 150 kcf (87 pci) should be assumed for the medium dense, fine to coarse-grained soils anticipated to be present at foundation subgrade elevation following adequate site preparation as described above. This value assumes the concrete slab system is designed

and constructed as recommended herein, with a minimum thickness of 8 inches of 1½"-0 crushed aggregate beneath the slab. The total thickness of crushed aggregate will be dependent on the subgrade conditions at the time of construction and should be verified visually by proof-rolling. Under-slab aggregate should be compacted to at least 95 percent of its maximum dry density as determined by ASTM D1557 (Modified Proctor) or equivalent.

In areas where moisture will be detrimental to floor coverings or equipment inside the proposed structure, appropriate vapor barrier and damp-proofing measures should be implemented. A commonly applied vapor barrier system consists of a 10-mil polyethylene vapor barrier placed directly over the capillary break material. Other damp/vapor barrier systems may also be feasible. Appropriate design professionals should be consulted regarding vapor barrier and damp proofing systems, ventilation, building material selection and mold prevention issues, which are outside GeoPacific's area of expertise.

6.8 Footing and Roof Drains

Construction should include typical measures for controlling subsurface water beneath the structures, including positive crawlspace drainage to an adequate low-point drain exiting the foundation, visqueen covering the exposed ground in the crawlspace, and crawlspace ventilation (foundation vents). The client should be informed and educated that some slow flowing water in the crawlspaces is considered normal and not necessarily detrimental to the structures given these other design elements incorporated into construction. Appropriate design professionals should be consulted regarding crawlspace ventilation, building material selection and mold prevention issues, which are outside GeoPacific's area of expertise.

Down spouts and roof drains should collect roof water in a system separate from the footing drains to reduce the potential for clogging. Roof drain water should be directed to an appropriate discharge point and storm system well away from structural foundations. Grades should be sloped downward and away from buildings to reduce the potential for ponded water near structures.

Perimeter footing drains may be eliminated at the discretion of the geotechnical engineer based on soil conditions encountered at the site and experience with standard local construction practices. Where it is desired to reduce the potential for moist crawl spaces, footing drains may be installed. If concrete slab-on-grade floors are used, perimeter footing drains should be installed as recommended below.

Where deemed necessary, perimeter footing drains should consist of 3 or 4-inch diameter, perforated plastic pipe embedded in a minimum of 1 ft^3 per lineal foot of clean, free-draining drain rock. The drain-pipe and surrounding drain rock should be wrapped in non-woven geotextile (Mirafi 140N, or approved equivalent) to minimize the potential for clogging and/or ground loss due to piping. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. Figure 4 presents a typical perimeter footing drain detail. In our opinion, footing drains may outlet at the curb, or on the back sides of lots where sufficient fall is not available to allow drainage to meet the street.

6.9 Permanent Below-Grade Walls

Lateral earth pressures against below-grade retaining walls will depend upon the inclination of any adjacent slopes, type of backfill, degree of wall restraint, method of backfill placement, degree of backfill compaction, drainage provisions, and magnitude and location of any adjacent surcharge loads. At-rest soil pressure is exerted on a retaining wall when it is restrained against rotation. In contrast, active soil pressure will be exerted on a wall if its top is allowed to rotate or yield a distance of roughly 0.001 times its height or greater.

If the subject retaining walls will be free to rotate at the top, they should be designed for an active earth pressure equivalent to that generated by a fluid weighing 35 pcf for level backfill against the wall. For restrained wall, an at-rest equivalent fluid pressure of 52 pcf should be used in design, again assuming level backfill against the wall. These values assume that the recommended drainage provisions are incorporated, and hydrostatic pressures are not allowed to develop against the wall.

During a seismic event, lateral earth pressures acting on below-grade structural walls will increase by an incremental amount that corresponds to the earthquake loading. Based on the Mononobe-Okabe equation and peak horizontal accelerations appropriate for the site location, seismic loading should be modeled using the active or at-rest earth pressures recommended above, plus an incremental rectangular-shaped seismic load of magnitude 6.5H, where H is the total height of the wall.

We assume relatively level ground surface below the base of the walls. As such, we recommend a passive earth pressure of 320 pcf for use in design, assuming wall footings are cast against competent native soils or engineered fill. If the ground surface slopes down and away from the base of any of the walls, a lower passive earth pressure should be used and GeoPacific should be contacted for additional recommendations.

A coefficient of friction of 0.42 may be assumed along the interface between the base of the wall footing and subgrade soils. The recommended coefficient of friction and passive earth pressure values do not include a safety factor, and an appropriate safety factor should be included in design. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

The above recommendations for lateral earth pressures assume that the backfill behind the subsurface walls will consist of properly compacted structural fill, and no adjacent surcharge loading. If the walls will be subjected to the influence of surcharge loading within a horizontal distance equal to or less than the height of the wall, the walls should be designed for the additional horizontal pressure. For uniform surcharge pressures, a uniformly distributed lateral pressure of 0.3 times the surcharge pressure should be added. Traffic surcharges may be estimated using an additional vertical load of 250 psf (2 feet of additional fill), in accordance with local practice.

The recommended equivalent fluid densities assume a free-draining condition behind the walls so that hydrostatic pressures do not build-up. This can be accomplished by placing a 12 to 18-inch wide zone of sand and gravel containing less than 5 percent passing the No. 200 sieve against the walls. A 3-inch minimum diameter perforated, plastic drain-pipe should be installed at the base of

the walls and connected to a suitable discharge point to remove water in this zone of sand and gravel. The drain-pipe should be wrapped in filter fabric (Mirafi 140N or other as approved by the geotechnical engineer) to minimize clogging.

Wall drains are recommended to prevent detrimental effects of surface water runoff on foundations – not to dewater groundwater. Drains should not be expected to eliminate all potential sources of water entering a basement or beneath a slab-on-grade. An adequate grade to a low point outlet drain in the crawlspace is required by code. Underslab drains are sometimes added beneath the slab when placed over soils of low permeability and shallow, perched groundwater.

Water collected from the wall drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. Down spouts and roof drains should not be connected to the wall drains in order to reduce the potential for clogging. The drains should include clean-outs to allow periodic maintenance and inspection. Grades around the proposed structure should be sloped such that surface water drains away from the building.

GeoPacific should be contacted during construction to verify subgrade strength in wall keyway excavations, to verify that backslope soils are in accordance with our assumptions, and to take density tests on the wall backfill materials.

Structures should be located a horizontal distance of at least 1.5H away from the back of the retaining wall, where H is the total height of the wall. GeoPacific should be contacted for additional foundation recommendations where structures are located closer than 1.5H to the top of any wall.

7.0 SEISMIC DESIGN

The Oregon Department of Geology and Mineral Industries (DOGAMI), Oregon HazVu: 2019 Statewide GeoHazards Viewer indicates that the site is in an area where *very strong* to *severe* ground shaking is anticipated during an earthquake. Structures should be designed to resist earthquake loading in accordance with the methodology described in the 2012 International Building Code (IBC) with applicable Oregon Structural Specialty Code (OSSC) revisions (current 2014). We recommend Site Class D be used for design per the OSSC, Table 1613.5.2 and as defined in ASCE 7-10, Chapter 20, Table 20.3-1. Design values determined for the site using the ATC Hazards by Location 2019 Seismic Design Maps Summary Report are summarized in Table 2 and are based upon observed existing soil conditions.

Table 2: Recommended Earthquake Ground Motion Parameters (USGS 2019)

Parameter	Value
Location (Lat, Long), degrees	45.449, -122.617
Probabilistic Ground Motion Values, 2% Probability of Exceedance in 50 yrs	
Peak Ground Acceleration PGA_M	0.455 g
Short Period, S_s	0.977 g
1.0 Sec Period, S_1	0.417 g
Soil Factors for Site Class D:	
F_a	1.109
F_v	1.583
$SD_s = 2/3 \times F_a \times S_s$	0.722 g
$SD_1 = 2/3 \times F_v \times S_1$	0.44 g
Seismic Design Category	D

7.1 Soil Liquefaction

The Oregon Department of Geology and Mineral Industries (DOGAMI), Oregon HazVu: 2019 Statewide GeoHazards Viewer indicates that the site is in an area considered to be at *low* risk for soil liquefaction during an earthquake. Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to ground shaking caused by strong earthquakes. Soil liquefaction is generally limited to loose sands and granular soils located below the water table, and fine-grained soils with a plasticity index less than 15. The upper 15 feet of the site was observed to be underlain by stiff to hard, low plasticity, SILT, Sandy SILT, and Poorly Graded SAND with Silt, located above the static water table. On August 29, 2019, the observed soil moisture conditions were generally dry to damp. No groundwater seepage was observed within our test pits which extended to a depth of 15 feet bgs, (approximately 143 feet amsl). According to the Estimated Depth to Groundwater in the Portland, Oregon Area Website (USGS, Oregon Water Science Center, htts://or.water.usgs.gov) static groundwater is expected to be located at an approximate depth of 83 feet below the site. Based upon the results of our study, it is our opinion that the risk of soil liquefaction in the upper 15 feet of the ground surface during a seismic event at the subject site should be considered to be low.

If additional information is desired or required regarding the soil liquefaction potential of the subject site during an earthquake, quantitative liquefaction analysis can be conducted by GeoPacific. Additional study of liquefaction potential would include conducting an electronic cone penetrometer test (CPT) to a depth of 60 feet bgs, or bedrock refusal, and quantitative liquefaction calculations to estimate seismically induced vertical settlements and lateral spreading.

8.0 UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

GEOPACIFIC ENGINEERING, INC.

CERTIFIED
OREGON
Benjamin L. Cook
E2245
ENGINEERING GEOLOGIST
EXP 12/31/19

Benjamin L. Cook, C.E.G.
Senior Geologist

REGISTERED PROFESSIONAL ENGINEER
14743PE
OREGON
JAN. 23, 1980
JAMES D. IMBRIE

EXPIRES: 06/30/2021

James D. Imbrie, P.E.
Principal Geotechnical Engineer

MILWAUKIE PLANNING
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Preliminary Plat Checklist and Procedures

All applications for partitions and subdivisions require submission of preliminary development plans and supporting information in accordance with the Milwaukie Land Division Ordinance. In special cases, certain items listed below may not be required and can be waived by staff. All items below must be submitted except when authorized by staff signature at the end of the form. Errors, omissions, or poor quality may result in the application being rejected or declared incomplete pursuant to the Milwaukie Zoning Ordinance and/or Land Division Ordinance. The Zoning and Land Division Ordinances can be found here: www.qcode.us/codes/milwaukie/.

Application Checklist

1. Detailed description of how the proposal complies with Land Division Ordinance Section 17.12 Application Procedure and Approval Criteria.
2. Detailed description of how the proposal complies with Land Division Ordinance Section 17.16 Application Requirements and Procedures.
3. Detailed description of how the proposal and application complies with Land Division Ordinance Section 17.20 Preliminary Plat including the following minimum requirements:
   a. Preliminary plats shall be prepared by an Oregon registered land surveyor.
   b. The following general information shall be submitted with the preliminary plat:
      1) Proposed name of the subdivision/partition. The name shall not duplicate nor resemble the name of another subdivision in the county. Subdivision names shall be approved by the County Surveyor in accordance with Oregon Revised Statutes Chapter 92.
      2) Appropriate identification clearly stating the map is a preliminary plat.
      3) Location by section, township, and range; and a legal description sufficient to define the location and boundaries of the area to be divided.
      4) Names and addresses of the owner, subdivider, and engineer or surveyor.
      5) Other information as may be specified on application forms and checklists prescribed by the Planning Director.
   c. Vicinity map shall be drawn at an appropriate scale, showing all existing subdivisions, streets, and unsubdivided land between the proposed subdivision and the nearest existing arterial or collector streets; and showing how proposed streets may be extended to connect with existing streets. At a minimum, the vicinity map shall depict future street connections for land within 400 ft of the subject property.
4. Existing conditions plan including the following (12 copies):
   a. Location, width, and names of all existing or platted streets within or adjacent to the tract, together with easements, railroad right-of-way, and other important features, such as section lines and corners, city boundary lines, and monuments.

b. Contour lines related to an established benchmark or other datum approved by the Engineering Director, with intervals at a minimum of 2 ft for slopes up to 10% and 5 ft for slopes over 10%.

c. Location within the area to be divided, and in the adjoining streets and property, of existing sewers, water mains, culverts, storm drain system, and electric conduits or lines proposed to service the property to be subdivided, and invert elevations of sewer manholes, drain pipes, and culverts.

d. Zoning and existing uses within the tract and 200 ft on all sides, including the location and use of all existing structures indicating those that will remain and those to be removed.

e. Approximate location of areas subject to inundation or stormwater overflow with approximate high-water elevation. Location, width, direction, and flow of all watercourses on or abutting the tract including wetlands and watercourses as shown on City-adopted natural resource and Title 3 maps.

f. Natural features such as rock outcroppings, drainages whether seasonal or perennial, wooded areas, and isolated trees, including type and caliper.

g. Floodway and floodplain boundary.

h. Areas containing slopes of 25% or greater

5. The preliminary plat plan shall include the following information (12 copies):

a. Date, north point, scale, address, assessor reference number, and legal description.

b. Name and address of the record owner or owners and of the person who prepared the site plan.

c. Approximate acreage and square feet under a single ownership or, if more than one ownership is involved, the total contiguous acreage of all landowners directly involved in the partition.

d. For land adjacent to and within the area to be divided, the locations, names, and existing widths of all streets, driveways, public safety accesses, easements, and right-of-ways; location, width, and purpose of all other existing easements; and location and size of sewer and waterlines, drainage ways, power poles, and other utilities.

e. Location of existing structures, identifying those to remain in place and those to be removed.

f. Dimensioned lot design and layout, showing proposed setbacks, landscaping, buffers, driveways, lot sizes, and relationship to existing or proposed streets and utility easements.

g. Existing development and natural features for the site and adjacent properties, including those properties within one 100 ft of the proposal, showing buildings, mature trees, topography, and other structures.

h. Elevation and location of flood hazard boundaries.

i. The location, width, name, and approximate centerline grade and curve radii of all streets; the relationship of all streets to any projected streets planned by the City; indication as to whether roads will continue beyond the plat; and existing and proposed grade profiles.

j. Lot and block numbers.

6. A conceptual plan shall be provided for complete subdivision or partitioning of the property, as well as any adjacent vacant or underutilized properties, so that access issues may be addressed in a comprehensive manner. The concept plan shall include documentation that all options for access have been investigated including shared driveways, pedestrian accessways, and new street development.
7. A detailed narrative description demonstrating how the proposal meets all applicable provisions of this title and Title 19.
8. Plans and drawings as necessary to demonstrate compliance with all applicable provisions of chapters of this title and Title 19.
9. A drainage summary report and plan that demonstrates estimated pre- and post-development flows, stormwater collection and management measures, and proposed discharges.
10. Proposed deed restrictions, if any, in outline form.
11. Improvements to be made by the developer and the approximate time such improvements are to be completed. Sufficient detail regarding proposed improvements shall be submitted so that they may be checked for compliance with the objectives of this title, State law, and other applicable City ordinances. If the nature of the improvements is such that it is impractical to prepare all necessary details prior to approval of the preliminary plat, the additional details shall be submitted with the request for final plat approval.
12. Twelve copies of a location plan drawn to an appropriate scale (on paper no larger than 8½ by 11 inches) showing nearest cross streets, drives opposite the site, and location of buildings and parking areas on adjoining lots.

Application Procedures

1. A preapplication conference with City staff is highly recommended.
2 Appointments may be made for review of preliminary plat requirements through the Planning Department in advance of formal submission.
3. The Planning Department coordinates with appropriate City departments, the Fire District, and other involved agencies as needed.
4. Applications will be screened for completeness at the time of submission. Incomplete applications will not be accepted.

Please contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov with any questions or help with this form.

Nile Hagen	Nile L Hagen	3/10/22
Applicant Name	Applicant Signature	Date
Waived Items	Milwaukie Planner Signature	Date

MILWAUKIE PLANNING
6101 SE Johnson Creek Blvd
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503-786-7630
planning@milwaukieoregon.gov

Submittal Requirements

For all Land Use Applications
(except Annexations and Development Review)

All land use applications must be accompanied by a signed copy of this form (see reverse for signature block) and the information listed below. The information submitted must be sufficiently detailed and specific to the proposal to allow for adequate review. Failure to submit this information may result in the application being deemed incomplete per the Milwaukie Municipal Code (MMC) and Oregon Revised Statutes.

Contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov for assistance with Milwaukie's land use application requirements.

1. **All required land use application forms and fees**, including any deposits.

   Applications without the required application forms and fees will not be accepted.

2. **Proof of ownership or eligibility to initiate application** per MMC Subsection 19.1001.6.A.

   Where written authorization is required, applications without written authorization will not be accepted.

3. **Detailed and comprehensive description** of all existing and proposed uses and structures, including a summary of all information contained in any site plans.

   Depending upon the development being proposed, the description may need to include both a written and graphic component such as elevation drawings, 3-D models, photo simulations, etc. Where subjective aspects of the height and mass of the proposed development will be evaluated at a public hearing, temporary onsite "story pole" installations, and photographic representations thereof, may be required at the time of application submittal or prior to the public hearing.

4. **Detailed statement** that demonstrates how the proposal meets the following:

   A. All applicable development standards (listed below):

      1. **Base zone standards** in Chapter 19.300.
      2. **Overlay zone standards** in Chapter 19.400.
      3. **Supplementary development regulations** in Chapter 19.500.
      4. **Off-street parking and loading standards and requirements** in Chapter 19.600.
      5. **Public facility standards and requirements**, including any required street improvements, in Chapter 19.700.

   B. All applicable application-specific approval criteria (check with staff).

   These standards can be found in the MMC, here: www.qcode.us/codes/milwaukie/

5. **Site plan(s), preliminary plat, or final plat** as appropriate.

   See Site Plan, Preliminary Plat, and Final Plat Requirements for guidance.

6. **Copy of valid preapplication conference report**, when a conference was required.

APPLICATION PREPARATION REQUIREMENTS:

- Five hard copies of all application materials are required at the time of submittal. Staff will determine how many additional hard copies are required, if any, once the application has been reviewed for completeness. Provide an electronic version, if available.
- All hard copy application materials larger than 8½ x 11 in. must be folded and be able to fit into a 10- x 13-in. or 12- x 16-in. mailing envelope.
- All hard copy application materials must be collated, including large format plans or graphics.

ADDITIONAL INFORMATION:

- Neighborhood District Associations (NDAs) and their associated Land Use Committees (LUCs) are important parts of Milwaukie's land use process. The City will provide a review copy of your application to the LUC for the subject property. They may contact you or you may wish to contact them. Applicants are strongly encouraged to present their proposal to all applicable NDAs prior to the submittal of a land use application and, where presented, to submit minutes from all such meetings. NDA information: www.milwaukieoregon.gov/citymanager/what-neighborhood-district-association.
- By submitting the application, the applicant agrees that City of Milwaukie employees, and appointed or elected City Officials, have authority to enter the project site for the purpose of inspecting project site conditions and gathering information related specifically to the project site.
- Submittal of a full or partial electronic copy of all application materials is strongly encouraged.

As the authorized applicant I, (print name) Nile Hagen, attest that all required application materials have been submitted in accordance with City of Milwaukie requirements. I understand that any omission of required items or lack of sufficient detail may constitute grounds for a determination that the application is incomplete per MMC Subsection 19.1003.3 and Oregon Revised Statutes 227.178. I understand that review of the application may be delayed if it is deemed incomplete.

Furthermore, I understand that, if the application triggers the City's sign-posting requirements, I will be required to post signs on the site for a specified period of time. I also understand that I will be required to provide the City with an affidavit of posting prior to issuance of any decision on this application.

Applicant Signature: Nile L Hagen

Date: 3/10/22

Official Use Only

Date Received (date stamp below):

Received by: _____