

File: \\nflpdx\ch\l\Projects\c\p\2022\2200448-00-EX-CLU.dwg TAB CO
 Plotted: 10/24/23 at 3:38pm By: R.Cadua

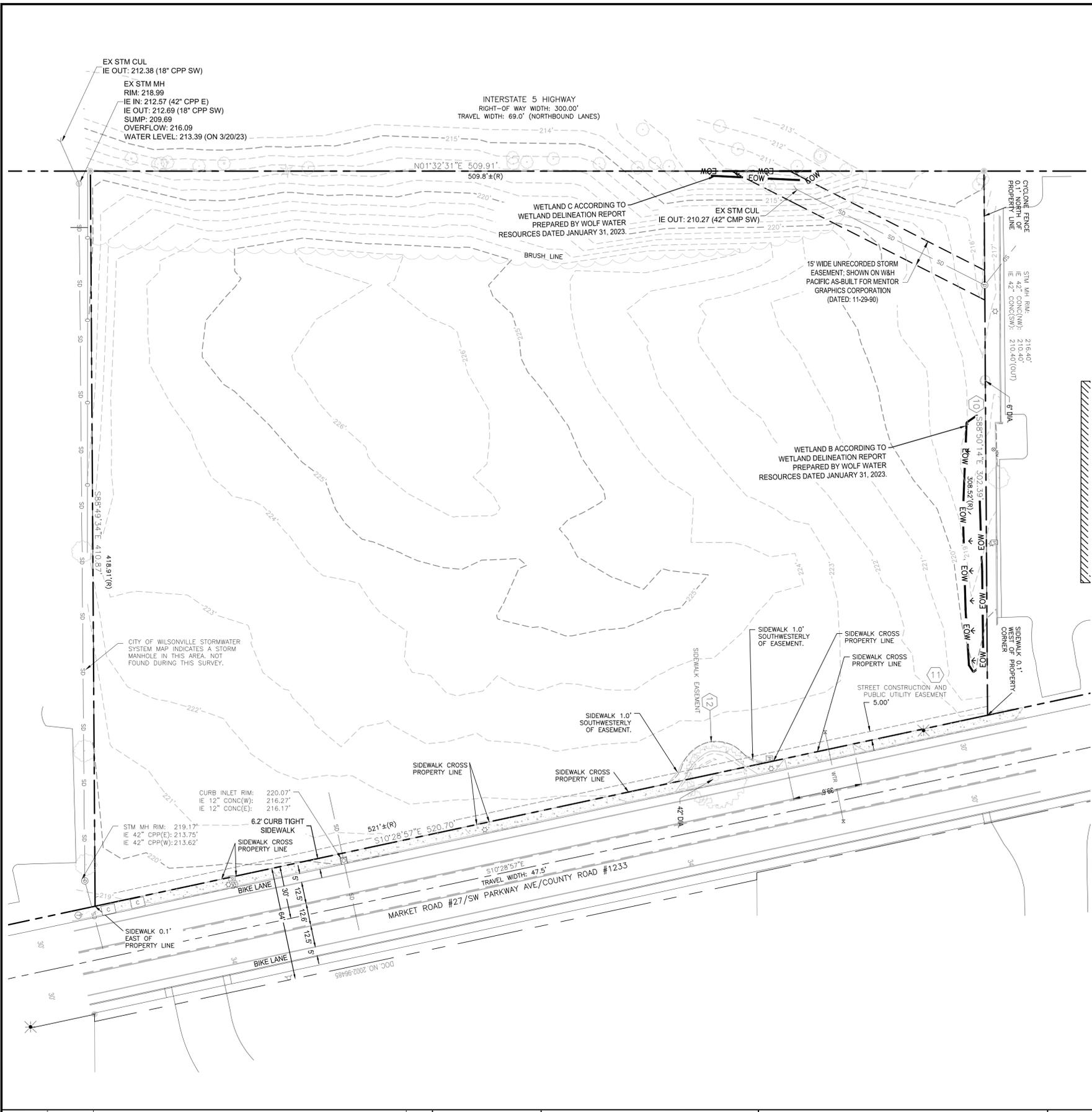


TABLE A NOTES:

- 2) NO ADDRESS HAS BEEN ASSIGNED TO THIS PROPERTY AT THE TIME OF THIS SURVEY.
- 4) TOTAL LAND AREA:
185,241± SQ FT
4.25± ACRES
- 5) VERTICAL RELIEF AND CONTOURS SHOWN HEREON WAS PROVIDED TO SURVEYOR BY CLIENT. THE SURVEYOR THEN SUPPLEMENTED PROVIDED DATA WITH ADDITIONAL FIELD TIES. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988, PER STATIC GPS TIES.
- 6a) ZONING INFORMATION NOT PROVIDED TO SURVEYOR AT THE TIME OF THIS SURVEY.
- 7a) NO BUILDINGS ON SUBJECT PROPERTY AT THE TIME OF THIS SURVEY.
- 7c) NO BUILDINGS ON SUBJECT PROPERTY AT THE TIME OF THIS SURVEY.
- 15) RECTIFIED ORTHOPHOTOGRAPHY AND PHOTOGRAMMETRIC MAPPING WAS PROVIDED TO SURVEYOR BY CLIENT.
- 16) THERE WAS NO EVIDENCE AT THE TIME OF THIS SURVEY OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.
- 18) THERE ARE NO PLOTTABLE OFFSITE EASEMENTS OR SERVITUDES AS DISCLOSED IN THE DOCUMENTS PROVIDED TO OR OBTAINED BY THE SURVEYOR.

LEGAL DESCRIPTION:

PER FIRST AMERICAN TITLE INSURANCE COMPANY, ORDER NO.: NCS-1083444-MICH, EFFECTIVE AUGUST 12, 2021.

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF CLACKAMAS, STATE OF OREGON, AND IS DESCRIBED AS FOLLOWS:

PART OF THE EAST ONE-HALF OF THE SOUTHEAST ONE-QUARTER OF SECTION 11, TOWNSHIP 3 SOUTH, RANGE 1 WEST, OF THE WILLAMETTE MERIDIAN, IN THE CITY OF WILSONVILLE, COUNTY OF CLACKAMAS AND STATE OF OREGON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF THE WEST PORTLAND-HUBBARD HIGHWAY, INTERSTATE HIGHWAY NO. 5 WITH THE SOUTH LINE OF THE NORTH ONE-HALF OF THE SOUTHEAST ONE-QUARTER OF THE SOUTHEAST ONE-QUARTER OF SECTION 11; THENCE NORTH 0°27'45" EAST ALONG THE EAST LINE OF SAID HIGHWAY A DISTANCE OF 509.8 FEET, MORE OR LESS, TO AN IRON ROD AT THE WEST END OF THE BOUNDARY LINE DESCRIBED IN AN AGREEMENT RECORDED JUNE 21, 1974 AS RECORDER'S FEE NO. 74017239;

THENCE SOUTH 89°55' EAST A DISTANCE OF 308.52 FEET TO AN IRON ROD AT THE EAST END OF SAID BOUNDARY LINE, BEING ON THE WESTERN LINE OF COUNTY ROAD NO. 217; THENCE SOUTHERLY ALONG THE WESTERN LINE OF SAID COUNTY ROAD A DISTANCE OF 521 FEET, MORE OR LESS, TO A POINT ON THE SOUTH LINE OF THE NORTH ONE-HALF OF SAID SOUTHEAST ONE-QUARTER OF THE SOUTHEAST ONE-QUARTER; THENCE NORTH 89°55' WEST A DISTANCE OF 418.91 FEET, MORE OR LESS TO THE POINT OF BEGINNING.

THE LEGAL DESCRIPTION WAS CREATED PRIOR TO JANUARY 01, 2008.

TITLE REPORT SPECIAL EXCEPTIONS:

- 10) THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "BOUNDARY LINE AGREEMENT" RECORDED JUNE 21, 1974 AS FEE NO. 74017239 OF OFFICIAL RECORDS. BOUNDARY LINE SHOWN HEREON.
- 11) EASEMENT, INCLUDING TERMS AND PROVISIONS CONTAINED THEREIN: RECORDING INFORMATION: JUNE 7, 1988 AS FEE NO. 88022435 IN FAVOR OF: CITY OF WILSONVILLE, OREGON FOR: STREET CONSTRUCTION AND PUBLIC UTILITIES SHOWN HEREON
- 12) EASEMENT, INCLUDING TERMS AND PROVISIONS CONTAINED THEREIN: RECORDING INFORMATION: MARCH 7, 2002 AS FEE NO. 2002 022173 IN FAVOR OF: CITY OF WILSONVILLE, OREGON; A MUNICIPAL CORPORATION FOR: SIDEWALK

SURVEYOR'S CERTIFICATE

TO:
MENTOR GRAPHICS CORPORATION;
PORTLAND GENERAL ELECTRIC;
FIRST AMERICAN TITLE INSURANCE COMPANY,

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 4, 5, 6(a), 7(a), 7(c), 8, 15, 16 AND 18 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON 09/16/2021.

DATE OF PLAT OR MAP:
09-21-2021

SURVEYOR'S SIGNATURE
CHRIS SHERBY, OR PLS 74508LS
CHRIS.SHERBY@SFLANDS.COM

LEGEND:

- BOUNDARY LINE
- - - CENTERLINE
- RIGHT OF WAY
- - - EASEMENT
- FLOW LINE CURB
- STANDARD CURB
- EDGE OF CONCRETE WALL-TOP
- WALL-TOE
- SD --- STORM SEWER
- FENCE - CHAINLINK
- CONCRETE HATCH
- FOUND MONUMENT - 5/8" IRON ROD
- TREE - DECIDUOUS
- POWER JUNCTION BOX
- LIGHT-LAMP POST
- STORM MANHOLE
- STORM CURB INLET
- GAS VALVE
- COMMUNICATION VAULT
- IRRIGATION CONTROL VALVE
- EOW --- EDGE OF WETLAND

HORIZONTAL DATUM (BASIS OF BEARINGS):

OREGON NORTH STATE PLANE COORDINATE SYSTEM NAD 83 (2011)
BASED ON GPS OBSERVATIONS.
DISTANCES SHOWN HEREON ARE GROUND DISTANCES, INTERNATIONAL FEET.

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

TREE TABLE

POINT	TREE TYPE	DIAMETER AT BREAST HEIGHT (INCHES)
5511	DECIDUOUS	5
5512	DECIDUOUS	5
5513	DECIDUOUS	4
5514	DECIDUOUS	3, 4, 5
5515	DECIDUOUS	11
5516	DECIDUOUS	16
5517	DECIDUOUS	6
5518	DECIDUOUS	4
5519	DECIDUOUS	3, 3
5520	DECIDUOUS	3, 3, 4, 11
5521	DECIDUOUS	4, 4, 4, 5, 5, 6
5522	DECIDUOUS	3, 3, 3, 4, 5, 8
5523	DECIDUOUS	4, 6
5524	DECIDUOUS	3, 3, 3, 4, 4, 4, 6 (SOME APPEAR DEAD)
5525	DECIDUOUS	5
5526	DECIDUOUS	7
5533	DECIDUOUS	14
5536	DECIDUOUS	3, 3, 3, 4, 4 (SOME APPEAR DEAD)
5537	DECIDUOUS	17
5538	DECIDUOUS	3
5539	DECIDUOUS	3
5540	DECIDUOUS	13
8280	EVERGREEN	10
8281	DECIDUOUS	3, 4, 4, 5, 6
8278	DECIDUOUS	6
8279	DECIDUOUS	8, 8, 10
5545	DECIDUOUS	7
5546	DECIDUOUS	10



REVISION	DATE	DESCRIPTION	BY

111 SW Fifth Ave., Suite 2600
Portland, OR 97204
O: 503.542.3860
F: 503.224.4681
www.kpff.com

DISCLAIMER: THIS SHEET REPRESENTS EXISTING SITE CONDITIONS BASED ON A LAND SURVEY PROVIDED BY KPFF OR BY OTHERS (NOT COMPLETED UNDER KPFF DIRECT SUPERVISION). ALL INFORMATION SHOWN HEREON MAY OR MAY NOT EXPLICITLY REFLECT THE ACTUAL SURVEY DELIVERED FOR THE PURPOSE OF THIS PROJECT SITE. THIS INFORMATION WAS RELIED UPON FOR CIVIL DESIGN PURPOSES. SURVEY COMPLETED BY: PGE 09/21/2021	JOB No.: 2200448 DESIGNED BY: TL, BC DRAWN BY: TL, RC CHECKED BY: JL PLOT DATE: 10/24/23 3:38pm DWG NAME: 2248-00-EX-CLU.dwg TAB NAME: CO
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PORTLAND GENERAL ELECTRIC CO. - 121 SW SALMON ST. PORTLAND, OR 97204

MEMORIAL SUBSTATION
LANDUSE SUBMITTAL
27601 SW PARKWAY AVENUE, WILSONVILLE, OR 97070

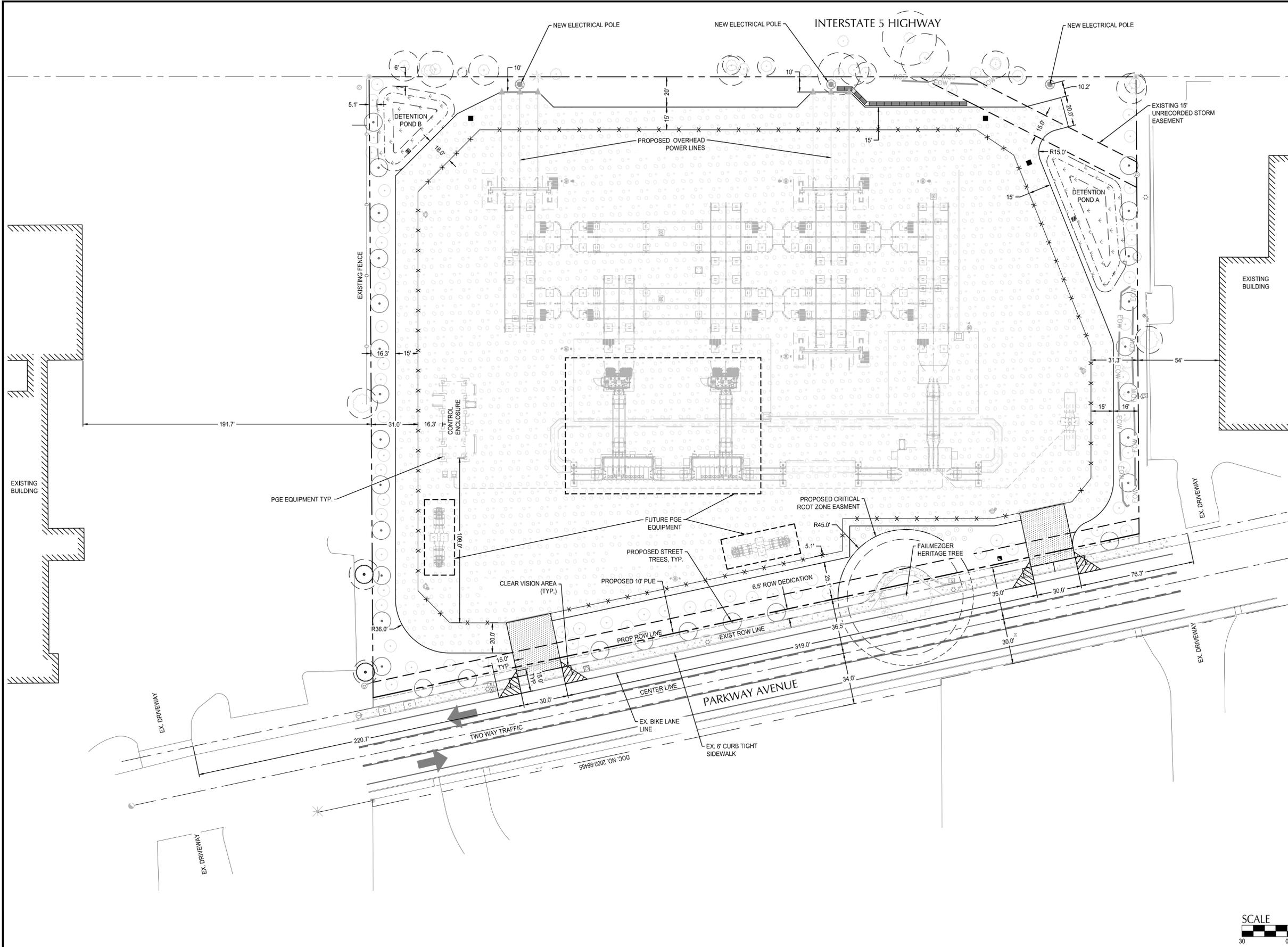
EXISTING CONDITIONS

City of Wilsonville
Exhibit B2 DB23-0007

SHEET NO.

CO

File: \\n:\proj\1\Civil\Projects\2022\220448-pge-memorial-substation\CAD\PI\LOT\LU\20448-01-SITE-LU.dwg TAB: C1
 Plotted: 10/24/23 at 3:38pm By: RCadua



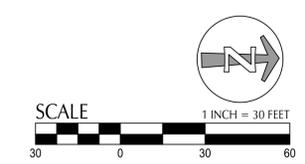
SHEET NOTES

1. PROPERTY AREAS

Item	Surface Area (SF)
Total Lot Area	185,224
ROW Dedication	3,385
Net Lot Area	181,839
Total Impervious	145,751
Pavement	2,185
Gravel	143,566
Components	8,600
Storm Detention Ponds	5,094
Landscape	39,473

SHEET LEGEND

	PROPERTY LINE
	EASEMENT LINE
	EDGE OF WETLAND
	EXISTING TREE WITH ROOT PROTECTION ZONE
	PROPOSED FENCE
	PROPOSED DETENTION POND PER COW DETAIL ST-6065
	PROPOSED GRAVEL SURFACING
	STANDARD ASPHALT PAVEMENT
	BLOCK RETAINING WALL



REVISION	DATE	DESCRIPTION	BY

111 SW Fifth Ave., Suite 2600
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JOB No.:	2200448
DESIGNED BY:	TL, BC
DRAWN BY:	TL, RC
CHECKED BY:	JL
PLOT DATE:	10/24/23 3:38pm
PLOTTED BY:	RCadua
DWG NAME:	220448-01-SITE.dwg
TAB NAME:	C1

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

MEMORIAL SUBSTATION
 LANDUSE SUBMITTAL
 27601 SW PARKWAY AVENUE, WILSONVILLE, OR 97070

SITE DEVELOPMENT PLAN

SHEET NO. **C1**

INTERSTATE 5 HIGHWAY

SHEET NOTES

- SLOPES PROVIDED ON SLOPE ARROW ARE FOR REFERENCE ONLY.
- SITE IS NOT PROPOSING ANY NEW UTILITY CONNECTIONS.
- SITE IS NOT OPEN TO THE PUBLIC AND IS NOT PROPOSING ANY PARKING FACILITIES.
- SITE IS NOT ANTICIPATED TO GENERATE ANY NEW VEHICULAR, CYCLIST OR PEDESTRIAN USERS.

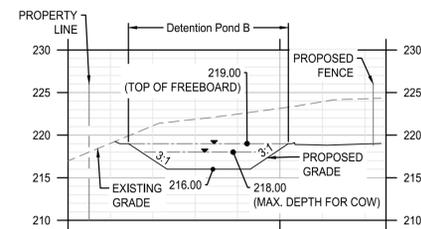
CALLOUT LEGEND

CALLOUT	DESCRIPTION
X.X%	GRADING SLOPE AND DIRECTION (DOWNHILL)
[X.X%]	SLOPE ORIENTATION INDICATING DIRECTION OF MAXIMUM GRADE (DOWNHILL)
XXXX	SPOT ELEVATION
IR	PROPOSED IRRIGATION

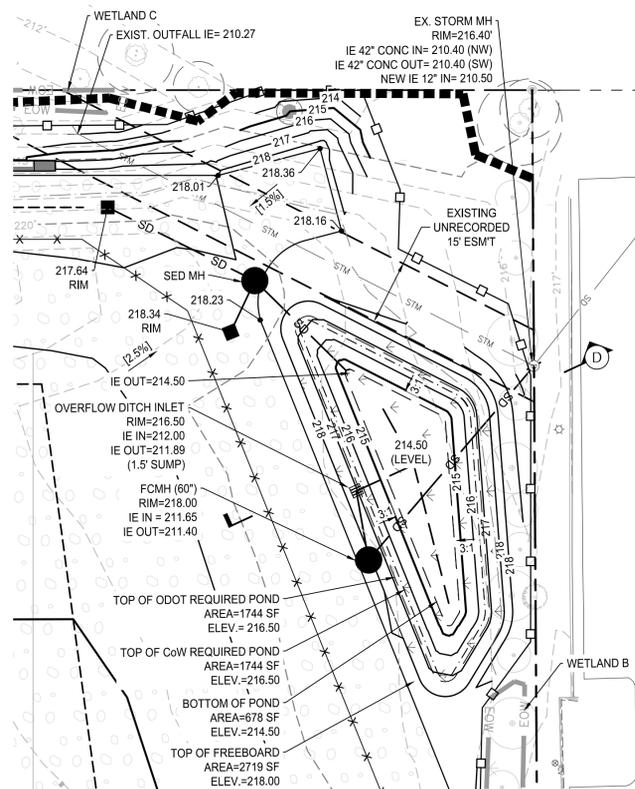
SHEET LEGEND

	PROPERTY LINE
	EASEMENT LINE
	GRADE BREAK
	EX. CONTOUR MINOR
	EX. CONTOUR MAJOR
	CONTOUR MINOR (FG)
	CONTOUR MAJOR (FG)
	CUT FILL LINE
	PROPOSED FENCE
	PROPOSED STORM DRAIN PIPE
	PROPOSED MANHOLE
	PROPOSED OVERFLOW INLET
	PROPOSED CATCH BASIN
	PROPOSED DETENTION POND PER COW DETAIL ST-8065
	PROPOSED GRAVEL SURFACING
	BLOCK RETAINING WALL
	GRAVEL CONSTRUCTION ENTRANCE
	SEDIMENT FENCE OR STRAW WATTLES
	TREE PROTECTION FENCE, SEE LANDSCAPE PLANS
	INLET PROTECTION
	EXISTING TREE WITH ROOT PROTECTION ZONE

2 ENLARGEMENT
SCALE: 1" = 20'

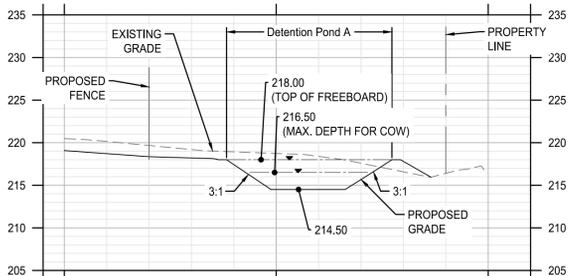


A SECTION
SCALE: HORZ: 1" = 20'
VERT: 1" = 10'

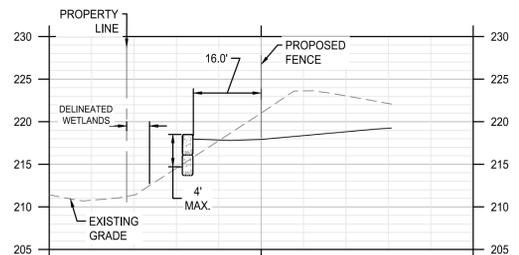


1 ENLARGEMENT
SCALE: 1" = 20'

D SECTION
SCALE: HORZ: 1" = 20'
VERT: 1" = 10'



C SECTION
SCALE: HORZ: 1" = 20'
VERT: 1" = 10'



File: \\nfile01\civ\Projects\c\p\2022\2200448-pge-memorial-substation\CAD\PI\LOT\LU\20448-02-GRADING-LU.dwg TAB: C2
Plotted: 10/24/23 at 3:39pm By: RCadua

REVISION	DATE	DESCRIPTION	BY

kpff
111 SW Fifth Ave., Suite 2600
Portland, OR 97204
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JOB No.:	2200448
DESIGNED BY:	TL, BC
DRAWN BY:	TL, RC
CHECKED BY:	JL
PLOT DATE:	10/24/23 3:39pm
PLOTTED BY:	RCadua
DWG NAME:	20448-02-GRADING-LU.dwg
TAB NAME:	C2



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

**MEMORIAL SUBSTATION
CONCEPT PLAN**
27601 SW PARKWAY AVENUE, WILSONVILLE, OR 97070

GRADING AND UTILITY PLANS

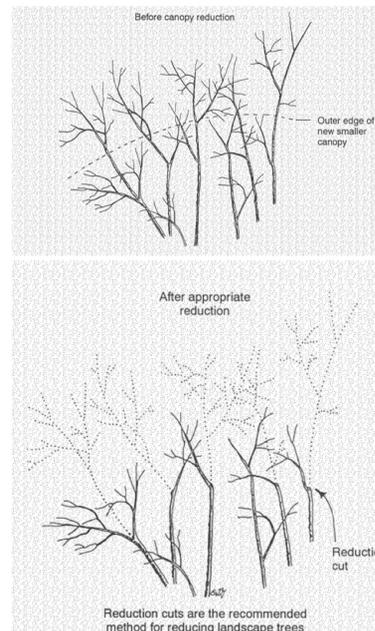
SHEET NO. **C2**
SHEET COUNT

TREE TABLE

Tree #	Species	DBH	Health Rating	Structure Rating	Canopy Diameter (ft)	Retain	Development Area	Invasive List	Construction Tolerance	RPZ (ft. Dia.)
5541	Oregon White Oak (Quercus garryana)	45	4	4	77	Y	Y	N	P	90
5540	Hawthorn (Crataegus monogyna)	10	3	4	8	Y	N	N	M	20
5537	Hawthorn (Crataegus monogyna)	12	3	4	8	Y	N	N	M	24
5538	Hawthorn (Crataegus monogyna)	16	3	4	12	Y	N	N	M	32
5533	Willow (Salix spp.)	10	3	4	8	Y	N	N	M	20
5526	Plum (Prunus spp.)	6	3	4	4	Y	N	N	M	12
5525	Plum (Prunus spp.)	10	3	4	6	Y	N	N	M	20
5523	Hawthorn (Crataegus monogyna)	8	3	4	6	Y	N	N	M	16
5520	Hawthorn (Crataegus monogyna)	14	3	4	10	Y	N	N	M	28
5521	Hawthorn (Crataegus monogyna)	10	3	4	8	Y	N	N	M	20
5522	Hawthorn (Crataegus monogyna)	7	3	4	6	Y	N	N	M	14
5514	Maple (Acer macrophyllum)	18	4	4	24	Y	N	N	M	36
5515	Maple (Acer macrophyllum)	16	4	4	20	Y	N	N	M	32
5513	Ash (Fraxinus spp.)	9	4	4	12	Y	N	N	M	18
5511	Ash (Fraxinus spp.)	6	4	4	10	Y	N	N	M	12
5546	Ash (Fraxinus spp.)	10	4	4	14	Y	N	N	M	20
5545	Ash (Fraxinus spp.)	7	4	4	6	Y	N	N	M	14
901	Ash (Fraxinus spp.)	9	4	3	10	Y	N	N	M	18
902	Paperbark Maple (A. griseum)	10	4	4	12	Y	N	N	M	20
903	Japanese Maple (A. palmatum)	10	4	4	10	Y	N	N	M	20
904	Japanese Maple (A. palmatum)	8	4	4	10	Y	N	N	M	16

Health and Structure Rating Legend:
 1=Very Poor - 2=Fair - 3=Fair - 4=Good - 5=Excellent - D=Dead
Construction Tolerance Rating Legend
 P= Poor - M=Moderate - G=Good

TREE ASSESSMENTS PERFORMED AND TABLE PREPARED BY:
 CHRIS WHITMAN
 BCMA WE-10291BU, TRAQ, MEMBER ASCA
 INTEGRATED ARBORICULTURAL SOLUTIONS
 CHRIS@INTEGRATEDARBORSOLUTIONS.COM



3 CROWN PRUNING
 SCALE: NTS

- NOTES:**
- 1 CROWN PRUNING FOR PERFORMANCE PATH TREES ONLY. SEE SHEET NOTES AND ARBORIST REPORT FOR MORE DETAILS.
 - 2 CONTACT PROJECT ARBORIST IF QUESTIONS ARISE ABOUT CROWN PRUNING.

SHEET NOTES

- 1 SEE CIVIL PLANS FOR GRADING AND STORMWATER AND EROSION CONTROL, UTILITY AND FEEDER LINE PLANS FOR SUBGRADE WORK. SEE PLANTING AND IRRIGATION PLANS.
- 2 OVERHEAD POWERLINES WILL BE ADJUSTED TO NOT CONFLICT WITH CROWN OF HERITAGE OAK, TREE NUMBER 5541.
- 3 UNDERGROUND FEEDER LINES WILL BE BORED OR ADJUSTED TO NOT CONFLICT WITH ROOTS OF HERITAGE OAK, TREE NUMBER 5541.
- 4 CONTRACTOR MUST ADHERE TO ALL CODES AND REQUIREMENTS OF THE TREE PLAN.
- 5 TREE PROTECTION MUST BE INSTALLED AND APPROVED BY THE CITY OF WILSONVILLE PRIOR TO ANY SITE WORK AND MUST REMAIN IN GOOD CONDITION THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. CONSTRUCTION ACTIVITIES AND NEEDED ACCESS THAT OCCUR INSIDE THE ROOT PROTECTION ZONE MUST BE APPROVED IN ADVANCE BY THE PROJECT ARBORIST. ANY CHANGES TO OR DISASSEMBLY OF TREE PROTECTION FENCING WITHOUT PRIOR APPROVAL IS PROHIBITED.
- 6 ROOT PROTECTION ZONE INCLUDES ALL AREAS INSIDE THE TREE PROTECTION FENCING. ADDITIONALLY, AREAS SHOWN IN APPENDIX B SHOULD BE GIVEN SPECIAL CARE AND ATTENTION FOR POTENTIAL ROOT INVOLVEMENT AND IMPACT.
- 7 ENTRANCE INTO THE FENCED ROOT PROTECTION ZONE IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE PROJECT ARBORIST.
- 8 WHEN POSSIBLE HAND TOOLS SHOULD BE USED IN AREAS DESIGNATED AS PROTECTION ZONES. OUTSIDE OF FENCING, IN ORDER TO REDUCE ROOT DAMAGE AND COMPACTION, HAND TOOLS SHALL BE USED WITHIN ALL FENCED ROOT PROTECTION AREAS UNLESS OTHERWISE APPROVED BY THE PROJECT ARBORIST.
- 9 ALL ROOTS OVER 2" IN DIAMETER THAT NEED TO BE CUT MUST FIRST BE INSPECTED AND APPROVED BY THE PROJECT ARBORIST AND RECORDED.
- 10 POST HOLES SHALL BE ADJUSTED IF THEY COME IN CONTACT WITH ROOTS 2" IN DIAMETER OR GREATER.
- 11 ANY EXCAVATION WITHIN THE PROTECTION ZONE SHALL BE MONITORED AND REPORTED TO AND MANAGED BY THE PROJECT ARBORIST, WHERE REQUIRED.
- 12 ROOTS AND STUMPS OF TREES REMOVED FOR DEVELOPMENT PURPOSES SHALL BE REMOVED BY USE OF A STUMP GRINDER AND THE PROJECT ARBORIST SHALL BE ON SITE TO MONITOR REMOVAL. NO PULLING OF ROOTS OR STUMPS SHALL OCCUR UNDER ANY CIRCUMSTANCES.
- 13 THE PROJECT ARBORIST SHALL MAKE AN ONSITE INSPECTION PRIOR TO COMMENCEMENT OF GRADING TO REVIEW TPP REQUIREMENTS WITH THE CONTRACTOR.

KEYED NOTES

- 1 OVERHEAD POWER LINES
- 2 CRUSHED ROCK SUBSTATION YARD
- 3 FACILITY FENCING
- 4 LOCATION OF PLANNED DETENTION POND.
- 5 UNDERGROUND FEEDER LINES.
- 6 SCREENING PLANTING, STREET TREES, IRRIGATION WILL NOT BE WITHIN ROOT PROTECTION ZONE. A NO-DIG AREA.
- 7 TREE IMPACTS TO 5520 AND 5521. SEE PROTECTION DIRECTIVES IN ARBORIST REPORT AND THIS SHEET. TREE PROTECTIONS TO REMAIN.

LEGEND

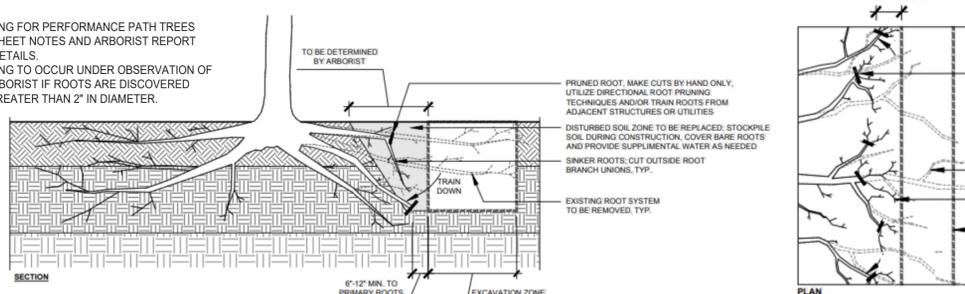
- EXISTING GRAVEL SURFACE
- CONCRETE
- EXISTING TREE
- ⊗ EXISTING TREE FOR REMOVAL
- PROPERTY LINE
- OVERHEAD POWER
- UTILITY LINE WITH TYPE CODE
- TREE PROTECTION FENCING
- ROOT PROTECTION ZONE
- CANOPY DIAMETER



TREE PLAN

SCALE: 1" = 40'

- NOTES:**
- 1 ROOT PRUNING FOR PERFORMANCE PATH TREES ONLY. SEE SHEET NOTES AND ARBORIST REPORT FOR MORE DETAILS.
 - 2 ROOT PRUNING TO OCCUR UNDER OBSERVATION OF PROJECT ARBORIST IF ROOTS ARE DISCOVERED THAT ARE GREATER THAN 2" IN DIAMETER.



2 ROOT PRUNING
 SCALE: NTS

1 TREE PROTECTION FENCING
 SCALE: NTS

File: Z:\NNA CURRENT PROJECTS\2023.2 Memorial Substation\05 Drawings\CAD\Landscape.dwg TAB.L1.1
 Plotted: 10/20/23 at 2:03pm By: Jane Jewett
 24-36

REVISION	DATE	DESCRIPTION	BY



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NNA Landscape Architecture

REGISTERED
 821
 Digital
FOR
 LANDSCAPE ARCHITECTURE
 LANDSCAPE ARCHITECT
 Expires: 02/27/2024

JOB No.:	2200448
DESIGNED BY:	JH
DRAWN BY:	JJ
CHECKED BY:	JH
PLOT DATE:	10/20/23 2:03pm
PLOTTED BY:	Jane Jewett
DWG NAME:	Landscape.dwg
TAB NAME:	L1.1

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

PGE

MEMORIAL SUBSTATION
 CONCEPT PLAN
 27601 SW PARKWAY AVENUE, WILSONVILLE, OR 97070

TREE SHEET

SHEET NO.

L1.1

SHEET COUNT

TREES

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
QUERCUS OBLONGIFOLIA	MEXICAN BLUE OAK	3" CAL.	20'	30'	YES	5
QUERCUS CHRYSOLEPIS	CANYON LIVE OAK	3" CAL.	20'	30'	YES	3
PHAMNUS PURSHIANA	CASCARA	1.75" CAL	10-15'	10-15'	NO	21

NOTE: ESTABLISHMENT IRRIGATION FOR THE ABOVE LOW-WATER NEED SPECIES IS PLANNED.

PROPOSED SCREENING PLANTS

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	5 GALLON	10-15'	15'	YES	16
ARBUTUS UNEDO 'COMPACTA'	STRAWBERRY TREE	5 GALLON	8-10'	12'	YES	23
CEANOTHUS VELUTINUS	CEANOTHUS	5 GALLON	8-10'	6'	YES	13
JUNIPERUS SCOPULORUM 'SKYROCKET'	SKYROCKET JUNIPER	5 GALLON	2-3'	15'	YES	19

NOTE: ESTABLISHMENT IRRIGATION FOR THE ABOVE LOW-WATER NEED SPECIES IS PLANNED.

PROPOSED SHRUBS

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
ARCTOSTAPHYLOS 'PACIFIC MIST'	PACIFIC MIST MANZANITA	2 GALLON	2'	2'	YES	4
MAHONIA AQUIFOLIUM 'COMPACTA'	COMPACT OREGON GRAPE	2 GALLON	4'	3'	YES	7

NOTE: ESTABLISHMENT IRRIGATION FOR THE ABOVE LOW-WATER NEED SPECIES IS PLANNED.

GROUNDCOVER

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
FRAGARIA X CHILOENSIS	COAST STRAWBERRY	2 GALLON	2'	1'	YES	3,433
ARCTOSTAPHYLOS 'VANCOUVER JADE'	VANCOUVER JADE MANZANITA	2 GALLON	4'	1'	YES	3,433

NOTE: ESTABLISHMENT IRRIGATION FOR THE ABOVE LOW-WATER NEED SPECIES IS PLANNED.

DRY SEEDING MIX - NOT IRRIGATED

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
ACHILLEA MILLEFOLIUM	WHITE YARROW					
FESTUCA TRACHYPHYLLA	HARD FESCUE					
FESTUCA OVINA 'QUATRO'	QUATRO TETRAPLOID SHEEP FESCUE					
LOBULARIA MARITIMA	SWEET ALYSSUM					
LOMIUM PERENNE	PERENNIAL RYEGRASS					
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER					
TRIFOLIUM REPENS	DUTCH WHITE CLOVER					

PT LAWN SEED "PT 705 XERISCAPE LAWN ALTERNATIVE" APPLY SEED AT A RATE OF 2-3 LBS./1000 S.F.

DETENTION POND PLANTS - ZONE A

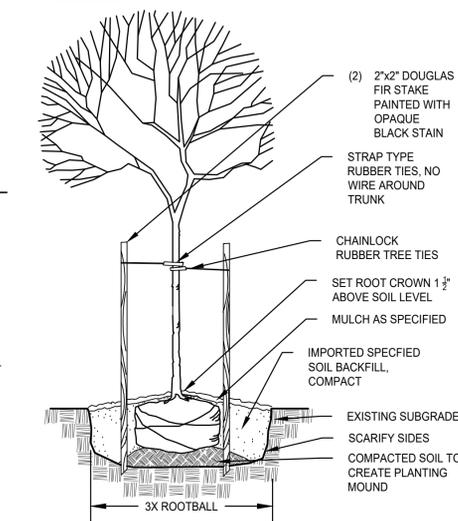
NOTE: ESTABLISHMENT IRRIGATION FOR THE BELOW LOW-WATER NEED SPECIES IS PLANNED.

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
LARGE SHRUBS						
CORNUS SERICEA	RED OSIER DOGWOOD	30" HEIGHT	8'	15'	NO	36
SMALL SHRUBS						
POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GALLON	2'	2'	YES	24
HERBACEOUS PLANTS						
CAREX OBLIQUA	SLOUGH SEDGE	4"	4"	1'	YES	12
JUNCUS PATENS	SPREADING RUSH	4"	3"	1'	YES	12
GROUNDCOVER						
MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GALLON	2'	1'	YES	1,392

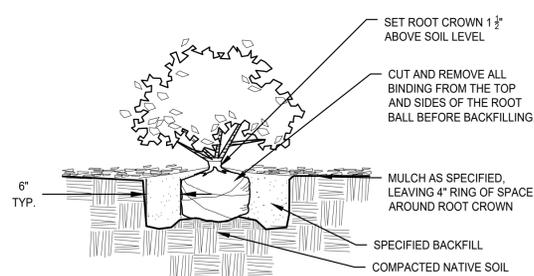
DETENTION POND PLANTS - ZONE B

NOTE: ESTABLISHMENT IRRIGATION FOR THE BELOW LOW-WATER NEED SPECIES IS PLANNED.

CODE	BOTANICAL NAME	COMMON NAME	SIZE	WIDTH	HEIGHT	EVERGREEN	QUANTITY
TREES							
ACE CIR	ACER CIRCINATUM	VINE MAPLE	1" CAL.	8'	15'	NO	39
LARGE SHRUBS							
ROSA NUTKANA	NOOTKA ROSE	30" HEIGHT	4'	8'	NO	58	
SPIREA DOUGLASII	DOUGLAS SPIREA	30" HEIGHT	4'	7'	NO	58	
SMALL SHRUBS							
POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GALLON	2'	2'	YES	155	
GROUNDCOVER							
ARCTOSTAPHYLOS UVA-URSI	KINNICKINICK	1 GALLON	1'	5'	YES	1,474	
MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GALLON	3'	5'	YES	1,474	
FRAGARIA X CHILOENSIS	COAST STRAWBERRY	1 GALLON	1'	5'	YES	1,474	



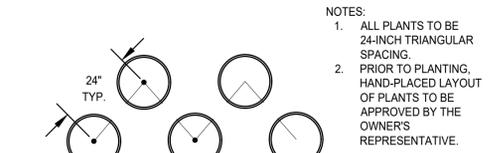
3 TREE PLANTING
SCALE: NTS



2 SHRUB PLANTING
SCALE: NTS

PLANTING PLAN
SCALE: 1" = 40'

1 GROUNDCOVER PLANT SPACING
SCALE: NTS



NOTES:
1. ALL PLANTS TO BE 24-INCH TRIANGULAR SPACING.
2. PRIOR TO PLANTING, HAND-PLACED LAYOUT OF PLANTS TO BE APPROVED BY THE OWNER'S REPRESENTATIVE.

SHEET NOTES

- CONTRACTOR RESPONSIBLE TO RESEED AND ESTABLISH ANY AREA ON SITE THAT HAS BEEN IMPACTED BY CONSTRUCTION ACTIVITY.
- STAKING OF PLANTS SHALL NOT INTERFERE WITH VEHICLE OR PEDESTRIAN CIRCULATION ROUTES.
- ANY TREE REMOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REPLANTED IN A 1:1 RATIO.
- STUMPS TO BE CUT FLUSH WITH GRADE AND TO BE GROUND TO A MINIMUM 6" BELOW GRADE.
- PLANT LANDSCAPE SCREENING PLANTS A MINIMUM OF 10' FROM CENTER OF PLANT TO THE FENCE, WHERE SPACE ALLOWS.
- TREES TO BE PLACED WHERE MATURE WIDTH WILL LEAVE AT LEAST 3' OF BUFFER BETWEEN PLANT AND FENCE.
- ALL PLANTS WILL REQUIRE TEMPORARY ESTABLISHMENT IRRIGATION, ALTHOUGH ALL PLANTS ARE LOW-WATER NEED. SCREENING AND ROW PLANTINGS WILL REQUIRE DIFFERENT IRRIGATION METHODS THAN THE STORMWATER FACILITY AND A SYSTEM WILL BE DESIGNED THAT PROVIDES SUITABLE RESOURCES FOR BOTH. NO NEW IRRIGATION WILL BE INSTALLED FOR EXISTING PLANTINGS, INCLUDING THE HERITAGE OAK.

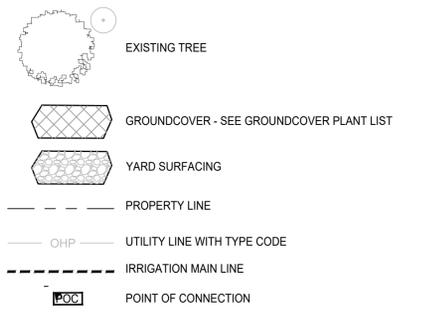
KEYED NOTES

- INSTALL SCREENING PLANTS. SEE PROPOSED SCREENING PLANTS BELOW FOR LIST OF PLANT MATERIAL TO BE USED. SPACE AS SHOWN.
- INSTALL GROUNDCOVER PLANTS.
- INSTALL LOW PLANTS TO INFILL SCREENING AREA IN SIGHT TRIANGLE.
- INSTALL NEW TREE.
- INSTALL SEEDING.
- INSTALL RAIN GARDEN PLANTING.
- ESTABLISHMENT IRRIGATION FOR NEW PLANTINGS
- POINT OF CONNECTION FOR IRRIGATION SYSTEM, VALVE, CONTROLLER, 1" MAINLINE.

WEED REMOVAL NOTES

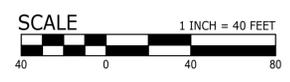
- PERFORM AERATION AND/OR OTHER OWNER'S REPRESENTATIVE-APPROVED SOIL IMPROVEMENT WHERE SOIL IS COMPACTED FROM CONSTRUCTION.
- PREPARE AREAS FOR WEED REMOVAL WITH AN OWNER'S REPRESENTATIVE-APPROVED HERBICIDE.

LEGEND



File: Z:\NNA CURRENT PROJECTS\2023.2 Memorial Substation\05 Drawings\CAD\Landscapes.dwg TAB.L1.2
Plotted: 10/20/23 at 2:10pm By: Jane Jewett

REVISION	DATE	DESCRIPTION	BY



kpff
Landscape Architecture
111 SW 7th Ave., Suite 3000
Portland, OR 97204
P: 503.241.3900
F: 503.241.4861
www.kpff.com

NNA Landscape Architecture

REGISTERED
LANDSCAPE ARCHITECT
Jane Jewett
Expires: 02/27/2024

JOB No.:	2200448
DESIGNED BY:	JH
DRAWN BY:	JJ
CHECKED BY:	JH
PLOT DATE:	10/20/23 2:10pm
PLOTTED BY:	Jane Jewett
DWG NAME:	Landscape.dwg
TAB NAME:	L1.2

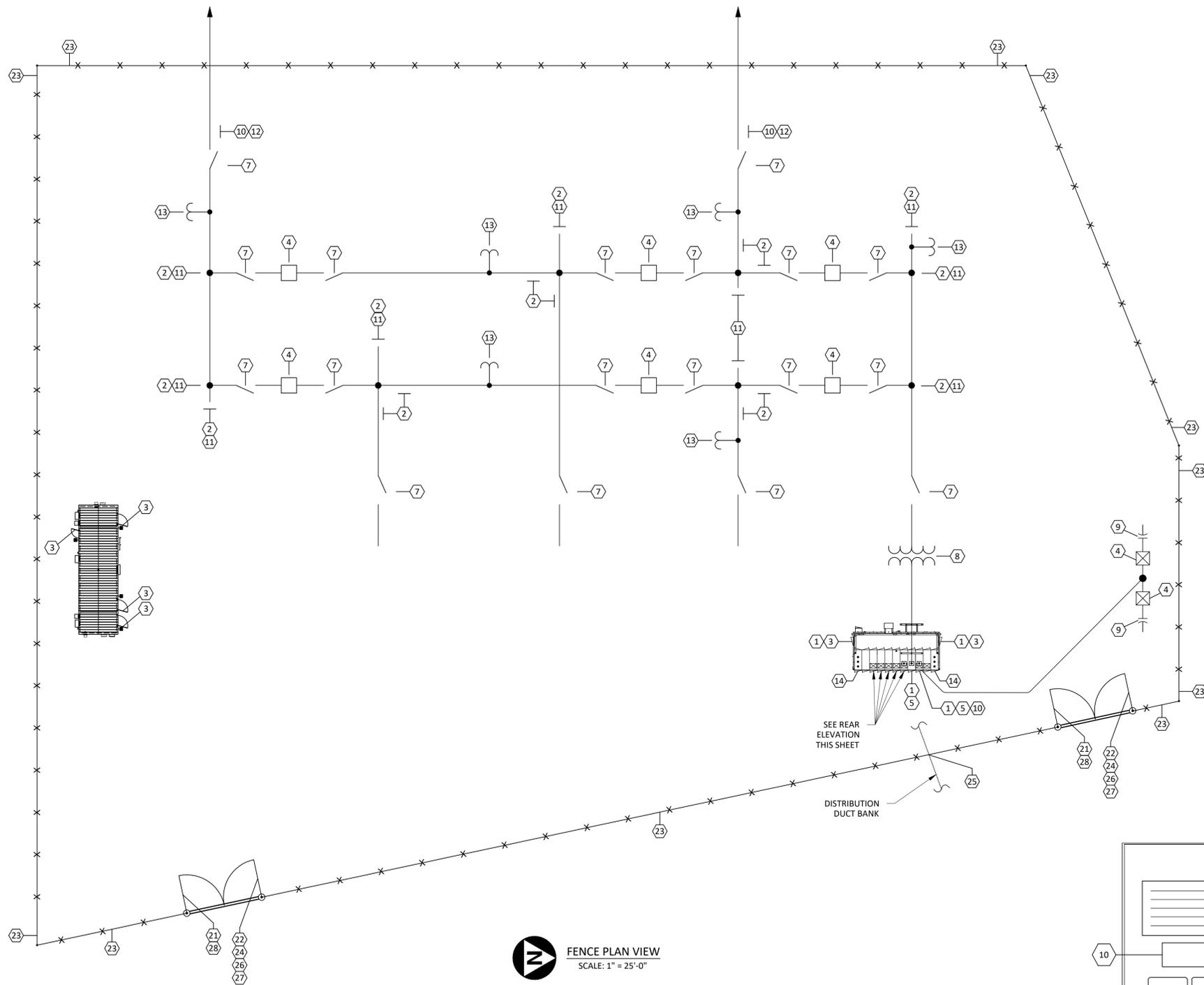
PORTLAND GENERAL ELECTRIC CO. - 121 SW SALMON ST. PORTLAND, OR 97204

PGE

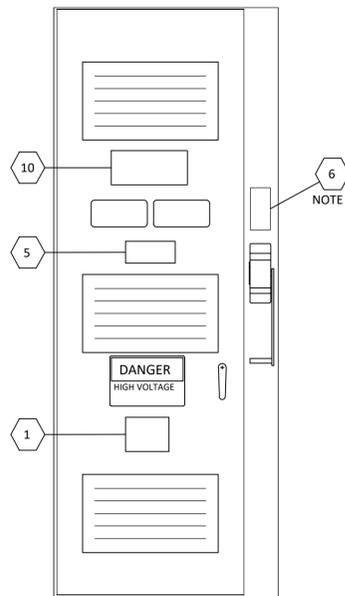
MEMORIAL SUBSTATION
CONCEPT PLAN
27601 SW PARKWAY AVENUE, WILSONVILLE, OR 97070

LANDSCAPE SHEET

SHEET NO.
L1.2
SHEET COUNT



FENCE PLAN VIEW
SCALE: 1" = 25'-0"



REAR ELEVATION
SCALE: NONE

SIGNS FOR SUBSTATION YARDS							
INDEX	SIGN	MESSAGE	SIZE	COLOR	PGE ITEM No.	LOCATION	NOTES
1A	ARC FLASH	WARNING, ARC FLASH, 4 CAL/CM ² , W/ DATE OF CALCULATION	7"W X 5" DETAIL 1A	BLACK LETTERS ON ORANGE AND WHITE BACKGROUND	40172	POWER CIRCUIT BREAKER CONTROL CABINET DOOR, FRONT OF SWITCHGEAR CUBICLE, REAR DOOR OF SWITCHGEAR CUBICLE, ENTRY OF SWITCHGEAR SHELTERED AISLE.	1,2,3
1B		WARNING, ARC FLASH, 8 CAL/CM ² , W/ DATE OF CALCULATION	7"W X 5" DETAIL 1B		40171		
1C		WARNING, ARC FLASH, 20 CAL/CM ² , W/ DATE OF CALCULATION	7"W X 5" DETAIL 1C		40170		
1D		WARNING, ARC FLASH, 40 CAL/CM ² , W/ DATE OF CALCULATION	7"W X 5" DETAIL 1D		9000 0560		
2	BUS	OPERATING VOLTAGE LETTER AND POSITION NUMBER	8"W X 3-1/2"H	BLACK LETTERS ON YELLOW BACKGROUND	LIST OF NAMEPLATES FOR OUTDOOR EQUIP.	EACH END OF EACH BUS, ATTACHED TO BUS SUPPORT STRUCTURE.	5,6,7
3	ENCLOSURE DOOR	SAFETY AND SECURITY NOTICE	12"W X 8"	BLACK LETTERS ON WHITE BACKGROUND	9000 8100	EACH DOOR OF CONTROL ENCLOSURES AND SHELTERED SWITCHGEAR AISLES.	4
4	EQUIPMENT	OPERATING VOLTAGE LETTER AND POSITION NUMBER	8"W X 3-1/2"H	BLACK LETTERS ON YELLOW BACKGROUND	LIST OF NAMEPLATES FOR OUTDOOR EQUIP.	POWER CIRCUIT BREAKER, LEFT-HAND CONTROL CABINET DOOR, OR ABOVE MANUFACTURER'S NAMEPLATE.	5,6
5		OPERATING VOLTAGE LETTER AND POSITION NUMBER				SWITCHGEAR POWER CIRCUIT BREAKER, ONE ON FRONT OF CUBICLE DOOR NEAR CONTROL SWITCH AND SWITCHGEAR BYPASS LOAD - BREAK SWITCH.	5,6
6		OPERATING VOLTAGE LETTER AND POSITION NUMBER				SWITCHGEAR BY-PASS SWITCH, MOUNTED VERTICALLY NEAR OPERATOR HANDLE.	5,6
7		OPERATING VOLTAGE LETTER AND POSITION NUMBER				DISCONNECT SWITCH, NEAR SWITCH OPERATOR, OR FACING PERSON OPERATING HOOK-SWITCH.	5,6,7
8		OPERATING VOLTAGE LETTER AND POSITION NUMBER				POWER TRANSFORMER, LEFT-HAND CONTROL CABINET DOOR, OR ABOVE MANUFACTURER'S NAMEPLATE.	5,6
9		CAPACITOR BANK NUMBER				CAPACITOR BANK RACK, OR DOOR OF METAL ENCLOSURE.	5,6
10	LINE NAME	LINE NAME AND OPERATING VOLTAGE	15"W X 10"	BLACK LETTERS ON WHITE BACKGROUND	LIST OF NAMEPLATES FOR OUTDOOR EQUIP.	NEAR LINE DISCONNECT SWITCH, BACK DOOR OF SWGR CUBICLE.	5,6,8
11	PHASE DESIGNATOR	"A", "B" OR "C"	3 1/4" X 3 1/4"	BLACK LETTERS ON YELLOW BACKGROUND	39136 (SET OF 3)	EACH END OF EACH BUS, ATTACHED TO BUS SUPPORT STRUCTURE.	
12						LINE TERMINATION STRUCTURE, NEAR INSULATOR ATTACHMENT.	
13	LINE PT	OPERATING VOLTAGE LETTER & POSITION No. OR ASSOCIATED BREAKER (NOT LINE NAME)	8"W X 3-1/2"H	BLACK LETTERS ON YELLOW BACKGROUND	LIST OF NAMEPLATES FOR OUTDOOR EQUIP.	PT JUNCTION BOX.	5,6
14	BUS TIE	"BUS TIE" AND OPERATING VOLTAGE	15"W X 10"	BLACK LETTERS ON WHITE BACKGROUND	LIST OF NAMEPLATES FOR OUTDOOR EQUIP.	SWITCHGEAR POWER CIRCUIT BREAKER, ONE ON FRONT OF CUBICLE DOOR AND ONE ON DOOR OF REAR COMPARTMENT.	

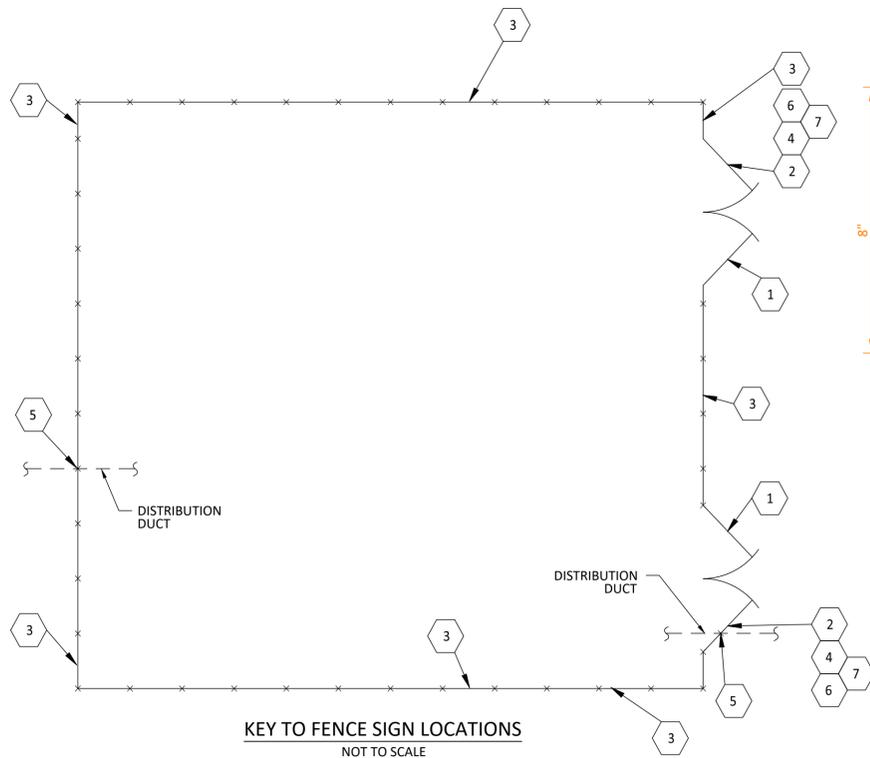
SIGNS FOR FENCE AND GATES					
INDEX	SIGN	SIZE	PGE ITEM No.	LOCATION	NOTES
21	SUBSTATION NAME	24"W X 12"H DETAIL 1	9000 6787	MAIN GATE, LEFT HAND PANEL WHEN FACING SUBSTATION.	10,11
22	HAZARDOUS VOLTAGE, DUAL LANGUAGE	20"W X 32"H DETAIL 2,3	9000 6481	ALL GATES, RIGHT HAND PANEL WHEN FACING SUBSTATION.	10,11
23				PERIMETER FENCE AT 40' INTERVALS, NOT MORE THAN 20' FROM ANY FENCE CORNER, AT LEAST ONE SIGN PER STRAIGHT SEGMENT OF FENCE.	10,11
24	ARC FLASH HAZARD	10"W X 10"H DETAIL 4	40173	MAIN GATE, RIGHT HAND PANEL WHEN FACING SUBSTATION, TO RIGHT OF HAZARDOUS VOLTAGE SIGN.	10,11
25	BURIED CABLE, 13KV	12"W X 8"H DETAIL 5	40158	PERIMETER FENCE WHERE BURIED DISTRIBUTION CABLES CROSS SUBSTATION FENCE.	10,11
26	NO PARKING	18"W X 12"H DETAIL 6	9000 6786	ALL DRIVE GATES, RIGHT HAND PANEL WHEN FACING SUBSTATION.	10,11
27	FIRE MARSHAL	18"W X 12"H DETAIL 7	9000 8098	ALL DRIVE GATES, RIGHT HAND PANEL.	10,11
28	ADDRESS NUMBERS	24"W X 8"H DETAIL 8		MAIN GATE, LEFT HAND PANEL.	10,11

NOTES

- ARC FLASH RATINGS TO BE DETERMINED FROM SUBSTATION OPERATING ONE-LINE DIAGRAM. FOR EQUIPMENT WITH ARC FLASH RATING OF 1.2 CAL/CM², USE 4 CAL/CM² SIGN.
- SEE DRAWING MSTR-9800.02 FOR ARC FLASH SIGNAGE ON SUBSTATION GATE.
- REFERENCE STANDARD S-139-10 FOR ARC FLASH LABELS.
- 90 MIL FIBERGLASS.
- ALL CAPITAL LETTERS, CENTER JUSTIFIED.
- ENGRAVED LAMINATE.
- INSTALL USING BACKING PLATE TYPE II. SEE DETAIL 13 ON 9800.02.
- INSTALL USING BACKING PLATE TYPE I. SEE DETAIL 12 ON 9800.02.
- NAMEPLATE TO BE MOUNTED ABOVE BY-PASS SWITCH AT A 90 DEGREE ANGLE.
- INSTALL APPROXIMATELY 5 FEET ABOVE FINISHED GRADE.
- INSTALL USING HOG RING STAPLES (MALCO HRAS OR EQUAL).

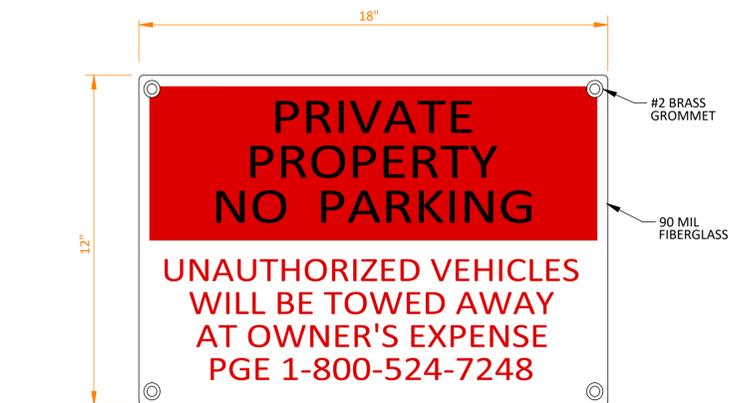
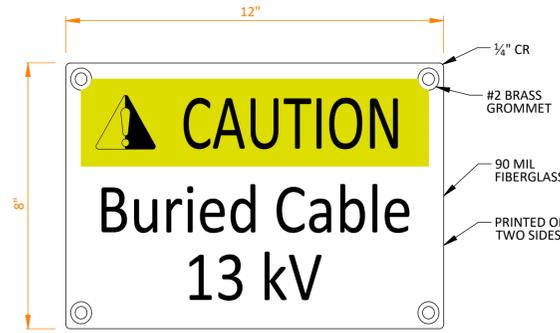
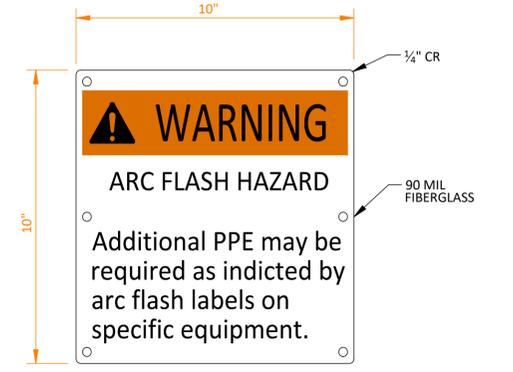
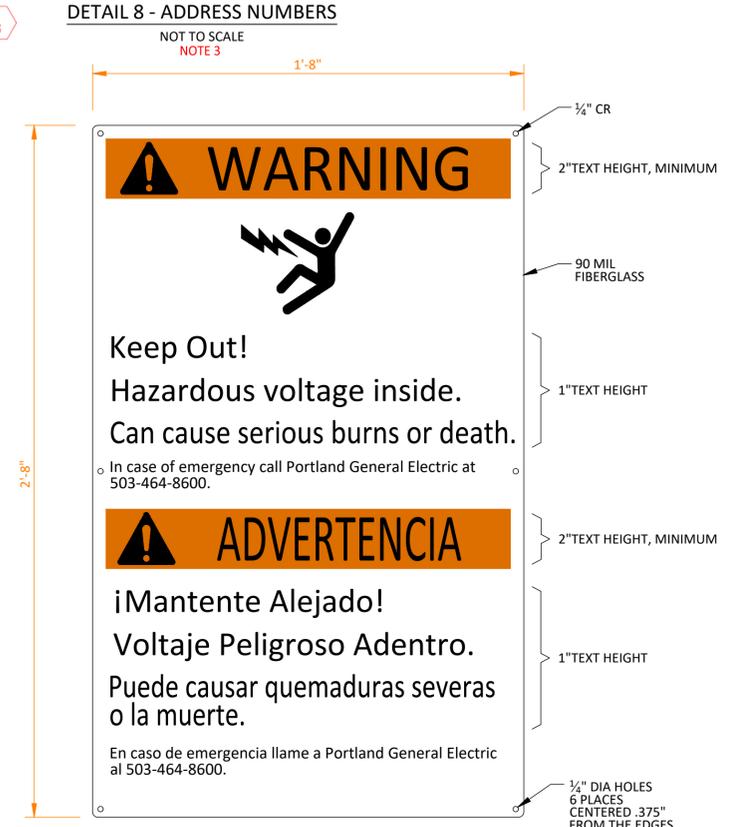
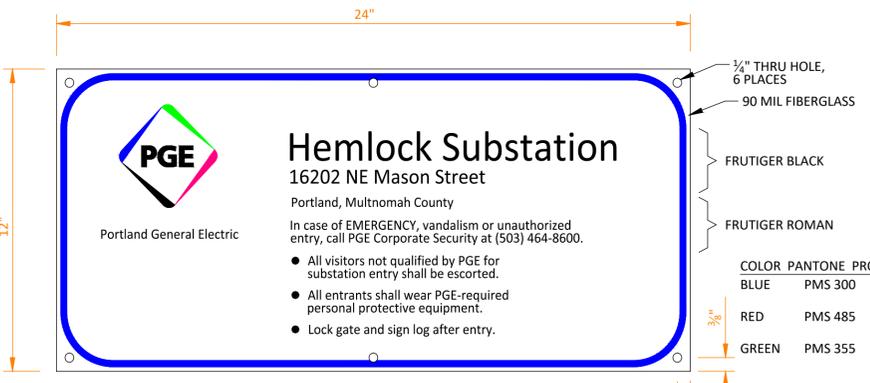
DRAWN (ISSUE): ENGR. CHK. APPD. PNK
 REV. DATE: 0 XX-XX-23
 REVISION DESCRIPTION: ORIGINAL ISSUE: AWO 100000925 (CREATED USING MSTR-9800-1 REV 4 AND MSTR-9801-1 REV 2).
Portland General Electric

MEMORIAL SUBSTATION SUBSTATION SIGNS
 MMRL-1600
 SHEET 1 OF 1
 DIST. CODE AG
 SCALE AS SHOWN
 S1
 05/10/2023
PGE Internal Use
 Access Limited to PGE
30% IFCR NOT FOR CONSTRUCTION



SUBSTATION FENCE SIGNS

INDEX	SIGN	SIZE	PGE ITEM No.	LOCATION	NOTES
1	SUBSTATION NAME	24"W X 12"H DETAIL 1	9000 6787	MAIN GATE, LEFT HAND PANEL WHEN FACING SUBSTATION.	1,2
2	HAZARDOUS VOLTAGE, DUAL LANGUAGE	20"W X 32"H DETAIL 2,3	9000 6481	ALL GATES, RIGHT HAND PANEL WHEN FACING SUBSTATION.	1,2
3				PERIMETER FENCE AT 40' INTERVALS, NOT MORE THAN 20' FROM ANY FENCE CORNER, AT LEAST ONE SIGN PER STRAIGHT SEGMENT OF FENCE.	
4	ARC FLASH HAZARD	10"W X 10"H DETAIL 4	40173	MAIN GATE, RIGHT HAND PANEL WHEN FACING SUBSTATION, TO RIGHT OF HAZARDOUS VOLTAGE SIGN.	1,2
5	BURIED CABLE, 13KV	12"W X 8"H DETAIL 5	40158	PERIMETER FENCE WHERE BURIED DISTRIBUTION CABLES CROSS SUBSTATION FENCE.	1,2
6	NO PARKING	18"W X 12"H DETAIL 6	9000 6786	ALL DRIVE GATES, RIGHT HAND PANEL WHEN FACING SUBSTATION.	1,2
7	FIRE MARSHAL	18"W X 12"H DETAIL 7	9000 8098	ALL DRIVE GATES, RIGHT HAND PANEL.	1,2
8	ADDRESS NUMBERS	24"W X 8"H DETAIL 8		MAIN GATE. LEFT HAND PANEL.	1,2



- NOTES**
- INSTALL APPROXIMATELY 5 FEET ABOVE FINISHED GRADE.
 - INSTALL USING HOG RING STAPLES (MALCO HRA5 OR EQUAL).
 - REFERENCE STANDARD 5-139-10 FOR ARC FLASH LABELS WITHIN SUBSTATION.
- REFERENCES**
- MSTR-9800, SIGNS FOR SUBSTATION YARDS.

DESIGNER NOTES:(REMOVE ON FINAL)

- UPDATE SUBSTATION NAME, STREET ADDRESS, CITY, AND COUNTY FOR EACH INDIVIDUAL SUBSTATION IN OUR SYSTEM.
- REFERENCE OREGON STATE FIRE MARSHAL "ACTIVE FACILITIES" SPREADSHEET, LOCATED ON THE S-DRIVE UNDER SPE/DESIGN/DESIGN ELECTRICAL/FIRE MARSHAL SUBSTATION IDS, FOR EACH INDIVIDUAL SUBSTATION FACILITY ID. UPDATE THE SUBSTATION NAME FOR EACH INDIVIDUAL SUBSTATION IN OUR SYSTEM.
- DETAIL 8 IS USED BY FIRE MARSHAL AND FOR EMERGENCY SERVICES IDENTIFICATION. THIS SIGN IS NOT REQUIRED FOR INSTALLATION IN ALL JURISDICTIONS. DESIGNER TO CONFIRM NEED WITH PROJECT ENGINEER.

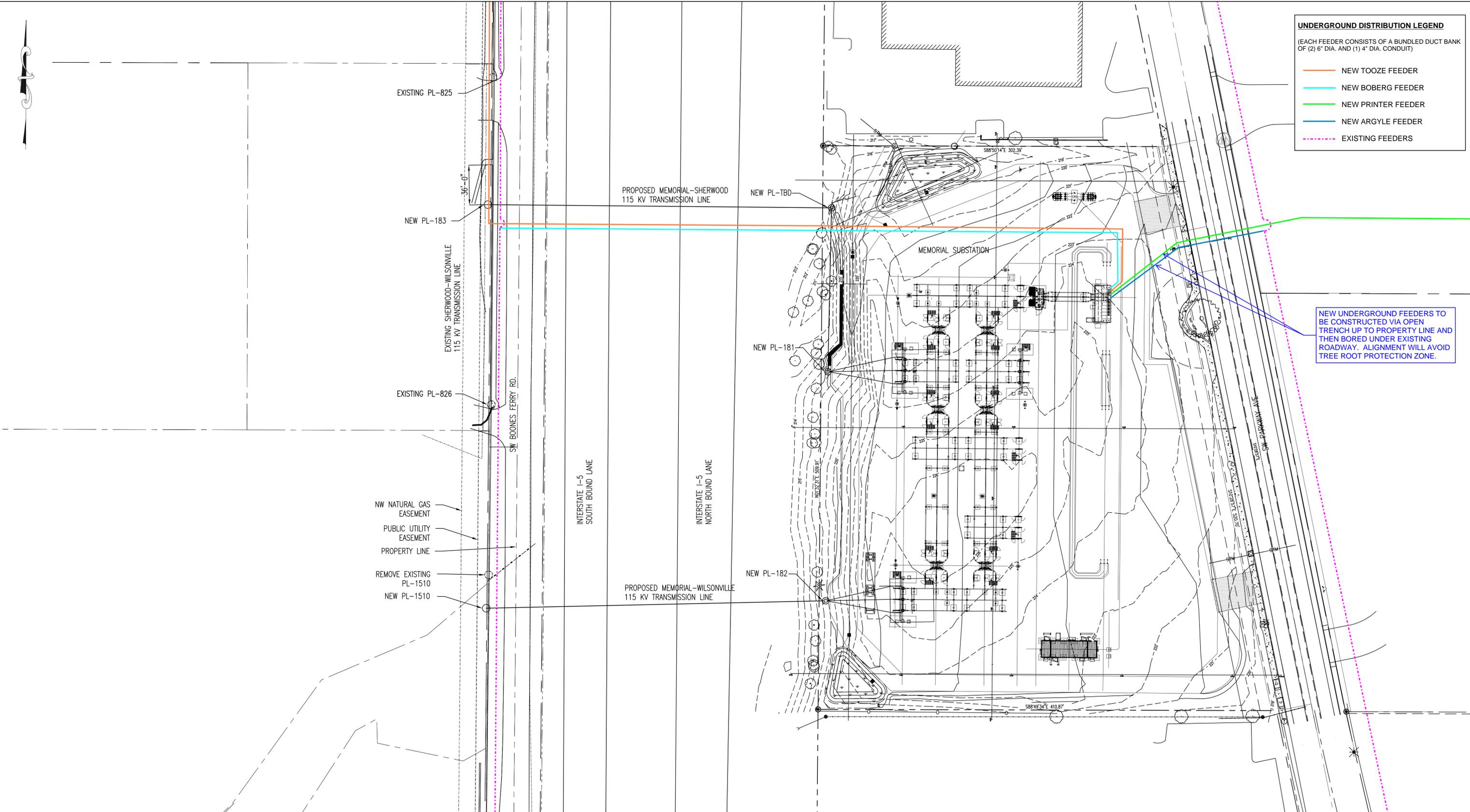
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REVISION DESCRIPTION					
ORIGINAL ISSUE:					
DATE	01-31-17	05-31-19	09-07-21		
REV.	0	1	2		
DESIGN MASTER SUBSTATION SIGNS SIGNS FOR FENCES					
MSTR-9801	SHEET 1 OF 1	DISTR CODE AG	SCALE NONE		
REV. S2					



UNDERGROUND DISTRIBUTION LEGEND
 (EACH FEEDER CONSISTS OF A BUNDLED DUCT BANK OF (2) 6" DIA. AND (1) 4" DIA. CONDUIT)

- NEW TOOZE FEEDER
- NEW BOBERG FEEDER
- NEW PRINTER FEEDER
- NEW ARGYLE FEEDER
- EXISTING FEEDERS

NEW UNDERGROUND FEEDERS TO BE CONSTRUCTED VIA OPEN TRENCH UP TO PROPERTY LINE AND THEN BORED UNDER EXISTING ROADWAY. ALIGNMENT WILL AVOID TREE ROOT PROTECTION ZONE.



LEGEND:

- PROPERTY LINE
- PUBLIC UTILITY EASEMENT & NW NATURAL EASEMENT
- GAS LINE
- 115 KV TRANSMISSION LINE
- PGE NEW STRUCTURE
- PGE EXISTING STRUCTURE

1	ISSUE FOR INFORMATION -UPDATED LINWORK	11/29/2023	ALB	ALB	MG	MG	
0	ISSUE FOR INFORMATION	07/20/2023	ALB	ALB	MG	MG	
REV	DESCRIPTION	DATE	DRN	DSGN	CKD	APPD	
DATE:	07/20/2023	SCALE:	1" = 40'	DRAWING NO.:	MEMORIAL SUBSTATION	JOB NO.:	M3280849
TITLE MEMORIAL SUBSTATION LOOP EXHIBIT- T-LINE							
CIRCUIT MEMORIAL-SHERWOOD & MEMORIAL WILSONVILLE							
LOCATION MEMORIAL SUBSTATION, WILSONVILLE OR							
COUNTY WASHINGTON							
SECTION(S) C3111D							
ENGINEER SUPERVISOR MATT GORDANIER							
ENGINEER ANDY BREWER							
PHONE 503-915-9441							
DRAWN BY ANDY BREWER							
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