

**SURVEY NARRATIVE**

THIS SURVEY WAS PERFORMED IN MARCH OF 2015 THROUGH MARCH OF 2016 AT THE REQUEST OF THE BONNEVILLE POWER ADMINISTRATION (BPA) TO SURVEY AND MONUMENT THE BOUNDARY OF THE REEDSPORT SUBSTATION PROPERTY LOCATED IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 4 AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 22 SOUTH, RANGE 12 WEST OF THE WILLAMETTE MERIDIAN, DOUGLAS COUNTY, OREGON BEING DESCRIBED IN THAT WARRANTY DEED RECORDED AS VOL. 161, PAGE 358, ON NOVEMBER 12, 1948, ALONG WITH THREE DISPOSALS CONVEYED TO THE CENTRAL LINCOLN PEOPLES' UTILITY DISTRICT, AS DESCRIBED IN VOL. 244, PAGE 723, VOL. 311, PAGE 323 AND INSTRUMENT NUMBER 94-23608, IN THE OFFICIAL RECORDS OF DOUGLAS COUNTY OREGON.

THE POINT OF BEGINNING (POB) FOR THE SUBSTATION AS DESCRIBED IN SAID VOL. 161, PAGE 358 WAS COMPUTED BY INTERSECTING A PROJECTION OF THE SOUTH RIGHT-OF-WAY LINE OF GREENWOOD AVE. WITH A LINE 80.00 FEET WESTERLY OF AND PARALLEL WITH THE EAST RIGHT-OF-WAY LINE OF 22ND STREET. SAID SOUTH RIGHT-OF-WAY LINE OF GREENWOOD AVE. WAS RESOLVED BY HOLDING FOUND MONUMENTS NUMBERED 1020 AND 1021. THE CENTERLINE OF 22ND STREET WAS RESOLVED BY HOLDING FOUND MONUMENT NUMBERED WM22S12W400700 ON CENTERLINE PER THE ORIGINAL PLAT OF REEDSPORT AND A 30.00 FOOT OFFSET FROM FOUND MONUMENT NUMBER 1019.

THE SOUTHEAST CORNER OF THE SUBSTATION WAS ESTABLISHED BY COMPUTING THE INTERSECTION OF SAID LINE 80.00 FEET WESTERLY OF THE EAST RIGHT-OF-WAY LINE OF 22ND STREET AND THE EXTENSION OF THE SOUTH RIGHT-OF-WAY LINE OF FIR STREET BY HOLDING FOUND MONUMENTS NUMBERED 1019 AND 1022 TO ESTABLISH SAID SOUTH RIGHT-OF-WAY LINE.

THE NORTHEASTERLY CORNER OF THE SUBSTATION WAS COMPUTED BY HOLDING SAID SOUTHEAST CORNER OF THE SUBSTATION AS DESCRIBED ABOVE AND A POINT 122.00 FEET SOUTH OF THE POINT OF BEGINNING, ALSO DESCRIBED ABOVE. BEING ON SAID LINE 80.00 FEET WEST OF THE EAST RIGHT-OF-WAY LINE OF 22ND STREET.

THE SOUTH LINE OF THE SUBSTATION WAS COMPUTED BY HOLDING THE FOUND BPA MONUMENTS, REED-PC01 AND REED-PC02, TO ESTABLISH THE TANGENT PORTION AND THEN FITTING A CONCENTRIC CURVE BACK TO THE COMPUTED SOUTHEAST CORNER OF THE SUBSTATION AS DESCRIBED ABOVE. THE DESCRIPTION OF THE US HWY 101 FRONTAGE ROAD, AS DESCRIBED IN VOL. 210, PAGE 196, BEING ADJACENT TO THE SOUTHERLY BOUNDARY OF THE SUBSTATION, CALLS TO THE SOUTHERLY LINE OF THE SUBSTATION AND RUNS PARALLEL WITH SAID SOUTHERLY LINE ALONG ITS FRONTAGE.

THE WEST LINE OF THE SUBSTATION WAS RESOLVED BY HOLDING FOUND BPA MONUMENTS REED-PC02 AND REED-PC03. BOTH OF THE LEGAL DESCRIPTIONS FOR THE ADJOINING PROPERTIES TO THE WEST OF THE SUBSTATION CALL DIRECTLY TO AND ALONG THE BPA LINE AS DESCRIBED IN SAID VOL. 161 PAGE 358.

THE ORIGINAL NORTH LINE OF THE SUBSTATION, PER SAID VOL. 161 PAGE 358, WAS COMPUTED BY HOLDING THE FOUND BPA MONUMENTS REED-PC03 AND REED-PC04 FOR THE TANGENT PORTION AND THEN BY COMPUTING A CONCENTRIC CURVE BACK TO THE ORIGINAL POB, COMPUTED AS DESCRIBED ABOVE. THE LAND DISPOSALS TO THE CENTRAL LINCOLN PEOPLES' UTILITY DISTRICT, WERE THEN COMPUTED BY USING THE RECORD DISTANCES FROM THE EASTERLY LINE OF THE SUBSTATION AND THE SOUTHERLY LINE OF VOL. 244, PAGE 723, BEING PERPENDICULAR TO THE EAST LINE OF THE SUBSTATION. INSTRUMENT NUMBER 94-23608 WAS COMPUTED BY HOLDING THE CALCULATED SOUTHWEST CORNER OF VOL. 344, PAGE 723, AND CONTINUING ON A LINE PERPENDICULAR TO THE EAST LINE OF THE SUBSTATION, THE RECORD DISTANCE OF 37.00 FEET. FROM THERE A BROKEN BOUNDARY WAS ESTABLISHED BETWEEN SAID POINT AND THE FOUND MONUMENT NUMBERED REED-PC05. INSTRUMENT NUMBER 94-23608 CALLS FOR THE LINE TO BE ALONG THE SUBSTATION FENCE, BUT THE FENCE THAT EXISTS TODAY IS NOT THE ORIGINAL FENCE THE LEGAL DESCRIPTION WAS BASED ON. SO IN COMPUTING THE BROKEN BOUNDARY MENTIONED ABOVE, ALL RECORD DISTANCES ON THIS COMMON LINE WERE HELD AS SHOWN HEREON.

THE RECORD BPA MONUMENTS WERE HELD AS SHOWN HEREON ALONG WITH THEIR RELATIONSHIP TO THE ORIGINAL HIGHWAY 101 CENTERLINE AS SHOWN ON ODOT DRAWING NO. 01B-22-0005. THE MONUMENTS WERE HELD AS FOUND, BASED ON THE LENGTH OF TIME THEY HAVE BEEN IN THE GROUND (SET IN 1949) AND THE FACT THEY HAVE BEEN ACCEPTED BY BOTH OTHER PRIVATE SURVEYORS AND STATE AGENCIES (ODOT) AS THE INTENDED LOCATION OF THIS BPA FACILITY, EVEN THOUGH THE RELATIONSHIP WITH THE NORTHERLY LINE OF THE ORIGINAL HIGHWAY 101 RIGHT-OF-WAY IS NOT PERFECTLY PARALLEL AS CALLED FOR IN THE VOL. 161, PAGE 358. THE RECORD AND MEASURED DIMENSIONS OF THIS RELATIONSHIP ARE SHOWN HEREON. THE CURRENT CENTERLINE OF HIGHWAY 101 AS SHOWN ON ODOT DRAWING NO. 7B-07-0012 WAS COMPUTED BY HOLDING RECORD STATION AND OFFSETS PER REFERENCE R6 AND R7 AT FOUND MONUMENTS NUMBERED 1007 AND 1011. THE CENTERLINE OF THE ORIGINAL HIGHWAY (NOW LONGWOOD DRIVE) WAS COMPUTED USING FOUND MONUMENTS PER REFERENCES R6, R7, R10 AND R11. COORDINATE RELATIONSHIP BETWEEN POINTS LISTED ON REFERENCE R-7 WERE USED TO COMPUTE THE RELATIONSHIP OF THE ORIGINAL AND EXISTING HIGHWAY CENTERLINE. THE ORIGINAL HIGHWAY CENTERLINE WAS OFFSET THE RECORD 40.00 FEET TO ESTABLISH THE NORTHERLY LINE OF THE ORIGINAL HIGHWAY.

THERE WERE ENCROACHMENTS FOUND ALONG THE WESTERLY LINE OF THE SUBSTATIONS AS SHOWN IN DETAIL "B" ON SHEET 2. THE BOUNDARIES FOR THE MILLER PROPERTY (INSTRUMENT NUMBER 2006-020196) WERE COMPUTED AS FOLLOWS: THE WEST LINE WAS COMPUTED BY HOLDING FOUND MONUMENTS NUMBERED 1000 AND 1017. THE SOUTH LINE WAS BY COMPUTED HOLDING FOUND MONUMENTS NUMBERED 1004 AND 1005. THE NORTHERLY LINE WAS COMPUTED BY HOLDING THE RECORD TURNING ANGLE FROM THE ESTABLISHED WEST LINE AND THE RECORD DISTANCE PER REFERENCE R-1. THE LINE COMMON WITH THE BPA SUBSTATION WAS ESTABLISHED AS DESCRIBED ABOVE, USING THE FOUND MONUMENTS NUMBERED REED-PC02, REED-PC03 AND REED-PC04. IT WAS DETERMINED THAT FOUND MONUMENT REED-RC01, DOES NOT FIT THE CALCULATED NORTHERLY BOUNDARY OF THE SUBSTATION (SEE DETAIL "A", SHEET 2), BUT WAS HELD TO ESTABLISH THE EAST LINE OF SAID MILLER PROPERTY AND THE WEST LINE OF THE CENTRAL LINCOLN PEOPLES' UTILITY DISTRICT PROPERTY.

THE BOUNDARIES FOR THE WEST PROPERTIES, INC. PROPERTY (INSTRUMENT NUMBER 2004-000162) WERE RESOLVED BY HOLDING THE MONUMENTS NUMBERED 1000, 1004, 1005 AND REED-PC02 PER REFERENCES R1, R3 AND R8 AS SHOWN HEREON.

INTERIOR PROPERTY CORNERS ON THE LINES COMMON WITH THE CENTRAL LINCOLN PEOPLES' UTILITY DISTRICT PROPERTY WERE NOT SET DUE TO SAFETY CONCERNS WITH ENTERING ENERGIZED FACILITIES TO RECOVER THESE CORNERS.

MONUMENTS FOR REED-PC05 AND REED-PC06 WERE SET ON FEBRUARY 10, 2016.

**RECORD OF SURVEY**

**REEDSPORT SUBSTATION**

**LYING WITHIN**

**THE NE1/4NE1/4 OF SECTION 4 AND  
THE NW1/4NW1/4 OF SECTION 3 T.22S., R.12W., W.M.  
DOUGLAS COUNTY, OREGON**

FILED  
Date: 3-30-2016 By: JC  
This survey consists of:  
Map: M170-54 A-E  
Cover Page: \_\_\_\_\_  
DOUGLAS COUNTY  
RECORDS

**SHEET INDEX**

1. VICINITY MAP, NARRATIVE & REFERENCES.
2. LEGAL DESCRIPTION, DETAILS AND LEGEND
3. MONUMENT TABLES, CONTROL TABLE AND CURVE TABLE
- 4.-5. SURVEY SHEETS

**PROCEDURAL AND EQUIPMENT NOTES:**

ALL MONUMENTS WERE TIED WITH EITHER MULTIPLE OCCUPATION/MULTIPLE BACKSITE INSTRUMENT TIES, DOUBLE OCCUPATION RTK TIES FROM SEPARATE BASE LOCATIONS OR MULTIPLE OREGON REALTIME GPS NETWORK (ORGN) OCCUPATIONS FOR REDUNDANCY TO ALL MONUMENTS TIED.

THE FIELD SURVEY WAS PERFORMED USING ONE TRIMBLE R8-GNSS MODEL 2 GPS RECEIVER, ONE TRIMBLE R8 GPS RECEIVER, ONE TRIMBLE R7-GNSS GPS RECEIVER WITH A ZEPHYR GEODETIC MODEL 2 ANTENNA, ONE TRIMBLE S6 ROBOTIC TOTAL STATION AND ONE TRIMBLE TSC3 CONTROLLER WITH TRIMBLE ACCESS SOFTWARE. TRIMBLE BUSINESS CENTER SOFTWARE WAS USED TO PROCESS THE FIELD DATA.

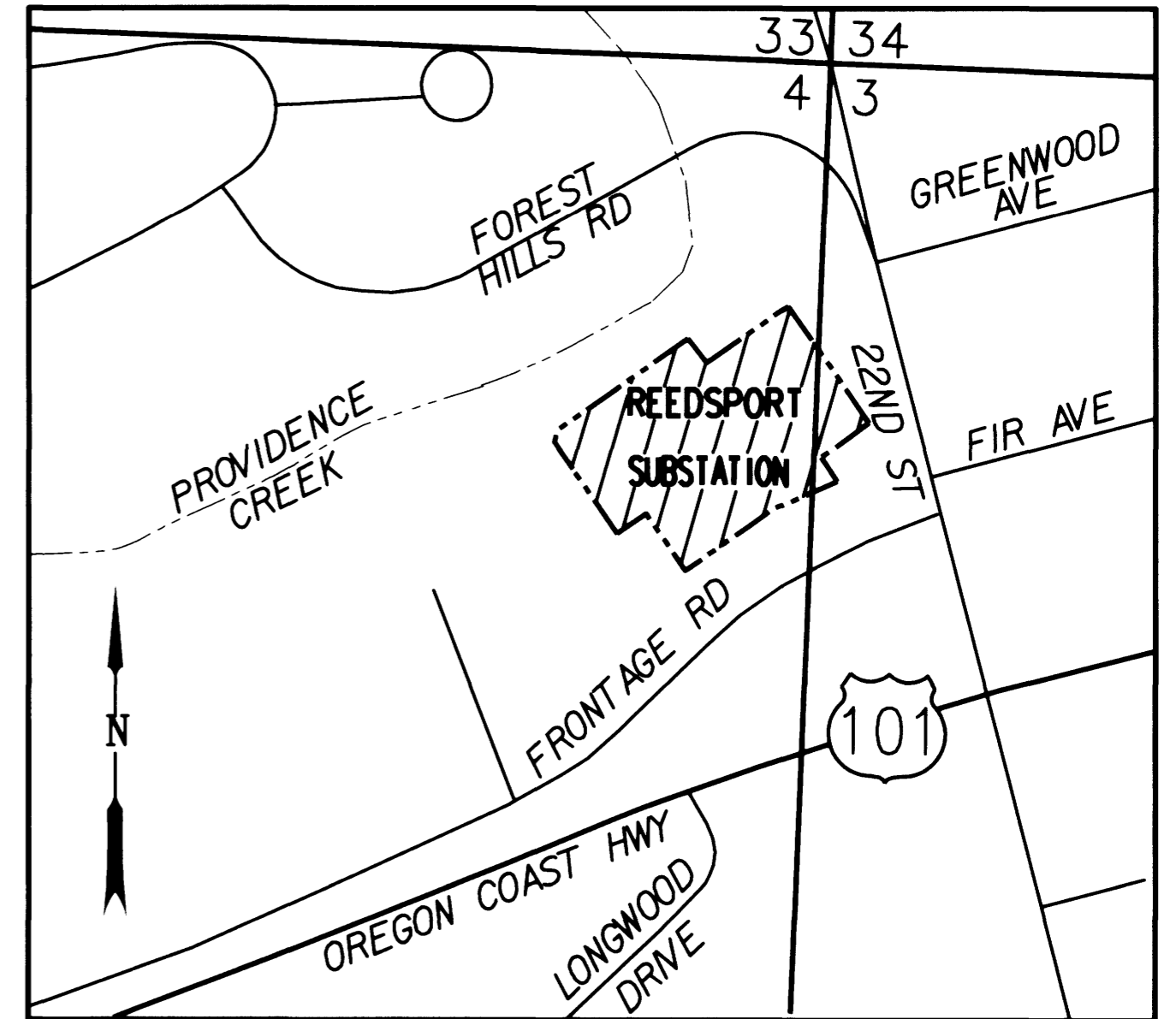
**NOTES:**

1. AMERITITLE PRELIMINARY TITLE REPORT, FILE NO. 32464AM, DATED FEBRUARY 23, 2015 WAS USED IN PREPARING THIS SURVEY.
2. SITE STREET ADDRESS: 210 NORTH 22ND STREET REEDSPORT, OREGON 97467

**BASIS OF BEARINGS AND HORIZONTAL DATUM**

BEARINGS AND COORDINATES SHOWN ARE BASED ON OREGON STATE PLANE COORDINATE SYSTEM - SOUTH ZONE (3602) NAD 83(2011) EPOCH 2010.0000 (APPLIED TO THE LINE BETWEEN FOUND MONUMENTS NUMBER REED-PC02 AND REED-PC03), ESTABLISHED BY USING THE NATIONAL GEODETIC SURVEY'S (NGS) ONLINE POSITIONING USER SERVICE - RAPID STATIC (OPUS-RS). PRIMARY CONTROL WAS ESTABLISHED ON THREE POINTS REEDA, REEDB AND REEDC. CONVENTIONAL TIES BETWEEN CONTROL POINTS WERE MADE TO VERIFY THE ANGLES AND DISTANCES BETWEEN THE OPUS-RS POSITIONS. THIS SURVEY USES INTERNATIONAL FEET UNITS.

DISTANCES SHOWN ARE GROUND DISTANCES. THE COMBINED GROUND TO GRID SCALE FACTOR IS 0.99993777. COORDINATES SHOWN ARE GRID. THE CONVERGENCE ANGLE AT POINT REEDA IS -02°28'46".



**VICINITY MAP**  
NOT TO SCALE

**SURVEY/MAP REFERENCES**

(DOUGLAS COUNTY SURVEY RECORDS)

- R1 - M127-49
- R2 - C.S. 58/201-1
- R3 - M49-44
- R4 - C.S. 51/283
- R5 - PLAT OF "REEDSPORT", VOL 3, PAGE 32 OF PLATS
- R6 - ODOT ROLL MAP 7B-07-12
- R7 - ST HWY 101-008A - 101-008F
- R8 - BPA SERIAL NO. 38233 (DRAWING \*221-02-340-D1, SHEET 33 OF 33)
- R9 - M161-53
- R10 - C.S. 63/3-5
- R11 - ODOT ROLL MAP 1B-22-0005

**DEED REFERENCES:**

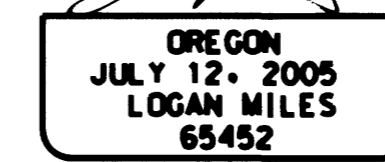
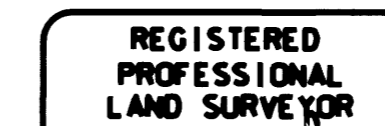
(DOUGLAS COUNTY RECORDS)

- D1 - VOL. 161, PAGE 358 (11/12/1948)
- D2 - VOL. 210, PAGE 196 (07/02/1952)
- D3 - VOL. 244, PAGE 723 (06/02/1955)
- D4 - INSTRUMENT NO. 94-23608 (11/07/1994)
- D5 - INSTRUMENT NO. 2004-000162 (01/05/2004)
- D6 - VOL. 311, PAGE 323 (03/11/1962)
- D7 - INSTRUMENT NO. 2006-020196 (08/17/2006)
- D8 - VOL. 326, PAGE 66 (07/25/1963)
- D9 - VOL. 740, PAGE 625 (12/20/1979)
- D10 - VOL. 332, PAGE 183 (02/26/1964)
- D11 - AMERITITLE PRELIMINARY TITLE REPORT FILE NO. 32464AM, DATED FEBRUARY 23, 2015

**SURVEYOR'S CERTIFICATE**

I, LOGAN MILES, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF OREGON DO HEREBY CERTIFY THAT THIS MAP IS AN ACCURATE REPRESENTATION OF THE SURVEY COMPLETED UNDER MY SUPERVISION.

LOGAN MILES  
LICENSE NO. 65452  
DATE 3/29/16



RENEWAL: DEC. 31, 2016  
Signed: 3/29/16

Corporate Office: 820 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-8088, 541-683-0080  
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www.obec.com

**BONNEVILLE POWER ADMINISTRATION**

**REEDSPORT SUBSTATION  
RECORD OF SURVEY  
DOUGLAS COUNTY, OREGON**

MARCH 29, 2016  
NO SCALE  
SHEET 1 OF 5

DESIGNED: L. MILES  
DRAWN: C.BARROWS  
CHK'D: A. CUTSFORTH

PROJ. NO. 684-003.15  
W/O# 356103\_17

MAP File No M170-54A

MAP File No M170-54A