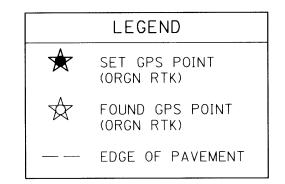
SHEET INDEX

- SHEET LAYOUT, CONTROL POINT SCHEMATIC, BASIS OF BEARING & NARRATIVE
- CONTROL POINT AND FOUND MONUMENT TABLES, LIST OF REFERENCES
 - & CONTROL POINT CONFIDENCE LEVEL LIMITS
- 3.-4. MONUMENT RECOVERY SURVEY



SEE SHEET 2 FOR CONTROL POINT COORDINATE TABLE & CONFIDENCE LEVEL LIMITS TABLE

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO PROVIDE FOR THE PERPETUATION OF THE LOCATIONS OF SURVEY MONUMENTS OF RECORD THAT MAY BE DESTROYED BY THIS PROJECT'S CONSTRUCTION. PERPETUATION OF THE MONUMENT LOCATIONS WAS ACCOMPLISHED BY TYING THE MONUMENTS TO THE PROJECT CONTROL NETWORK. THIS SURVEY MEETS THE REQUIREMENTS FOR A RECOVERY SURVEY AS OUTLINED IN THE OREGON REVISED STATUTES CHAPTER 209.155. THIS SURVEY WAS MADE AT THE REQUEST OF JACKSON COUNTY AND THE OREGON DEPARTMENT OF TRANSPORTATION IN SUPPORT OF THE PROPOSED EXTENSION OF THE BEAR CREEK GREENWAY TRAIL FROM PINE STREET TO UPTON ROAD.

THIS SURVEY DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY OR RIGHT-OF-WAY RETRACEMENT SURVEY. ALL PROPERTY LINES AND RIGHT-OF-WAY LINES AS SHOWN HEREON ARE APPROXIMATE. SAID LINES ARE SHOWN FOR GRAPHIC REPRESENTATION ONLY.

ALL DISTANCES, COORDINATES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE OREGON COORDINATE REFERENCE SYSTEM GRANTS PASS-ASHLAND ZONE PROJECTION PARAMETERS. THIS SURVEY USES INTERNATIONAL FEET UNITS.

SURVEY EQUIPMENT USED CONSISTED OF TWO TRIMBLE R8 GPS RECEIVERS, ONE TRIMBLE S6 ROBOTIC TOTAL STATION, ONE SOKKIA SDL30 DIGITAL LEVEL, ONE TRIMBLE TSC2 CONTROLLER AND ONE TRIMBLE TSC3 CONTROLLER.

CONTROL NARRATIVE

PROJECT: BEAR CREEK GREENWAY TRAIL: PINE STREET TO UPTON ROAD LOCATION: JACKSON COUNTY, OREGON OBEC PROJECT: 0019-0100.29 SURVEY DATUM: HORIZONTAL - OCRS: GRANTS PASS-ASHLAND ZONE

NAD83 (CORS96) EPOCH 2002 (INTERNATIONAL FEET)

OREGON COORDINATE REFERENCE SYSTEM (OCRS)

NORTH AMERICAN DATUM OF 1983 LATITUDE OF GRID ORIGIN: 41°45′00″ N CENTRAL MERIDIAN: 123°20′00″ W FALSE NORTHING: 0.000 M (0.00 FT)

HORIZONTAL CONTROL SURVEY

PRIMARY CONTROL FOR THIS PROJECT WAS ESTABLISHED BY USING THE OREGON REAL TIME GPS NETWORK (ORGN) TO ESTABLISH HORIZONTAL POSITIONS FOR CONTROL POINTS 1 THROUGH 13. THE MEAN NORTHINGS AND EASTINGS OF TWO SEPARATE OBSERVATIONS WITH A MINIMUM DURATION OF 180 EPOCHS, UNDER DIFFERENT SATELLITE CONSTELLATIONS, WERE HELD FIXED.

CONTROL POINTS FOR THIS SURVEY WERE NOT SET ON AND DO NOT REPRESENT PROPERTY LINES OR RIGHT-OF-WAY LINES AND ARE INTENDED FOR LISE BY JACKSON COUNTY. THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) AND OBEC CONSULTING ENGINEERS (OBEC) IN SUPPORT OF FUTURE PROJECTS. IT IS NOT THE INTENT OF JACKSON COUNTY, ODOT, OR OBEC TO PERPETUATE THESE CONTROL POINTS AS MONUMENTS.

VERTICAL CONTROL SURVEY

VERTICAL CONTROL IS BASED ON THE NAVD88 (GEOID12) VERTICAL DATUM AND WAS ESTABLISHED BY HOLDING THE ORGN DERIVED ELEVATION OF CONTROL POINT NUMBER 1. A DIGITAL LEVEL LOOP WAS THEN RUN THROUGH CONTROL POINTS 2 THROUGH 13.

GRANTS PASS-ASHLAND ZONE PARAMETERS

T36S R2W

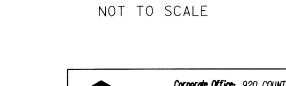
T37S R2W

DLC 57

34 | 35

D

CENTRAL MERIDIAN SCALE: 1.000043 (EXACT)



CONSULTING

ENGINEERS

www.obec.com

SHEET 4

CONTROL POINT SCHEMATIC,

BASIS OF BEARING & SHEET LAYOUT

DLC 55

DLC 56

NW 1/4 SEC 2 T37S R2W WM

NE 1/4 SEC 2 T37S R2W WM

SE 1/4 SEC 2 T37S R2W WM

SW 1/4 SEC 2 T37S R2W WM

NE 1/4 SEC 3 T37S R2W WM

SE 1/4 SEC 34 T36S R2W WM

SW 1/4 SEC 35 T36S R2W WM

T36S R2W

T37S R2W

LOT 2

LOT 3

二丰二 DLC 55

FILE NAME: 17883ret.dan Corporate Office: 920 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-6089, 541-683-6090

> 3990 FAIRVIEW INDUSTRIAL DRIVE SE, SUITE 200 SALEM, OREGON 97302-1166, 503-589-4100 831 O'HARE PARKWAY MEDFORD, OREGON 97504-4005, 541-774-5590 5000 MEADOWS ROAD, SUITE 420 LAKE OSWEGO, OREGON 97035, 503-620-6103

JACKSON COUNTY & OREGON DEPARTMENT OF TRANSPORTATION HORIZONTAL CONTROL AND MONUMENT RECOVERY SURVEY

PINE STREET

BEAR CREEK GREENWAY TRAIL: PINE STREET TO UPTON ROAD

JACKSON COUNTY

ODOT REGION 3 100 ANTELOPE ROAD WHITE CITY, OR 97503

KEY NO. 17883

APRIL, 2013 NO SCALE SHEET 1 OF 4

* * RECEIVED * *

DATE 4-29-13BY She

This survey consists of:

 \mathcal{A}_{\perp} sheet(s) Map

O page(s) Narrative

JACKSON COUNTY

SURVEYOR

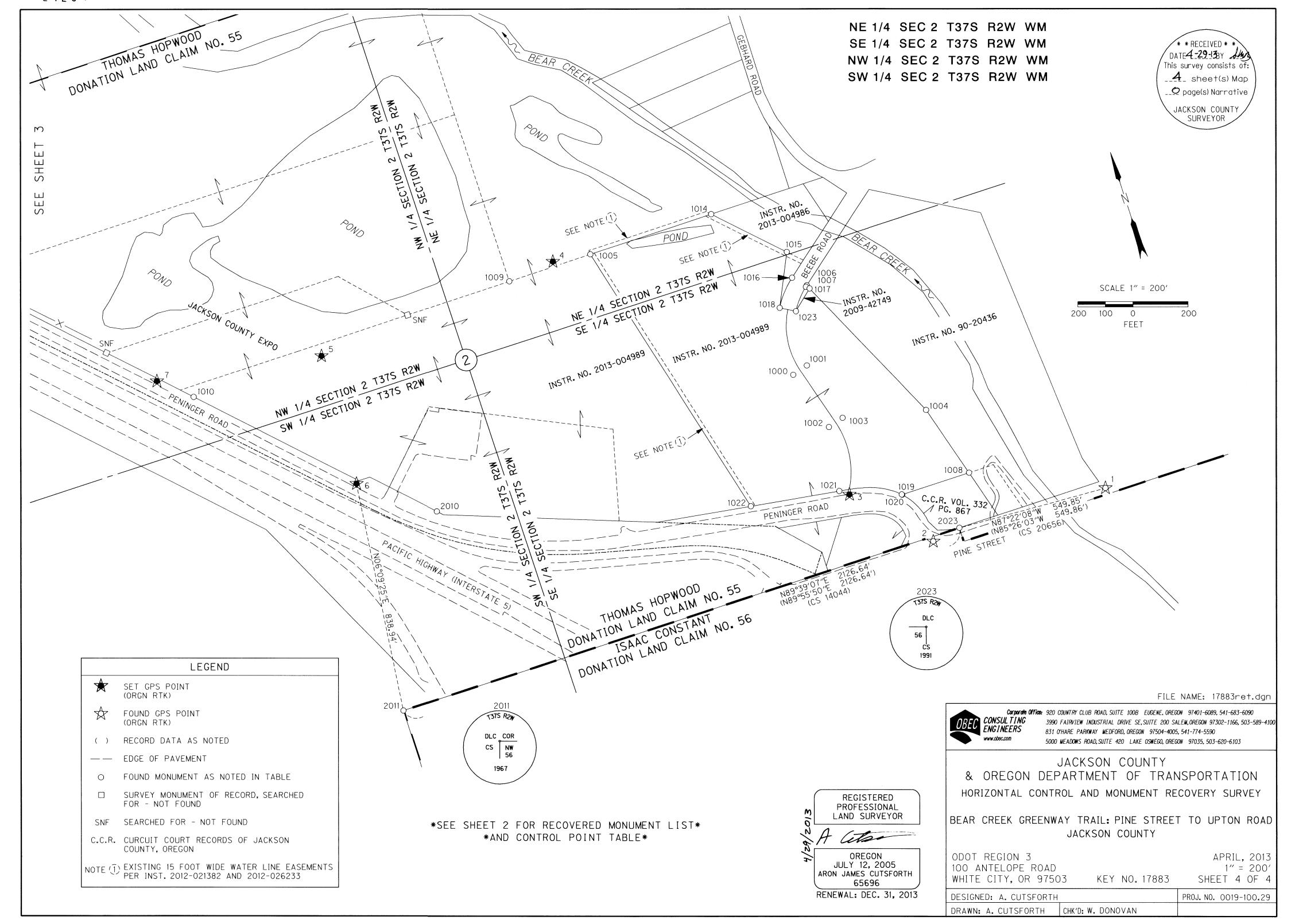
35 | 36

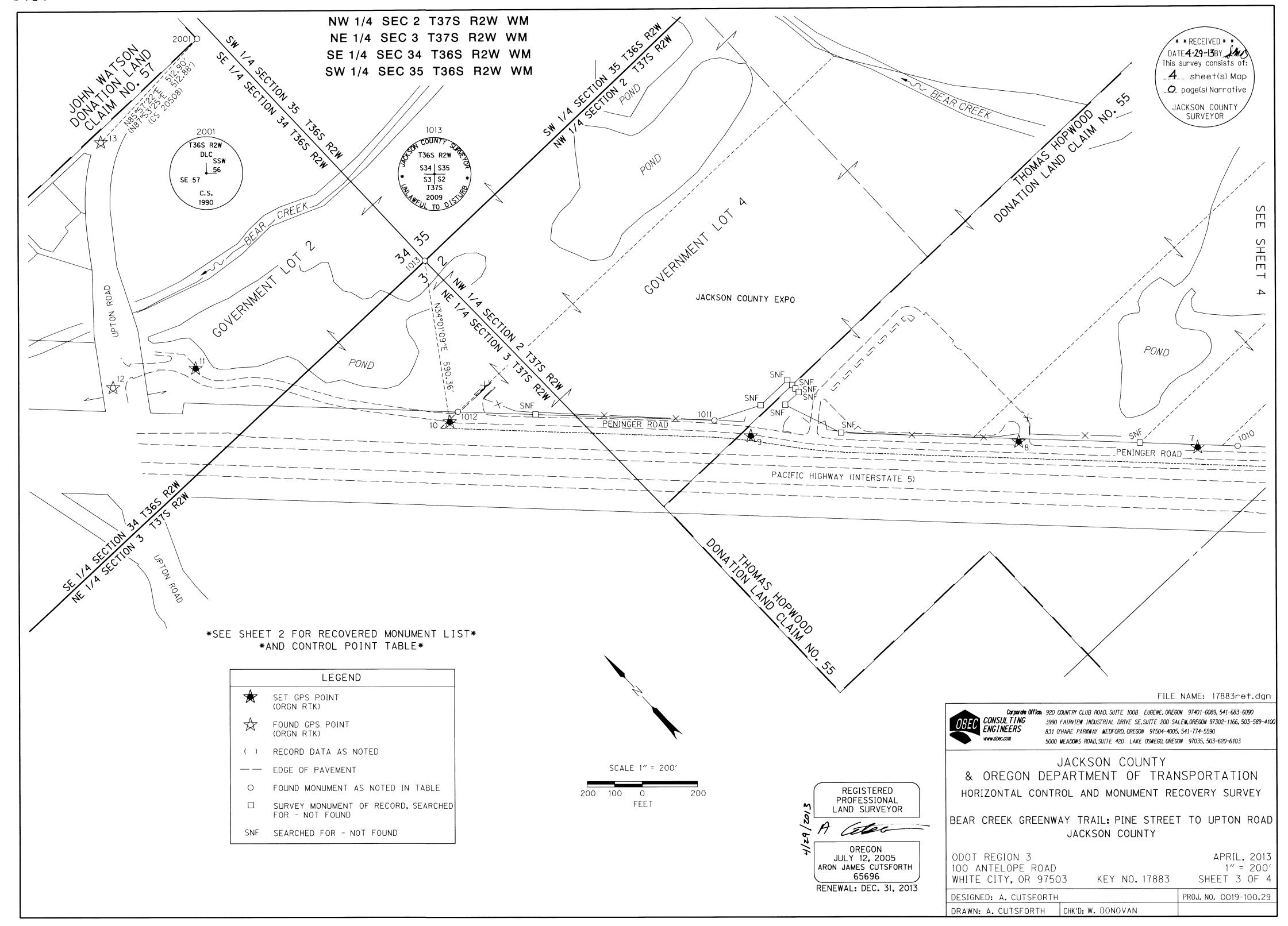
LOT 1

=BEEBE ROAD

J. COLTON OBEC | DESIGNED: A. CUTSFORTH PROJ. NO. 0019-100.29 CHK'D: W. DONOVAN APPROVED BY: GROUP MANAGER DRAWN: A. CUTSFORTH

TRANSVERSE MERCATOR PROJECTION FALSE EASTING: 50,000.000 M (164041.9948 FT)





REFERENCES

- 1. CS 1637, BY MARK E. BOYDEN, DATED MARCH 2, 1961
- 2. CS 1971, BY MARK E. BOYDEN, DATED APRIL, 1962
- 3. CS 20508, BY LOGAN MILES, DATED SEPTEMBER, 2009
- 4. CS 20656, BY ARON CUTSFORTH, DATED APRIL, 2010
- 5. CS 14044, BY JAMES E. HIBBS, DATED JUNE 6, 1994
- 6. CS 21217, BY ROBERT V. NEATHAMER, DATED FEBRUARY 26, 2013
- 7. ODOT RIGHT-OF-WAY DRAWING NO. 8B-8-23
- 8. ODOT RIGHT-OF-WAY DRAWING NO. 1A-13-26R
- 9. INSTRUMENT NO. 74-1660
- 10. INSTRUMENT NO. 74-7189
- 11. INSTRUMENT NO. 90-20436
- 12. INSTRUMENT NO. 2009-42749
- 13. INSTRUMENT NO. 2010-28968
- 14. INSTRUMENT NO. 2013-004986
- 15. INSTRUMENT NO. 2013-004989

RECOVERED MONUMENT LIST

CONTROL POINT COORDINATE TABLE

16. CIRCUIT COURT RECORDS VOL. 332, PAGE 867

NW 1/4 SEC 2 T37S R2W WM
NE 1/4 SEC 2 T37S R2W WM
SE 1/4 SEC 2 T37S R2W WM
SW 1/4 SEC 2 T37S R2W WM
NE 1/4 SEC 3 T37S R2W WM
SE 1/4 SEC 34 T36S R2W WM
SW 1/4 SEC 35 T36S R2W WM

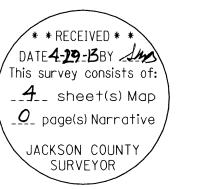
FD = FOUND

CS = COUNTY SURVEY

ID = INSIDE DIAMETER
OD = OUTSIDE DIAMETER

OPC = ORANGE PLASTIC CAP

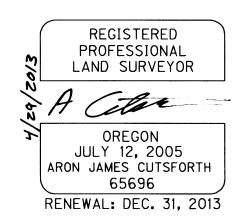
JCCR = JACKSON COUNTY CORNER RECORDS



1.96 SIGMA (95%) CONFIDENCE LEVEL LIMITS-RTK GPS CONFIDENCE TABLE

PT		
NO	SOLUTION	RMS
1	WIDE AREA RTK - L1 FIXED	0.02′
2	WIDE AREA RTK - L1 FIXED	0.02′
3	WIDE AREA RTK - L1 FIXED	0.02′
4	WIDE AREA RTK - L1 FIXED	0.02′
5	WIDE AREA RTK - L1 FIXED	0.02′
6	WIDE AREA RTK - L1 FIXED	0.03′
7	WIDE AREA RTK - L1 FIXED	0.03′
8	WIDE AREA RTK - L1 FIXED	0.05′
9	WIDE AREA RTK - L1 FIXED	0.02′
10	WIDE AREA RTK - L1 FIXED	0.03′
1 1	WIDE AREA RTK - L1 FIXED	0.02′
12	WIDE AREA RTK - L1 FIXED	0.02′
13	WIDE AREA RTK - L1 FIXED	0.03′

RMS (ROOT MEAN SQUARE) AFTER A MINIMUM OF 180 MEASUREMENTS OF EACH BASE LINE INDICATES THE QUALITY OF THE SOLUTION BASED ON MEASUREMENT NOISE. THE LOWER THE RMS VALUE, THE HIGHER THE QUALITY OF THE BASELINE. RMS IS EXPRESSED IN FEET AND IS THE RADIUS OF THE ERROR CIRCLE WITHIN WHICH 95% OF THE POSITION FIXES ARE FOUND.



FILE NAME: 17883ret.dgn

Corporate Office
OBEC CONSULTING
ENGINEERS

 Corporate Office:
 920 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-6089, 541-683-6090

 IL TING
 3990 FAIRVIEW INDUSTRIAL DRIVE SE, SUITE 200 SALEM, OREGON 97302-1166, 503-589-4100

 IEERS
 831 O'HARE PARKWAY MEDFORD, OREGON 97504-4005, 541-774-5590

 COOM
 5000 MEADOWS ROAD, SUITE 420 LAKE OSWEGO, OREGON 97035, 503-620-6103

JACKSON COUNTY

& OREGON DEPARTMENT OF TRANPORTATION HORIZONTAL CONTROL AND MONUMENT RECOVERY SURVEY

BEAR CREEK GREENWAY TRAIL: PINE STREET TO UPTON ROAD

JACKSON COUNTY

ODOT REGION 3 100 ANTELOPE ROAD WHITE CITY, OR 97503

KEY NO. 17883

APRIL, 2013 NO SCALE SHEET 2 OF 4

DESIGNED: A. CUTSFORTH CHK'D: W. DONOVAN PROJ. NO. 0019-100.29

PT	OCRS	OCRS		
ID	NORTHING	EASTING	DATE	DESCRIPTION & REFERENCE DOCUMENTS
1000	230203.03	280898.42	8/13/12	FD 1" OD IRON PIPE IN CONCRETE, SMASHED, DOWN 0.4', PER CS 1971
1001	230220.11	280955.99	8/13/12	FD 1" OD IRON PIPE IN CONCRETE, SMASHED, DOWN 0.5', PER CS 1971
1002	229983.36	280963.80	8/13/12	FD 1" OD IRON PIPE IN CONCRETE, GOOD CONDITION, DOWN 0.1', PER CS 1971
1003	230000.17	281021.55	8/13/12	FD 1" OD IRON PIPE IN CONCRETE, GOOD CONDITION, UP 1.0', PER CS 1971
1004	229934.69	281318.97	8/13/12	FD 3/4" ID IRON PIPE, GOOD CONDITION, DOWN 0.3', PER CS 1971
1005	230843.74	280331.26	8/13/12	FD STONE WITH SCRIBED X, GOOD CONDITION, DOWN 1.80', AS SHOWN PER CS 1637 & 1971
1006		281044.58	8/15/12	FD 3/4" ID IRON PIPE, GOOD CONDITION, FLUSH, PER CS 1971
1007	230492.36	281040.16	8/15/12	FD 3/4" ID IRON PIPE, GOOD CONDITION, FLUSH, PER CS 1971
1008	229670.52	281397.79	9/12/12	FD 3/4" ID IRON PINE IN CONCRETE, GOOD CONDITION, DOWN 1.0', PER CS 1971
1009		280021.32		FD 3/4" ID IRON PIPE, BENT, TIED AT SPIN POINT, DOWN 0.5', PER CS 1637
1010		278800.47		FD 3/4" IRON ROD, GOOD CONDITION, DOWN 0.3', PER ODOT DWG. NO. 8B-8-23
1011	+ -	277470.52	9/12/12	FD 3/4" IRON ROD, BENT, TIED AT SPIN POINT, DOWN 1.2', PER ODOT DWG. NO. 8B-8-23
1012		276809.41	9/12/12	FD 3/4" ID IRON PIPE, BENT, TIED AT SPIN POINT, DOWN 1.5', PER CS 1637
1013		277093.14		FD 3-1/2" BRASS DISK IN CONCRETE STAMPED "T36S R2W, S34, S35, S2,S3, T37S, 2009 ", FLUSH, PER JCCR
1014		280793.24	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1015		281012.88	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1016	· · · · · · · · · · · · · · · · · · ·	281002.38	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1017	230482.56	~~~~~	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH IN FALLEN TREE, PER CS 21217
1018	· · · · · · · · · · · · · · · · · · ·	280926.17	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1019		281140.81	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1020	229669.06		3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1021	+	280928.56	3/4/13	FD .38 CALIBER SHELL CASING, GOOD CONDITION, FLUSH W/CONCRETE, PER CS 21217
1022	229797.71	280605.68	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217
1023	230419.35	280978.42	3/4/13	FD 5/8" IRON ROD W/OPC STAMPED "NEATHAMER SURVEYING", GOOD CONDITION, FLUSH, PER CS 21217

234437.53 277035.59 9/12/12 FD 2-1/2" BRASS DISK IN CONCRETE STAMPED " T36S R2W, DLC SSW 56, SE 57, C.S. 1990", DOWN 0.3', PER JCCR

230138.42 279514.23 9/12/12 FD 5/8" IRON ROD, GOOD CONDITION, DOWN 0.3', PER ODOT DWG. NO. 8B-8-23

229478.61 279176.40 9/12/12 FD 2-1/2" BRASS CAP STAMPED "T37S R2W, DLC COR, NW56, CS 1967", DOWN 0.3', PER JCCR

2023 | 229491.53 | 281303.00 | 9/12/12 | FD 1" OD IRON PIPE W/2-1/2" BRASS CAP STAMPED "T37S R2W, DLC 56, CS 1991", DOWN 1.2', PER JCCR

* = LEVELED ELEVATION

FD = FOUND

RPC = RED PLASTIC CAP

CS = COUNTY SURVEY

CP# = CONTROL POINT NUMBER

PT.	OCRS	OCRS	(NAVD 88)	ELLIPSOID	GEOIDAL	CONVERGENCE	DATE	
NO.	NORTHING	EASTING	ELEVATION	HEIGHT	SEPARATION	ANGLE		DESCRIPTION
1	229466.29	281852.27	1266.96	1187.19′	-79.77′	0°17′38″	8/7/12	FD 3" BRASS DISK STAMPED "RESET 1980", CP#7 PER CS 20656
2	229473.42	281197.41	1264.99*	N/A	N/A	0°17′32″	8/7/12	FD 1" COPPER PLUG STAMPED "OBEC", FLUSH IN CONCRETE, CP#5
								PER CS 20656
3	229727.99	280959.63	1261.89*	N/A	N/A	0°17′30″	8/7/12	FD MAG NAIL W/WASHER, FLUSH IN PAVEMENT
4	230860.25	280193.62	1254.93*	N/A	N/A	0°17′23″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
5	230792.16	279287.42	1249.62*	N/A	N/A	0°17′15″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
6	230312.71	279266.38	1254.74*	N/A	N/A	0°17′15″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
7	230887.52	278690.83	1249.80*	N/A	N/A	0°17′10″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
8	231342.96	278227.95	1246.82*	N/A	N/A	0°17′06″	8/7/12	SET 1" COPPER PLUG STAMPED "OBEC", FLUSH IN CONCRETE CURB
9	232019.03	277529.23	1241.20*	N/A	N/A	0°16′59″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
10	232797.65	276762.85	1235.41*	N/A	N/A	0°16′53″	8/7/12	SET 5/8" REBAR W/RPC MARKED "OBEC CONTROL", DOWN 0.1'
1 1	233566.37	276217.21	1237.92*	N/A	N/A	0°16′48″	8/7/12	SET 1" COPPER PLUG STAMPED "OBEC", FLUSH IN CONCRETE CURB
12	233718.51	275950.45	1254.54*	N/A	N/A	0°16′45″	8/7/12	FD MAG NAIL W/WASHER, FLUSH, CP#3 PER CS 20508
13	234401.36	276523.97	1234.89*	N/A	N/A	0°16′51″	8/7/12	FD 5/8" IRON ROD W/RPC MARKED "OBEC CONTROL", DOWN 0.1',
								CP#1 PER CS 20508