



Office of the County Recorder
St. Louis County, Minnesota
Recorded on 01/14/2020
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Wendy Levitt
County Recorder

By B Goodreau Deputy
AFR 394761

Document: CERT LOCATION/GOVT CORNERS
Grantor: CERTIFICATE OF
Grantee: GOVT CORNER POST

Recording Fee: \$0.00
Well Certificate Fee: \$0.00

This page has been added by the St. Louis County Recorder/Registrar of Titles to add the recording information to the attached document.

CERTIFICATE OF LOCATION OF GOVERNMENT CORNER

Quarter Corner common to Sections 3 & 34,
Township 57 & 58 North, Range 13 West, 4th P.M.
STATE OF MINNESOTA, COUNTY OF ST. LOUIS.

On 7/15/1985: Charlie Chernak, U.S. Forest Service, and his survey crew reset a 2 1/4" diameter by 36" long Brass Capped Aluminum Pipe (BCP) so that it matched the location where Bernard Keegan, of the DM&R, had found the 1/4 post in 1896.
On 2/6/2019, Matt Brunner & Zach Neunsinger made a VRS GPS observation over the Forest Service pipe. All of the Forest Service references were now stumps, so they tagged 4 other trees as references.

Recorded on: JAN 14 2020
at 12 34 P m
Document No. 1371408

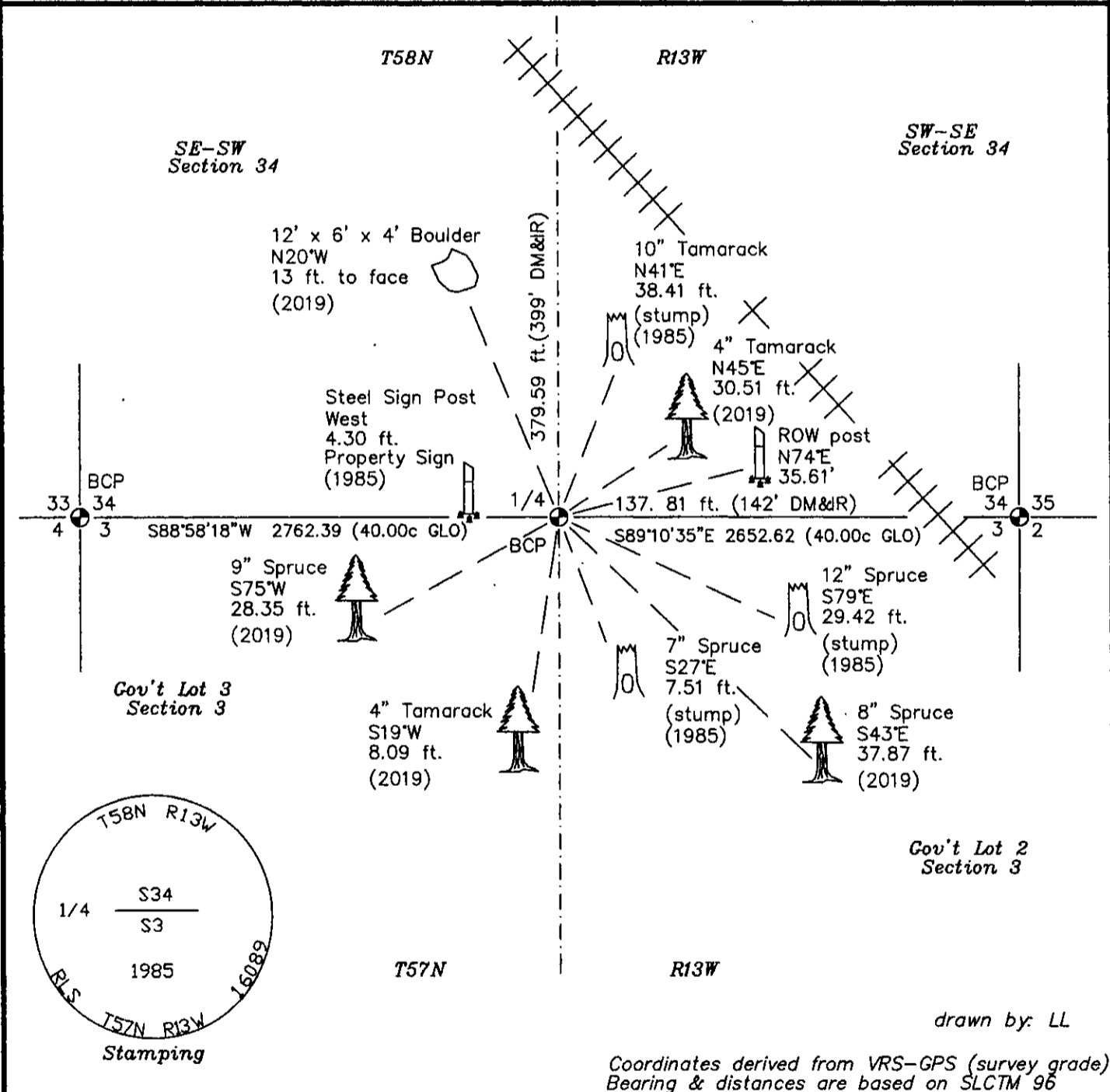
Wendy Levitt
County Recorder

I hereby certify that the within instrument
was filed in this office for record

by B. Goodreau
Deputy

(reserved for recording data)

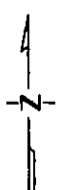
See "Statement of Evidence" for further details (on back)



drawn by: LL

Coordinates derived from VRS-GPS (survey grade)
Bearing & distances are based on SLCTM 96

"SKETCH OF REFERENCE TIES" (not to scale - bearings are magnetic)



Ties are measured to center of monument
unless otherwise noted.

UNITS = Metric English

(NAD 83) Latitude (N):	<u>47°27'34.24798"</u>
Longitude (W):	<u>91°58'22.30734"</u>
SLCTM 96 Northing:	<u>3,588,625.620 ft.</u>
(NAD 83) Easting:	<u>4,875,247.564 ft.</u>
S. P. North Northing:	<u>680,089.645</u>
(NAD 83, feet) Easting:	<u>2,903,466.387</u>

I hereby certify that this document and the data contained herein was prepared by me or under my direct supervision and that I am a Licensed Land Surveyor under the laws of the State of Minnesota. I further certify that this Certificate of Location of Government Corner is correct and complete to the best of my knowledge.

LaVerne Leuelling
LaVerne Leuelling

1-8-2020 License No. 16089
date

**Statement of Evidence for the Quarter Corner common to Sections 3 & 34,
T57 & 58N, R13W, of the Fourth Principal Meridian.**

4/16/1881: George Stuntz, GLO Deputy Surveyor, set a 5' long, 2 1/2" by 3" post for the 1/4 corner. It fell on higher ground, 25.50 chains (1683') West of the St. Louis River. There was no mention of BTs.

Swamp	St. Louis River (NW'ly)
West	East
25 chains	25.50 chains
(1650')	(1683')

1896: In the course of an upgrade to the D & IR RR track alignment, the D & IR RR commissioned Bernard Keegan to locate GLO corners in those sections through which the rail line passed. This 1/4 section corner was one of those located. Mr. Keegan ran easterly from the corner post at the N1/4 of Section 3 to the RR centerline, which he intersected at 142 feet at an angle of 68°24'. He measured a distance of 2652 feet between the N1/4 & NE corners of Section 3. He also ran northerly along the north-south 1/4 line in Section 34, T58N, R13W. He intersected the railroad centerline at Sta. 3265+68 at an angle of 19°00'. The distance from the 1/4 post to the centerline was 395 feet.

See DM&R RR fieldbook 335, pages 48 & 49.

12/31/1927: The D & IR RR track map shows a station of 3425+39.5 at the intersection of the town line & the railroad centerline.

1941: WPA mapping & photogrammetric control traverses located this 1/4, 130 feet westerly of the DM&R centerline at its intersection with the Town Line. The coordinates (NAD27 SPCS) were 47°27'34.47"N, 91°58'19.60"W (for the intersection point).

6/3/1985: Superior National Forest employees John Zakovich, Charlie Chernak & Jerry Johnson set a 2 1/4" x 36" Brass Capped Pipe at a bearing & distance of S83°E 18.0 feet from the found DM&R row post at Point #693. That position was a preliminary search position that placed the 1/4 142 feet from the existing centerline & perpendicular to the tracks through the row post. The references were as follows:

10" Tamarack	12" Spruce	6" Spruce
N25°E	S60°E	N31°W
19.77 ft.	18.92 ft.	14.65 ft.
The 2 bearing trees were blazed at the base, scribed "BT" & painted red.		Attention Sign
A BT tag was affixed.		Location Poster

See Superior National Forest Photo Project fieldbook 17, pages 6 & 7.

Summer 1985: LaVerne Leuelling, with the field assistance of Charlie Chernak, created a map showing the curves, Mileposts, & other points on the railroad infrastructure. This allowed him to calculate the equation between Keegan's 1896 station and the 1927 track map stationing. With the assistance of Forest Service photogrammetrist James Colbern, he was able to map the St. Louis River throughout T57 & 58N, R13W. These 2 processes were combined to develop a State Plane Coordinate for both the N1/4 & NE corners of Section 3, T57N, R13W, such that this 1/4 fit both calls to the centerline. It also negated the location described above.

7/15/1985: Superior National Forest employees Charlie Chernak, Jerry Johnson & Laura Schanlaub reset the BCP S54°24'43"W 20.21 feet from its June location so that it better fit the 1896 notes. The revised references were:

10" Tamarack	12" Spruce	7" Spruce	True Line intersections with current RR cl.	
N41°E	East	S27°E	N1°43'26"W	N89°42'27"E
41.00 ft.	33.22 ft.	7.51 ft.	379.59 ft.	137.81 ft.
The 2 bearing trees were blazed at the base, scribed "BT" & painted red.		Attention Sign	Angle at intersection	
A BT tag was affixed.		Location Poster	19°37'	68°22'

SPCS (NAD27, MN North)	Converted to SPCS 83
Y = 352,033.358 ft.	Y = 680,089.575 ft.
X = 2,278,850.059 ft.	X = 2,903,466.109 ft.
Point #820	

See Superior National Forest Photo Project fieldbook 17, page 51.

1989: John Zakovich, working for the Superior National Forest, prepared two certificates of survey which showed the town line separating T57N, R13W from T58N, R13W. The northern certificate was filed in the Office of the St. Louis County Surveyor in 1990. Copies of both are kept at the Supervisor's Office of the Superior National Forest in Duluth, Minnesota.

To NW 3 = S88°28'30"W 2761.62 ft. (SPCS 27)
To NE 3 = S89°40'06"E 2651.98 ft. (SPCS 27)

See Document #0492744, filed 2/27/1990 filed in the St. Louis County Recorder's Office

**Statement of Evidence for the Quarter Corner common to Sections 3 & 34,
T57 & 58N, R13W, of the Fourth Principal Meridian.**

2017 through 2020: LaVerne Leuelling, the Superior National Forest and the St. Louis County Surveyor's Office entered into an informal agreement to complete corner certificates related to the 1980's era remonumentation work. St. Louis County agreed to provide the necessary field work while LaVerne Leuelling would draft the corner certificates and provide the final certification. The Superior National Forest agreed to provide necessary supplies.

Winter 2017: LaVerne Leuelling re-adjusted the Superior National Forest's Photo Project using a least squares adjustment of all traverses. The project was placed on NAD 83 (Harn, MN North) by utilizing new RTK GPS observations by St. Louis County & Northern Lights Survey Company. Measurements below are from that re-adjustment:

To NW 3 = S88°29'54"W 2761.78 ft. (SPCS 83)
To NE 3 = S89°40'08"E 2651.75 ft. (SPCS 83)

SPCS 83 (Harn, MN North)	Geodetic	SLCTM 96
Y = 680,088.767 ft.	Lat. = 47°27'34.23956"N	N = 3,588,624.756 ft.
X = 2,903,464.661 ft.	Long. = 91°58'22.33265"W	E = 4,875,245.830 ft.

2/6/2019: A St. Louis County crew found the Brass Capped Aluminum Pipe 1' above the ground. They located 4 USFS references, but did not find the DM & IR ROW post because of deep snow. They established 5 new references and made a VRS-GPS observation.

10" Tamarack	12" Spruce	7" Spruce	Steel Sign Post
N41°E	S79°E	S27°E	West
38.41 ft.	29.42 ft.	7.51 ft.	4.30 ft.
(stump)	(stump)	(stump)	Property Sign
(1985)	(1985)	(1985)	(1985)
Nails & BT tags were present.		No nail present	

8" Spruce	4" Tamarack	9" Spruce	4" Tamarack	12' x 6' x 4' Boulder
S43°E	S19°W	S75°W	N45°E	N20°W
37.87 ft.	8.09 ft.	28.35 ft.	30.51 ft.	13 ft. to face
(2019)	(2019)	(2019)	(2019)	(2019)

Nail & disk plus BT tag on all new tree ties

SPCS (NAD27, MN north)	SLCTM 96	Geodetic
Y = 680,089.645 ft.	N = 3,588,625.620 ft.	Lat. = 47°27'34.24798"N
X = 2,903,466.387 ft.	E = 4,875,247.564 ft.	Long. = 91°58'22.30734"W
	Point #518	

To NW 3 = S88°29'16"W 2762.01 ft. (SPCS 83)
To NE 3 = S89°39'37"E 2652.26 ft. (SPCS 83)

To NW 3 = S88°58'18"W 2762.39 ft. (SLCTM 96)
To NE 3 = S89°10'35"E 2652.62 ft. (SLCTM 96)

See St. Louis County fieldbook VA-0039, pages 34 & 35.

8/8/2019: LaVerne Leuelling located where the GLO feature calls and the DM & IR tracks intersected the section lines relevant to this corner. This was intended to replicate photogrammetric mapping of those features by James Colbern & him in 1985. The mapping was done on the St. Louis Co. GIS. The 2013 aerial photography embedded in the GIS was most useful.

Swamp	St. Louis River	DM & IR RR.	DM & IR RR.
West	East	East	East
9.14 chains	26.21 chains	139 feet	158 feet
(603')	(1730')	abandoned line	remaining track