

MINNESOTA DEPARTMENT OF TRANSPORTATION CERTIFICATE OF LOCATION OF GOVERNMENT CORNER

EAST QUARTER CORNER, Section 30, Township 29 North, Range 22 West,
4th Principal Meridian Survey, Ramsey County, Minnesota.

At the corner location shown on the sketch:

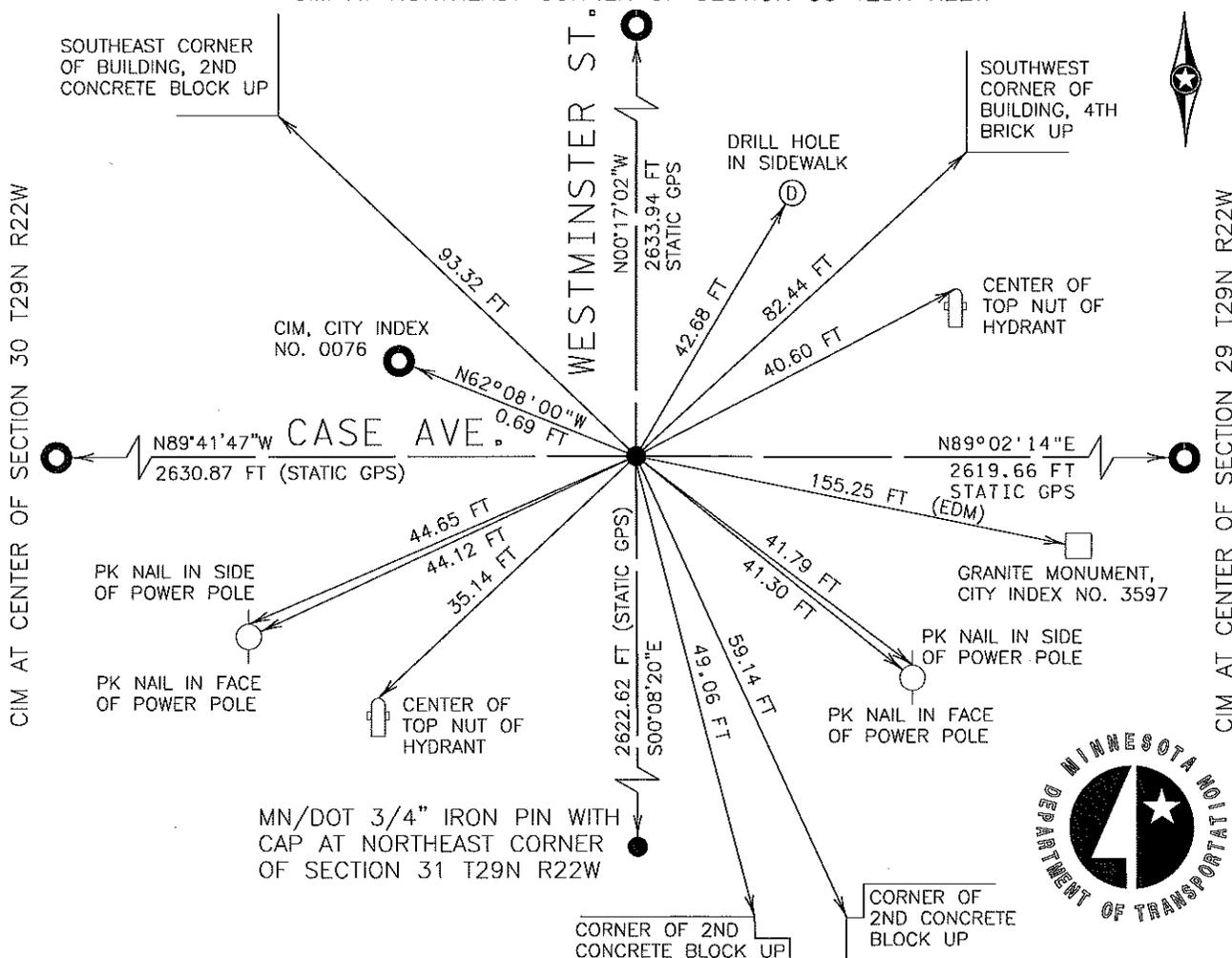
- On JULY 12, 2006 found CAST IRON MONUMENT (CITY INDEX NO. 0076)
- left monument as found, lowered monument, removed monument (explain)

- On JULY 22, 2011 placed a 3/4" IRON PIN WITH AN ALUMINUM CAP STAMPED MN/DOT DISTRICT SURVEYS EQ 30-29-22, 0.05' BELOW BITUMINOUS GRADE

Corner reference ties measured on JULY 21, 2011

Statement of evidence relative to this corner location is on back of page.

CIM AT NORTHEAST CORNER OF SECTION 30 T29N R22W



Tie distances are horizontal distances measured with a steel tape except as noted. Bearings are based on Ramsey County NAD 83 (1996) coordinates.

I hereby certify that this document and the data contained herein was prepared by me or under my direct supervision. I further certify that this document conforms to applicable portions of Minnesota State Statute 381.12.

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02/02/2012
Date



East Quarter Corner, Section 30, T. 29 N. - R. 22 W.

Statement of Evidence

- 1847 (Unknown date Nov __, 1847) Isaac N Higbee deputy surveyor set post. Tied to 2 BTs. See IH p.212-213 2922
- 1800 (Unknown date __ __, __) Monument 1.0 ft west of 1/4 post, reset by Chas Hunt
- 1800 (Unknown date __ __, 18??) Elev 156.080 ft on GM. See Old Benches Book, Entry 1897
- 1887 (Unknown date __ __, 1887) Monument showing center of Case St as grading in 1887
- 1889 July 25, Monument set at true 1/4 corner by J H Armstrong
- 1890 (Unknown date abt __, 189?) J B Irvines survey on 1/4 line on Case. See JBI 23 p.07-08
- 1890 (Unknown date abt __, 189?) Located monument by station during the Westminster survey. See JBI 23 p.35-36
- 1919 (Unknown date Sep. __, 1919) Placed ties. See FB 937 p.75
- 1943 November 24, Placed ties. See FB 1360 p.45
- 1972 February 16, Monument out, no ties. (FB 1360 p.45) See FB 1689A p.7
- 1972 (Unknown date abt __, 1972) CIM set to grade in concrete base in Bit surface. See Yellow Tie Book.
- 1980 June 13, Fd CIM inplace. See FB 1676 p.14
- 1985 (Unknown date Jan __, 1985) Frank Van Horn checked ties. See Yellow Tie Book.
- 1987 (Unknown date Feb __, 1987) William Cutting checked ties. See Yellow Tie Book.
- 1988 (Unknown date Mar __, 1988) CIM set to grade in conc. base w/ bit surface.

Statement of Evidence Continued

- 1995 September 25, Fd 2 pk nails 2.65 east of SMH. Verified west pk. See Yellow Tie Book.
- 1996 February 20, Elev 156.52 ft on pk CL CL. See 97adj.pts, 1996/sycamore-case.org/sycamore-case.sdr (loop 041 047) Digital-Adj
- 1996 March 22, Rick Woessner found 2 pk nails. See Yellow Tie Book.
- 1999 May 24, Recovered 8 penny nail & placed transit ties. See CofL 0076-0043-A
- 2000 March 17, Set pk nail from ties (marked for painting target for 2000 aerial)
- 2002 March 8, Elev 156.54 ft on pk nail at asphalt surface. See FB 1736 p.36
- 2002 May 7, Placed ties on pk nail. See FB 1738 p.1
- 2003 September 22, Coordinate position established by GPS RTK-VRS on pk nail.
- 2004 April 15, Placed a CIM to asphalt grade and placed ties. See CofL 0076-0043-B
- 2006 July 12, Mn/DOT Survey personnel static GPS'd a cast iron monument embossed Quarter Corner.
- 2011 July 22, Mn/DOT Survey personnel found the CIM at bituminous grade in good condition and checked ties from the 4/15/2004 tie sheet. They set a 3/4" iron pin with an aluminum cap, stamped Mn/DOT DISTRICT SURVEYS EQ 30-29-22, 0.69 feet southeast of the existing CIM and 0.05 feet below bituminous grade. The pin and cap were tied out with a steel tape, using the existing ties from the 4/15/2004 tie sheet.

Summary and Conclusion

Please note that most of the history for EQ 30-29-22 was obtained from the St. Paul Surveyor's Office. This corner has had a lot of activity in the last 40 years. It is reasonable to conclude that any monument that has been reset and retied so many times should be thoroughly scrutinized. Note also that this monument was replaced in 1972 with no remaining reference ties. The record and field notes do not say how the monument was replaced, or what evidence was examined; only that it was replaced.

Summary and Conclusion Continued

Comprehensive surveys of the adjoining PLS corners, and granite monuments recorded in the notes for St. Paul's standard surveys identify a different position for EQ 30-29-22 than that occupied by the cim (City Mon 76). The cim does not fit with City Monument 3597 (southwest corner of the east junction of Case & Westminster), a monument that is only 155 feet away, more or less, and is in excellent condition, stable and plumb. A position for EQ 30-29-22 was computed holding the cim at CS 29-29-22, City Monument 3597 and John B. Irvine's station and offset to City Monument 3597 (JBI bk.23, pg.7-12). This position was eventually monumented with a 3/4" iron pin and aluminum cap.

PLS Comparisons

EQ 30-29-22 to CS 29-29-22

Standard Survey	2619.66' Irvine
2011 Iron Pin & Cap	2619.66'
2004 CIM	2620.25'

EQ 30-29-22 to Iron Pin & Cap at NE 31-29-22 (See cert dated 02/02/2012)

Standard Survey	2622.56' Irvine
2011 Iron Pin & Cap	2622.62'
2004 CIM	2622.93'

EQ 30-29-22 to CS 30-29-22

Standard Survey	2630.96' Irvine
2011 Iron Pin & Cap	2630.87'
2004 CIM	2630.28'

EQ 30-29-22 to NE 30-29-22

Standard Survey	2633.72' Irvine
2011 Iron Pin & Cap	2633.94'
2004 CIM	2633.63'

Angle formed by NE30-EQ30-CS29

Standard Survey	89^20' Irvine
2011 Iron Pin & Cap	89^19'16"
2004 CIM	89^18'55"

Angle formed by CS29-EQ30-Iron Pin & Cap at NE31

Standard Survey	90^48' Irvine
2011 Iron Pin & Cap	90^49'26"

Summary and Conclusion Continued

2004 CIM 90^48'14"

Angle formed by Iron Pin at NE31-EQ30-CS30

Standard Survey 90^27' Irvine

2011 Iron Pin & Cap 90^26'33"

2004 CIM 90^26'55"

Angle formed by CS30-EQ30-NE30

Standard Survey 89^25' Irvine

2011 Iron Pin & Cap 89^24'45"

2004 CIM 89^25'56"

Although the angular comparisons are inconclusive, nevertheless, all but one of the distance comparisons of the PLS lines, favor the iron pin and cap over the cim.

Standard Survey Comparisons

Westminster Street was re-established holding 4 recovered granite monuments: City Monuments numbered 3563, 3742, 3743, & 3597. Monuments 3563 & 3597 are held as they are plumb and undisturbed. Monument 3743 is leaning slightly westerly (downhill) and monument 3742 is under a retaining wall, so it is difficult to access; said monuments are used as checks. Westminster Street, thus defined, intersects the east and west quarter line of Section 29 at a distance of 185.99 feet east of the iron pin, and 186.59 feet east of the cim. John B. Irvine measured 186.00 feet. The length of Westminster Street from the north line of Section 32 to the east and west quarter line of Section 29 is 2623.43 feet. John B. Irvine measured 2623.42 feet. Westminster Street, so defined, clearly favors the iron pin over the cim.

Four granite monuments were recovered along Case Avenue east of EQ 30-29-22 (City Monuments numbered 3597, 3599, 3600 and 4943).

Distance from EQ 30-29-22 to City Monument 3597	OFFSET
Standard Survey 152.52' Irvine	29.83' Irvine
2011 Iron Pin & Cap 152.52' (Held)	29.83' (Held)
2004 CIM 152.91'	30.13'

Distance from EQ 30-29-22 to City Monument 3599	OFFSET
Standard Survey 935.36' Irvine	30.21' Irvine
2011 Iron Pin & Cap 935.12'	30.11'
2004 CIM 935.72'	30.32'

Summary and Conclusion Continued

Distance from EQ 30-29-22 to City Monument 3600	OFFSET
Standard Survey	1332.63' Irvine -30.34' Irvine
2011 Iron Pin & Cap	1332.27' -30.28'
2004 CIM	1332.86' -30.12'

Distance from EQ 30-29-22 to City Monument 4943	OFFSET
Standard Survey	1596.64' Irvine -33.52' Irvine
2011 Iron Pin & Cap	1596.67' -33.35'
2004 CIM	1597.25' -33.22'

Overall, the granite monuments along Case Ave favor the iron pin and aluminum cap. The northwest corner of the southeast quarter of the northwest quarter was monumented with a granite stone at one time, but it appears to have been destroyed by sewer construction.

Only two granite monuments were recovered along Westminster Avenue north of EQ 30-29-22 (City Monuments numbered 3598, and 5501).

Distance from EQ 30-29-22 to City Monument 3598	OFFSET
Standard Survey	1679.75' Irvine -33.52' Irvine
Note the original measure has been changed to 33.23' then changed to 33.12'	
2011 Iron Pin & Cap	1679.34' -33.32'
2004 CIM	1679.01' -33.11'

Distance from EQ 30-29-22 to City Monument 5501	OFFSET
Standard Survey	2008.62' Irvine -33' Irvine
2011 Iron Pin & Cap	2008.33' -33.04'
2004 CIM	2008.01' -32.90'

Although the stationing is not great, these monuments fit the iron pin and cap better than the cim. Two monuments are not a lot to go on, so it is beneficial to look at how the subdivision plats fit with the EQ 30-29-22.

Platted street centerline stations north of Case and south of Maryland

Jenks 29+51.78 Irvine
 29+51.80 2011 Iron Pin & Cap
 29+51.49 2004 CIM

Lawson 32+81.00 Irvine

Summary and Conclusion Continued

	32+81.05 2011 Iron Pin & Cap 32+80.73 2004 CIM
Cook	36+10.19 Irvine 36+10.29 2011 Iron Pin & Cap 36+09.97 2004 CIM
Magnolia	39+39.42 Irvine 39+39.53 2011 Iron Pin & Cap 39+39.21 2004 CIM
Jessamine	42+68.63 Irvine 42+68.51 2011 Iron Pin & Cap 42+68.19 2004 CIM
Geranium	45+98.08 Irvine 45+97.51 2011 Iron Pin & Cap 45+97.19 2004 CIM
Rose	49+27.05 Irvine 49+27.24 2011 Iron Pin & Cap 49+26.93 2004 CIM

All of The east and west street centerlines from the retraced plats of *BROOKSIDE ADDITION*, *BROOKVALE ADDITION*, *BROOKVALE 2ND ADDITION*, *MCMENEMY'S SUBDIVISION A*, and *WESTMINSTER ADDITION*, except Rose Street, favor the iron pin & cap over the cim.

The retracement of Mississippi Street confirms that the iron pin and cap fits the corner position that was accepted and used in the late 1800's. The notes for John B. Irvine's survey of Mississippi Street can be found in Book 14, Pages 65-72. Irvine shows an angle point of $44^{\circ}13'$ at station 20+15.33, just south of York Street. Retraced Mississippi Street has an angle point of $44^{\circ}13'51''$ at station 20+15.27. Mississippi Street intersects the east and west quarter line of Section 30-29-22, 753.07 feet northerly of station 20+15.33. Retraced Mississippi Street intersects the east and west quarter line 753.17 feet northerly of the angle point at station 20+15.27, 631.30' west of the iron pin & cap. Irvine does not give a distance to EQ 30-29-22, but Forsberg does. Forsberg measured 631.30 feet from the angle point at Case to EQ 30-29-22 (FB1360, Pg.48).

Summary and Conclusion Continued

Irvine shows an angle point of $1^{\circ}15'$ left at the east and west quarter line and measured a distance of 1317.76 feet to the north line of the southeast quarter of the northeast quarter of Section 30-29-22 (centerline of Magnolia Street), at a distance of 660 feet west of the east line of said Section 30. Retraced Mississippi Street has an angle point of $1^{\circ}14'51''$ left at the east and west quarter line and a distance of 1317.92 feet to the centerline of Magnolia Street at a distance of 660 feet west of the east line of said Section 30.

Irvine shows an angle point of $1^{\circ}15'$ right at the centerline of Magnolia Street and measured a distance of 1317.36 feet to a point on the north line of Section 30-29-22, 660 feet west of NE 30-29-22. Retraced Mississippi Street has an angle point of $1^{\circ}14'51''$ right at the centerline of Magnolia Street and a distance of 1317.24 feet to a point on the north line of section 30-29-22, 660 feet west of NE 30-29-22. Note that this portion of Mississippi Street is parallel with the east line of the northeast quarter of Section 30-29-22.

Retraced Mississippi Street fits Irvine's survey of Mississippi Street and his survey of the PLS virtually right on. Moreover, the distance that Forsberg measured from the intersection of Mississippi Street with the east and west quarter line of Section 30-29-22 to the east quarter corner of said Section 30 is the same as the distance from the intersection of retraced Mississippi Street with said east and west quarter line to the iron pin and cap. The inevitable conclusion is that the iron pin and cap, set from the cim at the center of Section 29-29-22, City Monument 3597, and the standard survey notes from John B. Irvine's surveys, occupies the location of the east quarter corner as monumented in the late 1800's; namely, the position used for the surveys and subdivisions of land at that time, many of which still define property lines. I expect that when this corner was reset in 1972 with no remaining ties, it was reset erroneously.