

MISSOURI GEOGRAPHIC REFERENCE SYSTEM

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
LAND SURVEY PROGRAM

PO Box 250, Rolla, Missouri 65402, (573) 368-2300

STATION NAME: BU-13

PID: AD9786

COUNTY: Buchanan

STATE: Missouri

TOWNSHIP: 57 NORTH, RANGE: 34 WEST, SECTION: S 1/2 OF 31

USGS 7.5' QUAD: St. Joseph South

DATE MONUMENTED: 1993

MONUMENTED BY: MODNR

TECHNICAL DATA TABLE:

(All data in meters 1 meter = 3.28083333 feet)

HORIZONTAL: NAD 1983**VERTICAL:** NAVD 1988

DATE OF OBSERVATIONS: 2001

DATE OF OBSERVATIONS: 2001

DATE OF ADJUSTMENT: 2000

DATE OF ADJUSTMENT: 2000

ORDER: 1st

ORDER:

LATITUDE: 39°42'38.14855"

ELEVATION: 308.0

LONGITUDE: 94°45'32.58216"

ELLIPSOID HEIGHT: 275.88

MISSOURI COORDINATE SYSTEM 1983:

NORTH (Y): 393368.909

EAST (X): 827786.858

ZONE: West

CONVERGENCE: -00°09'56"

GRID FACTOR: .9999040

AZIMUTH INFORMATION:

STATION: BU-13

AZIMUTH MARK: BU-13A

GEODETTIC:

ASTRONOMIC: 01°24'15"

GRID: 01°34'11"

REMARKS

The HORIZONTAL POSITION was determined by GPS observations and adjusted by the National Geodetic Survey in February 2000.

The AZIMUTH was determined by observation of Polaris with an estimated accuracy of 1 second of arc.

The ELEVATION was determined by GPS observations.

The ELLIPSOID HEIGHT was determined by GPS observations referenced to NAD83.

GEOID 99 was used in determining ELEVATION and ELLIPSOID HEIGHT.

STATION: BU-13

DESCRIPTION: The station is a standard DNR aluminum GRS disk stamped "BU-13, 1993", set in a 12 inch diameter concrete post flush with the ground surface. The station has an underground mark 0.841 meters below the surface disk. The azimuth mark is a standard DNR aluminum GRS disk stamped "BU-13A, 1993", set in a 12 inch diameter concrete post flush with the ground surface.

STATION, AZIMUTH MARKS AND REFERENCE TIES: The station is located about 0.5 mile outside the southeast city limits of St. Joseph, MO, on the west right-of-way of Riverside Terrace. It is 24.0 feet west of the center of Riverside Terrace; 51.1 feet southwest of the north edge of the concrete drive to the house of C.A. and Hazel Stewart at the apron joint; 47.8 feet west of a nail and shiner in the north side of a utility pole; 53.4 feet northwest of the northwest corner of the concrete apron of the drive to the #6101, G.A. and D.L. Stewart residence and 2 feet east of a carsonite witness post.

The azimuth mark is 0.25 mile north of the station in the southeast angle of the junction of Riverside Terrace with US Hwy 169. It is 3.5 feet southwest of a nail and shiner in a utility pole; 25.5 feet southwest of the southwest edge of Highway 169 driving lane; 9.6 feet northwest of the center of a water valve box; 42.8 feet north of a nail and shiner in the mailbox post #5530 and 19.0 feet east of the center of the Riverside Terrace.

STATION & AZIMUTH MARK TO REACH: To reach the station from the intersection of I-29 (Exit 44) and US Highway 169. Go east and southeast on Highway 169 for 1.75 mile to the crossroad with Riverside Terrace. Turn right (south) and go 0.25 mile on Riverside Terrace to the top of the grade and the station on the right (west) side of the road as described.

To reach the azimuth mark from the station return north to highway 169 and the mark on the right in the southeast angle as described.

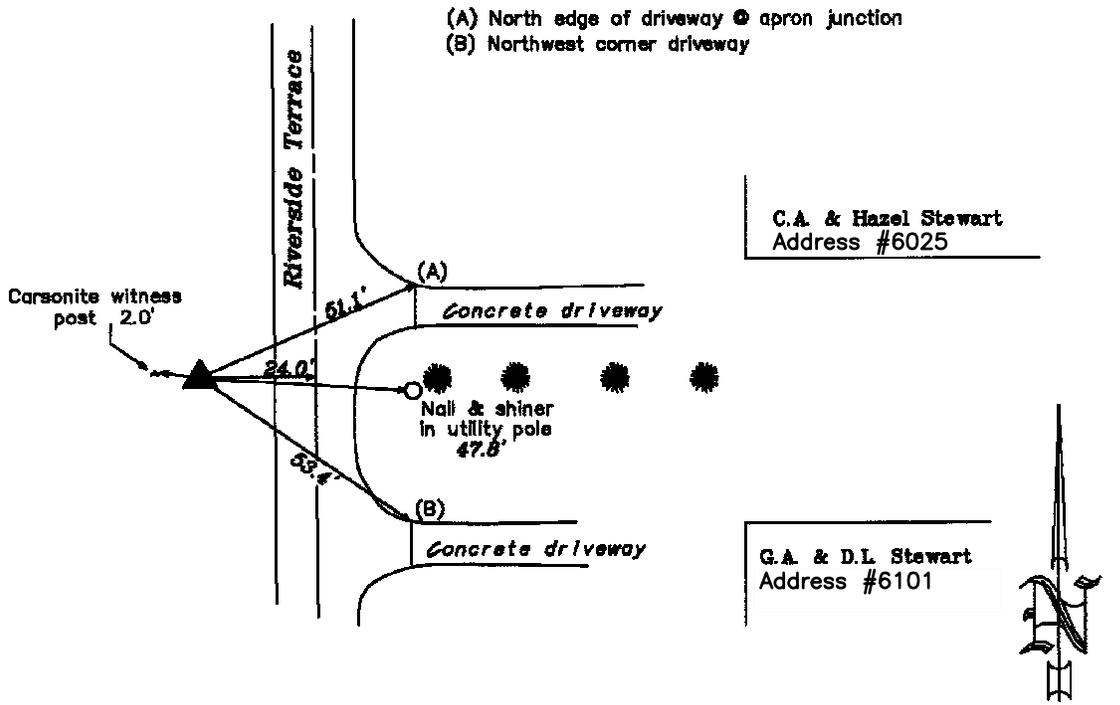
SPECIAL INFORMATION:

SUPERSEDED SURVEY CONTROL

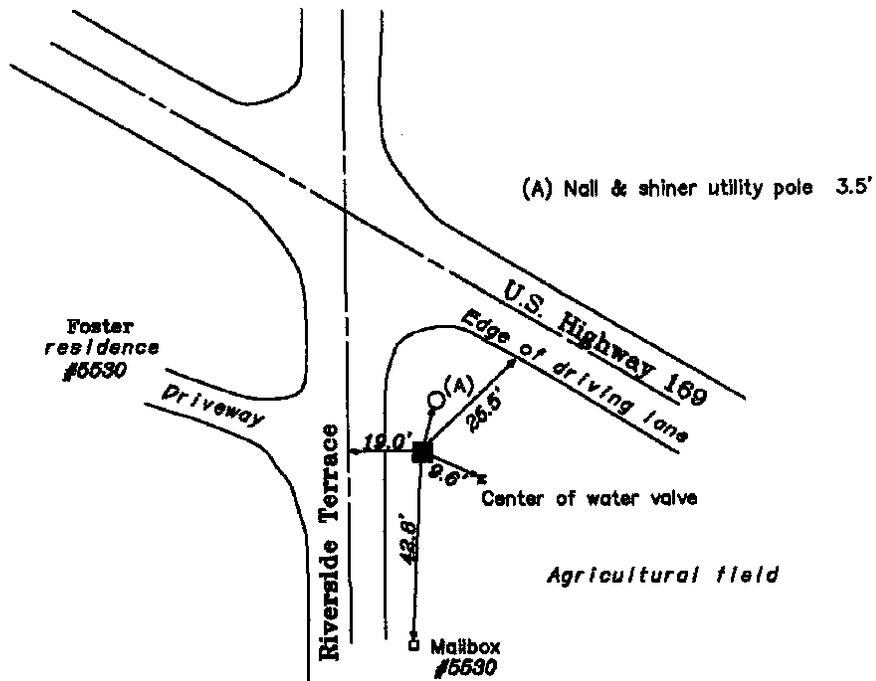
NGS NAD 83(1997)-	39°42'38.14854"(N)	94°45'32.58218"(W)
NGS NAD 83(1997)-	39°42'38.14854"(N)	94°45'32.58218"(W)
NGS NAD 83(1986)-	39°42'38.15157"(N)	94°45'32.57868"(W)
MODNR NAD 83(1986)-	39°42'38.15016"(N)	94°45'32.57881"(W)

DATE of REPORT, 2002

STATION: BU-13



AZIMUTH MARK: BU-13A



DATE OF SKETCH 2001



STATION: BU-13 (LOOKING NORTH)



STATION: BU-13 (LOOKING EAST)