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## Bulletin 898-F

# SPIRIT LEVELING IN MISSOURI <br> Part 6. NORTHEASTERN MISSOURI <br> 1896-1938 

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Prepared in cooperation with the<br>STATE OF MISSOURI GEOLOGICAL SURVEY AND WATER RESOURCES<br>H. A. Buehler, Director



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## SPIRIT LEVELING IN MISSOURI

PART 6. NORTHEASTERN MISSOURI, 1896-1938
J. G. Staack, Chief Topographic Engineer

## INTRODUCTION

Scope of report. -This bulletin, which for convenience is to be published in eight parts, contains the results of all spirit leveling done in Missoiari by the Geological Survey, United States Department of the Interior, including those heretofore published.* Each of the parts deals with one of eight sections into which the State has been divided for this purpose and which have been designated northeastern, northwestern, southeastern, southwestern, central, east-centrul, south-central, and westcentral Missouri. In each part descriptions of the points for which figlares of elevation have been determined are listed according to the quadrangles in which the points occur. Results of spirit leveling other than that done by the Geological Survey have not been included.

Cooperation.-The State has contributed financially to the work of leveling in Missouri since 1907, ordinarily cooperating with the United States Geological Survey on a dollar-for-dollar basis. The agencies concerned in this cooperation are the Missouri Geological Survey and Water Resources and, since 2929, the Missouri State Highway Commission. Since 1934, the Missouri Geological Survey and Water Resources, under allotments from the Federal Emergency Relief Administration and the Works Progress Administration, has also supplied the funds to pay the personnel working on extensive projects of leveling in the State. For these projects the United States Geological Survey has furnished equipment and supervision as its share of the cooperation.

Classification of leveling.- Spirit leveling is classified according to the degreo of refinement in the instruments and methods used and according to the closure errors. First-order leveling ${ }^{* *}$ consists of leveling done with the most improved instruments, all sections being leveled twice, in opposite directions, under varying conditions. Closures are not allowed to exceed the amount in feet represented by the formula 0.017 times the square root of the length of section in miles.

Second-order leveling, according to regulations of the United States Geological Survey, comprises lines leveled twice with reliable instruments, though not necessarily of the most improved type. Closures are not allowed to exceed 0.035 times the square root of the length of section in miles.

Third-order leveling is made up of lines that are run, either with first-order equipment or with an engineer's wye levgl and rods of the New York type, in single-line circuits that are required to close. within the limits of 0.05 times the square root of the

[^0]length of circuit in miles. This is equivalent to 0.071 times the square root of the length of section in miles if the line is leveled twice.

All leveling done by the United States Geological Survey in Missouri is of thirdorder accuracy except as otherwise stated.

Adjustments.-A preliminary step to the adjustment of first, second, and third-order leveling is the application of all corrections for rod error, temperature, and unbalanced sights, as well as the orthometric corrections required because of the convergence toward the poles of level surfaces of different elevations. The adjustment of a net of leveling begins with the first-order lines. Most of these lines in both the United States and Canada have already been combined in a general net and adjusted to remove accidental closure errors by the mathematical method known as least squares. The latest adjustment of this kind was made in 1929 by the United States Coast and Geodetic Survey and is known as the "1929 general adjustment of first-order leveling." This adjustment included the first-order lines in Missouri, and the elevations thus derived are the fundamental references for elevations determined by second- and thirdorder nets. The third-order leveling of the United States Geological Survey in Missouri has been adjusted by determining weighted mean elevations for new junction points and prorating the errors of each link. The weights are taken as the reciprocals of lengths of links. The third-order net has thus been brought into agreement with the best information available for the results of the fundamental first-order leveling, although the published figures of elevation may be changed slightly by future adjustments of the level net.

Benchmarks.-The benchmarks used by the United States Geological Survey (pl. 1) are of two general classes-principal and supplementary. Principal benchmarks are placed at more or less regular intervals along a level line and are established with the aim of making them as nearly permanent as practicable. They are usually bronze or aluminum tablets, iron posts, or copper bolts. Supplementary or auxiliary benchmarks are less formal in design and are placed between the principal benchmarks. Some of the supplementary benchmarks in common use are copper nails fitted with washers, spikes, and marks cut with a chisel on rock or masonry.

The tablets are circular in shapo, measure 3-7/8 inches in diameter, and taper from a thickness of three-eighths of an inch at the center to about a quarter of an inch near the rounded edge. During a short period in the earlier years of the Survey's leveling the tablets set were made of aluminum. The softness of this metal, however, made them susceptible to damage, so that aluminum as a material for tablets was soon discarded. The earliest tablets set and those now being placed are made of bronze, and bronze is the material now specified for standard tablets. Each tablet is cast with a 3-inch shank extending from the center of its reverse side, by means of which it is cemented in place, and each bears an inscription on its face. The inscriptions on the tablets already placed differ in many detalls, because of changes in design at varicus times. The face of every tablet, however, is cast with the words "U. S. Geological Sur vey", a cross at the center, which indicates the fiducial point for position or elevation, and the words "Elevation above sea." On some tablets the inscription indicates that they were set in connection with a project in which a State or other organization cooperated; on some the inscription includes a triangle, which signifies a located point, enclosing the cross at the center. Tablets bearing a triangle enclosing a cross may be used not only as benchmarks but also as triangulation- or traverse-station marks.


GEOLOGICAL SURVEY BENCHMARKS.
$A$ and $B$, Standard tablets, principal benchmarks, used where masonry or rock is available to hold them. $A$ is used in cooperating States; the State name is inserted at $a . \quad C$, Under side of $A$ and $B$, showing shank used to hold tablet in place. $D$ and $E$, Two views of copper nail and copper washer, a supplementary benchmark, used for points lying between those marked by standard tablets. $F$, Standard iron post fitted with bronze cap similar in design to the standard tablet, formerly used where no rock or masonry was available; superseded by concrete post with tablet set in top.

The inscription on most of the tablets already set includes the warning " 250 dollars fine for disturbing this mark", but the latest design omits this phrase and adds the sentence "For information write the Director, Washington, D. C."

If the tablet is to mark a transit-traverse station, the traverseman stamps it with letters indicating this use of it, such as "Prim. Trav. Sta.", "P.T.S.", or "T.T.", as well as his own identifying letter or letters, the serial number of the station, and the year, using steel dies. If the tablet is set as a benchmark, the levelman stamps It with his identifying letter or letters, the serial number, and the year. He may at the same time stamp upon it with steel dies the figures of elsvation to the nearest foot, or these figures may be added later. Tablets that serve as benchmarss may have been set as such or they may have been set to mark traverse stations. Thus some of them serve a dual purpose, but each has stamped upon it the date and the identifying designation of only the engineer who estiablished it.

The figures of elevation that appear on a tablot are usually those determined by field computation only. It is sometimes found, therefore, that they do not represent the latest information. This has happened either because they refer to some independent datum temporarily adopted before first-order trunk lines made standard datum available, or because a later adfustment made in the office has rendered necessary an appreciable change in the figures as determined in the field. In June 1933 a field party was organized and charged with the responstbility of stamping figures of elevation, to the nearest foot, on the permanent benchmarks established in the State by the Geological Survey. Thus, these figures may appear stamped on the tablets in addition to the identifying letters and numbers quoted in the printed descriptions. It is assumed that engineers and others who require accurate figures of elevation for the marks will use those printed in a bulletin such as this one, instead of accepting the stamped figures. If the appropriate bulletin is not conveniently accessible, a request for the desired information may be addressed to the Director, Geological Survey, United States Department of the Interior, Washington, D. C.

The tablets, of whatever style, are cemented into holes drilled in solid rocks or in the walls of public buildings, bridge abutments, or other masonry structures. Where masonry or rock is not avallable, the tablets are set in the tops of reinforced concrete posts, which may be either precast or mixed and molded at the selected site. The posts are about 8 inches square or 8 inches in diameter at the top and larier at the base. They vary in length from 36 to 48 inches and are generally set so as to project about 6 inches above ground.

Antedating the concrete posts which are now constructed to hold the tablets, in places where masonry or rock is not available, are wrought-iron posts, to the tops of which are riveted bronze caps of similar design to the tablets. These iron posts measure 4 feet in length and 3 合 inches in outer diameter and are set about 3 feet in the ground. The bottom of the post spreads out to a width of about 10 inches in order to give it a firm footing in the earth. No iron posts have been set in recent years. They have proved impracticable, as they are easily disturbed and are subject to rust at the ground level, which eventually destroys them.

The third form of principal benclmark, set only in the early leveling, is a copper bolt, designed to be wedged into a drill hole in rock or masonry and perhaps further secured with lead or cement. This bolt measures 4 inches in length and 1 inch in diam-
eter and has a slot at one end into which fits a brass wedge. The wedge serves to expand the bottom end of the bolt, so that after the bolt has been driven to almost its full length into the hole, it cannot be easily removed. The exposed end of the bolt bears an appropriate inscription, stamped upon it with steel dies. This inscription is made up of the letters "U S G S", the letters indicating the datum used, the abbreviated word "Ft.", and the figures of elevation.

Supplementary benchmarks are of many kinds. One kind consists of a copper nail lit inches long supplied with a copper washer seven-eighths of an inch in diameter, through which the nail is driven into the root of a tree or some timber structure or cemented into rock after bending the point. The designation "U S G S B M" is stamped on each washer, and on some washers the abbreviation of the name of the cooperating state is added. Another kind of supplementary benchmark is a chiseled square, used on the horizontal surface of rocks or masonry structures, or a chiseled cross, used on a vertical surface. Nails, track spikes, and small, capped iron pipes also serve as supplementary benchmarks, and occasionally easily described and recognized points, such as doorsills and tops of hydrants, are so used.

Preservation and restoration of benchmarks.-Any person who finds that a principal benchmark has been damaged, disturbed, or destroyed or that it should be reset or redescribed on account of highway or other improvements will render a public service by commanicating the facts to the Director, Geological Survey, United States Department of the Interior, Washington, D. C., before taking any action affecting the location or elevation of the mark. A proper form, accompanied by a return-addressed, franked envelope, will be sent for use in reporting the action taken and in recording the revised description of the mark, if any, and the notes made in obtaining the revised elevation.

Datum.-All elevations determined by the United States Geological Survey and those determined by the United States Coast and Geodetic Survey for inland mapping are referred to mean sea level, which is the level that the sea would assume if the influence of winds, tides, and currents were eliminated. This level is not the elevation determined from the mean of the highest and lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. Mean sea level is the average height of the water, all stages of the tide being considered. It is determined from observations made by means of tidal gages placed at stations where local conditions, such as those due to long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if accuracy is desired they must extend over several years. At ocean stations the halftide level and the mean sea level usualiy differ but little. It is assumed that there is no difference between the mean sea levels determined from observations made in the Atlantic Ocean, the Gulf of Mexico, and the Pacific Ocean.*

Location of the area.-Northeastern Missouri, as the term is used in this bulletin and as the aubject of part 6 of the bulletin, is, as its name indicates, the northeasternmost section of the state. Its north and east boundaries are the boundaries of the State; 1ts west and south boundaries are formed by a line that runs south along longitude $93^{\circ} 15^{\prime}$ to latitude $39^{\circ} 30^{\prime}$, thence east to longitude $92^{\circ} 00^{\prime}$, thence south to latitude $39^{\circ} 15^{\prime}$, thence east to the east boundary of the State. (See fig. ll.)

[^1]Index map.-The accompanying index map of northeastern Missouri (fig. 12) shows the relative position of the quadrangle areas which make up this section. A quadrangle is the unit of topographic survey adopted by the Geological Survey for dividing the area of the United States. All the quadrangles referred to in listing the results of leveling in northeastem Missouri measure 15 minutes in latitude by 15 minutes in longitude. With the name of each quadrangle, as shown on the map, is given the number of the page in this bulletin on which begins the list of descriptions of benchmarks in that quadrangle.


Flgure 11. - Outline map of Missouri showing the names and relative position of the elght sections covered by the parts of Bulletin 898, on spirit leveling in the State. The shaded portion represents the section designated as northeastern Missouri.

Maps of many of the quadrangles in northeastern Missourl may be purchased at 10 cents each retail or 6 cents each in lots of 50 or more. Prepayment is required and may be made by money order, payable to the Director, Geological Survey, United States Department of the Interior, or in cash-the exact amount, at sender's risk. Postage stamps should not be sent.



Diagrams of quadrangles showing routes of leveling.-At the beginning of the list of benchmark descriptions for each quadrangle is a diagram showing the routes followed by the lines of leveling in and immediately adjacent to that quadrangle. To aid in identifying these routes, the boundaries of the townships and ranges in the quadrangle are indicated by light dashed lines, and the designations of these land subdivisions are given on the margin. The principal settlements are also shown. The solid lines represent the routes of the third-order leveling of the United States Geological Survey. To each of these is assigned a number, and the same number is assigned to the list of descriptions of benchmarks along that route. The heavy dashed lines represent the first-order leveling of the United States Coast and Geodetic Survey.

Personnel.-The leveling of the United States Geological Survey in northeastern Missouri was done under the supervision of the several chief geographers or chief topographic engineers who were in administrative charge of the topographic branch during the years when the lines were run. Included in the heading that precedes the descriptions of benchmarks established along any line of leveling are the name of the levelman who ran that line and the date when it was run, or, if this information has been omitted, it may be assumed that the levelman and date are the same as those indicated for the line immediately preceding. The adjustment of the third-order level net was done in the Washington office mainly by V. S. Benfell, computer. The revision, correlation, and compilation of the descriptions of benchmarks was done in the field office at Rolla, Mo., by employees of the Works Progress Administration of Missourl, who also assembled the lists and made new typewritten copies of them suitable for reproduction by photography. The work at Rolla was sponsored by the Missouri Geological Survey and Water Resources and was in charge of W. R. Broaddus, of the United States Geological Survey. The work in the Washington office was under the supervision of R. M. Wilson, chief of the section of computing, under the general direction of J. G. Staack, chief topographic engineer.

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Pike County


1. FROM CLARKSVILLE SOUTHEAST TO EAGLE NEST ISLAND (by L. V. Johnson in 1928)
U.S.C.E. B.M. designated "28" Copper bolt

Feet
460.514

Clarksville, about 1 mi . SE. of, along river rd., 25 ft . N. and 25 ft .
W. from junction of lane W., on W. side at $N$. end of head wall of concrete culvert; chiseled square
447.14

Clarksville, about 2 mi . SE. of, along river rd., about l,000 ft. SE. of junction of lane W., 10 ft . NE. of rd., in root on SW. side of 18-in.
oak tree; copper nail and washer
447.15
U.S.C.E. B.M. designated " $82 / 4$ "

Top of cap
447.340
443.290

> 2. FROM CLARKSVILLE SOUTHEAST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD TO ANNADA, THENCE WEST INTO ELSBERRY QUADRANGLE AT SOUTHWEST CORNER OF QUADRANGLE (by L. V. Johnson in 1928)

Clarksville, at $S$. limits of, 20 ft . S. and 10 ft . W. from W . track at rd. crossing, 2 ft . S. of NE. corner of stockyard fence, in concrete post; standard tablet stamped "9 L J 1928 "
Clarksville, 1 ml . S. of, 150 ft . S. of T-fence E., 10 ft . E. of track, on NW. corner of concrete base of semaphore; chiseled square
Clarksville, about 1.8 ml . S. of, 10 ft . W. of track, on SW. concrete abutment of steel bridge; chiseled square
461.96

Clarksville, 2.7 mi . S. of, 10 ft . N. and 50 ft . W. from crossing at private rd., 5 ft . N. of gatepost, 25 ft . N. of T-fence W., in concrete post; standard tablet stamped "I L J 1928"
449.189
T. $53 \mathrm{~N}, \mathrm{R}_{\text {. }} 1 \mathrm{E}$. , near center sec. $35,10 \mathrm{ft}$. S. of curve, on NE. corner of concrete base of semaphore; chiseled square
Kissinger, about 0.5 ml . N. of, on SE. corner of concrete base of semaphores chiseled square
Kissinger, at sta., 12 ft . W. of W . track, on concrete base of semaphore; chiseled square
Kissinger, about 1 mi . SE. of, 60 ft . S. and 30 ft . W. from bridge, 35 ft . W. of rd. crossing, 5 ft . E. of telegraph pole, in concrete post; 'standard tablet stamped "2 L J 1928"
Reference mark, at NW. corner of bridge, on concrete abutment; chiseled square
Annada, 1.5 ml . NW. of at crossing of private rd.; top of w. rail
Annada, 1 ms . NW. of, 240 ft . SE. of $\mathrm{N} .-\mathrm{S}$. rd. crossing, 10 ft . E. of
track, on NW. corner of concrete base of semaphore; chiseled square
Annada, 300 ft . S. of sta., 10 ft . W. of W. track, on concrete base of mail pouch crane; chiseled square
Annada, 1.5 ml . W. of, 25 ft . S. and 20 ft . W. from T-rd. S., in concrete post; standard tablet stamped "T T Sta No 28 F 1928"
post; standard tablet stamped 7 ft. E. from T-rd. N., on concrete base

. from crossroads, on W.
aynesville, about 0.7 ml . E. of, 10 ft . N. and 10 ft . W. from junction of private rd. N. to farmhouse, on head wall of concrete culvert; chiseled square
Paynesville, 15 ft . N, and 20 ft . E. from T-rd. E. to Annada, on head wall of concrete culvert; chiseled square

[^2]Paynesville, at W. limits of, near center sec. 21, T. 52 N., R. l E., 30 ft . S. and 15 ft . E. from junction of rd. to church, in concrete post; standard tablet stamped T T 29 F 1928"
Feference mark, 15 ft . N. and 10 ft . E. from tablet, on head wall of concrete culvert; chiseled square
Paynesville, about 1.2 ml . W. of, center sec. 20, T. $52 \mathrm{~N} ., \mathrm{R}$. I E., 10 ft . N. and 20 ft . W. from T-rd. N., about 600 ft . W. of creek bed, in root on E. side of 72-in. sycamore tree; copper nail and washer
Paynesville, about $2.2 \mathrm{ml} . \mathrm{W}$. of, near center sec. 19, T. 52 N.,
R. 1 E., about 600 ft . E. of private rd. S., 5 ft . S. of rd., on head wall of concrete culvert; chiseled square
Eolia, 1.8 mi . N. and 2.3 mi . E. from, 30 ft . S. and 20 ft . E. from
T-rd. S., in concrete post; standard tablet stamped "T T Sta No 30 F 1928"

Feet 564.607 565.24

Eolia, about 2 mi . NE. of, near center of land grant, T. 52 N.,
R. 1 W. , at foot of large hill, 15 ft . S. of rd., 150 ft . W. of fence corner, in root on N. side of $30-1 n$. sycamore tree; copper nail and washer
Eolla, about 1.5 mi . NE. of, near center of land grant; T. 52 N., R. 1 W., 20 ft. S. of T-rd. NW., 15 ft . E. of T-fence SE., in root on E. side of 18-in. oak tree; copper nail and washer
783.98
3. FROM CLARKSVILLE WEST INTO BOWLING GREEN QUADRANGLE AT

SEC. 15, T. 53 N., R. 1 W. (by L. V. Johnson in 1928)

| Clarksville, about 1.3 mi . NW. of, along Chicago, Burlington \& Quincy R.R., in $\mathrm{SW} 1 / 4 \mathrm{sec} .8$, T. $53 \mathrm{~N} ., \mathrm{R} .1 \mathrm{E} ., 8 \mathrm{ft}$. S. and 100 ft . E. from trestle over Calumet Creek, on concrete abutment of bridge; ch1seled square | 455.81 |
| :---: | :---: |
| Clarksville, about 2 ml . W. of, near quarter cor, between secs. 7 and 18, T. 53 N., R. 1 E., 10 ft . W. of N.-S. rd. in line with rd. W., |  |
| in root on SW. side of 60-1n. elm tree; copper nail and washer | 469.48 |
|  |  |
| on head wall of concrete culvert; chiseled square | 518.28 |
| T. 53 N., R. 1 W., near center sec. 12, 150 ft . W. of church, $6 \mathrm{ft} . \mathrm{N}$. of rd., on head wall of concrete culvert; chiseled square | 528.45 |
| Calumet Church, about 3.2 mi . W. of Clarksville, center sec. 11, T. 53 |  |
| R. 1 W., 40 ft . S. and 30 ft . E. from T-rd. E., at NE. corner of fence around church, in concrete post; standard tablet stamped "T T Sta No 39 F 1928" |  |
| Reference mark, 18 ft . S. of tablet, in root on $E$. side of twin oak tree; copper nail and washer | 531.54 |
| T. 53 M., R. 1 W., on line between secs. 10 and 15 , about 1.2 ml . E. of Stark, $7 \mathrm{ft} . \mathrm{N}$. and 20 ft . E. from steel bridge over Little Calumet Creek, on concrete wing wall; chiseled square | 531.05 |

(Continued in Bowling Green quadrangle; see line l.)
4. FROM BOWLING GREEN QUADRANGLE SOUTH THROUGH ABERDEEN INTO BOWLING GREEN QUADRANGLE (by L. V. Johnson in 1928)
(Continued from Bowling Green quadrangle; see line 1.)
Aberdeen, about $1 \mathrm{mi} . \mathrm{N} .0 \mathrm{f}, \mathrm{in}$ land grant, T. $52 \mathrm{~N} ., \mathrm{R} . \mathrm{l}$., 300 ft. N. of angle in rd., at bottom of large ravine, on E. head wall of concrete culvert; chiseled square
Aberdeen, 30 ft . N. and 40 ft . W. from crossroads, 3 ft . NW. of fence corner, in concrete post; standard tablet stamped "T $T$ Sta No 42 F 1928"
Reference mark, 50 ft . N. and 15 ft . E. from crossroads, on concrete base of water pump; chiseled square
berdeen, about 1 ml . S. of, 10 ft . E. of rd., 250 ft . N. of E.-W.
fence, on head wall of concrete culvert; chiseled square

## 5. FROM ANNADA SOUTH ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD INTO ELSBERRY qUADRANGLE (by L. V. Johnson in 1928)

Annada, about 0.6 ml . SE. of, near SE. cor. sec. 19, T. 52 N., R. 2 E., 30 ft . S. and 25 ft . W. from steel bridge, 2 ft . E. of telephone pole, in concrete post; standard tablet stamped "T T Sta No 3 L J 1928"
(Latitude $39^{\circ} 15^{\prime}-39^{\circ} 30^{\prime}$; long1tude $91^{\circ} 00^{\prime}-91^{\circ} 15^{\prime}$ )


1. FROM NEBO QUADRANGLE AT SEC. 15, T. 53 N., R. 1 W., WEST AND SOUTH THROUGH CALUMET INTO NEBO QUADRANGLE AT POINT ABOUT 2 MILES SOUTH OF CALUMET (by L. V. Johnson in 1928)
(Continued from Nebo quadrangle; see line 3.)
Louisiana, $5 \mathrm{mi} . \mathrm{S}$. and l mi . E. from, in NW $1 / 4 \mathrm{sec} .16, \mathrm{~T} .53 \mathrm{~N} .$, R. 1 W., $00 \mathrm{ft} . \mathrm{S}$. and 40 ft . E. from E . ond of rd. forks, io ft. S. and 50 ft . E. from gate, at entrance to large brick dwelling, in concrete post; standard tablet stamped "T T Sta No 40 F 192 ह́"
Ccilumet, about 2.1 ml . N. of, in $\mathrm{SW} 1 / 4 \mathrm{sec} .16$, T. $53 \mathrm{~N} ., \mathrm{R} .1 \mathrm{~W}$. , 10 ft . N. and 20 ft . E. from crossroads, on head wall of concrete culvert; chiseled square

Feet
646.943
643.04

Calumet, about 1 mi . N. of, in NW $1 / 4 \mathrm{sec} .28$, T. $53 \mathrm{~N} ., \mathrm{R} .1 \mathrm{~W}$. , about 100 ft . SE. of curve in rd., in line with T-fence W ., in root on SE. side of $40-1 \mathrm{n}$. elm tree; copper nail and washer
Calumet, about 0.6 ml . N. of, near center sec. 28, T. 53 N., R. 1 W.; 200 ft . S. and 15 ft . W. from T-rd.'W., on rock head wall of culvert; chiseled square
680.24
635.14

Calumet, $550 \mathrm{ft} . \mathrm{S}$. of T-rd. E., at store, $1 \mathrm{ft} . \mathrm{S}$. and 10 ft . W. from fence corner near church, in concrete post; standard tablet stamped "T T. Sta No 41 F 1928 "
582.108

Reference mark, 150 ft . SE. of tablet, in root on E. side of 48 fin . elm tree; copper nail and washer
Calumet, about 1.2 mi . S. of, 15 ft . N. and 25 ft . W. from crossrocds, on rock head wall of culvert; chiseled square
(Continued in Nebo quadrangle; see line 4.)
2. FROM LOUISIANA SOUTHEAST ALONG COUNTY ROUTE D TO SEC. 16, T. 53 N., R. 1 W. (by C. W. Williams in 1934-35)
U.S.c.E. B.II. designated "23"
468.198
U.S.C. \& G.S. standard disk stamped "D 137 1935"
U.s.C. \& G.S. standard disk stomped "E 137 1935"

Junction of old Clarkeville-Louisiana rd., 340 ft . S. of, on SW. head wall of concrete culvert; chiseled square
Louisiana, about 1.7 mi . S. of, 47 ft . N. and 22 ft . W. from junction of rd. E., in root on N. side of $40-1 \mathrm{n}$. elm tree; copper nail and washer
Bricge $\mathrm{Z}-1 \mathrm{C} 5,67 \mathrm{ft}$. S. and 28 ft . E. from, 100 ft . N. and 28 ft . E. from entrance to farm of Roy Pitzer, in root on E. side of 60-in. elm tree; crossed nails
Loulsiana, 2.5 mi . S. of, 50 ft . S , and 30 ft . E. from junction of rd. E., in concrete post; standard tablet stamped "1832 ER A 1935"

Tps. 53 and 54 N., R. 1 W., near quarter cor. between secs. 5 and 32, on top of $E$. end of $S$. concrete abutment of bridge $Z-406$ over Euffalo Creek; chiseled square
T. 53 N., R. 1 K., in $S E 1 / 4$ sec. 5, about 650 ft . S. of junction of private rd. E., on top of NE. corner of $W$. concrete head wall of culvert; chiseled square
Schlieper's store, in front of, on NW. corner of concrete base of gasoline pump; painted squere
T. 53 N., R. 1 W., in NE $1 / 4 \mathrm{sec} .8,165 \mathrm{ft}$. S. and 25 ft . E. from junction of rd. W., in root on NV. side of 30-in. elm tree; copper nail and washer
566.09

Louisiana, $\left\{\mathrm{mi}_{\mathrm{m}} \mathrm{S}\right.$. and 1 mi . E. from, in NW $1 / 4 \mathrm{sec} .16, \mathrm{~T} .53 \mathrm{~N}$. , R. $1 \mathrm{~W} ., 80 \mathrm{ft} . \mathrm{S}$. and 40 ft . E . from E . end of rd. forks, $10 \mathrm{ft} . \mathrm{s}$. and 50 ft . E. from gate, at entrance to large brick dwelling, in concrete post; standard tablet stamped "T T Sta No $40 \mathrm{~F} 1928647^{\prime \prime}$
fieference mark, 28 ft . S. and 40 ft . W. from tablet, on base of S . concrete gatepost; chiseled square
*A small part of this quadrangle lies in Illinois.
3. LINE TO DETERMINE ELEVATION OF WATER-RESOURCES GAGE AT LOUISIANA (by C. W. Williams in 1934-36)
U.S.c.E. B.M. designated "23 A"

Feet
Lcuisiana, on U.S. Highway 54, in top of right upstream abutment of 480.982 bridge over Mississippi River; standard taclet (set by water-resources branch of U.S.Geol. Survey)

## 4. FROM LOUISIANA NORTH AND WEST ALONG COUNTY ROUTE T TO SEC. 7, T. 54 N., R. 2 W., THENCE WEST ALONG LOUISIANA-FFÁMKFORD ROAD INTO VANDALIA QUADFANGLE AT SEC. $4, \mathrm{~T} .54 \mathrm{~N} ., \mathrm{R} .3 \mathrm{~W}$. (by C. W. Williams in 1935)

U.S.C. \& G.S. standard disk stamped "C 137 1935"
U.S.C. \& G.S. standard disk stamped "B 137 1935"

Louisiana, Seventh Street at Frankford Road, on w. corner of sidewaik; painted square
Louisiana, 125 ft . E. of W. city limits, N. of rd., in root on S. side of 30-in. elm tree; copper nall and washer
487.643

Louisiana, 1.5 ml . NW. of, at entrance to dwelling of J. C. McCormack, on floor at S . end of smali box culvert; painted square
Louisiana triangulation sta.; U.S.C. \& G.S. standard disk designated "Louisiana 1931"
U.S.C. \& G.S. standard reference disk designated "Louisiana No 1 "

Louisiana, 2 mi . NW. of, in front yard of Mrs. W. P. Betwor, in root on SW. side of $24-i n$. locust tree; nail
Louisiana, 2.6 mi . NW. of, in NE $1 / 4 \mathrm{sec}$. 11 ; T. $54 \mathrm{~N} ., \mathrm{R} .2 \mathrm{~W} .$, on top of abutment at SW. corner of bridge 2-402 over Dry Fork Creek; chiseled square
T. $54 N_{0}, R_{0} 2 W_{0}$, in $N W 1 / 4 \mathrm{sec} .11,25 \mathrm{ft}$. N. of highwiay, in S. side of 16-in. walnut tree; crossed nails
Louisiana, 3 ml . NW. of, in NE $1 / 4 \mathrm{sec} .10$, T. $54 \mathrm{~N} ., \mathrm{R} .2 \mathrm{~W} ., 35 \mathrm{ft} . \mathrm{N}$. and 50 ft . E. from junction of rd. N., in concrete post; standard tablet stamped "1833 E R A $1935 "$
Heference mark, about 525 ft . N. $70^{\circ} \mathrm{E}$. of tablet, at SW. comer of bridge S-904 over Grass Creek, in top of abutment; bolt
T. $54 \mathrm{M} ., \mathrm{R} .2 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .9$, in front of large, two-story dwelling, in root on SW. side of $30-1 n$. walnut tree; copper nail and washer
T. 54 N., R. 2 W., near center sec. 9, junction of rd. S.; surface of highway
T. 54 N., R. 2 H., in E $1 / 2 \mathrm{sec} .8$; about 500 ft . W. of two-story cwelling of liss. Nalley, about 100 ft . from highway, in pasture, in root on N. side of $30-\mathrm{in}$. elm tree; crơssed nalls
T. 54 N., R. 2 W., in sec. 7, in front of dweling of Jim Travis, 18 ft . S. of rd., in root on NE. side of $24-1 n$. walnut tree; nail
T. 54 N., Rs. 2 and 3 W., on line retween secs. 7 and 12, 20 ft . N. and 35 ft . E. from junction of rd. at range line, in root on NW. side of 30-1n. elm tree; copper nall and washer
T. 54 N., R. 3 W., in $S W 1 / 4$ sec. 1.2 , $15 \mathrm{ft} . \mathrm{N}$. and 130 ft . F. (? W.) from crossroad, in root on $S$. side of 16-in. elm tree; nail
T. 54 N., R. 3 W., in F l/2 sec. $12,15 \mathrm{ft}$. N . and 30 ft . W. from T-rd. W., at top of hill, in root on S. side of 12-in. hickory tree; copper nail and washer
T. $54 \mathrm{~N}:$, R . $3 \mathrm{~W} .$, in $\mathrm{HE} 1 / 4 \mathrm{sec} .11,40 \mathrm{ft}$. N . of rd., in root on S . side of 20-in. white-ook tree; nall
. 54 N., R. 3 W., in $N 1 / 2$ sec. 11 , at center of triangle formed by rd. forks; surface of ground
Sugar Creek Church, in NW $1 / 4 \mathrm{sec} .11$, T. 54 N., R. $3 \mathrm{~W} ., 100 \mathrm{ft}$. N. of rd., 2 ft . W. of W . end of concrete steps of church, in concrete post; standard tablet stamped "1835 ER A 1935"
Feference mark, 200 ft . E. of tablet, in root on SE. side of $20-1 \mathrm{r} . \mathrm{elm}$ tree; copper nall and washer
T. 54 N., R. 3 W., in sec. 10 , on SW. abutment of bridge over Sugar Creek; painted square
T. 54 N., R. 3 W., in NW $1 / 4 \mathrm{sec} .10$, in front of dwelling of W. T. Johnson, 35 ft . S. of rd., in root on $N$. side of 24 -in. maple tree; copper nail and washer
. 54 N., R. 3 W., in SE $1 / 4 \mathrm{sec} .4$, in creek bottom of West Fork of Sugar Creek, 48 ft . N. and 28 ft . W. from junction of rd. N., in root on E. side of 40-in. burr-oak tree; copper nall and washer
5. FROM BARRY QUADRANGLE AT SEC. 31, T. 55 N., R. 2 W., SOUTH TO

SEC. 6, T. 54 N., R. 2 W. (by C. W. Williams in 1935)
Continued from Barry quadrangle; see line 1.)
T. 55 N., R. 2 W., in sec. 31, at bridge over Sugar Creek Slough, on NE. abutment; chiseled cross

Feet
459.30
466.421
465.9
463.66
467.9
509.22
660.90
649.78
614.07
606.96
(Continued in Barry quadrangle; see line 3.)
7. FROM VANDALIA QUADRANGLE SOUTH ALONG J.S. HIGHWAY 61 TO BOWLING GREEN, THENCE ALOIGG COUNTY ROUTE A (NOW STATE HIGHWAY 29) TO ASHLEY AND INTO SILEX QUADRANGLE, THENCE EAST AND NORTHEAST ALONG ROADS TO POINT ABOUT 1 MILE SOUTH OF EDGEWOOD, INCLUDING THAT PART OF THE LINE IN SILEX QUADRANGLE (by C. W. Williams in 1934-35 and Cornish Beck in 1936)
(Continued from Vandalia quadrangle; see line 2.)
Bowling Green, about 5.5 mi . NW. of, 125 ft . upstream from bridge over East Forl: of Peno Creek, in top of right end of downstream head wall of concrete culvert; standard tablet (set by water-resources branch of U.S.Geol. Survey)

Bowling Green, 4.4. mi. Nw. of, 109 ft . E. of highway, 2 ft . N. and 124 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 26 C 1935"
Eowling Green, about 3.7 mi . NW. of, 50 ft . S. and 45 ft . E. from junction of rd. W., at entrance to field, on $S$. end of pipe culvert; painted square
Crossroad, 50 ft . N. and 10 ft . E. from, on head wall of culvert; chiseled square
Eowling Green, about 1.7 mi . NW. of, 0.7 mi . NE. of intersection of $0 . s$. Highway 54, 20 ft . N. and 50 ft . E. from crossroad, in corner fence post; nail
Bowling Green, 1.2 mi . NW. of, 80 ft . N. and 30 ft . F. from intersection of U.S. Highway 54, in concrete post; standard tablet stamped "T T 25 C 1935"
U.S.C. \& G.S. standerd disk stamped "A 137 1935"

Bowling Green, l mi. S. of, 246 ft . S. and 35 ft . E. from junction of County Route A (now State Highway 29), in concrete post; standard tablet stamped "T T 24 C 1935"
Bowling Green, 1.8 ml . S. of, 20 ft . N. and 30 ft . E. from junction of rd. E., in root on $N$. side of 24-in. catalpa tree; copper nail and washer
868.245
873.23
830.32
813.18
822.91
810.824
Ashley, 3 mi . E. and 1 mi . S. from, in $\mathrm{E} 1 / 2$ sec. $31, \mathrm{~T} .52 \mathrm{~N} ., \mathrm{R} .2 \mathrm{~W} .$, 25 ft . N. and 10 ft . E. from T-rd. W., in concrete post; standard tablet stamped "T T No Sta 56 F 1928"
Feet
729.960
. 52 N., R. 2 W., cor. secs. 29, 30,31 , and $32,50 \mathrm{ft}$. E. of T-rd. N. on NW. corner of head wall of culvert; chiseled square
Pleasant Grove School, $80 \mathrm{ft} . \mathrm{S}$, and 75 ft . W. from SW. corner of, in root on N. side of 26-in. locust tree; bent nail
749.08
T. 52 N., R. 2 W., near cor. secs. $28,29,32$, and 33 , on SE. wing wall of bridge; chiseled square
T. 52 N., R. 2 W., on line between secs. 28 and $33,30 \mathrm{ft}$. N. and 6 ft .
E. from crossroads, on head wall of culvert; chiseled square
752.15
T. 52 N., R. $2 W_{\text {. }}$ about 0.1 mi . N. of center sec. $28,100 \mathrm{ft} . \mathrm{N}$. of gat to jard of dwelling, in root on W. side of 6-in. catalpa tree; copper nail and washer
T. 52 N., R. 2 W., near center sec. $21,20 \mathrm{ft}$. S, and 25 ft . E. from T-rd. E., in concrete post; standard tablet stamped "T T Sta No 55 F $1928{ }^{\circ}$
Creek at abandoned rd., $5 \mathrm{ft} . \mathrm{S}$. and 60 ft . E. from, in root on S. side of $36-1 \mathrm{n}$. elm tree; nail
728.14
T. 52 N., R. 2 W., near center sec. $22,30 \mathrm{ft}$. N. and 10 ft . E. from abandoned ra. at N.-S. fences, in root on S. side of 24-in. post-oak tree; copper nail and washer
Creek, at ford, 15 ft . S . and 15 ft . E. from, in SE . side of $7-1 \mathrm{n}$. elm tree; nail
T. 52 N., R. 2 W., near center sec. 23 , 150 ft . N. and 40 ft . W. from rd. fork NE., 15 ft . E. of rd. NW., in root on SE. side of 24-in. whito-oak tree; copper nail and washer
829.05
Edgewood, $0.5 \mathrm{mi} . \mathrm{S}$. of, 2.1 mi. SE. of Cyrene, along U.S. Highway 61, 42 ft . N. and 48 ft . E. from crossroad, in concrete post; standard tablet stamped "T T Sta No 54 F 1928"
831.418
U.S.C. \& G.S. standard disk stamped "U 136 1935"
821.839
8. FROM ASHLEY SOUTHWEST ALONG STATE HIGHWAY 29 INTO BELLFLOWER QUADRANGLE (by Cornish Beck in 1936)
Ashley, 0.8 mi . SW. of, 615 ft . NE. of junction of rd. SE., 40 ft . NW. of highway, 6 ft . NE. of private entrance, on concrete base of gatepost; chiseled square (in Silex quadrangle; see Bull. 898-c, p.445).
716.96
(Continued in Vandalia quadrangle; see line 3.)
For additional level lines along Mississippi River, Alton R.R. and U.S. Highway 6l, refer to United States Coast and Geodetic Survey first-order line, Savanna to Grafton, Ill.; and second-order lines, Louisiana to Mexico and Wentzville to Bowling Green.

# VANDALIA QUADRANGLE <br> (Latitude $39^{\circ} 15^{\prime}-39^{\circ} 30^{\prime}$; long1tude $91^{\circ} 15^{\prime}-91^{\circ} 30^{\prime}$ ) <br> Audrain, Pike, and Ralls Counties 



1. FROR BOVLING GREEN QUADRANGLE WEST ALONG FRANKFORD-LOUISIANA ROAD TO FRAMKFORD, THENCE WEST ALONG ROADS INTO HANNIBAL QUADRAMGLE AT SEC. 2, T. 54 N., R. 5 W. (by C. W. Williams in 1934-35)
(Continued from Bowling Green quadrangle; see line 4.)
T. 54 N., R. 3 W., in $S E 1 / 4$ sec. $5,100 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from junction of rd. S., in root on E. side of $14-1 n$. wild-cherry tree; copper nail and washer

Feet
. 54 N., R. 3 W., near quarter cor. between secs. 5 and $6,27 \mathrm{ft}$. S. and 200 ft . E. from crossroad, 80 ft . E. of NE. corner of farmhouse, in concrete post; standard tablet stamped "1836 E R A 1935"
635.203

Reference mark, 60 ft . N. and 160 ft . W. from tablet, in root on N . side of $24-1 \mathrm{n}$. elm tree; copper nail and washer
T. $54 \mathrm{N}$. , Rs. 3 and 4 W ., on line between secs. 1 and $6,15 \mathrm{ft}$. S. and 150 ft . E. from junction of range line rd., in root on NE. side of 30-in. burr oak tree; copper nail and washer
539.46

Frankford, $0.5 \mathrm{ml} . E$. of, on U.S. Highway 6l, in NE $1 / 4 \mathrm{sec} .2$, T. 54 N. , R. 4 W., 125 ft . S. and 38 ft . E. from junction of Frankford-Louisiana rd., in concrete post; standard tablet stamped "1837 ER A 1935"
630.239

Reference mark, 120 ft . N. of tablet, on N. head wall of concrete culvert; chiseled square
Frankford, at NW. corner of post office, on sidewalk; chiseled square 570.75

Tps. 54 and 55 N., R. 4 W., near W. sixteenth cor. between secs. 3 and 34 , 55 ft . S. and 18 ft . W. from T-rd. S., in root on S. side of $12-\mathrm{in}$. elm tree; copper nall and washer
Frankford, 1.5 mi . W. of, cor. secs. 4, 5, 32, and 33, Tps. 54 and 55 N. , R. 4 W., $25 \mathrm{ft} . \mathrm{N}$. and 200 ft . W. from T-rd. N., 10 ft . W. of entrance to farm, in concrete post; standard tablet stamped "1838 E R A 1935"
Reference mark, 110 ft . E. of tablet, in root on N . side of $18-\mathrm{in}$. hickory tree; copper nail and washer
Tps. 54 and 55 N., R. 4 W., near W. sixteenth cor. between secs. 5 and $32,25 \mathrm{ft}$. S. and 15 ft . E. from crossroads, in root on NE. side of 10-1n. hackberry tree; copper nail and washer
Tps. 54 and 55 N., R. 4 W., near W. sixteenth cor. between secs. 6 and $31,13 \mathrm{ft}$. N. and 77 ft . E. from T-rd. N., in root on S. side of twin 10-in. black-oak tree; copper nail and washer
T. 54 N., R. 5 W., in NE $1 / 4 \mathrm{sec} .1,93 \mathrm{ft}$. E. of E. face of farmhouse, 15 ft . N. of rd., in root on $N$. side of $40-1 \mathrm{n}$. burr-oak tree; copper nall and washer
T. 54 N., R. 5 W., in NE $1 / 4 \mathrm{sec} .2,32 \mathrm{ft}$. N. and 45 ft . E. from rd. at N . end of bridge over Spencer Creek, 30 ft . SE. of rd. forks, in concrete post; standard tablet stamped "1839 E R A 1935"
Reference mark, 20 ft . S. of tablet, in root on NW. side of $12-1 \mathrm{n}$. elm tree; copper nail and washer
(Continued in Hannibal quadrangle; see line 6.)

## 2. FROM FRAMKFORD SOUTHEAST ALONG U.S. HIGHWAY 61 INTO BOWLING GREEN QUADRANGLE (by C. W. Williams in 1934-35 and Cornish Beck in 1936)

Frankford, 1 mi . SE. of, at bridge over Peno Creek, in top of upstream end of $S$. pier of steel truss; standard tablet (set by water-resources branch of U.S.Geol. Survey)
Junction of rd. SE., 15 ft . N. and 40 ft . W. from, on NW. head wall of concrete culvert; chiseled square
T. 54 N., R. 3 W., in $1 / 4 \mathrm{sec} .7$, about $0.2^{\circ} \mathrm{mi}$. SE. of fillinc sta.

Feet
of J.S. Ford, on top of SW. head wall of concrete culvert; chiseled square
611.96
630.18
S. of pond, on top of NE'. head wall of concrete culvert; chiseled square
T. 54 N., R. z w., $0.2 \mathrm{mi} . \mathrm{W}$. of cor. secs. $7,8,17$, and 18 , $59 \mathrm{ft} . \mathrm{S}$. and 82 ft. E. from crossroad. in concrete, post; standard tablet stamped "T T 30 C 1935 "
651.034

Reference mark $1,232 \mathrm{ft}$. N. and 142 ft . W. from tablet, on top of $W$. head wall of concrete culvert; chiseled square
Reference mark 2, 77 ft . N. and 14 ft . W. from tablet, on top of N. head wall of concrete culvert; chiseled square
T. 54 f., R. 3 W., on $l i n e$ between secs. 17 and $20,5 \mathrm{ft} . \mathrm{N}$. end 60 ft . E. from crossroad, on NiW. corner of old concrete culvert; chiseled square
T. 54 N., R. 3 W., in $\mathrm{S} 1 / 2 \mathrm{sec} .20,33 \mathrm{ft}$. N. and 18 ft . E. from crossroad, on head wall of concrete cuivert; chiseled square
Bowling Green, 7.2 mi . NW. of, near quarter cor. between secs. 28 and 29, T. 54 H., R. 3 W., 24 ft . N. and 29 ft . E. from crossroad, in concrete post; standard tablet stamped "T T 29 C 1935"
(Continued in Eowling Green quadrangle; see line 7.)
3. FROM SILEX GUADRANGLE WEST ALONG SOUTH BORDER INTO WELLSVILLE
QUADRANGLE, INCLUDING THAT FART OF THE LINE IN BELLFLOFER
GUADRANGLE (by Cornish Eeck in 1936)
(Continued from Bowling Green quacirangle; see line 8.)

Ashley, 1.9 ml . SW. of, along State Highway 29, in sec. 33, T. 52 N.
R. 3 W., in NW. wing wall of bricge; metal disk (Mo. Státé Highway B.M.)

State HiEhway 29 at crossroad, 13 ft . N. and 15 ft . E. from, on N . end of culvert; painted square
630.858

Steel briige, in NW. wing wall; top of S . bent rod
T-rd. E., i8'ft. N. and 40 ft . E. from, in S . side of $20-\mathrm{in}$, white-oak tree; bent nall
Farmer, $1 \mathrm{mi} . \mathrm{S}$. and 1.8 mi . E. from, cor. secs. 29, 30, 31 , and 32 , T. $52 \mathrm{~N} .$, R. 3 W., $25 \mathrm{ft} . \mathrm{N}$. and 20 ft . E. from rd. corner M.-E., in concrete post; standard tablet stamped "I T Sta No $68 \mathrm{~F} 1928^{\circ}$
Crossroads, 13 ft . N. and 15 ft . E. from, on E. corner of wing wall of concrete culvert; chiseled square
Farmer, about 1 mi . S. and 1 mi . E. from, in $\mathrm{SW} 1 / 4$ sec. 30, T. 52 N. , R. 3 W., on SW. end of bottom step of Siloam Church; chiseled square
r-rd. E., 15 ft . N. and 30 ft . E. from, in root on S. side of $24-1 \mathrm{n}$. post-cak tree; bent nail
Farmer, 0.5 ml . S. of, quarter cor between secs. 25 and $26, \mathrm{~T} .52 \mathrm{~N}$. , R. 4 W., 20 ft . S. and 25 ft . E. from crossroads, in concrete post; standard tablet stamped "T T Sta No 67 F 1928"
Vannoy School, at flagpole; top or base
Farmer, about 0.9 ml . S. and 0.9 ml . W. from, in $\mathrm{SW} 1 / \mathrm{L} \mathrm{sec} .26$, T. 52 N., R. 4 W., on top of N. rivet of NW. pier of bridge over Indian Creek; chiseled cross
T-rd. S., 15 ft . S. and 15 ft . E. from, in N . side of peach tree; bent nail
685.36
678.87
682.71
752.043
732.72
745.08
707.40
728.814
724.52
640.32
681.41

Estes, about 1.5 ml . E . of, near quarter cor. between secs. 33 and 34 , T. 52 N., R. 4 W., $21 \mathrm{ft} . \mathrm{S}$. and 10 ft . W. from crossroads, on W. head wall of culvert; chiseled square
Estes, 1 mi. E. of, near center sec. 33, T. $52 \mathrm{~N} ., \mathrm{R} .4 \mathrm{w} ., 20 \mathrm{ft} . \mathrm{N}$. of T-rd. N., 3 ft . W. of SE. corner of yard fence, in concrete post; standard tablet stamped "T T Sta No 66 F 1928"
Estes, 12 ft . $N$, and 15 ft . W. from crossroads, on $N$. end of iron pipe culvert; painted square
T-rd. E., NE. of, on concrete base of corner post; chiseled square
Estes, about C.2 mi. N. and 0.5 ml . W. from, near N. sixteenth cor. between secs. 31 and $32, \mathrm{~T} .52 \mathrm{~N} ., \mathrm{R} .4 \mathrm{~W} ., 12 \mathrm{ft}$. S. and 13 ft . W. from T-rd. W., on head wall of culvert; chiseled square
$735 \cdot 77$
733.510

Estes, about 0.2 ml . N. and 1.5 ml . W. from, near N. sixteenth cor. between secs. 31 and $36, T .52 \mathrm{~N} ., \mathrm{Rs}$. 4 and $5 \mathrm{~W} ., 9 \mathrm{ft}$. N. and 21 f't. E. from T-rd. E., on head wall of culvert; chiseled square

Estes, 1 mi . N. and 1.5 ml . W. from, approximate quarter cor. between secs. 25 and $30, \mathrm{~T} .52 \mathrm{H}$. , Rs. 4 and $5 \mathrm{~W} ., 75 \mathrm{ft}$. S. and 20 ft . E. from crossroads, in concrete post; standard tablet stamped "T T Sta No 65 F 1928"
Estes, about 1 mf . N. and 2.3 ml . W. from, in $\mathrm{w} 1 / 2$ sec. 25 , T. 52 N. , R. $5 \mathrm{~W} ., 30 \mathrm{ft}$. E. of T-rd. N., on NW. corner of curb of bridge; chiseled square
Crossroads, 15 ft . S. and 24 ft . W. from, on head wall of culvert; chiseled square
Estes, about $1 \mathrm{mi} . \mathrm{N}$. and 3.5 mi . W. from, near quarter cor. between secs. 26 and $27, T .52$ N., R. $5 \mathrm{~W} ., 0.5 \mathrm{ml}$. W. of Boyc School, 15 ft . S. and 100 ft . E. from rd. at fences $\mathrm{N},-\mathrm{S}$. , in root on S . side of 20-in. elm tree; copper nail and washer
estes, 1 mi . N. and $[. .5 \mathrm{mi}$. W. from, near quarter cor. between secs. 27 and 28 , T. 52 N., R. 5 W., 25 ft. W. of T-rd. E., in concrete post; standard tablet stamped "T T Sta No 64 F 1928"
T. $52 \mathrm{M},. \mathrm{R} .5 \mathrm{~W} ., \operatorname{cor}$. secs. 27,28 , 33 , and $34,12 \mathrm{ft} . \mathrm{S}$. and 18 ft . E. from crossroads, on head wail of culvert; chiseled square W. from County Route $W$ at crossroad, on $S$. end of iron pipe culvert; painted square
(Continued in Farber quadrangle; see line 7.)
4. FROM BELLFLOWER QUADRANGLE AT SEC. 29, T. 52 N., R. 5 W., NORTH TO VANDALIA ALONG COUNTY ROUTE T, THENCE NORTH ALONG COUNTY ROUTE F TO SEC. 20, T. 53 N., R. 5 W., THENCE NORTH ALONG ROADS INTO FARBER QUADRANGLE ABOUT 1 MILE NORTHWEST OF MADISONVILLE (by Cornish Beck in 1936)
T. 52 N., R. 5 W., cor. secs. $20,21,28$, and $29,16 \mathrm{ft}$. S. and 15 ft . E. from crossroad, on head wall of concrete culvert; chiseled square
T. 52 N., R. 5 W. , cor. secs. $16,17,20$, and $21,12 \mathrm{ft} . \mathrm{S}$, and 20 ft . W. from crossroad, on $S$. edge of pipe culvert; painted square
Vandalia, about $1 \mathrm{ml} . \mathrm{S}$. of, cor. secs. $8,9,16$, and 17, T. 52 N.,
R. 5 W., 33 ft . S. and 39 ft . W. from crossroad, in concrete post;
standard tablet stamped ${ }^{1} T$ T $28^{\circ} \mathrm{C}$ 1935 ${ }^{\circ}$ (covered by driveway construction) 758.280
Reference mark, 64 ft . S. and 12 ft . E. from tablet, in root on NW. side of 12-1n. cedar tree; copper nail and washer
Rd. fork N., on N. end of culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "V 137 1935"

Tps. 52 and 53 N., R. 5 W., near quarter cor. between secs. 5 and 32, 26 ft . N. and 6 ft . W. from crossroad, on head wall of culvert; chiseled square
745.44

Vandalia, 2 mi . N. of, near quarter cor. between secs. 29 and 32, T. $53 \mathrm{~N}_{0}, \mathrm{R}_{\mathrm{o}} 5 \mathrm{~W} ., 25 \mathrm{ft}$. N. and 25 ft . E. from T-rd. S., in concrete post; standard tablet stamped "T T 27 C 1935"
755.327
T. 53 N., R. 5 W., cor. secs. $26,29,32$, and $33,15 \mathrm{ft}$. S. of T-rd. N., in NW. side of telephone pole; nail
T. 53 N., R. 5 W., cor. secs. $20,21,28$, and 29, 21 ft . W. of highway S., 63 ft . S. of rd. W., in root on N. side of 24 -in: elm tree; copper nail and washer
761.72
T. 53 N., R. 5 W., cor. secs. $16,17,20$, and $21,45 \mathrm{ft} . \mathrm{S}$. and 22 ft . W. from T-rd. E., in root on W: side of 20-1n. cheriry tree; copper nall and washer
T. $53 \mathrm{~N}_{\mathrm{r}}, \mathrm{R} .5 \mathrm{~W} .$, cor. secs. $8,9,16$, and $17,21 \mathrm{ft}: \mathrm{s}$, and $24 \mathrm{ft} . \mathrm{W}$. from T-rd. S., in NW. side of hedge telephone pole; nail
T. 53 N., R. 5 W., near quarter cor. between secs. 8 and 17 , 148 ft . S. and $5 \mathrm{ft}, \mathrm{W}$. from T-rd: E., 15 ft . S., and 5 ft . W. from rd. corner W. - N., In concrete post; standard tablet stamped "T T $15 \mathrm{C} 1935^{\prime \prime}$
(For balance in Farber quadrangle; see line 4.)
T. 54 N., R. 5 W., in NE $1 / 4$ sec. i9; on SW: wing wall of bridge over Spencer Creek; chiseled square
Madisonville, at T-rd. S., in N. side of telephoné pole; nail
(Continued in Farber quadrángie; see line 4.)
For an additional level line along Alton R.R., refer to United States Coast and Geodetic Survey secónd-order line; Louisiana to Mexico.

KEOKUK GUADRANGLE*
(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 30^{\prime}$; longitude $91^{\circ} 15^{\prime}-91^{\circ} 30^{\prime}$ )
Clark County


1. FROM KAHOKA QUADRANGLE SOUTHEAST ALONG U.S. HIGHWAY 61 TO ALEXANDRIA (by B. A. Barnes in 1936 ) (Continued from Kahoka quadrangle; see line 2.)
T. 64 N., R. 6 W., in $N E 1 / 4$ sec. $1,45 \mathrm{ft}$. N. and 81 ft . W. from N. -S. crossroad, in root on $N$. side of 14-in. elm tree; copper nail and washer

Feet
496.02
493.97
490.35
488.600
496.700
500.710

[^3]Clark County


1. FROM KAHOKA QUADRANGLE NORTH ALONG STATE HIGHWAY 81 INTO KEOSAUQUA QUADRANGLE (by B. A. Barnes in 1936)
(Continued from Kahoka quadrangle; see line 4.)
Kahoka, 6 ms . N. of, 0.3 mi . S. of junction of County Route C, 23 ft . S. and 37 ft . E. from junction of rd. E., 2 ft . W. of fence corner, in concrete post; standard tablet stamped "T T 94 C 1936"

Feet
705.604
T. 66 N., R. 8 W., near quarter cor between secs. 13 and 24 , 30 ft . S. and $36^{\prime} \mathrm{ft}$. E. from crossroad, in root on IW. side of 34 -in. maple tree; copper nail and washer
709.62
T. 66 N, , R. 8 W. , near quarter cor, between secs. 12 and $23,15 \mathrm{ft} . \mathrm{S}$. and 27 ft . W. from crossroad, on center of S . head wall of concrete culvert; chiseled square
Kahoke, 8.3 mi . N. of, 0.1 mi . W. of center sec. 12, T. 66 N., R. E W., $2 L^{2} \mathrm{ft}$. S. and 80 ft . E. from E.-W. crossroad, 7 ft . S. of fence corner, In concrete post; standard tablet stamped "T T 93 C 1936"
T. 66 N., R. 8 W., in SE $1 / 4 \mathrm{sec} .2,20 \mathrm{ft}$. W. of highway, in center of W. head wall of concrete culvert; iron pin
709.096
701.38
T. 66 N., R. 8 W., in sec. 2, 15 ft . S. and 27 ft . E. from junction of rd. E., on center of $S$. head wall of concrete culvert; chiseled square
T. 67 N. , R. 8 W., in $\mathrm{SW} 1 / 4$ sec. 34 , at junction of rd. SW., surface of highway
(Continued in Keosauqua quadrangle; see line 1.)

> 2. FROM KEOSAUQUA QUADRANGLE AT SEC. 22, T. 66 N. . R. 8 W., EAST ALONG WEST HALF OF SOUTH BORDER INTO KAHOKA QUADRANGLE AT SEC. 19, T. 66 N., R. 7 W. (by F. Y. Brown in 1936-37)
> (Continued from Keosauqua quadrangle; see 11ne 2.)
T. 66 N., R. 8 W., near center sec. 23 , 110 ft. E. of T-rd. N., on N. end of $E$. abutment of bridge over creek; chiseled square
T. 66 N., R. 8 W., near quarter cor. between secs. 23 and $24,210 \mathrm{ft} . \mathrm{N}$. of T-rd. E., 100 ft . S. of rd. corner from S. W., 25 ft . W. of rd., in root on E. side of 14-in. white-oak tree; copper nail and washer
County Route $\mathrm{C}, 25 \mathrm{ft}$. S. of, about 300 ft . N. of farmhouse, in root on N. side of 28-in. maple tree; crossed nails from junction of rd. S., 30 ft . SW . of SW . corner of farmhouse, in root on S. side of $36-1 n$. maple tree; copper nail and washer
(Continued in Kahoka quadrangle; see line 5.)

[^4][^5]KAhOKA QUADRANGLE*
(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 30^{\prime}$; longitude $91^{\circ} 30^{\prime}-91^{\circ} 45^{\prime}$ )
Clark and Lewis Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1900)
T. 63 N., R. 6 W., in $W 1 / 2$ sec. 4 , in SE. corner of stone foundation of schooihouse; standard tablet stamped " 538 A"
T. 64 N., R. 6 W., in NW $1 / 4 \mathrm{sec} .8$, at crossroads, in stone step at W. door of Fox River Church; aluminum tablet stamped " 533 A"
Antioch, in SW $1 / 4 \mathrm{sec} .20, \mathrm{~T} .64 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W} .$, in NW. corner of store building; standard tablet stamped " 698 A"
Kahoka, in front of Chicago, Buriington \& Quincy R.R. sta., top of rail Kahoka, at SW. corner of courthouse, in window ledge; aluminum tablet stsmped "704 A"

Feet<br>** 535.087<br>** 532.532<br>697.564<br>697.1<br>704.887

## 2. FROM WYACONDA QUADRANGLE EAST ALONG STATE HIGHWAY 4 TO WAYLAND, THENCE EAST ALONG U.S. HIGHWAY 61 INTO KEOKUK QUADRANGLE (by B. A. Barnes in 1936)

(Continued from Wyaconda quadrangle; see line 3.)
Kahoka, 1 mi . W. of, $15 \mathrm{ft} . \mathrm{N}$. and 33 ft . W. from crossroad, at center on N. head wall of concrete culvert; chiseled square
Kahoka, at W. limits of, at crossroad; surface of highway
Kahoka, at SE. corner of courthouse yard, in concrete post; standard tablet stamped "695 A"
解, 40 ft . N. anc 65 ft . E. from intersection of Main and Washington Streets, in concrete post; standard tablet stamped "1517 ER A $1935^{\circ \prime}$
Kahoka, l.] mi. E. of, 30 ft . S. and 50 ft . E. from junction of rd. S., in top of right-of-wey post; iron pin
703.272

Junction of rd. S.; surface of highway
T. 65 N., R. 7 W., in $S W 1 / 4 \mathrm{sec} .21,20 \mathrm{ft}$. S. and 18 ft . E. from crossroad, on center of $E$. head wall of concrete culvert; chiseled square
696.08
691.2
T. 65 N., R. 7 W., in NE $1 / 4 \mathrm{sec} .28$, 35 ft . S. of E.-W. crossrced, in concrete post; standard tablet stamped "1518 E R.A 1935"
Crossroad; surface of highway
T. 65 N., R. 7 W., in sec. $34,45 \mathrm{ft}$. N. and 300 ft . W. from N.-S. crossroad, in top of right-of-way post; iron pin
crossroad; surface of highway
689.69
690.513
687.8
682.24
T. 65 N., R. 7 W., in $\mathrm{S} 1 / 2$ sec. $35,26 \mathrm{ft}$. S. and 14 ft . E. from N.-S. crossroad, on center of $E$. head wall of concrete çulvert; chiseled square
T. 65 N., R. 7 W., near querter cor. between secs. 35 and $36,35 \mathrm{ft}$. S. of highway at fence S., in concrete post; standard tablet stamped "1519 E R A 1935"
Wayland, 1.5 mi . W. of, 20 ft . S. and 12 ft . E. from crossroad, on center of $E$. head wall of concrete culvert; chiseled square
Wayland, 1 mi . W. of, at SE. corner of bridge over Fox River, in center of concrete wing wall; standard tablet (set by water-resources branch of U.S.Geol. Survey)
677.8
676.80
664.827
526.42
525.592

Wayland, 50 ft . N. and 65 ft . W. from junction of U.S. Highway 61 and State Highway 4, in concrete post; standard tablet stamped ${ }^{1} 1520$ ERA 1935"
Wayland, about 1 mi . E. of, 21 ft . N. and 27 ft . W. from junction of rd. N., on center of W. heac wall of concrete culvert; chiseled square
531.62

Wayland, about 2 mi . E. of, 15 ft . N. and 75 ft . E. from junction of rd. N., $15 \mathrm{ft} . \mathrm{N}$. and 12 ft . $V$. from junction of rd . S., on center of W . head wall of concrete culvert; chiseled square
Crossroad, 15 ft . N. and 21 ft . E. from, on center of N . head wall of concrete culvert; chiseled square

[^6]Wayland, about 3 mi . E. of, 35 ft . NE. of curve in highway from W.-SE., Feet
in concrete post; standard tablet stamped "1521 E R A 1935"
Concrete culvert near Jenkins School, on W. head wall of; chiseled square Grossroad; surface of highway
(Continued in Keokuk quadrangle; see line 1.)

## 3. FROM WAYLAND SOUTH ALONG U.S. HIGHWAY 61 INTO CANTON QUADRANGLE (by B. A. Barnes in 1936)

T. 64 N., R. 6 W., in NE $1 / 4$ sec. $6,100 \mathrm{ft}$. S. and $2 \mathrm{~L}_{4} \mathrm{ft}$. W. from junction of rd. W., on center of W. head wall of concrete culvert; chiseled square
522.24
T. $64 \mathrm{~N} ., \mathrm{R}$. 6 W. , in SE $1 / 4 \mathrm{sec} .6$, about 280 ft . N. of bridge over Fox River, 12 ft . N. and 33 ft . E. from junction of rd. E., on center of N. head wall of concrete culvert; chiseled square
T. 64 N., R. 6 W., in NE $1 / 4 \mathrm{sec} .7,30 \mathrm{ft}$. N. and 30 ft . W. from junction of rd. W., on center of $N$. head wall of concrete culvert; chiseled square
Fox River triangulation sta.; U.S.C.E. stone post
524.82

Fox River triangulation sta.; U.S.C.E. stone post
T. 64 N., R. 6 W., in NW $1 / 4 \mathrm{sec} .17,20 \mathrm{ft}$. N . and 35 ft . E. from
junction of rd. E., on center of N. head wall of concrete culvert; chiseled square
Junction of rd. E.; surface of highway
T. 64 N., R. 6 W. , on line between secs. 19 and $20,95 \mathrm{ft} . \mathrm{S}$. and 12 ft . W. from junction of rd. W., at NW. end of concrete briage, on inside curb; chiseled square
T. 64 N., R. 6 W., in center sec. $29,38 \mathrm{ft} . \mathrm{N}$. and 24 ft . W. from junction of rd. W., on center of W. head wall of concrete culvert; chiseled square
T. 64 N., R. 6 W., about 0.2 ml . W. of cor. secs. $28,29,32$, and 33 , 75 ft . S . and 45 ft . W. from crossroad, in concrete post; standard tablet stamped "1523 E R A 1935"
T. 64 N., R. $6 \mathrm{~W} .$, in sec. 32 , at SW . corner of bridge over Honey Creek, on center of concrete wing wall; chiseled square
T. 63 N., R. 6 W., near quarter cor. between secs. 4 and $5,70 \mathrm{ft}$. N. and 24 ft . W. from Junction of County Route Z , on center of W. head wall of concrete culvert; chiseled square
T. 63 N., R. 6 W ., in sec. 9 , at SW. corner of bridge, on center of con-
T. 63 N., R. $6 \mathrm{~W} ., 640 \mathrm{ft}$. E. of cor secs. 9,10 , 15 , and $16,50 \mathrm{ft}$. W. of highway at fence W., in concrete post; standard tablet stamped "1531 E R A 1935"
T. 63 N., R. $6 \mathrm{~W} ., 0.1 \mathrm{~ms}$. W. of center sec. $15,105 \mathrm{ft}$. N. and 20 ft . W. from crossroad, on center of W. head wall of concrete culvert; chiseled square
(Continued in Canton quadrangle; see line 5.)
4. FROM ATCHISON, TOPEKA \& SANTA FE RAILWAY NORTH ALONG STATE
HIGHWAY 81 INTO DONNELLSON QUADRANGLE (by B. A. Barnes in
1936)
U.S.C. \& G.S. standard disk stamped "H 85 1935"

Kahoka, 3 mi . N. of, 195 ft . N. and 47 ft . W. from Atchison, Topeka \&
Santa Fe Ry. double-track crossing, 11 ft . N. and 2 ft . E. from fence
corner, in concrete post; standard tablet stamped "T. T 95 C 1936" (to be reset) 596.205
Kahoka, about $4 \mathrm{mi} . \mathrm{N}$. of, 305 ft . S. and 30 ft . E. from crossroad, in center of E. head wall of concrete culvert; iron pin
Top of hill, on center of $E$. head wall of concrete culvert; chiseled square
T. 66 N., R. 8 W., in SW $1 / 4 \mathrm{sec} .25$, 9 ft . S. and 24 ft . W. from
junction of ra. W., on center of $S$. head wall of concrete culvert;
T. 66 N., R. 8 W., in $W ~ 2 / 2 \mathrm{sec} .25,15 \mathrm{ft}$. S. and 21 ft . W. from cross694.04
road, on center of $S$. head wall of concrete culvert; chiseled square
T. 66 N., R. 8 W., in NW $1 / 4 \mathrm{sec} .25$, at junction of rd. N.; surface of highway
(Continued in Donnellson quadrangle; see line 1.)

> 5. FROM DONNELLSON QUADRANGLE, NEAR REVERE, EAST AND SOUTHEAST ALONG ROADS TO POINT ABOUT 2.5 MILES EAST OF WAYLAND (by F. Y. Brown in 1937)
> (Continued from Donnellson quadrangle; see line 2.)

Revere, about 0.2 ml . W. of, along County Route $\mathrm{C}, 100 \mathrm{ft}$. NW. of junction of ra. S., 20 ft . N. of rd., in root on S . side of $14-1 \mathrm{n}$. locust tree; copper nail and washer
Revere, 185 ft . W. of $W_{\text {. corner of Atchison, Topeka \& Santa Fe Ry. sta., }}$ 35 ft . E. of rd., 3 ft . N. and 8 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 96 C 1936 "
U.S.C. \& G.S. standard disk stamped "L $851935 "$
T. 66 N. R. 7 W. cor. secs. $27,26,33$, and 34 , 100 ft. E. of crossroads, 30 ft . $\mathrm{N}^{\prime}$. of rd., in fence ine, in root on E. side of $24-1 \mathrm{n}$. elm tree; copper nail and washer

[^7] wall of concrete culvert; chiseled square
T. 64 N., R. 7 W., near N. sixteenth cor. sec. $26,17 \mathrm{ft}$. S . and 26 ft. E. from T-ra. W., 7 ft . E. of fence corner, in concrete post; standard tablet stamped "T T 109 C 1936 " E. of rd., in root on W. side of $18-1 n$. cedar tree; copper nail and washer
T. 64 N., R. 7 W., near quarter cor. between secs. 23 and $24,430 \mathrm{ft}$. W. of T-rd. N., 80 ft . N. of rd., on top of SE. corner of concrete well top; chiseled square
Dukes triangulation sta.; U.S.C. \& G.S. standard disk stamped "Dukes 1931"

695.033

U.S.C. \& G.S. standard reference disk stamped "Dukes No 1"
U.S.C. \& G.S. standard reference disk stamped "Dukes No $2^{\prime \prime}$
 N.-S. fence, in root on S. side of $16-1 n$. post-cak tree; copper nail and washer
T. 64 N., R. 6 W ., in $\mathrm{N} 1 / 2 \mathrm{sec} .18$, on S. pier at W. end of steel bridge over Sugar Creek, on top of bolt head; chiseled cross
T. 64 N., R. 6 W., near N. sixteenth cor. between secs. 17 and 18, 15 ft . S. and 24 ft . W. from U.S. H1ghway 61 at rd. W., on center of S. head wall of concrete culvert; chiseled square
8. FROM POINT O.6 MILE WEST OF KAHOKA, SOUTH INTO WYACONDA QUADRANGLE AT SEC. 2, T. 64 N., R. 8 W. (by F. Y. Brown in 1937)

Concrete culvert, on N. end of W. head wall; chiseled square
Kahoka, 1 mi . W. and 1.5 mi . S. from, cor. secs. $25,26,35$, and 36 , T. 65 N., R. 8 W., $59 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from crossroads, 2 ft . W. of fence, in concrete post; standard tablet stamped "T T 113 C 1936"
T. 65 N., R. 8 W., on line between secs. 35 and $36,40 \mathrm{ft} . \mathrm{s}$. and 45 ft . W. from bridge over Honey Creek, in root on E. side of $30-1 n$. elm tree; crossed nails
T. 65 ri., R. 8 W., S. cor. secs. 35 and $36,40 \mathrm{ft}$. S. and 200 ft . W. from T-rd. N., 50 ft . SE. of small bridge, on NE. corner of concrete well top; chiseled square
(Continued in Wyaconda quaadrangle; see line 5.)

[^8]Clark and Lewis Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in
1900) 

Weber, in NE $1 / 4$ sec. 7, T. 60 N., R. 6 W., on E. side of large brick
Feet dwelling of J. W. Willows (commonly known as old Tate place), in stone foundation; standard tablet stamped "615 A"
Ewing, in SE $1 / 4$ sec. 7, T. 60 N., R. 7 W., in E. face of stone foundation of Reformed Lutheran Church; standard tablet stamped "687 A"

4**613.860
686.081
. 61 N., R. 6 W., in NE $1 / 4$ SE 1/4 sec. 20, on E. side of large brick dwelling owned by Eliza Glavin, in stone casing over cellar window; standerd tablet stamped "640 A"
$* * 637.800$
T. 62 N., R. 6 W., near NW. cor. sec. 29, at NW. corner of yard of M. L. Spalding; iron post stamped "637 A"
** 634.228
T. $62 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W}$. , near center of $\mathrm{SE} 1 / 4 \mathrm{sec} .16,40 \mathrm{ft}$. W. of lane to dwelling of L. E. Moore, N. of rd., at foot of cherry tree; iron post stamped "671 A"
** 668.715
Derrahs, in $\mathrm{SW} 1 / 4$ sec. 27 , T. 63 N., R. $7 \mathrm{~W} ., \mathrm{N}$. of rd., in fence corner SE, of schoolhouse; iron post stamped "608 A" 606.653

Bunker Hill, in E $1 / 2 \mathrm{sec} .11, \mathrm{~T} .62 \mathrm{~N}$. , R. 8 W. , at SE. comer of front 699.504

## 2. FROM La BELLE QUADRANGLE EAST ALONG STATE HIGHWAY 96, THROUGH MONTICELLO TO CANTON, THENCE SOUTH ALONG U.S. HIGHWAY 61 THROUGH La GRANGE INTO PALMYRA QUADRANGLE (by A. R. Friend in 1936) <br> (Continued from La Belle quadrangle; see line 2.)

Lewistown, about 4.2 mi . E. of, on concrete abutment at SW . corner of bridge over Middle Fabius River; chiseled square
Junction of rd. E., on base of concrete, corner fence post; chiseled square
572.64
676.26

Monticelio, about 1 mi . S. of, 50 ft . N. and 65 ft . W. from junction of rd. S., on base of concrete gatepost; chiseled square
640.01

Monticello, $40 \mathrm{ft} . \mathrm{N}$. of S . limits of, 40 ft . E. of highway, in concrete post; standard tablet stamped "1429 C W A 1934"
604.240

Monticello, at N. limits of, at junction of County Route $A$ and rd. W., on top of $N$. head wall of concrete culvert; chiseled square
658.32

Monticello, about 1.2 mi . E. of, on S. head wall of concrete culvert; chiseled square
641.36

Monticello, about 2.2 mi . E. of, at N.-S. crossroad, on S. head wall of 669.42
onticello, 3.2 mf . E. of, 35 ft . N. of highway, 25 ft . E. of driveway,
400 ft . S. of dwelling, in concrete post; standard tablet stamped " 1430 C W A 1934 "
650.075

Monticello, about 4.1 ml . E. of, 20 ft . N. and 10 ft . E. from function of rd. N., on top of W. end of concrete pipe culvert; chiseled square
Monticello, about 5.4 mi . E. of, on top of masonry at SW. corner of
bridge over Sugar Creek; chiseled square
622.70

Junction of rd. S., on top of rock at W. end of culvert; chiseled square $\quad 636.09$
Monticello, 6.4 mi . E. of, along State Highway $96,30 \mathrm{ft}$. N. and 25 ft . W. from crossroad, in concrete post; standard tablet stamped "1431 C W A 1934"
Monticello, about 7.5 mi . E. of, 12 ft . N. of junction of rd. N., on N. head wall of concrete culvert; chiseled square
Canton, about 2 ml . W. of, about 8 mi . E. of Monticello, at NW. corner of bridge over Wyaconda River, on top of first pier; chiseled square

[^9]Canton, at W. limits of, 15 ft . S. and 49 ft . W. from junction of State Highway 96 and County Route $T$, in concrete post; standard tablet stamped "1432 C W A 1935"
Canton, at NW. corner of yard of high school, on top of concrete sewer cover; chiseled square
Concrete bridge, on NE. wing wall; chiseled squale
Canton, l. mi. S. of, 40 ft . E. of function of rd. W., 4 ft . W. of corner fence post, in concrete post; standard tablet stamped "1433 C W A 1935"
Canton, about 2 mi . S. of, at junction of rd. W., on W. head wall of concrete culvert; chiseled square
Junction of private rd. W., on W. head wall of concrete culvert; chiseled square
La Grange, $1 \mathrm{mi} . \mathrm{N}$. of, $20 \mathrm{ft} . \mathrm{S}$. and 40 ft . E. from crossroad, in concrete post; stendard teblet stampect " 1434 C W A 1935 "
La Grange, about 0.5 mi . N. of, on NW. corner of abutment of bridge over Wyaconda River; chiseled square
La Crange, at N. limits of, at junction of rd. W., in W. concrete head wall of culvert; top of bolt
La Grange, ot SE. corner of junction of County Route $C$, on top of curb; chiseled square
485.94
502.43
501.975
502.37
499.38
498.414
489.67
491.90
490.10

La Grange, 0.4 mi . S. of S . limits of, ot NW. corner of yard of farmhouse, in root on $W$. side of $36-i n$. soft-maple tree; copper nail and washer
La Grange, about $0.7 \mathrm{mi} . \mathrm{S}$, of S . Ilmits of, at junction of rd. W., on S . concrete head wall of culvert; chiseled square
La Grange, $1 \mathrm{mi} . S$. of, 60 ft . S. of cottage, 60 ft . E. of highway, in concrete post; standard tablet stamped "1435 C W A 1935"
T. 60 N., R. 6 . W., in NW $1 / 4$ sec. 12, at junction of rd. S., in root on W. side of 14-1n. walnut tree; crossed nails

Junction of private rd. W., on N. end of iron pipe culvert; painted. square
(Continued in Palmyra quadrangle; see line 3.)
3. FROM POINT ABOUT 2. 2 MILES SOUTH OF La GRANGE, SOUTHWEST
ALONG ROADS INTO PALMYRA QUADRANGLE, ABOUT 1 MILE SOUTH
OF WEBER (by A. R. Friend in 1936)
T. 60 N., R. $6 \mathrm{~W} .$, in $N W 1 / 4 \mathrm{sec} .15$, at junction of rd. S. and abandoned rd. W., at NW. corner of yard of old brick dwelling, in root on E. side of $12-1 n$. cedar tree; copper nall and washer
524.03
(For balance in Palmyra quadrangle, see line 4.)
T. $60 \mathrm{M} ., \mathrm{R} .6 \mathrm{~W} .$, in $\mathrm{SW} 1 / \mathrm{H}_{+} \mathrm{sec} .9$, 20 ft . N. and 20 ft . F. from T-rd.
E., in root on N. side of 14-in. hickory tree; copper nail and washer
T. 60 N., R. 6 W., in SE 1.4 sec. $8,65 \mathrm{ft} . \mathrm{s}$. and 20 ft . W. from T-rd.
W., $125 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from T-rd. E., in fence line, in root on S. side of 12-in. hickory tree; copper nail and washer
604.76
T. $60 \mathrm{~N} ., \mathrm{R}$. $6 \mathrm{w} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .8$, 50 ft . S. and 12 ft . E. from T-rd. S., in top of ifrin. stump; copper nail and washer

T-rd. N., on W. end of concrete culvert; chiseled square
T. 60 N., R. 6 W., in NE $1 / 4 \mathrm{sec} .7,25 \mathrm{ft}$. N. and 29 ft . W. from crossroads, $l_{4} \mathrm{ft}$. E. of $12-1 \mathrm{n}$. hickory tree, at SE. corner of yard of Dover Grange Hall, in concrete post; standard tablet stamped "5 F 1936"
Reference mark $1,60 \mathrm{ft}$. E. of tablet, on $N$. end of concrete culvert; chiseled square
Feference mark 2, 60 ft . S. of tablet, on $W$. end of concrete culvert; chiseled square
(Continued in Palmyra quadrangle; see line 4.)

## 4. FROM POINT ABOUT 0.5 MILE WEST OF EWING EAST TO EWING (by A. R. Friend in 1936) <br> (Continued from Palmyra quadrangle; see line 6.)

Ewing, 0.5 ml . W. of, near w. sixteenth cor. between secs. 7 and 18 ,
T. 60 N., R. 7 W., $25 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from T-rd. E., in root on E. side of $20-1 n$. white-oak tree; copper nail and washer

Ewing, at W. limits of, at junction of State Highway 6 and rd. W., on
top of concrete right-of-way marker; chiseled cross
U.S.C. \& G.S. standard disk stamped "H 15 1933"
642.20
682.26
676.216

## 5. FROM KAHOKA QUADRANGLE SOUTH ALONG U.S. HIGHWAY 61 TO CANTON (by B. A. Barnes in 1936) <br> (Continued from Kahoka quadrangle; see line 3.)

T. 63 N., R. $6 \mathrm{~W} ., 480 \mathrm{ft}$. E. of quarter cor. between secs. 15 and 22 , 215 ft . N. and 20 ft . W. from junction of rd. W. on Clark-Lewis county line, on center of $W$. head wall of concrete culvert; chiseled square
T. 63 N., R. 6 W., in SW $1 / 4$ sec. $23,150 \mathrm{ft}$. N. and 48 ft . E. from junction of rd. E., on SW. corner of concrete porch of church; chiseled square
Junction of rd. W., 93 ft . S. and 20 ft . W. from, on NW. concrete wing wall of bridge; chiseled square
T. $63 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} .$, in $\mathrm{N} 1 / 2 \mathrm{sec} .35,120 \mathrm{ft}$. S. and 45 ft . W. from junction of rd. W., in concrete post; standard tablet stamped "1532 ERA 1935'

Ewing, $1.5 \mathrm{~ms} . \mathrm{SW}$. of, in $\mathrm{NE} 1 / 4 \mathrm{sec} .13$, T. $60 \mathrm{~N} ., \mathrm{R} .8 \mathrm{w} ., 15 \mathrm{ft} . \mathrm{S}$. of rd., 8 ft . E. of private drive to farmhouse, in root on S . side of 8-in. catalpa tree; copper nail and washer
Wooden bridge, 400 ft . E. of, 20 ft . N. of rd., in fence line, in root on N. side of 22-in. black-oak tree; crossed nails
7. FROM La BELLE QUADRANGLE, NEAR BUNKER HILL, SOUTH AND WEST ABOUT 2 MILES INTO La BELLE QUADRANGLE (by F. Y. Brown in 1937)
(Continued from La Belle quadrangle; see line 5.)
Mott triangulation sta.; U.S.C. \& G.S. standard disk stamped "Mott 1934"
U.S.C. \& G.S. standard reference disk stamped "Kott No 12934 "
U.S.C. \& G.S. standard reference disk stamped "Lfott No 2 1934"
U.S.C. \& G.S. standard reference disk stamped "Mott Azi 1934"

Rd., $12 \mathrm{ft} . \mathrm{N}$. of, on E. end of N. head wall of concrete culvert; chiseled square
(Continued in La Eelle quadrangle; see line 5.)
8. FROM La BELLE QUADRANGLE AT SEC. $24, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W} .$, EAST
INTO KAHOKA QUADRANGLE AT SEC. $24, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W}$. INTO KAHOKA QUADRANGLE AT SEC. $24, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W}$. (by F. Y. Brown in 1937)
T. 63 N., R. 8 W., in $S W 1 / 4 \mathrm{sec} .24,40 \mathrm{ft}$. S. of rd., 200 ft . E. of jog in rd., in root on $N$. side of $22-1 n$. elm tree; copper nail and washer
T. 63 N., R. 8 W., near quarter cor. between secs. 24 and $25,25 \mathrm{ft}$. E. of W. rd. at crossroads, in roct on $S$. side of $\dot{I}_{4}-1 n$. elm tree; nail and washer
692.67
T. 63 N., R. 8 W., on line between secs. 24 and 25 , on corner of N. wing of W. abutment of small steel bridge; chiseled square
Wiliamstown, 4 mi . E. of, E. sixteenth cor. between secs. 19 and 30 , T. 63 N., R. 7 W., 18 ft . N. and 15 ft . E. from T-rd. S., 18 ft . N. and 350 ft . W. from T-rd. N., l ft. S. of hedge fence, in concrete post; standard tablet stamped " IT T 122 C 1936"
Small steel bridge, 30 ft . S. of rd. at $E$. end of, in root on $N$. side of 26-in. black-oak tree; nail and washer
T. 63 N., R. 7 W., near quarter cor. between secs. 20 and $29,35 \mathrm{ft}$. N. of rd. at top of hill, in root on S. side of 28-in. white-oak tree; na1l and washer
696.672
630.91

Small bridge, on $N$. end of E. abutment; chiseled square
T. $63 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W}$. , in $\mathrm{NW} 1 / 4 \mathrm{sec} .28$, 100 ft . N . of creek, $15 \mathrm{ft} . \mathrm{N}$. of rd., 60 ft . SW. of stucco farmhouse, in root on $S$. side of $30-1 \mathrm{n}$. elm tree; nail and washer
T. 63 N., R. 7 W., near quarter cor. between secs. 27 and $28,100 \mathrm{ft}$. S. and 15 ft . E. from T-rd. E., in root on W. side of $20-\mathrm{in}$. elm tree; copper nall and washer
Derrahs, 0.5 mi . E. of, at top of hill, 25 ft . N. of rd. at gate, in root on S. side of 24 -in. white-oak tree; crossed nails
T. 63 N., R. 7 W., near cor. secs. $26,27,34$, and $35,150 \mathrm{ft}$. S. and 15 ft . E. from T-rd. S., in root on N. side of 18-in. black-oak tree; copper nall and washer
Dim T-rd. N., 60 ft . W. of, 20 ft . S. of rd., 100 ft . N. of small farmhouse, in root on N. side of twin 10-in. maple tree; crossed nails
T. 63 N., R. 7 W., on line between secs. 26 and $35,210 \mathrm{ft}$. N. and 25 ft . W. from T-rd. N., in root on W. side of 22-in. Inden tree; copper nail and washer
. 63 N., R. 7 W., in E $1 / 2 \mathrm{sec} .26$, 440 ft . N. of T-rd. E., 30 ft . W. of rd., in farmyard, in root on E. side of $16-1 n$. cottonwood tree; copper nail and washer
T. 63 N., R. 7 W., 0.1 mt . W. of quarter cor. between secs. 24 and 25 , at intersection of tangents of rd. N.-W., ll ft. W. of fence corner, in concrete post; standard tablet stamped "T T 121 C 1936"
T. 63 N., R. 7 W., near quarter cor. between secs. 23 and 24 , about

800 ft . N. of rd. forks, 15 ft . E. of rd., in root on $W$. side of $16-\mathrm{in}$. hickory tree; copper nail and washer
(For balance in Kahoka quadrangle, see line 6.)
County Route T at curve from $\% .-S ., 15 \mathrm{ft}$. S. of, on $S$. end of iron pipe culvert; painted square
St. Patrick, 2 mi . SE. of, along County Route $\mathrm{T}, 10 \mathrm{ft}$. N. and 28 ft . W. from highway N.-E, at rd. S., 10 ft . N. and 2 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 120 C 1936"
T. 63 N., R. 6 W., in center sec. $19,15 \mathrm{ft}$. N. of curve in County Route $T$ at rd. E., in root on $S$. side of $16-1 n$. wild-cherry tree; nail and washer
T. 63 N., R. 6 W. , near center sec. $30,150 \mathrm{ft}$. N. and 45 ft . W. from T-rd. E., in barnyard, in root on S. side of 36-in. maple tree; copper nall and washer
650.92

Small bridge, on center of $S$. end of $E$. abutment; chiseled square
Concrete culvert, 14 ft . N. of rd., on center of W . wing wall; chiseled square
Buena Vista School, quarter cor. between secs. 28 and 29, T. 63 N ., R. 6 W., $24 \mathrm{ft} . \mathrm{N}$. and 35 ft . W. from crossroads, at SE. corner of schoolyard, in concrete post; standard tablet stamped "T T 119 C 1936 "
Farmhouse of Jim Rodgers, $60 \mathrm{ft} . \mathrm{N}$. of, 15 ft . S. of rd.; SE. corner of concrete step
T. 63 N., R. 6 W., near center sec. $27,25 \mathrm{ft}$. N. of rd., at SE. corner of farmyard of Ralph Barkley, in root on N. side of 30-in. maple tree; copper nail and washer
T. $63 \mathrm{~N} ., \mathrm{R}$. 6. W., in $W 1 / 2 \mathrm{sec} .26,60 \mathrm{ft}$. S. of U.S. Highway 61 at rd .
W., on NE. corner of bridge H-281; chiseled square

T-rd. N., 60 ft . E. of, 15 ft . N. of rd., in N. end of W. abutment of steel bridge over slough; top of bolt head
T. 63 N., R. 6 W ., on line between secs. 24 and 25 , near Chicago, Burlington \& Quincy R.R. at private rd. crossing, 41 ft . W. of track, 8 ft . N. of rd., on base of concrete post; highest point
T. 63 N., R. 6 W ., near E. sixteenth cor. between secs. 13 and $24,60 \mathrm{ft}$. E. of Chicago, Burlington \& Quincy R.R. at Clark-Lewis county line, in root on W. side of 48-in. cottonwood tree; nail
(Continued in Kahoka quadrangle; see line 6.)

[^10]PALMYRA QUADRANGLE
(Latitude $39^{\circ} 45^{\prime}-40^{\circ} 00^{\prime}$; long'tude $91^{\circ} 30^{\prime}-91^{\circ} 45^{\prime}$ )

## Lewis and Marion Counties



1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1901-02)

Hester, 0.3 mi . E. of, in SE $1 / 4 \mathrm{NW} 1 / 4$ sec. 18 , T. $59 \mathrm{~N} .$, R. 6 W. , in
Feet
*511.322
652.7
681.9
696.048
*711.681
*672.671
647.4
$* 694.23$
$605 \cdot 42$
w Market, in SE. cor. sec. 1, T. 57 N., R. 8 W., SW. of crossroads, in root of 18-in. locust tree; copper nail and washer
(For balance in Newark quadrangle, see line 2.)
T. 58 N., R. 8 W., near quarter cor. between secs. 24 and 25 , at gate to barnyard, in root of $24-1 n$. elm tree; copper nail and washer
T. $58 \mathrm{~N} .$, R. $8 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .24$, on S . wing wall of E . abutment of bridge over North River; chiseled square
680.47
555.87
T. 58 N., R. 7 W., in $W 1 / 2$ sec. 19, at top of hill, SE. of T-rd. E., in root of 10-in. oak tree; copper nail and washer
676.40
3. FROM CANTON QUADRANGLE SOUTH ALONG U.S. HIGHWAY 61 TO POINT 1 MILE SOUTH OF TAYLOR, TIIEHCE WEST ALONG STATE HIGHWAY 6 AIND COUNTY ROUTE V TO KAYWOOD (by A. R. Friend in 1936) (Continued from Canton quadrangle; see line 2.)
La Grange, 3 mi . S. of, $30 \mathrm{ft} . \mathrm{N}$. and 48 ft . W. from crossroad, 125 ft . NW. of filling sta., in concrete post; standard tablet stamped "1436 C W A $1935^{\circ}$
T. 60 N., R. 6 W., in N $1 / 2$ sec. 23, on NW. corner of briage over Durgen Creek; chiseled square
T. $60 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} .$, in $N E 1 / 4 \mathrm{sec} .26,20 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from junction of rd. W. to farmhouse, l,050 ft. N. of rd. E., on W. head wall of concrete culvert; chiseled square
Junction of rd. E., on SW. corner of porch of Walnut Grove School; chiseled square
Taylor, 1.5 ml . N. of, 40 ft . N. and 15 ft . W. from junction of rd. E., on top of curb; chiseled square
Taylor, about 1 mi . N. of, at junction of rd. N., on S. head wall of concrete culvert; chiseled square
493.85 488.910
*Accuracy doubtful because of insufficient connections.

Taylor, $1.5 \mathrm{mi} . \mathrm{S}$. of, 100 ft . N. and 100 ft . W. from junction of State H1ghway 6 , in concrete post; standard tablet stamped "1437 C W A 1935"
Schroeder triangulation sta. reference mark No 2; U.S.C. \& G.S. standard reference disk stamped "Schroeder No $2^{"}$
T. 59 N., R. 6 W., on line between secs. 9 and $10,75 \mathrm{ft}$. S. and 200 ft . W. from crossroad, in NW. corner of farmyard, in root on W. side of 16-1n. elm tree; copper nail and washer
T. 59 I., R. 6 W., in $S 1 / 2 \mathrm{sec}$. 9, near junction of rd. S., on N. head wail of concrete culvert; chiseled square
T. 59 N., R. 6 W. , near quarter cor. between secs. 8 and $9,25 \mathrm{ft}$. S. and 15 ft . E. from junction of rd. S., on E. head wall of concrete culvert; chiseled square
T. 59 N., R. 6 W., near quarter cor. between secs. 5 and 8,14 ft. N. and 15 ft . E. from crossroad, on E. head wall of concrete culvert; chiseled square
623.48

Maywood, 1.5 ml . S. of, in SE $1 / 4 \mathrm{sec} .6$, T. $59 \mathrm{N.}, \mathrm{R} .6 \mathrm{~W} ., 60 \mathrm{ft}$. S. and 35 ft . W. from crossroad, in concrete post; standard tablet stamped "1244 C W A 1935"
Maywood, about $1 \mathrm{mi} . \mathrm{S}$. of, 275 ft . E. of junction of County Route V , on N. head wall of concrete culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "E 15 1933"

> 4. FROM CANTON QUADRANGLE AT SEC. 15 , T. 60 N., R. 6 W., WEST TO DURHAM (by A. R. Friend in in36)
> (Continued from Canton quadrangle; see line 3.)
T. 60 N., R. 6 W., in $S W 1 / 4$ sec. $15,100 \mathrm{ft}$. E. of steel bridge over Durgen Creek, 655 ft . W. of rd. N., S. of rd., in notch on S. side of 24-1n. birch tree; copper nail and washer
T. 60 N., R. 6 W., quarter cor. between secs. 16 and $21,27 \mathrm{ft} . \mathrm{N}$. and 22 ft . W. from crossroads, in concrete post; standard tablet stamped "4 F 1936"
Reference mark l, $45 \mathrm{ft} . \mathrm{S}$. of tablet, in base of telephone pole; nails
Reference mark 2, 250 ft . N. of tablet, on W. head wall of concrete culvert; chiseled square
(For balance in Canton quadrangle, see line 3.)
T. 60 N., R. 6 W., in sec. 13, 560 ft. W. of ford across North Fabius River, 20 ft . S. and 20 ft . E. from rd. forks, in notch on S . side of twin 12-in. elm tree; copper nail and washer
T-rd. S., in bese of corner fence post; nalls
T. 60 N., R. 7 W., quarter cor. between secs. 13 and $24,25 \mathrm{ft}$. N. and 45 ft . W. from T-rd. W., in concrete post; standard tablet stamped "6 F 1936"
596.725
T. 60 N., R. 7 W., in NE $1 / 4 \mathrm{sec} .23,70 \mathrm{ft}$. N. and 50 ft . E. from ford
across Middle Fabius River, in notch on N. side of 14 -in. cottonvood tree; copper nall and washer
514.89

Durham, 1.2 mi . E. of, E. sixteenth cor. between secs. 23 and 26 ,
T. 60 N., R. 7 W., 92 ft . N. and 15 ft . W. from T-rd. N., in NE. corner of farmyard, in top of $16-1 \mathrm{n}$. stump; copper nail and washer
U.S.C. 8: G.S. standard disk stamped "G 25 1933"
5. FROM PALMYRA SOUTH INTO MONROE CITY QUADRANGLE AT SEC. 12, T. 57 N., R. 6 W., THENCE WEST THROUGH WOODLAND TO COR. TPS. 57 AND 58 N., RS. 7 AND 8 W. (by A. R. Friend in 1936)

Palmyra, about $0.3 \mathrm{mi} . \mathrm{S}$. of S . Limits of, along U.S. Highway $61,45 \mathrm{ft}$. W. of junction of rd. E., 45 ft . E. of Chicago, Burlington \& Quincy R.R., in concrete post; standard tablet stamped "14山OC WA 1935"

Palmyra, about 1 mi . S. of, along U.S. fighway $61,50 \mathrm{ft}$. W. of junction of rd. S., in notch on W. side of 10-in. wild-cherry tree; copper nail and washer
Palmyra, about $2.5 \mathrm{mi} . S$. of, along Chicago, Burlington \& Quincy R.R., on NE. corner of concrete abutment of bridge over South River; chiseled square
620.82 648.102
(For balance in Monroe City quadrangle; see line 6.)
Woodland, 1 mi. E. of, near center sec. 9, T. 57 N., R. 6 W., N. of rd., in root on S . side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. $57 \mathrm{~N} ., \mathrm{R}$. $6 \mathrm{~W} .$, in $\mathrm{sec}, 9,115 \mathrm{ft}$. E. of T-rd. S., on N. head wall of concrete culvert; chiseled square
640.62

Woodland, 0.5 mi . W. of, 80 ft . N. and 150 ft . W. from T-rd. S., 45 ft . S. of SE. corner of brick church, in small cemetery, in root on W. side of 12-in. cedar tree; copper nail and washer
690.72

Woodland, 1.3 ml . W. of, in NE $1 / 4 \mathrm{sec}$. 12 , T. 57 N., R. $7 \mathrm{~W} ., 10 \mathrm{ft}$. N. and 10 ft . W. from intersection of rd. tangents S. $-\mathrm{w} ., 9 \mathrm{ft}$. S. and 5 ft . W. from fence corner, in concrete post; standard tablet stamped ${ }^{\prime \prime} T \mathrm{~T} 85$ C $1936^{\prime \prime}$
T. 57 N., R. 7 W., near quarter cor. between secs. 1 and $12,6 \mathrm{ft}$. N. and 55 ft . E. from T-rd. S., on top of concrete retaining wall of culvert over small stream; chiseled square
620.21
in root on w. side of $8-1 \mathrm{n}$. wild-cherry tree; copper nail and washer
T. 57 N., R. 7 W. , near N. sixteenth cor. between secs. 1 and $2,28 \mathrm{ft}$. S. and 7 ft . E. from T-rd. S., on concrete head wall of iron pipe culvert; chiseled square

Feet
671.00
545.707
534.74
642.76
590.94
623.898
697.14
6. FROM NEWARK QUADRANGLE AT SEC. 2ly, T. 59 N., R. 8 W., NORTH
INTO CANTON QUADRANGLE AT SEC. $13, T .60$ N., R. 8 W. (by A. R. Friend in 1936)
(Continued from Newark quadrangle; see line 5.)
T. 59 N., R. $8 \mathrm{~W} ., \mathrm{W}$. sixteenth cor, between secs. 24 and $25,15 \mathrm{ft}$. N. and 170 ft . E. from County Route N at rd. E., in root on S. side of il 4 -in. cottonwood tree; copper nail and washer
645.36
(For balance in Newark quadrangle, see line 5.)
T. 60 N., R. 8 W., cor. secs. $23,24,25$, and $26,15 \mathrm{ft}$. N. and 25 ft . W. from crossroads, in root on N. side of 10-1n. elm tree; copper nail and washer
674.08

Ewing, 1.5 mi . W. and $0.5 \mathrm{mi} . \mathrm{S}$. from, 315 ft . N. of quarter cor. between secs. 13 and 14, T. 60 N., R. 8 W., 48 ft . N. of T-rd. S., 75 ft . SW. of dweliing, in concrete post; standard tablet designaṭed "7 B 1936"
(Continued in Canton quadrangle; see line 4.)
> 7. FROM NEWARK QUADRANGLE SOUTH ABOUT 1 MILE ALONG COUNTY ROUTE N TO PHILADELPHIA, THENCE SOUTHEAST ALONG STATE HIGHWAY 56 TO PALMYRA, THENCE NORTH ALONG U.S. HIGHWAY 6I TO-TAYLOR (by W. V. Kennedy in 1937)
> (Continued from Newark quadrangle; see line 8.)

Philadelphia, about 1 mi . N. of, along County Route $\mathrm{N}, \mathrm{ll} \mathrm{f} \mathrm{ft}$. S. of private entrance to farmhouse, E. of rd., in root on E. side of 22-in. elm tree; copper nail and washer
Philadelphia, at W. Iimits of, near junction of rd. W., on S. end of iron pipe culvert; painted cross
677.96
711.81
hiladelphía, at $E$. limits of, 20 ft . N. and 12 ft . E. from junction of rd. N., on E. head wall of concrete culvert; chiseled square
T. 58 N., R. 7 W., approximate center sec. 7, 14 ft . N. and 12 ft . E. from N.-S. crossroad, on E. head wall of concrete culvert; chiseled square
T. $58 \mathrm{~N} .$, R. $7 \mathrm{~W} .$, in $W 1 / 2 \mathrm{sec} .8,70 \mathrm{ft}$. N. of junction of rd. E., in SE. corner of schoolyard, in root on SE. side of 20-in. elm tree; copper nall and washer
698.52
T. 58 N., R. 7 W., near S. sixteenth cor. between secs. 8 and 9, 20 ft. N. and 10 ft . E. from N.-S. crossroad, on E. head wall of concrete culvert; chiseled square
675.42
T. 58 N., R. 7 W., in $\mathrm{S} 1 / 2$ sec. 9, at junction of rd. W., on N. head wall of concrete culvert; chiseled square
684.49
T. 58 N., R. $7 \mathrm{~W} .$, cor. secs. $9,10,15$, and $16,35 \mathrm{ft} . \mathrm{N}$. and $70 \mathrm{ft} . \mathrm{W}$. from junction of rd. S., in concrete post; standard tablet stamped " 1542 E R A 1935 "
T. 58 N., R. 7 W., about 0.2 mi . W. of quarter cor. between secs. 10 and 15 , $18 \mathrm{ft} . \mathrm{N}$. and 10 ft . E. from junction of rd . N., on E. head wall of concrete culvert; chiseled square
675.231
T. 58 N., R. 7 W., near quarter cor. between secs. 11 and $\mathcal{I}_{4}, 20$ ft. S. and 10 ft . E. from junction of rd. S. and private rd. N., on E. head wall of concrete culvert; chiseled square
. 58 N., R. 7 W., near cor. secs. $11,12,13$, and $14,18 \mathrm{ft} . \mathrm{s}$. and
10 ft. E. from N. -S. orossroad, on E. head wall of concrete culvert; chiseled square
T. 58 N., R. 7 W., on line between secs. 12 and $13,100 \mathrm{ft}$. W. of Junction of rd. S., on N. head wall of concrete culvert; chiseled square 674.76
T. 58 N., Rs. 6 and 7 W ., cor. secs. $7,12,13$, and $18,35 \mathrm{ft}$. N. and 65 ft . E. from highway at $N .-S$. fences, in concrete post; standard tablet stamped "1541 ER A 1935"
T. 58 N., R. 6 W., on line between secs. 7 and 18 , at junction of rd. N. on N. head wall of concrete culvert; shiseled square
T. 58 N., R. 6 W., near quarter cor. between secs. 7 and $28,20 \mathrm{ft}$. S. and 15 ft . E. from junction of rd . S., on $E$. head wall of concrete culvert; chiseled square
T. 58 N., R. 6 W ., cor. secs. $7,8,17$, and $18,45 \mathrm{ft}$. N. of junction of rd. S., on concrete base of corner fence post; chiseled square
Palmyra, about 3 mi . NW. of, 225 ft . N. of junction of rd. E., $30 \mathrm{ft} . \mathrm{N}$. of entrance to brick dweliing, on W. head wall of concrete culvert; chiseled square

Palmyra, 3.6 mi . NW. of junction of U.S. Highway 61, near E. sixteenth
corner betwsen secs. 16 and 21, T. $58 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} ., 10 \mathrm{ft} . \mathrm{S}$, and 38 ft .

Feet
638.709 "1537 ERA 1935"
Crossroad, on S. head wall of concrete culvert; chiseled square
Palmyra, about 1.8 ml . NW. of, on top of $S W$. abutment of briage over North River; chiseled square
Junction of private rd. S., on E. end of iron pipe culvert; painted cross
Palmyra, about 0.5 mi . W. of, 100 ft . W. of junction of rd. S. to
Woodland; on S. head wall of concrete culvert; chiseled square
Chicago, Burlington \& Quincy R.R. Overpass at junction of rd. S., 700 ft . E. of junction of ra. N., on top of conerete curb at SE. corner; chiseled square
Palmyra, State Highway 56 at Thain Street, on top of concrete curb at SN. corner; chiseled square
Palmyra, at N. limits of, at junction of U.S. Highway 61 , on N. head wall of concrete culvert; chiseled square
Palmyra, $1 \mathrm{mi} . \mathrm{K}$. of, 450 ft . N. of crossing of Chicago, Burlington \& Quincy R.R., 400 ft . S. of bridge over North River, in concrete post; standard tablet stamped "1439 1935"
Junction of rd. E., on N. head wall of concrete culvert; chiseled square
T. 58 N., R. 6 W., cor. secs. $11,12,13$, and $14,10 \mathrm{ft} . \mathrm{N}$. and 45 ft . W. from function of rd. W., 340 ft . S. of rd. E., on N. head wall of concrete culvert; chiselea square
T. 58 N., R. 6 W., cor. secs. 1, 2, 11 , and $12,12 \mathrm{ft}$. . and 20 ft . E. from E.-W. crossroad, on N. head wall of concrote culvert; chiseled square
Tps. 58 and 59 N., R. $6 \%$., cor. secs. $1,2,35$, and $36,15 \mathrm{ft}$. N. and 20 ft . E. from E. W. crossroad, on N. head wall of concrete culvert; chiseled square
Taylor, $5 \mathrm{mi} . \mathrm{S}$. of, 27 ft . N. and 50 ft . W. from crossroad, in concrete post; standard tablet stamped "1438 1935"
596.02

Junction of private rd. E., on N. end of iron pipe culvert; painted cross
Junction of private rd. E., on N. end of 1 ron pipe culvert; painted cross
Taylor, 4 mi . S. of, 18 ft . N. and 16 ft . W. from E. $-W$. crossroad, on $W$. head wall of concrete culvert; chiseled square
Junction of private rd. W., on concrete base of gasoline pumps; chiseled square
ylor 3 ms . S. of, 30 ft . S. and 50 ft . W. from junction of rd. W. on base of concrete corner fence post; chiseled square
T. 59 N., R. 6 W., on line between secs. 23 and 24 , at bridge over

South Fabius River, on NE. corner of abutment; chiseled square
Taylor, $2 \mathrm{mi} . \mathrm{S}$. of, $20 \mathrm{ft} . \mathrm{S}$. and 38 ft . E. from junction of rd. W., in root on N. side of 26-in. pecan tree; copper nall and washer
522.26

Taylor, 0.8 mi . S. of, near private rd. W., on N . end of concrete pipe culvert; chiseled square
490.31

Taylor, at $S$. limits of, at bridge over North Fabius River, on NE. corner of left abutment; standard tablet (set by water-resources branch of U.S.Geol. Survey)

For an additional level line along Quincy, Onaha \& Kansas City R.R., refer to United States Coast and Ceodetic Survey first-orjer line, Quincy, Ill. to Milan, Mo.

MONROE CITY QUADRANGLE
(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 4^{\prime} 5^{\prime}$; longitude $91^{\circ} 30^{\prime}-91^{\circ} 4^{\prime \prime}$ )
Marion, Monroe, and Ralls Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1901-02) Accuracy of figures of elevation doubtful because of insufficient connections.
West Ely, in front of post office (abandoned), on large rock; chiseled cross
Rensselaer, in front of Wabash Ry. sta.; top of rail
Feet 719.18 734.9
728.430 of porch; standard tablet stamped " 727.5 Q"
Ely, in front of Chicago, Burlington \& Quincy R.R. sta.; top of inside rail
T. 56 N., R. 7 W., in NW $1 / 4 \mathrm{NE} 1 / /_{+}$sec. 2, in N. face of stone foundation of dwelling; standard tablet stamped "729 Q"
729.640
T. 57 N., R. 7 W., in $S W 1 / 4 \mathrm{SW} 1 / 4$ sec. 15 , in SW. stone of coping around Mount Vernon Church; standard tablet stamped "664 Q"
Monroe City, in N. face of stone coping of First Baptist Church; standard tablet stamped "748 Q"
T. 55 N. , Rs. 7 and $8 \mathrm{~W}_{\text {. }}$, about 1.2 ml . N. of S. cor. secs. 1 and 6 , 300 ft . from rd., in ledge of rock on creek bank; standard tablet stamped "650 Q"
T. 55 N., R. 7 W., in NE $1 / 4$ SW $1 / 4 \mathrm{sec} .2$, in NE. corner of stone school; standard tablet stamped "723 Q"
Cincinnati, in $\mathrm{S} 1 / 2$ sec. 17, T. $55 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} .$, in E. face of stone foundation of Methodist Church; standard tablet stamped "527 Q"

## 2. FROM HUNNEWELL QUADRANGLE AT SEC. 2, T. 55 N., R. 8 W., NORTH THROUGH MONROE CITY INTO PALMYRA QUADRANGLE AT SEC. 12, T. 57 N., R. 8 W. (by J. H. Vinyard in 1934) <br> (Continued from Hunnewell quadrangle; see line 2.)

T. 55 N., R. 8 W., on line between secs. 1 and $2,0.3 \mathrm{mi}$. S. of U.S. Highway $2!$, in root of $24-1$. elm tree; copper nail and washer
709.12

Monroe City, 3.5 mi . S. of, along U.S. Highway $24,400 \mathrm{ft}$. E. of junction of rd. S., on N. head wail of culvert; shiseled square
708.06

Monroe City, 3 mi . S. of, along U.S. Uighway 24 , in SE $1 / 4 \mathrm{sec}$. 36 , T. 56 N., R. $8 \mathrm{~W} ., 50 \mathrm{ft}$. S. of highway, 47 ft . W. of rd., in concrete post; standard tablet stamped "69 C W A 1934"
721.799

Reference mark, 250 ft . E. of tablet, in root of $30-1 \mathrm{n}$. walnut tree; copper nail and washer
Monroe City, 2.6 mi . S. of, along U.S. Highway $24,0.2 \mathrm{mi}$. S. of highway
 middle of E . curb of steel bridge; chiseled square
717.84

Monroe City, 2.2 ml . S. of, along U.S. Highway $24,1,000 \mathrm{ft}$. S. of Nolen School at crossroads, on E. head wall of culvert; chiseled square
Monroe Cs.ty, 1.5 mi . S. of, along U.S. Highway $24,500 \mathrm{ft}$. N. of farmhouse, $E$. of highway, on E. head wall of culvert; chiseled square
Monroe City, 1 mi . S. of, along U.S. Highway $24,400 \mathrm{ft}$. S. of stone entrance to Elzea farm, W. of highway, in pasture, in root of 24-1n. elm tree; copper nail and washer
Monroe City, at S. limits of, 126 ft . N. and 39 ft . E. from U.S. Highway 24 at rd. E., in concrete post; standard tablet stamped "70 C W A 1934"
726.214

Reference mark, 90 ft . S. of tablet, on $N$. head wall of side rd. culvert; chiseled square
Monroe City, 1 mi. N. of, E. cor. secs. 1 and 12, T. 56 N., R. 8 W., SW. of T-rd. W., in root of 21 -in. elm tree; copper nail and washer

Reference mark, 50 ft . E. of tablet, on $N$. head wall of concrete culvert; chiseled square

Feet
731.42

Monroe City, $2 \mathrm{mi} . \mathrm{N} .$, thence 0.5 mi . W. from, quarter cor. between secs. 1 and 36 , Tps. 56 and 57 N., R. 8 W., at T-rd. N., in root of 20-1n. oak tree; copper nail and washer
Monroe City, 4 mi. N. of, near center sec. 25, T. 57 N., R. 8 w., opposite T-rd. W., on top of $E$. head wall of culvert; chiseled square
Monroe City, $4.5 \mathrm{mi} . N$. of, quarter cor. between secs. 24 and 25 , T. $57 \mathrm{~N} .$, R. $8 \mathrm{~W} ., 1,000 \mathrm{ft}$. N. of crossroads, in root of twin 50-in. elm tree; copper nail and washer
Monroe City, about 6 ms . N. of, E. sixteenth cor. between secs. 13 and 24 , T. 57 N., R. 8 W., 18 ft . N. and 40 ft . W. from corner N. -W., 2 ft . S. and 18 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 72 C W A 1934"
Reference mark, 400 ft . N. of tablet, in root of 12-1n. hickory tree; copper nall and washer
Monroe City, 6.7 mp . N. of, in NE $1 / 4 \mathrm{sec} .13, T, 57 \mathrm{~N} ., \mathrm{R} .8 \mathrm{w} .$, NE. of T-rd. E., in 12-in. white-oak tree; copper nail and washer
Monroe City, 7.5 ml . N. of, near center sec. $12, \mathrm{~T} .57 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W} .$, at N . end of W. truss on bridge over South Fork of North River, on bolt; top of nut
(Continued in Palmyra quadrangle; see line 2.)

## 3. FROM HANNIBAL QUADRANGLE AT SEC. 7, T. 57 N., R. 5 W., SOUTH ALONG HIGHWAY 24 TO SEC. 31 , T. 57 N., R. 5 W . (by B. A. Barnes in 1936) <br> (Continued from Hannibal quadrangle; see line 2. .)

Culvert, on E. head wall; (mark not described)
Palmyra, 4.2 mi . S. of, 1.4 mi . S. of junction of U.S. Highvay 61, on SE. abutment of concrete bridge $\mathrm{K}-290$ over Bear Creek; chiseled square
Junction of rd. W., 100 ft . N. of ra. E.; surface of highway
Palmyra, 5.5 mi . S. of, 1 mi . N. of junction of U.S. Highway 36, at crossroad, on $S$. head wall of culvert; chiseled square
Palmyra, 6.5 mi . S. of, at junction of U.S. Highway $36,30 \mathrm{ft}$. S. of Highway 36, in root on E. side of 26-in. elm tree; copper nail and washer
(For balance in kannibal quadrangle, see line 3.)
Missouri-Kansas-Texas R.R. at rd. crossing, in telegraph pole; nail
699.36
(Continued in Hannibal quadrangle; see line 3.)
4. FROM HANNIBAL QUADRANGLE AT SEC. 30, T. 55 N., R. 5 W., SOUTHWEST TO SOUTH BORDER OF QUADRANGLE, THENCE NORTII ALONG COUNTY ROUTE H AND OTHER ROADS INTO HANNIBAL QUADRANGLE AT SEC. 6, T. 56 N., R. 5 W. (by B. A. Barnes in 1935)
(Continued from Hannibal quadrangle; see line 3.)
T. 55 N., R. 5 W., in SW $1 / 4 \mathrm{sec} .30$, on State Hishway 19 , on N. head wall of concrete culvert; chiseled square
T. 55 N., Rs. 5 and 6 W., cor. secs. $25,30,31$, and 36 , on State Highway 19, $S_{\text {. of }}$ rd. W., N. of $r d$. . ., on E. head wall of concrete culvert; chiseled square
State Highway 19 at rd. S.; surface of highway
State Highway 19, on N. head wall of concrete culvert; chiseled circle
720.34
721.2
713.50
T. 56 N., R. 6 W., in $S W 1 / 4 \mathrm{sec} .36$, at driveway to dwelling of Fred Howard, on 1 N . end of concrete culvert; chiseled squere

Feet
$534 \cdot 36$
534.2
585.60

Top of hill, $E$ of rd. in root of l2-in. hickory tree; nail
530.53
in root of $36-1 n$. elm tree; copper nail and washer
Ra. fork $S$. . 110 ft . W. of, in root on W. side of oak tree; nail
Spalding, 0.7 mi . N. of, 406 ft . S. of quarter cor. between secs. 24 and
25, T. 56 N., R. $6 \mathrm{~W} ., 44 \mathrm{ft}$. S. and 110 ft . W. from SW. comer of
Sait Lick Church, in concrete post; standard tablet stampes "T T 2 C 1935"
T. 56 N., R. 6 W., in sec. 24, at private ra. W., opposite mail box, on N . end of concrete culvert; painted square
Spalding, 1.8 mi . N. of, quarter cor. between secs. 13 and 24, T. 56 N. , R. 6 W., 120 ft . S. of crossroads, 80 ft . E. of dwelling of A. E. Hogan, in root of 20-in. oak tree; copper nall and washer
T. 56 N., R. 6 W., near center sec. $13,35 \mathrm{ft}$. N. and 30 ft . E. from senter of creek opposite abandoned rd. S., in root on w. side of 30-1n. elm tree; crossed nails
T. 56 N., R. 6 W., near quarter cor, between secs. 12 and $13,50 \mathrm{ft}$. S. and $80^{\prime} \mathrm{ft}$. W. from fence corner, in root on SW. side of $24-i n$. locust tree; copper nail and washer
T. 56 N., R. 6 W., E. sixteenth cor. sec. l2, 10 ft . S. of rd. corner from N.-W., $10 \mathrm{ft} . \mathrm{S}$. and 18 ft . W. from ience comer, in concrete post; standard tablet stamped "T T l C 1935"
T-rd. S., in NE. corner of field, at base of corner fence post; surface of ground
T. 56 N., R. 5 W ., near quarter cor. between secs. 6 and 7, 10 ft . N. and 30 ft . W. from T-rd. N., on SW. corner of $N$. head wall of concrete culvert; chiseled square
Bridge over branch, on $E$. end of $N$. concrete abutment; painted square

> 5. FROM SEC. 3, T. 55 N., R. 6 W. , WES' THROUGH SOUTH PART OF QUADRANGLE TO SEC. 36, T. 56 N., R. 8 W. (by B. A. Barnes in 1935)
T. 55 N., R. 6 W., in $N 1 / 2$ sec. 3, 70 ft. W. of T-rd. N., 80 ft . E. of ra. corner from W.-S., on SE. concrete wing wall of small bridge over creek; chiseled square

T-rd. E., 30 ft . S. of, on E. head wall of concrete culvert; paintod
square
Briage over creeik, on NW. corner of, on T-beam; painted square
T. 55 N., R. 7 W., about 500 ft . N. of cor. secs. 5, 6, 7, and 8, on
Monroe-Ralls county line, on NE. corner of concrste sidewaik to farm-
house of I. P. Jovell; chiseled square
T-rd. W., near base, in corner fence post; nall
T-rd. W., near base, in corner fence post; nall
T. $55 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W}$. , near W. sixteenth cor. sec. 6 , $15 \mathrm{ft} . \mathrm{s}$. and $15 \mathrm{ft} . \mathrm{E}$
T. 55 N., R. 7 W., near W. sixteenth cor. sec. $6,15 \mathrm{ft}$. S. and $15 \mathrm{ft} . \mathrm{f}^{\mathrm{E}}$.
T. 55 N., R. 7 W., 0.5 ml . N. of W. quarter cor. sec. $6,25 \mathrm{ft}$. S. and
25 ft . E. from T-rd. N., in concrete post; standard tablet stamped
तTT T9 ${ }^{\text {C }} 1935^{\circ}$
T. 55 N., R. 8 W. , in $\mathrm{NE} 1 / 4 \mathrm{sec}$. 1 , on SW . concrete wing wall of bridge
over Littie Indian Creek; chiseled square
T-rd. W., on E. head wall of concrete culvert; painted square
6. FROM PALMYRA QUADRANGLE AT SEC. 12, T. 57 N., F . 6 W., SOUTH
ABOUT 1.5 MILES, THENCE WEST INTC PALMYTA QUADRANGLE AT
SEC. 9 ; T. 57 N., R. 6 W. (by A. R. Friend in 1936)
(Continued from Paimgra quadrangle; see line 5.$)$
Palmgra, 3 ml . S. of, along. U.S. Highway 61, 100 ft . S. of junction of
U.S. Highwas $24,55 \mathrm{ft}$. N. and 2 ft . W. from Chicago, Purlington 8 :

"T T ${ }^{23}$ C 1936"
T-rd. S., in root on N. side of 12-in. walnut troe; crossed nails
T. 57 N., R. 6 W., quarter cor. between secs. 11 and 14 , 35 ft . s. end
125 ft . E. from crossroads, in root on S. side of twin $14-\mathrm{in}$. hedge
tree; copper nail and washer
r. $57 \mathrm{Nt}, \mathrm{R} .6 \mathrm{~W}$., quarter cor. between secs. 10 and $15,6 \mathrm{ft} . \mathrm{s}$. and
20 ft . E. from Trra. N., on top of SW. wing wall of concrete bridge;
chiseled square
Woodland, 2 m. . SE. of, near cor. secs. $9,10,15$, and 16, T. $57 \mathrm{~N} .$,
R. 6 W., $100(? 20) \mathrm{ft}$. s. and 22 (? 90 ) ft. E. from T-rd. s., 36 ft .
E. of 30 -in. post-oak tree, in concrete post; standard tablet's stamped
"T T 840 1936"
619.75
629.71
700.74
674.81
709.50
701.963
642.43
665.37
(Continued in Palmyra quadrangle; see line 5.)

U.S.C. \& G.S. standard disk stamped "T 1351935 "
Monroe City, about 0.2 mi. W. of W. I1mits of, 25 ft . s. and 10 ft . E. 727.643
from U.S. Highway 36 at entrance to brick dweliing, in root on N. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
T-rd. N., 25 ft . S. of, on concrete base of corner fence post; chiseled 732.38
(Continued in Hunnewell quadrangle; see line 4.)

For an additional level line along Wabash Ry., refer to United States Coast and Geodetic Survey second-order line, Hannibal to Salisbury.

# FARBER QUADRANGLE <br> (Latitude $39^{\circ} 15^{\prime}-39^{\circ} 30^{\prime}$; longitude $91^{\circ} 30^{\prime}-91^{\circ} 45^{\prime}$ ) 

Audrain, Monroe, and Ralls Counties


1. FROM FLORIDA QUADRANGLE, IM SEC. 25, T. 52 N., R. 8 W. (by D. W. Weber in 1929)
(Continued from Fiorica quadrangle; see line 2.)
Worcester, 1.5 mi . S. and 0.8 mi . E. from, E. cor. secs. 25 and 36 ,
T. 52 N., R. 8 W., 20 ft. N. and 23 ft. W. from T-rd. W., $55 \mathrm{ft} . \mathrm{S}$. and 23 ft . W. from T-rd. F., in concrete post; standard tablet stamped "T T Sta No 23 M 1926"
T. 52 N., R. 8 W., near T-rd. W., on S. head wall of concrete culvert; chiseled square
Worcester, about 0.5 mi . N. and 0.8 mi . E. from, E. cor. secs. 13 and 24 , T. 52 N., R. 8 W. , SE. of T-rd. W., on N. head wall of culvert; chiseled square
Worcester, 1.5 ms . N , and 0.8 mi . E. from, E. cor. secs. 12 and 13 , T. 52 N., R. 8 w., $5 \mathrm{ft}$. . and 35 ft . W. from rd. at fence W., 243 ft . S. and 35 ft . W. from T-rd. E. at W. cor. secs. 7 and 18 , T. 52 N . ${ }^{\prime}$ R. 7 W., in concrete post; standard tablet stamped "1931 E R A 1935"

Feference mark, 400 ft . N. of tablet, in root of $24-1 \mathrm{n}$. elm tree; copper nail and washer
of 18 -in. elm tree; copper nail and washer
TPps. 52 and 53 N., Rs. 7 and $8 \mathrm{~W} .$, cor. of, 400 ft . S. of T-rd. E., in root of $24-1 n$. elm tree; copper nail and washer
T. 53 N., Rs. 7 and 8 W ., near quarter cor. between secs. 31 and 36 ; top of $S$. post of $W$. rail of steel bridge
T. 53 N., R. 8 W., near NE. cor. sec. 36 ; top of S. post of W. rail of steel bridge
T. $53 \mathrm{~N} ., \mathrm{Rs}$.7 and 8 W. , quarter cor. between secs. 25 and $30,36 \mathrm{ft}$. N. and 48 ft . E. from crossroads, 8 ft . N. of fence, in concrete post; standard tablet stamped "54 CW A 1934"
Reference mark, 500 ft . W. of tablet, in root of $24-1 n$. elm tree; copper nail and washer
T. 53 N., R. 8 W., near SE. cor. sec. 24 , W. of rd., in root of 18-5r. elm tree; copper nail and washer
T. 53 N., R. 7 W., in sec. 19 , about 300 ft . N. of farmhouse, in root of 18-in. elm tree; copper nail and washer
T. 53 N., R. 8 W., in SE $1 / 4 \mathrm{sec} .13$, W. of rd., in root of 18 -in. elm tree; copper nail and washer
T. 53 N., Rs. 7 and $8 \mathrm{~W} .$, cor. secs. $7,12,13$, and $18,37 \mathrm{ft}$. S. and 52 ft . W. from County Route $D$ at crossroad, 2 ft . N. of fence, in concrete post; standard tablet stamped "53 C W A 1934"
Reference mark, 75 ft . E. of tablet, on concrete base of fence post; chiseled square
elm tree; copper nail and washer
Tps. 53 and 54 N., Rs. 7 and 8 W., cor. of, 150 ft . E. of T-rd. S., on N. head wall of culvert; chiseled square

Feet $758.411_{4}$
773.94
777.08
765.235
764.02
764.69
755.95
741.64
3. FROM MONROE CITY QUADRANGLE, AT SEC. 36, T. 55 N., R. 6 W., SOUTHWEST, THENCE NORTH ALONG STATE HIGHWAY 19 INTO MONROE CITY QUADRANGLE (by B. A. Barnes in 1935)
(Continued from Monroe City quadrangle; see line 4.)
Center, about 0.8 mi . S. of, near S. cor, secs. 35 and $36, \mathrm{~T} .55 \mathrm{~N}$. , R. 6 W., 63 ft . N. and 37 ft . E. from County Route $P$ at rd. E.,

42 ft . N. of Highway 19 W. produced, 30 ft . N. of fence corner, in
concrete post; standard tablet stamped "1422 C W A 1934"
(Continued in Monroe City quadrangle; see line 4.)
4. FROM VANDALIA QUADRANGLE AT SEC. 7, T. 53 N., R. 5 W., NORTH INTO MONROE CITY QUADRANGLE AT SEC. $31, \mathrm{~T} .55 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W}$. (by Cornish Beck in 1936)
(Continued from Vandalia quadrangle; see line 4.)
T. 53 N., R. 5 W., W. cor. secs. 7 and $18,8 \mathrm{ft}$. S. and 18 ft . E. from T-rd. E., on $S$. end of concrete culvert; chiseled square
T. 53 N., R. 6 W., quarter cor. between secs. 12 and $13,6 \mathrm{ft}$. S. and 27 ft . W. from T-rd. N., on head wall of culvert; chiseled square
T. 53 N., R. $6 \mathrm{~W}_{.}$, quarter cor. between secs. 1 and $12,55 \mathrm{ft}$. N. and 28 ft . E. from crossroads, 8 ft . N. and 3 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 14 C 1935"
753.00

Tps. 53 and 54 N., R. 6 W. , on line between secs. 1 and 36 , near T-rd. S., in NW. side of corner power-line pole; nail
750.498

Tps. 53 and $54 \mathrm{~N}_{.}$, R. 6 W., W. sixteenth cor. between secs. 1 and 36, 6 ft . S. and 15 ft . W. from T-rd. N., on S. end of pipe culvert; painted square
T. 54 N., R. 6 W., w. sixteenth cor. between secs. 25 and $36,12 \mathrm{ft}$. S. and 13 ft . W. from crossroads, on head wall of culvert; chiseled square
Madisonville, 2 ms . SW. of, in NE $1 / 4$ sec. 25, T. 54 N., R. 6 W., 25 ft . N. (? S.) and $64 \mathrm{ft}$. . (? W.) from rd. forks, 4 ft . S. and 2 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 13 C $1935^{\prime \prime}$
T. 54 N., R. 5 W., in $\mathrm{SE} 1 / 4 \mathrm{sec} .19$, 350 ft . SW. of rd. forks, on N. head wall of concrete bridge; chiseled square
(For balance in Vandalia quadrangle; see line 4.)
T. 54 N., R. 5 W., in $W 1 / 2$ sec. 18 , 135 ft. W. of T-rd. N., on S. head wall of culvert; chiseled square
Ford across creek, 90 ft . SE. of, 6 ft . E. of rd., in E. side of 36-in. elm tree; nail
664.50
606.48
693.185
 tablet stamped "T T 12 C 1935"
619.76 tree; nail
Tps. 54 and 55 N., R. 5 W., on line between secs. 6 and $31,18 \mathrm{ft}$. N. and 12 ft . E. from T-rd. S., in W. side of telephone pole; nail

## 5. FROM MONROE CITY QUADRANGLE, SOUTHWEST ALONG STATE HIGHWAY 19 TO SEC. 25, T. 54 N., R. 7 W., THENCE WEST ALONG STATE HIGHWAY 26' TO PERRY (by Cornish Beck in 1936)

Center, about 0.8 mi . S. and 1.3 mf . W. from, 30 ft . N. of highway at E. end of curve, on top of right-of-way post; (mark not described)
721.65

Center, about 2.6 ms . SW. of, 45 ft . E. of highway, in root on SW . side of lone 36-in. elm tree; copper nail and washer
T. 54 N., R. 6 W., quarter cor. between secs. 8 and 9, 235 ft . N. and 48 ft . W. from crossroads, 48 ft . W. of N. -S . crossroad, 3 ft . E. of transmission-ilne pole, in concrete post; standerd tablet stamped "1121 C W A 1934"
T. 54 N., R. 6 W., on line between secs. 17 and $18,35 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from crossroad, on NW. side of hedge-fence post; copper nall and washer
T. $54 \mathrm{~N}_{\text {. }}$ R. $6 \mathrm{~W} .$, in SE $1 / 4$ sec. $18,25 \mathrm{ft}$. S. and 40 ft . E. from junction of rd . E., in $W$. side of telephone pole; nail
T. 54 N., R. 6 W., about 400 ft . E. of W. cor. secs. 18 and 19, 20 ft . N. and 35 ft . W. from junction of rd. W., on head wall of culvert; chiseled square
T. 54 N., R. 7 W., W. sixteenth cor. between secs. 24 and $25,0.8 \mathrm{mi}$. N. of junction of State Highway $26,91 \mathrm{ft}$. N. and 43 ft . E. from E.-W. "rossroad, $2 \mathrm{ft}^{2}$. E. of fence, in concrete post; standard, tablet stamped "1420 C WA 1934"
Perry, about 1.5 mi . E. of, 15 ft . N. and 120 ft . W. from S. Junction of State Highway 26, on head wall of culvert; chiseled square
Porry, about 1 mi . E. of, in $\mathrm{SE} 1 / 4 \mathrm{sec} .26, \mathrm{~T} .54 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W} ., 20 \mathrm{ft} . \mathrm{S}$. and 40 ft . W. from junction of rd. S., on head wall of culverts chiseled square
Perry, near E. limits of, 83 ft . N. and 158 ft . W. from N.-S. crossroad, 3 ft . N. of picket fence around park, in concrete post; standard tablet stamped "1408 C.W A 1934"
U.S.C. \& G.S. standard disk stamped "X 132 1935"
6. FROM SEC. 18, T. 53 N., R. 5 w., WEST TO POINT ABOUT 1 MILE
NORTH OF HUTGHISON (by Cornish Beck in 1936)
T. 53 N., R. 5 W., W. cor. secs. 18 and 19, 20 ft. S. and 2 ft. E. from rd. corner N. $-E ., 3 \mathrm{ft}$. N. and 2 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 22 C 1935"

Feet
757.578
T. 53 N., R. 6 W., cor. secs. $13,14,23$, and $24,15 \mathrm{ft} . \mathrm{N}$. and 120 ft . W. from T-rd. N., in root on W. side of 12-in. elm tree; copper nail and washer
Bridge over Spencer Creek, on $S$. corner of; chiseled square
T. 53 N., R. 6 W., cor. secs. $14,15,22$, and $23,34 \mathrm{ft} . \mathrm{S}$. and 40 ft . E. from crossroads, 13 ft . S. and 2 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 18 C 1935"
T. 53 N., R. 6 w., cor. secs. $15,16,21$, and $22,9 \mathrm{ft} . \mathrm{S}$. and 120 ft . W. from rd. at N.-S. fence, on SW. wing wall of culvert; chiseled square
738.01
716.0
738.372
729.59
T. 53 N., R. 6 W., cor. secs. $16,27,20$, and $21,365 \mathrm{ft}$. W. of crossroads, on NE. Wing wall of bridge; chiseled square
719.83
T. 53.N., R. 6 W., E. sixteenth cor. between secs. 18 and 19, $23 \mathrm{ft} . \mathrm{N}$. of T-rd. S., 2 ft . N. of fence, in concrete post; standard tablet stamped "T T 17 C 1935"
741.002
T. 53 N., Rs. 6 and 7 W., near cor. secs. $13,18,19$, and $24,60 \mathrm{ft}$. N. and 4 ft . E. from NW. corner of dwelling, in root on N. side of 26-in. maple tree; copper nail and washer
747.21
T. 53 N., R. 7 W., cor. secs. $13,14,23$, and $24,16 \mathrm{ft}$. S. and 35 ft . E. from State Highway 19 at rd. E., on head wall of culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "T 132 1935"
748.85
750.776

## 7. FROM BELLFLOWER QUADRANGLE AT SEC. 31, T. 52 N., R. 5 W., WEST TO SEC. 36, T. 52 N., R. 8 W., INCLUDING THAT PART OF THE LINE IN WELLSVILLE QUADRANGLE (by Cornish Beck in 1936) <br> (Continued from Vandalia quadrangle; see line 3.)

T. 52 N., R. 6 W., E. cor. secs. 25 and $36,20 \mathrm{ft}$. S. and 20 ft . W. from T-rd. W., inside fence, in concrete post; standard tablet stamped "T T Sta No 4 S 1927"
T. 52 N., R. 6 W., cor. secs. $25,26,35$, and $36,18 \mathrm{ft} . \mathrm{N}$. and 15 ft . W. from T-rd. N., in corner fence post; nail
763.037
T. 52 N., R. 6 W., E. sixteenth cor. between secs. 26 and $35,18 \mathrm{ft} . \mathrm{N}$. and 90 ft . E. from T-rd. S., in schoolyard, in root on S. side of 26-in. maple tree; copper nail and washer
T. 52 N., R. 6 W., on line between secs. 26 and $35,32 \mathrm{ft}$. N. and 25 ft . E. from T-rd. E., in W. side of $32-1 n$. elm tree; nail
T. 52 N., R. 6 W., on line between secs. 26 and $27,12 \mathrm{ft}$. N. and 6 ft . W. from T-rd. N., on head wall of culvert; chiseled square
748.70
T. 52 N., R. 6 W., in $S E 1 / 4 \mathrm{sec} .27,18 \mathrm{ft}$. S. and 12 ft . W. from T-rd. S., on W. edge of pipe culvert; painted square
742.23
T. 52 N., R. 6 W., on line between secs. 27 and $28,12 \mathrm{ft}$. N. and 21 ft . W. from County Route AA at rd. E., on head wall of culvert; chiseled square
$747 \cdot 58$
Farber, $1.5 \mathrm{ml} . \mathrm{S}$. of, near E. sixteenth cor. between secs. 28 and 33 , T. 52 N., R. 6 W., E. of County Route AA at rd. W., in concrete post; standard tablet stamped "T T Sta No 3 S 1927"
T. $52 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} .$, cor, secs. $28,29,32$, and $33,7 \mathrm{ft}$. N . and 21 ft . E. from crossroads, on head wall of culvert'; chiseled square
764.360
T. 52 N., R. 6 W., cor 747.32
from crossroads, on head wall of culvert; chiseled square
760.36

Laddonia, 0.5 mi . N., thence 1 mi . E. from, cor. secs. $25,30,31$, and 36, T. 52 N., Rs. 6 and 7 W., $18 \mathrm{ft}$. . and 36 ft . W. from T-rd. W., in concrete post; standard tablet stamped "T T Sta No 2 S 1927"
771.128

Laddonia, 0.5 ml . N. of, cor. secs. $25,26,35$, and 36, T. 52 N. , R. 7 W., 12 ft . S. and 30 ft . E. from U.S. Highway 54 at crossroad, on head wall of culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "B 138 1935"
779.710
addonia, $0.5 \mathrm{mi} . \mathrm{N}_{0}$, thence 1 mi . W. from, cor. secs. $26,27,34$, and 35, T. $52 \mathrm{~N} ., \mathrm{R} .7 \mathrm{w}, 12 \mathrm{ft}$. S. and 20 ft . E. from crossroads, on head wall of concrete culvert; chiseled square
771.64

Laddonia, 0.5 ml . N., thence 2 mf . W. from, cor. secs. $27,28,33$, and 34, T. 52 N., R. 7 W., 24 ft . S. and 30 ft . W. from crossroads, 50 ft . N. of dwelling of John Braden, in concrete post; standard tablet stamped "T T Sta No I S 1927"
776.432

Laddonia, 0.5 ml . N., thence 3 mf . W. from, cor. secs. $28,29,32$, and 33, T. 52 N., R. 7 W., 12 ft . S. and 320 ft . W. from crossroads, on SE. wing wall of bridge; chiseled square
Laddonia, $0.5 \mathrm{mi} . \mathrm{N} .$, thence 4 mi . W. from, cor. secs. 29, 30, 31, and 32, T. 52 N., R. 7 W., 7 ft . S. and 40 ft . W. from County Route B at crossroad, on head wall of culvert; chiseled square
776.50

For additional level lines along Alton R.R. and U.S. Highway 54 and State Highways 19 and 26, refer to United States Coast and Geodetic Survey second-order lines, Louisiana to Mexico and Laddonia to Edina.

# FLORIDA QUADRANGLE <br> (Latitude $39^{\circ} 15^{\prime}-39^{\circ} 30^{\prime} ;$ longitude $91^{\circ} 45^{\prime}-92^{\circ} 00^{\prime}$ ) <br> Audrain and Monroe Counties 



1. FROM MEXICO QUADRANGLE AT SEC. 36 , T. 52 N., R. 9 W., WEST TO SKINNER (by D. W. Weber in 1929)
T. 52 N., R. 9 W., E. cor. secs. 25 and $36,18 \mathrm{ft}$. E. of T-rd. W., 83 ft .
N. and 20 ft. E. from T-rd. E. at W. cor. secs. 30 and 31 , T. 52 N., R. 8 W., in concrete post; standard tablet stamped "T T Sta No 21 M 1926"
Reference mark, 480 ft . S. of tablet, on concrete culvert; chiseled square

Feet
782.547
775.64
712.08 over South Fork of Salt River; chiseled sauare
T. 52 N., R. 9 W., in $W 1 / 2 \mathrm{sec} .26,170 \mathrm{ft}$. N. and 10 ft . W. from T-rd. E., 15 ft . S. of T-rd. W., on top of SW. corner of head wall of concrete culvert: chiseled square
722.38

Skinner, 4.5 mi . E. of, near quarter cor. between secs. 27 and 28 , T. 52 N., R. 9 W., 600 ft . W. of Clover Leaf stock farm, 8 ft . S. of rd., on top at center of concrete culvert; chiseled square
763.62

Skinner, 4.2 mi . E. of, on State Highway 15 , in top of NW. wing wall of concrete bridge 548 over Fish Branch; standard tablet stamped "No 1 W 1929 Mo"
Reference mark, 160 ft . E. of tablet, on top of concrete culvert; chiseled square
Skinner, 4.2 mi . E. of, on State Highway $15,16 \mathrm{ft}$. S , and 77 ft . E. from N. end of bridge over Fish Branch, in concrete post; standard tablet

Skinner, 3 mi . E. of, center sec. 29, T. 52 N., R. $9 \mathrm{~W} ., 17 \mathrm{ft}$. S. and
180 ft . W. from T-rd. N., on top of E . head wall of concrete culvert; chiseled square
Skinner, 2.5 mi. E. of, quarter cor. between secs. 29 and 30, T. 52 N., R. 9 W., 12 ft . N. and 670 ft . W. from T-rd. N., on top at center of concrete culvert; chiseled square
Skinner, 1 mi. E. of, in SW. cor. sec. 19, T. 52 N., R. 9 W., 10 ft. N. of rd., on top at center of concrete culvert; chiseled square
Skinner, cor. secs. $23,24,25$, and 26, T. 52 N., R. $10 \mathrm{~W} ., 24 \mathrm{ft}$. S. and 18 ft . E. from crossroads, in concrete post; standard tablet stamped "T T Sta No 15 M 1926"
Reference mark, 210 ft . S. of tablet, on top of wall of concrete culvert; chiseled square
2. FROM MEXICO QUADRANGLE AT SEC. 30, T. 52 N., R. 8 W., EAST INTO FARBER QUADRANGLE AT POINT ABOUT 1.5 MILES SOUTH OF WORCESTER (by D. W. Weber in 1929)
Worcester, $1.5 \mathrm{mi} . \mathrm{S}$. , thence 3.8 mi . W. from, near cor. secs. 29, 30 , 31 , and $32, \mathrm{~T} .52 \mathrm{~N} ., \mathrm{R} .8 \mathrm{w} ., 42 \mathrm{ft}$. N. and 12 ft . E. from T-rd. S., 8 ft . E. of gate, in root on S. side of $15-1 \mathrm{n}$. box-elder tree; copper nail and washer
Worcester, 1.5 mi . S., thence 2.8 mi . W. from, on line between secs. 28 and 33 , T. 52 N., R. 8 W., on top of $S$. head wall of concrete culvert; chiseled square
Worcester, 1.5 ml . S., thence 2.2 mi . W. from, cor. secs. 27, 28, 33, and 34 , T. 52 N., R. 8 W., $23 \mathrm{ft} . \mathrm{N}$. and 23 ft . E. from crossroads, in concrete post; standard tablet stamped "T T Sta No 22 M 1926 "
Reference mark, 750 ft . E. of tablet, in root of twin wild-cherry tree; copper nall and washer

Worcester, $1.5 \mathrm{mf} . \mathrm{S} .$, thence 0.3 mi . W. from, near cor. secs. 26, 27, 34 , and $35, \mathrm{~T} .52 \mathrm{~N} .$, R. $8 \mathrm{~W} ., 100 \mathrm{ft}$. W. of hedge fence S., on top of N. head wall of concrete culvert; chiseled square

Worcester, 1.5 mi . S. of, in $\mathrm{SW} 1 / 4 \mathrm{sec} .25, \mathrm{~T} .52 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W} ., 0.5 \mathrm{ml}$. E. of crossroads, on top of Sw. wing wall of small bridge; chiseled square

Feet
749.07
755.94
(Continued in Farber quadrangle; see line 1.)

> 3. FROM FARBER QUADRANGLE AT SEC. 36, T. 54 N., R. 8 W., NORTH INTO HUNNEWELL QUADRANGLE AT POINT ABOUT 0.5 MILE NORTHWEST OF FLORIDA (by J. H. Vinyard in 1934)
> (Continued from Farber quadrangle; see line 2.)
T. 53 N., R. 8 W., N. cor. secs. 1 and 2, at T-rd. S., in root of 15-in. heage tree; copper nail and washer
Tps. 53 and 54 N ., R. 8 W. , approximate quarter cor. between secs. 2 and 35, 20 ft . S. of $\mathrm{T}-\mathrm{rd.N}$. , 97 ft . E. of $18-1 \mathrm{n}$. thorn tree, 2 ft . N. and 1 ft. E. from fence corner, in concrete post; standard tablet stamped "64 C W A 1934"
Reference mark, 200 ft . E. of tablet, $N$. of rd., in root of 18-in. ash tree; copper nall and washer
T. 54 N., R. 8 W., near quarter cor. between secs. 26 and 35, NW. of crossroads, on N. head wall of culvert; chiseled square
T. 54 N., R. 8 W., near quarter cor. between secs. 23 and 26 , SE. of crossroads, in root of $24-1 n$. locust tree; copper nall and washer
T. 54 N., R. 8 W., quarter cor. between secs. 14 and $23,37 \mathrm{ft}$. S. and 15 ft . W. from State Highway 26 at crossroad, in top of N. end of W. head wall of concrete culvert; standard tablet stamped "65 C W A 1934"
Reference marik, 120 ft . E. of tablet, on S. head wall of culvert; chiseled square
T. 54 N., R. 8 W., 0.2 mi . W. of SE. cor. sec. 15 , on State Highway 26, on N. head wall of twin culvert; chiseled square
T. 54 N., R. 8 W., near cor. secs. $15,16,21$, and 22, SE. of junction of State Highways 26 and 107 and rd. S., on E. head wall of culvert; chiseled square (elev. determined by ण.S.C. \& G.S.)
T. 54 N., R. 3 W., in NE $1 / 4$ sec. $16,200 \mathrm{ft}$. S. of farm entrance, W. of State Highway 107, in root of $48-1 n$. elm tree; copper nail and washer
Florida, 1 mi . S. of, near quarter cor. between secs. 9 and 10, T. 54 N., R. 8 W., W. of State Highway 107, 200 ft . N. of farm entrance, in root of 15-in. oak tree; copper nail and washer
Florida, 0.5 mi . S. of, along State Highway 107, about 0.1 mi . E. of cor. secs. 3, 4, 9, and 10, T. 54 N., R. 8 W., in top of E. end of S. abutment of bridge over Salt River; standard tablet stamped "66 C W A 1934"
Reference mark, 600 ft . N. of tablet, 30 ft . N. of $N$. end of steel span, on W. curb of bridge; chiseled square
Florida, on State Highway 107, N. of stores at crossroad, in yard of dvelling $W$. of rd., in root of $36-1 n$. maple tree; copper nail and washer
748.59
749.892
749.83
748.20
744.25
696.016
697.99
683.78
664.792
698.17
667.34
587.825
588.06
639.77
748.08 721.33 731.33 748.569 721.88
649.83
711.48
632.43
717.409
718.58
630.99
717.29
$734 \cdot 38$
759.682
T. 53 N., R. 9 W., near quarter cor. between secs. 11 and 14 , on N. head wall of concrete culvert; painted square
Phillips triangulation sta.; U.S.C. \& G.S. standard disk stamped "Phillips 1934"

Feet
734.23
763.551
763.099
U.S.C. sc G.S. standard reference disk stamped "Phillips 21934 "
T. 53 N., R. 9 W., cor. secs. $10,11,14$, and $15,30 \mathrm{ft}$. N. and 160 ft .
E. from County Routs D at crossroad, in root of $20-1 \mathrm{n}$. elm tree; nail and washer
T. $53 \mathrm{~N} ., \mathrm{R}$. 9 W. , on line between secs. 10 and 15 , at top of hill, in root of 18-1n. maple tree; erossed nails
T. 53 N., R. 9 W., cor. secs. $9,10,15$, and $16,40 \mathrm{ft}$. N. and 90 ft . E. from County Route $D$ at ra. S., in root of $22-1 n$. oak tree; nail and washer
County Route D at rd. N., NE. of, in base of corner fence post; spike
County Route D at rd. S., 20 ft . E. of, on S . head wall of concrete culvert; chiseled square
T. 53 N., R. 9 W., W. sixteenth cor. between secs. 8 and $17,38 \mathrm{ft} . \mathrm{S}$. of County Route $D$ at rd. N., 2 ft . S. of fence corner, in concrete post; standard tablet stamped "1926 E R A 1935"
T. 53 N., R. 9 W., W. sixteenth cor. between secs. 7 and $18,20 \mathrm{ft} . \mathrm{s}$. and 25 ft . W. from County Route D at rd. S., in root of $14-1 \mathrm{n}$. elm tree; copper nail and washer
County Route $D$ at crossroad, NE. of, on concrete base of corner fence post; chiseled square
T. $53 \mathrm{N},$.R . 10 W ., 300 ft . E. of quarter cor. between secs. 12 and 13 , on County Route D, on SW. concrete abutment of small bridge over branch; chiseled square
County Route $D$ at crossroad, NE. of, on concrete base of corner fence post; chiseled square
T. 53 N., R. 10 W., cor. secs. $10,11,14$, and $15,35 \mathrm{ft}$. S. and 35 ft . W. from junction of State Highway 15 and County Route D, on center of S. head wall of concrete culvert; chiseled square

T-rd. W., on rock head wall of iron pipe culvert; painted square

## 5. FROM SEC. $11, T .53$ N., R. 10 W., NORTH ALONG STATE HIGHWAY 15 TO PARIS, INGLUDING THAT PART OF THE LINE IN MADISON QUADRANGLE (by B. A. Barnes in 1935)

T. $53 \mathrm{~N} ., \mathrm{R}$. 10 W. in $\mathrm{SE} 1 / 4 \mathrm{sec}, 3,70 \mathrm{ft}$. S. of private lane W. to farmhouse of R. N. Davis, on center of W. head wail of concrete culvert; chiseled square
Junction of rd. E.; surface of highway
T. 54 N., R. 10 W., near quarter cor. between secs. 34 and 35 , near junction of rd. E., on S. head wall of concrete culvert; chiseled square
Paris, $4 \mathrm{mi} . \mathrm{S}$. of, in NE $1 / 4 \mathrm{sec} .34, \mathrm{~T} .54 \mathrm{~N} ., \mathrm{R} .10 \mathrm{w} ., 25 \mathrm{ft} . \mathrm{N}$. and 28 ft . E. from crossroad, in concrete post; standard tablet stamped "T T Sta No $18 \mathrm{M} 1926^{\prime \prime}$
Crossroad, on SE. head wall of concrete culvert; chiseled square
Paris, about 2.5 mi . S. of, on top of upstream end of S. pier of S. truss of bridge over Elk Fork of Salt River; standard tablet (set by waterresources branch of U.S.Geol. Survey)
Paris, 1.5 mi . S. of, center of E . head wall of concrete culvert; chiseled square
645.998

Paris, 0.5 ml . S. of S . $11 \mathrm{mits} \circ \mathrm{f}^{\circ}$, at junction of State Highway 26 , on SW. head wall of concrete culvert under Highway 26; chiseled square
U.S.C. \& G.S. standard disk stamped "J 133 1935"
U.S.C. \& G.S. standard disk stamped "K 133 1935"

Paris, 10 ft . S, and 78 ft . W. from W. entrance to courthouse, in con-
crete sidewalk; standard tablet stamped "T T Sta No 19 M 192́6"
U.S.C. \& G.S. standard disk stamped "C 124 1935"
675.41
739.90
695.740
696.445
681.311
660.855

## 6. FROM SEC. $11, T .53$ N., R. $10 \mathrm{~W} .$, SOUTH TO SKINNER, INCLUDING THAT PART OF THE LINE IN MADISON QUADRANGLE (by B. A. Barnes in 1935)

T. 53 N., R. 10 W., cor. secs. $22,23,26$, and $27,30 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from State Highway 15 at crossroad, on center of N. head wall of concrete culvert; chiseled square
Top of hill, 80 ft . S. of filling sta., in root of 20-in. walnut tree; crossed nails
T. 53 N , R. 10 W , on line between secs. 34 and 35 , on State Highway 15, in top of upstream end of S. abutment of bridge; standard tablet (set by water-resources branch of U.S.Geol. Survey)
802.49
753.185

Tps. 52 and $53 \mathrm{~N} ., \mathrm{R}$. 10 W., cor. secs. $2,3,34$, and $35,30 \mathrm{ft}$. N. and 40 ft . E. from State Highway 15 at crossroad, on center of N . head wall of concrete culvert; chiseled square
Farmhouse, in front yard of, in root of 18-in. ash tree; crossed nails
U.S.C. \& G.S. standard reference disk stamped "T T Sta No 16 M 1926 No $2^{\text {" }}$
(There may be a U.S.G.S. tablet stamped "T T 16 M 1926" 110 ft. E.)
T. 52 N., R. 10 W., S. sixteenth cor. between secs. 1 and 2,40 ft. N. and 30 ft . W. from State Highway 15 at crossroad, on center of W.
head wall of concrete culvert; chiseled square
T. 52 N., R. 10 W. , on line between secs. 11 and 12 , on NE. concrete wing wall of steel bridge over Youngs Creek; chiseled square
Skinner, 2 mi. N. of, near cor. secs. 11,12 , 13 , and $14, \mathrm{~T} .52 \mathrm{~N} .$, R. 10 ., on NW. concrete wing wall of small bridge over branch; chiseled square
T. 52 N., R. 10 W., quarter cor. between secs. 13 and 14 , SW. of T-rd. W., on concrete base of corner fence post; chiseled square

Skinner, 0.3 mi. N. of, N. sixteenth cor. between secs. 23 and 24 , T. 52 N., R. 10 W., on SW. concrete wing wall of steel bridge over branch; ehiseled square
7. FROM PARIS NORTH ALONG U.S. HIGHWAY 24 INTO SIIELBINA QUADRANGLE (by Cornish Beck in 1936)

Paris, $0.6 \mathrm{mi} . N$. of, along U.S. Highway $24,65 \mathrm{ft} . \mathrm{S}$. and 62 ft . E. from crossroad, in telephone pole; nail(in Madison quadrangle, central Missouri)
(Continued in Hunnewell quadrangle; see line 6.)
For additional level lines along state Highways 15 and 26 , refer to United States Coast and Geodetic Survey second-order line, Laddonia to Edina.

HUNNEWELL QUADRANGLE
(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 4^{\prime} 5^{\prime}$; long1tude $91^{\circ}{ }^{\circ} 5^{\prime}-92^{\circ} 00^{\prime}$ )
Sarion, Monroe, and Shelby Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1901-02)

Hunnewell, in front of Chicago, Burlington \& Quincy R.R. sta.; top of rail
758.5

Lakenan, in front of Chicago, Burlington \& Quincy R.R. sta.; top of rail
Lakenan, 0.8 mi . NW. of, along U.S. Highway 36 , in SE $1 / 4$ sec. 1 ,
T. 56 N., R. 10 W., 166 ft . S. and 15 ft . W. from highway at fence N.; iron post stamped " $71+7$ Q"
T. 57 N., R. 10 W., in $S 1 / 2 \mathrm{sec} .36$, in W. face of stone foundation of dwelling of J. Clark; standard tablet stamped "739 Q (elevation doubtful)
Hunnewell, in SW. corner of stone foundation of drug store of A. C. Spalding; standard tablet stamped "758 Q"
T. 57 N., R. 9 W., near S. quarter cor. sec. 35; 1ron post stamped "754 Q"
Hunnewell, 1.5 ml . NE. of, in SW $1 / 4$ sec. 31 , T. $57 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W} .$, in N. face of stone foundation of dwelling of James McClintock; standard tablet stamped "754 Q"
T. 55 N., R. 10 W., near N. quarter cor. sec. 1 ; iron post stamped " 691.5 Q"
*745.555
*759.262
*754.740
*755. 027
*692.266
2. FROM FLORIDA QUADRANGLE AT. SEC. 33, T. 55 N., R. 8 W., NORTHEAST,
THENGE NORTH INTO MONROE CITY QUADRANGLE AT SEC. 2, T. 55 N., R. 8 W. (by J. H. Vinyard in 1934)
(Continued from Florida quadrangle; see line 3.)
Florida, 0.5 mi . NW. of, along State Highway 107, in SE $1 / 4$ sec. 33 , T. 55 N., R. 8 W ., on'S. end of E. curb of bridge over North Fork of Salt River; chiseled square
T. 55 N., R. 8 W., in $N_{*} 1 / 2 \mathrm{sec} .33$, at top of hill, in yard of farmhnuse, in root of $24-1 n$. oak tree; copper nail and washer
T. 55 N., R. 8 W., near NW. cor. sec. 33 (? NE $1 / 4 \mathrm{sec} .34$ ), on NE. wing wall of steel bridge; chiseled square
T. 55 N., R. 8 W., near SW. cor. sec. 26 , at angle in rd. NW., in root of 15-1n. oak tree; nails
T. 55 N., R. 5 W., in $\mathrm{NW} 1 / 4 \mathrm{sec} .26,0.2 \mathrm{mi}$. W. of schoolhouse, W. of T-rd., in root of $12-1 n$. oak tree; copper nail and washer

[^11]T. 55 N., R. 8 W., quarter cor. between secs. 23 and $26,19 \mathrm{ft}$. N. and 28 ft . E. from T-rd. N., 400 ft . W. of schoolhouse, in concrete post; standard tablet stamped "67 C W A 1935"

Feet 703.512 708.96
715.01
665.10
707.377
709.51
608.37
(Continued in Monroe City quadrangle; see line 2.)
3. FROM NEWARK QUADRANGLE AT SEC. 12, T. 57 N., R. 10 W., SOUTHNEST INTO SHELBINA QUADRANGLE AT SEC. 11, T. 57 N., R. 10 W. (by J. H. Vinyard in 1934)
(Continued from Newark quadrangle; see line 3.)
T. 57 N., R. $10 \mathrm{~W} .$, near quarter cor. between secs. 12 and $13,700 \mathrm{ft}$. W. of T-rd., 75 ft . N. of rd., in pasture, in root of $30-\mathrm{in}$. elm tree; copper nail and washer
734.34
T. 57 N., R. 10 W., near quarter cor. between secs. 11 and 14 , at top of hill, N. of rd., 10 ft . inside pasture, in root of $30-1 \mathrm{n}$. elm tree; copper nall and washer
738.21
(Continued in Shelbina quadrangle; see line 2.)
4. FROM MONROE CITY QUADRANGLE WEST ALONG U.S. HIGHWAY 36 INTO SHELBINA QUADRANGLE (by Cornish Beck in 1936)
(Continued from Monroe City quadrangle; see line 7.)
T. 56 N., R. 8 W., near cor. secs. $10,11,14$, and $15,18 \mathrm{ft} . \mathrm{N}$. and 10 ft . W. from crossroad on Marion-Monroe county line, on head wall of culvert; chiseled square
T. 56 N., R. 8 W., cor. secs. $9,10,15$, and $16,29 \mathrm{ft} . \mathrm{S}$. and 27 ft . E. from crossroad on Marion-Monroe county line, in concrete post; standard tablet stamped "1534 ERA 1935"
T. 56 N., R. 8 W., near cor. secs. 3, 9,16 , and $17,21 \mathrm{ft} . \mathrm{S}$. and 15 ft . W. from Junction of rd. S. on Marion-Monroe county line, on head wall of culvert; chiseled square
T. 56 N., R. 8 W. , on line between secs. 7 and $8,70 \mathrm{ft}$. N. and 20 ft . E. from junction of County Route $K$, on $E$. edge of pipe culvert; painted square
T. 56 N. , Rs. 8 and 9 W ., on line between secs. 7 and 12 , on U.S. Highway 36 , on Marion-Shelby county line, 50 ft . S . and 50 ft . W. from highway at fences N. and S., in concrete post; standard tablet stamped "1535 ERA 1935"
Hunnewell, 30 ft . S. of highway, 18 ft . W. of main cross street, on head wall of culvert; chiseled square
748.806
T. 56 N., R. 9 W., in $N 1 / 2$ sec. $11,20 \mathrm{ft}$. N. and 45 ft . W. from junction of rd. N., on head wall of culvert; chiseled square
T. 56 N., R. 9 W., on line between secs. 10 and $11,20 \mathrm{ft}$. s. and 30 ft . E. from N.-S. crossroad, on head wall of culvert; chiseled square

Junction of rd. S., 40 ft . S. and 35 ft . W. from, in S . side of $12-1 \mathrm{n}$. white-oak tree; nail
T. 56 N., R. 9 W., near line between secs. 9 and 10 , in NW. pier of bridge over North Fork of Salt River; standard tablet (set by waterresources branch of U.S.Geol. Survey)
T. $56 \mathrm{~N} ., \mathrm{R} .9$ W., in NE $1 / 4$ sec. $9,400 \mathrm{ft}$. W. of bridge over North Fork of Salt River, 30 ft . N. and 25 ft . W. from highway at fences N . and S., in concrete post; standard tablet stamped "1536 E R A 1935"
Lakenan, 1 mi . E. of, in $\mathrm{N} 1 / 2$ sec. 8 , T. $56 \mathrm{~N} ., \mathrm{R} .9$ W., on S. head wall of culvert; chiseled square
Lakenan, 18 ft . $N$. and 42 ft . W. from junction of County Route $T$, on concrete pipe culvert; chiseled square
717.15
731.203
743.08
754.20

Lakenan, 0.8 mi . NW. of, in $\mathrm{SE} 1 / 4$ sec. $1, \mathrm{~T} .56 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., 166 \mathrm{ft}$ S. and 15 ft . W. from highway at fence N.; iron post stamped " 747 Q"

Reference mark, 30 ft . S. and 9 ft . W. from highway at fence N.; top of right-of-way post
Junction of rd. S., $18 \mathrm{ft} . \mathrm{S}$. and 15 ft . W. from, on concrete pipe culvert; chiseled square
755.02
733.30
706.77
690.33
637.964
649.431
679.34
743.25
753.266
T. 56 N., R. 10 W., in E $1 / 2 \mathrm{sec} .2,18 \mathrm{ft}$. S. and 25 ft . W. from SW. corner of dwelling owned by Ed Bush, 30 ft . N. of highway, top of right-of-way post
T. 56 N., R. 10 W., on line between secs. 2 and $3,21 \mathrm{ft}$. N. and 21 ft . E. from crossroad, on concrete base of corner post; chiseled square

## 5. FROM POINT ABOUT 2 MILES WEST OF HUNNEWELL SOUTH TO STOUTSVILLE (by Cornish Eeck in 1936)

T. 56 N., R. 9 W., on line between secs. 10 and $15,35 \mathrm{ft}$. W. of N.-S. rd., $21 \mathrm{ft} . \mathrm{N}$. of E.-W. rd. on Monroe-Shelby county line, in root on SE. side of 26-in. black-cak tree; copper nail and washer

Feet 663.57
T. 56 N., R. 9 W., near quarter cor. between secs. 15 and $22,18 \mathrm{ft}$. S. and 40 ft. W. from T-rd. N., in root on NW. side of $16-i n$. white-oak tree; copper nail and washer
711.60
T. $56 \mathrm{~N} ., \mathrm{R} .9$ W., 0.1 mi . W. of center sec. 22, 29 ft . N. and 32 ft . E. from rd. at fences E. and W., 29 ft . N. and 12 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 19 C $1935^{\circ}$
T. $56 \mathrm{~N} ., \mathrm{R}$. 9 W. , in NW $1 / 4$ sec. $27,30 \mathrm{ft}$. N. of center of steel bridge, in NE. side of $6-1 n$. elm tree; nail
710.404
T. 56 N., R. 9 W., in NW $1 / 4 \mathrm{sec}$. 34 , at rd. forks, $30 \mathrm{ft}$. . N. and 60 ft . W. from SW. corner of cemetery fence, in root on E. side of $14_{4}-1$. hickory tree; copper nail and washer
623.04
T. $56 \mathrm{~N} ., \mathrm{R} .9 \mathrm{~W}$. , in sec. 34 , 15 ft . N. of rd. forks, in comer fence post; nail
T. 56 N., R. 9 W., S. quarter cor. sec. $34,17 \mathrm{ft}$. S. and 5 ft . W. from Trd. N., $2 \mathrm{ft} . \mathrm{N}$. of fence, in concrete post; standard tablet stamped "r T 20 C 1935"
669.84
642.22

T-rd. S., $21 \mathrm{ft} . \mathrm{S}$, and 21 ft . W. from, in root on E. side of $24-1 \mathrm{n}$. elm tree; copper nail and washer
718.136
T. $55^{\circ}$ N., R. 9 W., on line between secs. 2 and $3,18 \mathrm{ft}$. S. and 7 ft . W. from T-rd. E., on head wall of culvert; chiseled square
733.53
T. 55 N., R. 9 W., S. sixteenth cor. sec. T-rd. N., 8 ft . N. and $3 \mathrm{ft} . \mathrm{W}$. from fence corner, in concrete post; standard tablet stamped "T T 21 C 1935"
720.793
T. 55 N., R. 9 W., in $\mathrm{NE} 1 / 4 \mathrm{sec} .11,15 \mathrm{ft}$. N. and 140 ft . W. from rd.
corner S.-W., in root on N. side of $10-1 n$. walnut tree; copper nail and washer
T-rd. W., 15 ft . S. and 15 ft . W. from, in corner post; nail
Stoutsville, 0.8 mi . NW. of, 85 ft . S. and 105 ft . W. from U.S.Highway 24 at crossroad; top of right-of-way post
U.S.C. \& G.S. standard disk stamped "A 136 1935"

## 6. FROM SHELBINA QUADRANGLE NORTHEAST ALONG U.S. HIGHWAY 24 INTO MONROE CITY QUADRANGLE (by Cormish Beck in 1936)

## (Continued from Florida quadrangle; see line 7.)

T. 55 N., R. 10 W., quarter cor. between secs. 34 and $35,40 \mathrm{ft}$. N. and 33 ft . W. from junction of rd. W., in E. side of telephone poles nail U.S.C. \& G.S. standard disk stamped "M 133 1935"
760.45 709.464

Goss, 2.4 mi . W. of, 0.5 mi . E. of junction of State Highway $15,48 \mathrm{ft}$ N. of highway, 23 ft . S. and 111 ft . W. from SW . corner of farmhouse of C. Scobee, 2 ft . inside fence, in concrete post; standard tablet stamped "1415 C W A 1934"
Goss, 1.2 ml . W. of, 18 ft . S. and 14 ft . W. from crossroad, on head wall of culvert; chiseled square
756.722

Goss, at NW. limits of, 18 ft . S. and 12 ft . E. from junction of rd. S., on head wall of culvert; chiseled square
745.38

Goss, about 0.7 mi . NE. of, 52 ft . N. and 245 ft . E. from junction of rd. N. 33 ft . inside fence, in concrete post; standard tablet stamped "1416 C W A 1934"
Goss, about 1.9 mi . NE. of, 45 ft . E. of junction of rd. S., on head wall of culvert; chiseled square
$747 \cdot 31$

Bridge over Otter Creek, on NE. wing wall; chiseled square
727.917

Goss, about 3.1 mi . NE. of, 75 ft . S. and 90 ft . W. from N.-s. crossroad, on N. corner of head wall of culvert; chiseled square
Crossroad, 25 ft . N. and 11 ft . W. from, on head wall of culvert; chiseled square
659.70
T. 55 N., R. 9 W., in sec. Il, at bridge over Salt River, on SW. bolt of guardrail on NW. wing wall; chiseled cross.
Stoutsville, 1 ml . SW. of, $1,000 \mathrm{ft}$. NE. of bridge over Salt River, 64 ft N. of E. -W. crossroad, 2 ft . Inside fence, in concrete post; standard tablet stamped "1417 C W A 1934"
U.S.C. \& G.S. standard disk stamped "Z 135 1935"
664.731
T. 55 N., R. 8 W., near cor. secs. 5, 6, 7, and 8, 69 ft . N. $24^{\circ}$ W. of NE. corner of junction of State Highway 107, 42 ft. E. of Highway 107 at curve, 4 ft . Inside fence, in concrete post; standard tablet stamped "1418 C W A 1934"
T. $55 \mathrm{~N}_{\mathrm{N}}, \mathrm{R} .8 \mathrm{~W}$., on line between secs. 4 and $5,25 \mathrm{ft}$. S. and 15 ft . E.
from N.-S. crossroad, on head wall of culvert; chiseled square
708.216
741.45
of private, on ine between secs. 3 and, junction
of private rd. N., on S. head wall of culvert; chiseled square
Indian Creek, 96 ft . W. from NW.-SE. crossroad, 60 ft . SW. of steel post in fence corner, 2 ft . inside fence, in concrete post; standard tablet stamped "1419 C W A 1934"
T. $56 \mathrm{~N} ., \mathrm{R}$. $8 \mathrm{w} ., 300 \mathrm{ft}$. s . of s . cor secs. 35 and $36,40 \mathrm{ft}$. S. of junction of ra. N., in fence post; nail
lines, Hannibal to Salisbury and Laddonia to Edina.

Knox, Lewis, Marion, and Shelby Counties


1. ISOLATED BENCHMARKS (not shown on dlagram; by H. V. Kees in
1901-02)

Argola, in front of post office, about 6 ft . from SW . corner, on large stone; cross
Nelsonville, in front of post office, on NE. corner of step; cross Cherrydell, approximate cor. secs. 19, 24, 25, and 30, T. 59 N.,

Rs. 8 and 9 W., 8 ft . N. of SW. corner of post office, in stone
foundation; standard tablet stamped "695 $Q^{\text {" }}$
Emden, near quarter cor: cetween secs. 25 and 26, T. 58 N., R. 9 W., in SW. corner of stone foundation of Christian Church; standard tablet stamped "743 Q"

Feot *704. 52 4716.83 695.832
*743.821
*740.054
*756.208
*750.068
2. FROM PALMYRA QUADRANGLE, AT WARREN, NORTH 1 MILE INTO PALMYRA
QUADRANGLE (by J. H. Vinyard in 1934 )
(Continued from Falmyra quadrangle; see line 2.)
Warren, 32 ft . NW. of Main Street at rd. S., 70 ft . NW. of post office, in yard of dweliing of Dr. R. A. Terrell, in concrete post; standard tablet stamped "73 C W A 1934"
726.849

Reference mark, 300 ft . E. of tablet, in root of $24-\mathrm{in}$. maple tree; copper nail and washer
Warren, about 0.5 mi . $N$. of, along Philadelphia-Warren rd., near quarter cor. between secs. 35 and 36, T. 58 N., R. 8 W., at bridge, in S. end of W. girder; top of inside rivet head
Warren, about 1 ml . N. of, near cor. secs. 25, 26, 35, and 36, T. 58 N. , R. 8 W., opposite T-rd. E., in root of $30-1 n$. elm tree; copper nail and washer 718.98
(Continued in Palmyra quadrangle; see line 2.)
3. FROM WARREN WEST INTO HUNNEWELL QUADRANGLE AT SEC. $12, \mathrm{~T} .57$ N., R. 10 W. (by J. H. Vinyard in 1934)

Warren, 1.2 ml . W. of, near quarter cor. between secs. 3 and 34, Tps. 57 and $58 \mathrm{~N} .$, R. $8 \mathrm{~W} ., 350 \mathrm{ft}$. E. of T-rd. S., N. of rd., in root of 24-1n. elm tree; (mark not described)
Warren, 2 mi . W. of, in sec. 4, T. $57 \mathrm{~N} .$, R. $8 \mathrm{~W} ., 160 \mathrm{ft}$. SE. of SE. corner of church, 30 ft . S. of rd., near entrance to cemetery, in concrete post; U.S.C. \& G.S. and State Survey standard tablet stamped "80 C W A 1934"
Reference mark, on NW. corner of concrete entrance to church; chiseled
. 58 N., R. $8 \mathrm{~W} .$, near SW . cor. sec. 33 , E. of store, on SE. corner of
T. $57 \mathrm{~N} ., \mathrm{R}$. 8 W ., in $\mathrm{SE} 1 / 4$ sec. $5,0.2 \mathrm{ml}$. N. of County Route K at rd.
W., in root of $30-$ in. black-oak tree; crossed nails
T. 57 N., R. 8 W., W. sixteenth cor. between secs. 5 and 8 , about 0.5 mi . W. of County Route $\mathrm{K}, 25 \mathrm{ft}$. S. of rd., in concrete post; standard tablet stamped "81 CW A 1934"

[^12]Reference mark, about 450 ft . E. of tablet, in root of $20-\mathrm{in}$. elm tree;
Feet 734.63 734.48
748.11
745.38
769.193
768.80
755.13
716.38
753.346
728.51
744.45
659.47
696.45
(Continued in Hunnewell quadrangle; see line 3.)

## 4. FROM SEC. 36, T. 59 N., R. 8 W., WEST THROUGH CENTER OF QUADRANGLE INTO SHELBYVILLE' QUADRANGLE AT SEC. 26, T. 59 N , R. 10 W. (by A. R. Friend in 1936)

T. 59 N., R. 8 W., quarter cor. between secs. 35 and $36,55 \mathrm{ft}$. N. and 35 ft . E. from County Route $N$ at crossroad, in concrete post; standard tablet stamped "75 C W A 1934"
649.161
T. 59 N., R. \& W., center sec. $35,245 \mathrm{ft}$. N. and 70 ft . E. from, on SW.
corner of concrete porch of Ewing School; chiseled square
T. 59 N., R. 8 W., W. sixteenth cor. sec. 34 , $15 \mathrm{ft} . \mathrm{S}$. and $65 \mathrm{ft} . \mathrm{E}$. from T-rd. E., 735 ft . N. and 65 ft . E. from T-rd. W., in top of $12-\mathrm{in}$. stump; copper nail and washer
715.68
T. 59 N., R. 8 W., quarter cor. between secs. 32 and $33,32 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from crossroads, in concrete post; standard tablet stamped "90 C w A 1934"
$\mathrm{T} \rightarrow \mathrm{rd}$. N., in base of $8-1 \mathrm{n}$. walnut tree; nail
T. 59 N., R. 8 W., near cor. secs. $29,30,31$, and $32,65 \mathrm{ft}$. N. and 20 ft . W. from T-rd. W., in root on S. side of l2-in. black-oak tree; copper nail and washer
719.489
720.51
695.27
709.81
731.620
735.77
721.89
711.66
628.59
726.939
730.90
735.39
736.80
712.794
750.76
724.87
750.46
758.62
T. 59 N., R. 10 W., near E. sixteenth cor. sec. $26,26 \mathrm{ft}$. S. and 10 ft .
E. from T-rd. S., on E. end of concretecculvert; chiseled square
T. $59 \mathrm{~N}_{.}$, R. $10 \mathrm{~W} .$, near center sec. 26 , 2 ml . E. of Bethel, 78 ft . s .
and 74 ft . E. from SE. corner of Haman School, 38 ft . N. and 65 ft . W. from T-rd. N., in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped " 86 C W A 1934
765.148
T. 59 N., R. 10 W., near quarter cor. between secs. 26 and $27,10 \mathrm{ft}$. S. and 15 ft . W. from crossroads, on $S$. head wall of concrete culvert; chiseled square
766.73
(Continued in Shelbyville quadrangle; see line 2.)
5. FROM SEC. 35, T. 59 N., R. 8 W., NORTH INTO PALMYRA QUADRANGLE AT SEC. 23, T. 60 N., R. 8 W. (by A. R. Friend in 1936)

Philadelphia, about 3 mi . N. and 0.5 mi . W. from, along County Route N , at SW. corner of bridge over South Fabius River, on top of concrete abutment; chiseled square
(For balance in Palmyra quadrangle, see line 6.)
T. 59 N., R. 8 W., in $\mathrm{NH} 1 / 4 \mathrm{sec} .24,24 \mathrm{ft}$. S. and 270 ft . E. from County Route N at rd. N., S. of highway, in root on N. side of 18-in. water-oak tree; copper nail and washer
692.02

County Route $N$ at crossroad, in corner fence post; nail
. 59 N., R. 8 W., in NE $1 / 4 \mathrm{sec} .14,6.5 \mathrm{ml}$. S. and 2.5 mi . W. from Ewing, 270 ft . N. and 37 ft . E. from County Route N at crossroad, in concrete post; standard tablet
T. 59 N., R. 8 W., near quarter cor. between secs. 11 and $14,100 \mathrm{ft} . \mathrm{N}$. and 150 ft . E. from County Route $D$ at rd. E., on concrete step of
New Providence Presbyterian Church; chiseled square
T. 59 N., R. 8 W., near cor. secs. $11,12,13$, and $14,30 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from crossroads, in top of $10-1 \mathrm{n}$. stump; copper nail and washer
T. 59 N., R. 8 W., in NW $1 / 4$ sec. 2, $300 \mathrm{ft} . \mathrm{N}$. of dwelling on top of hill, N. of rd., in root on S. side of 18-in. elm tree; copper nail and washer
T. $60 \mathrm{~N} ., \mathrm{R}$. $8 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .35,3.5 \mathrm{mi}$. S. and 2 mi . W. from Ewing, 400 ft . S. of entrance to farm, 15 ft . W. of rd., in concrete post; standard tablet
T. 60 N., R. 8 W., cor. secs. $22,23,26$, and $27,40 \mathrm{ft} . \mathrm{S}$. and 135 ft .
W. from crossroads, in field, in root on N. side of l2-in. water-oak tree; copper nail and washer
(Continued in Palmyra quadrangle; see line 6.)
6. FROM SHELBYVILLE QUADRANGLE AT SEC. 22, T. 60 N., R. 10 W.,
(Continued from Sheibyville quadrangle; see line 7.)
Newark, 1.5 mi . SW. of, along County Route B, 50 ft . N. of junction of rd. S., about 200 ft . E. of Strock farmhouse; iron post stamped "Prim Trav Sta No 5 1905"
Reference mark, 200 ft . W. of post, 50 ft . S. of SW . corner of farmhouse, in root on E. side of $30-1 \mathrm{n}$. maple tree; copper nail and washer
Bridge S-952 over South Fabius River; on N. end of E. abutment; chiseled square
Newark, 0.8 mi . W. of, along County Route B, 40 ft . N. and 45 ft . W. from junction of ra. N., in root on E. side of 20-in. black-oak tree; copper nail and washer
Junction of rd. N., 330 ft . N. of, 25 ft . S. and 10 ft . W. from SW. corner of dwelling of Jim Husted, in root on E. side of 16-in. hickory tree; copper nail and washer
737.64

Newark, at SE. corner of square, 100 ft . N. and 100 ft . W. from street intersection, 5 ft . W. of sidewalk, in root on N . side of 22-in. elm tree; copper nail and washer
Steel bridge over Myers Branch, on N. corner of W. abutment; chiseled square
650.50

Newark, 0.6 mi . E. of, along County Route B, 300 ft . W. of junction of rd. S., 40 ft. N. of highway, in fence line, in root on S. side of 30-in. locust tree; copper nail and washer
Newark, about 1 ml . E. of, along County Route B, 310 ft . E. of junction of rd. S., 25 ft . N. of highway, in root on W. side of 16-in. elm tree; copper nail and washer
Newark, 1.5 ml . E. of, along County Route B, 30 ft . S. of junction of rd. N., in concrete post; standard tablet stamped " 4 B 1936"

Bridge, on W. end of S. catwalk; chiseled square
end of N. catwalk of bridge; chiseled square
T. 60 N., R. 9 W., cor. secs. $16,17,20$, and $21,100 \mathrm{ft}$. N. and 150 ft . W. from junction of County Routes $B$ and $D$, at SW . corner of yard of Brushy School, in root on N. side of ll-in. hickory tree; copper nail and washer
T. 60 N., R. 9 W., near quarter cor. between secs. 16 and $17,165 \mathrm{ft}$. N. and 110 ft . E. from County Route D at rd. E., in field of Francis Byer, in root on S. side of 18-in. elm tree; copper nail and washer
T. 60 N., R. 9 W., near center sec. ]5, 20 ft. N. of entrance to farmyard of Wick Zupann, 25 ft . E. of rd., 60 ft . SW. of SW. corner of dweliling, in root on $S$. side of $12-1 \mathrm{n}$. elm tree; copper nail and washer
T. 60 N., R. 9 W., near quarter cor. between secs. 15 and $22,350 \mathrm{ft}$. N. of crossroads, 30 ft. W. of rd., in root on $W$. side of $16-1 n$. elm tree copper nail and washer
Feet 734.69 .
725.24
T. 60 N., R. $9 \mathrm{~W}_{*}$, cor. secs. $1 \mathrm{l}_{\mathrm{t}}, 15,22$, and $23,80 \mathrm{ft}$. E. of T-rd. S., $25 \mathrm{ft} . \mathrm{N}$. of rd., in farmyard, in root on S . side of $20-\mathrm{in}$. elm tree; copper nail and washer
Farmhouse of William E. Jones, 115 ft . NE. of NE. corner of, 100 ft . S. of rd., 12 ft . W. of entrance to farm, in root on W. side of 18-1r. elm tree; nall and washer
T. 60 N., R. 9 W., cor. secs. $13,14,23$, and $24,240 \mathrm{ft}$. W. of T-rd. S., 75 ft . SE. of dwelling of Stanley Turner, 30 ft . N. of rd., in concrete post; standard tablet stamped "5 B 1936"
T. 60 N., R. 9 W., near center of $S E 1 / 4 \mathrm{sec} .13$, 540 ft . NE. of T-rd. E., 20 ft . W. of rd., in farmyard of Frank Gutchfield, in root on S . side of 36-1n. white-oak tree; copper nail and washer
T. 60 N., R. 9 W., E. sixteenth cor. sec. $13,50 \mathrm{ft} . \mathrm{N}$. of rd. corner S.-E, and woods rd. W., in root on E. side of $20-1 n$. white-oak tree; copper nail and washer
T. 60 N., R. 8 W., W. quarter cor. sec. $28,610 \mathrm{ft}$. E. of T-rd. S., 40 ft. W. of NW. corner of dwelling of A. E. Phillip, 50 ft . S. of rd., in root on N. side of 16-in. hickory tree; copper nail and washer
Top of hill, $30 \mathrm{ft} . \mathrm{S} .0 \mathrm{f}$ r., about 400 ft . W. of large barn, in root on N. side of $16-1 \mathrm{n}$. wild-cherry tree; iron nail and washer
T. 60 N., R. 8 W., quarter cor. between secs. 17 and $18,785 \mathrm{ft}$. W. of crossroads, 75 ft . NE. of NE. corner of farmhouse of Mrs. C. R. Huebotter, 30 ft . S. of rd., in root on W. side of 20-1n. elm tree; copper nail and washer
Farmhouse of R. R. Brown, 55 ft . SW. of SW . corner of, 40 ft . N. of rd., in root on S. side of 8-1n. maple tree; crossed nails
T. 60 N., R. 8 W., quarter cor. between secs. 16 and $17,77 \mathrm{ft}$. NW. of NW. corner of Oyster Prairie Grange and Conminity House, 50 ft . S. and 195 ft . W. from crossroads, 167 ft . SW. of schooihouse, in concrete post; standard tablet
Dwelling of Fred Schrader, 45 ft . E. of private drive, 60 ft . N. of rd., In root on S. side of 18-1n. elm tree; nail and washer
Farmhouse of Milton Smith, 100 ft . S. of SE. corner of, 35 ft . N. of rd., in root on $S$. side of $26-1 n$. black-locust tree; nail and washer
736.69
732.92
714.539
713.68
(Continued in Canton quadrangle; see line 6.)

> 7. FROM SEC. 22, T. 60 N., R. 10 w., SOUTH INTO SHELBYVILLLE QUADRANGLE AT SEC. 3, T. 59 N., R. 10 W. (by F. Y. Brown in 1936)

Top of hill, at $N$. edge of field, in root on $W$. side of $10-1 n$. elm tree; crossed nails
738.62
T. 60 N., R. 10 W., 150 ft . NW. of cor. secs. $22,23,26$, and 27 ; about 250 ft . S. of Little Fabius River, 50 ft . S. of gate to Nelson Cemetery, in root on E. side of 26-in. white-oak tree; copper nail and washer
T. 60 N. , R. 10 W. , quarter cor. between secs. 26 and $27,240 \mathrm{ft}$. N. of T-rd. W., 15 ft . E. of rd., in fence line, in root on w. side of $1 \mathrm{l}_{\mathrm{f}}-1 \mathrm{n}$. cedar tree; copper nail and washer
T. 60 N., R. 10 W., cor. secs. $26,27,34$, and $35,15 \mathrm{ft}$. N. and 170 ft . E. from crossroads, 30 ft . S. and 20 ft . E. from SE . corner of farmbouse of Walter Mauck, in root on S. side of 10-in. box-elder tree; copper nail and washer
745.52

Bridge, at SE. corner of; surface of floor
Rd. corner from N. W. . 75 ft . W. of, 15 ft . N. of rd., in root on W. side of $10-1 \mathrm{n}$. elm tree; crossed nails
Tps. 59 and 60 N., R. 10 W., E. sixteenth cor. between secs. 3 and 34, 4.8 mi . N. and 1.2 ml . E. from Bethel, 27 ft . S. and 31 ft . W. from T-ric. S. on Knox-Shelby county line, in corner of field, in concrete post; standard tablet stamped "T T 2 1935"
726.300
T. 59 N., R. 10 W., near E. sixteenth cor. sec. 3 (?), 40 ft. S. and 20 ft . W. from crossroads, in root on S . side of ly-in. elm tree; copper nail and washer
Bridge, on E. corner of $S$. head wall; chiseled square
(Continued in Shelbyville quadrangle; see line 5.)
8. FROM SEC. $2, T .58$ N., R. 8 W., EAST ALONG COUNTY ROUTE N INTO
PALMYRA QUADRANGLE (by W. V. Kennedy in 1937)

County Route $N$ at rd. W., on $S$. head wall of concrete culvert; chiseled square

## La BELLE QUADRANGLE <br> (Latitude $40^{\circ} 00^{\prime}-40^{\circ} 15^{\prime}$; longitude $91^{\circ} 45^{\prime}-92^{\circ} 00^{\prime}$ )

## Knox and Lewis Counties



1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in
T. 60 N., R. 8 W., in SE $1 / 4$ NE $1 / 4$ sec. 10 , on property of William Juafram; iron post stamped "681 A"
T. 60 N., R. 9 W., on line between secs. 8 and 9 , on property of
W. E. Piner, W. of County Route D, 10 ft . S. of entrance to farm; iron post stamped "681 A"
Lewistown, at SE. corner of Main and Elm Streets, on bank building; aluminum tablet stamped " 725 A" (C.\& G. S. recovery gives post office and 724 A)
La Belle, in NW. corner of stone foundation of bank; aluminum tablet stamped "738 A"
*736.013
T. 62 N., R. 9 W., in NE $1 / 4$ sec. 20, in SE. corner of yard of H. P. Gregory; iron post stamped "674 A"
*673.817
Williamstown, in W. side of stone foundation of Southern Methodist Church; standard tablet stamped " 721 A"
T. $63^{\circ}$ N., R. 9 W., quarter cor. between secs. 28 and 29, 21 ft . N. and 23 ft . W. from crossroads; iron post stamped "709 A"
2. FROM LEWISTOWN EAST ALONG STATE HIGHWAY 96 INTO CANTON QUADRANGLE (by A. R. Friend in 1936)
U.S.C. \& G.S. standard disk stamped "M 15 1933"
725.028

Lewistown, about 0.5 mi . E. of, 500 ft . W. of junction of State Highway
6 , 30 ft . S. and 20 ft . W. from Highway 6 at rd. S., on W. head wall of concrete culvert; chiseled square
Junction of rd. N., in NW. corner of farmyard, in top of concrete right-of-way post; nail
Lewistown, about 2 ml . E. of, at entrance to county farm, on W. concrete head wall of culvert; chiseled square
Crossroad, on W. concrete head wall of culvert; chiseled square
Lewlstown, 3.2 mi . E. of, 150 ft . N. and 700 ft . E. from N.-S. crossroad, 48 ft . S. of highway, in concrete post; standara tablet stamped " 1428 C W A 1934"
(Continued in Canton quadrangle; see line 2.)
3. FROM NEWARK QUADRANGLE AT SEC. 8, T. 60 N., R. 9 W., EAST INTO NEWARK QUADRANGLE AT SEC. 10 , T. 60 N., R. 9 W. (by F. Y. Brown in 1936)
(Continued from Newark quadrangle; see line 6.)
Junction of rd. E., 50 ft . S. of, 30 ft . E. of NE. corner of farmhouse of F. W. Mitcheli, in root on W. side of 26-in. maple tree; crossed nails
$\mathrm{Rd} . \mathrm{R}_{2} \mathrm{ft}$. S . of, in root on E. side of $20-\mathrm{in}$. elm tree; crossed nails
T. 60 N., R. 9 W., near center sec. $10,585 \mathrm{ft}$. S. of crossroads, 40 ft . E. of rd., in field, in root on W. side of 20-in. black-oak tree; copper nail and washer
(Continued in Newark quadrangle; see line 6.)

[^13]4. FROM SEC. $14, \mathrm{~T} .60 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} .$, NORTH AND WEST INTO EDINA QUADRANGEE AT SEC. 10, T. 60 N., R. 10 W. (by F. Y. Brown in 1936)
T. 60 N., R. 10 W., near W. sixteenth cor. sec. $14,20 \mathrm{ft}$. E. of rd. corner from S.-W., in root on $S$. side of $14-i n$. hickory tree; copper nall and washer
T. 60 N., R. 10 W., cor. secs. $10,11,14$, and $15,300 \mathrm{ft}$. S. and 55 ft . E. from crossroads, 30 ft . S. and 3 ft . W. from SW . corner of Fruithill School, in root on W. side of 14-in. hickory tree; copper nail and washer

Feet
750.14
732.35
(Continued in Edine quadrangle; see line 3.).

## 5. FROM WYACONDA QUADRANGLE AT SEC. 22, T. 63 N., R. 8 W., SOUTH TO POINT ABOUT 3.2 MILES EAST OF LEWISTOWN (by F. Y. Brown in 1937) <br> (Continued from Wyaconda quadrangle; see line 5.)

Steel bridge, at $N$. end of, 60 ft . W. of rd., in root on $N$. side of $14-1 n$. black-obk tree; crossed nails
656.38

Williamstow, 1.5 ml . E. of, cor. secs. $22,23,26$, and $27, \mathrm{~T} .63 \mathrm{~N}$, R. 8 W., 96 ft . N. and 15 ft . E. from crossroads, 4 ft . E. of fence, in concrete post; standard tablet stamped "T T 116 C 1936"
705.498

Reference mark, 0.2 mi . S. of tablet, on W. head wall of concrete culvert, 4 ft . S. of N. end; chiseled square
692.11
T. 63 N., R. 8 W., cor. secs. $26,27,34$, and $35,15 \mathrm{ft}$. S. and 20 ft . W. from Trad. E., in root on $N$. side of $26-1 n$. wainut tree; copper nail and washer
708.09
T. 63 N., R. 8 w., in $S W 1 / 4$ sec. $35,800 \mathrm{ft}$. N. of T-rd. E., 25 ft . W. of rd., in fork of twin 16-1n. black-locust tree; copper nail and washer 695.89
T. 62 N., R. 8 W., near N. sixteenth cor. between secs. 2 and 3 , about 450 ft . S. of County Route A at rd. NE., about 700 ft . N. of rd. NW., 15 ft . E. of highway, on center of E . head wall of concrete culvert; chiseled square
County Route A, 45 ft . E. of, in farmyard of E. C. Tompkins, in root on W. side of 16-1n. maple tree; crossed nails
681.69
T. 62 N., R. 8 W., near cor. secs. $10,11,14$, and $15,25 \mathrm{ft}$. N. and 30 ft . E. from T-rd. E., in root on N. side of l2-in. wild-cherry tree; copper nail and washer
696.16

Rd. corner from S.-E., 40 ft . N. of, 60 ft . S. of old Price farmhouse, in root on S. side of $30-1 n$. maple tree; crossed nails
610.37
(For balance in Canton quadrangle, see line 7.)
T. 62 N., R. 8 W., near quarter cor. between secs. 15 and 22, on S. bank of North Fabius River, on bolt head on top of NW. corner of E. pier of steel bridge (bridge washed away); chiseled square
581.92

North Fabius River, 20 ft . N. of, 15 ft . E. of rd., in S . side of willow tree; nail
T. 62 N., R. 8 W., in NE $1 / 4 \mathrm{sec} .22,15 \mathrm{ft}$. S. and 45 ft . W. from T-rd. at $S$. edge of North Fabius River valley, in fence line, in root on $N$. side of $26-1 n$. white-oak tree; copper nail and washer
T. 62 N., R. 8 W., in sec. 22, 110 ft . S. of rd. corner from S.-E.,

15 ft . W. of ra., in root on E . side of $2 \mathrm{~L}_{4}$-in. elm trees crossed nails
T. 62 N., R. 8 W., in $E 1 / 2 \sec$. $22,25 \mathrm{ft}$. E. of rd. corner from S.-W., in root on w. side of $18-1 n$. hickory tree; copper nail and washer
Top of hill, 55 ft . W. of rd., 115 ft . S. of old dwelling, in root on E. side of 36-in. elm tree; crossed nafis
T. 62 N., R. 8 W., in $S E 1 / 4$ sec. $27,50 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from SE . corner of Reynolds School, 60 ft . E. of rd., in root on S. side of 10-in. post-oak tree; copper nail and washer
581.92
608.19
651.38
626.71
680.19
693.94
T. 62 N. , R. 8 W. , in $\mathrm{NE} 1 / 4 \mathrm{sec} .34,60 \mathrm{ft}$. S. and 30 ft . W. from T-rd. N., in farmyard of W. H. Robert, on top of E. side of concrete well top; chiseled square
705.11
T. 62 N., R. 8 W., S. sixteenth cor sec. $35,260 \mathrm{ft}$. N. and 15 ft . W. from T-rd. E., 2 ft . N, and 10 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 118 C 1936 "
697.416
T. 61 N., R. 8 W., near center sec. $2,15 \mathrm{ft}$. S. and 15 ft . E. from crossroads, in root on E. side of $22-1 n$. elm tree; copper nail and washer
T. 61 N., R. 8 W., near center sec. $11,100 \mathrm{ft}$. W. of rd., in farmyard, in root on $S$. side of $14-i n$. cedar tree; copper nail and washer

## 6. FROM POINT 1.5 MILES EAST OF WILLIAMSTOWN WEST INTO EDINA QUADRANGLE AT SEC. 22, T. 63 N., R. 10 W. (by F. Y. Brown in 1937)

Williamstown, 1 mi. E. of, near quarter cor. between secs. 22 and 27, T. 63 N., R. 8 W., 8 ft . S. of rd., on corner of E. head wall of concrete culvert; chiseled square
671.60

Farmhouse, 55 ft . NW. of, in root on N. side of l6-in. elm tree; crossed na1ls
Williamstown, about 1 mi. W. of, near W. sixteenth cor. between secs. 20
and $29, T .63 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W}$, about 800 ft . E. of crossroads, 15 ft . N. of and 29, T. 63 N., R. 8 W., about 800 ft . E. of crossroads, 15 ft . N. of rd., on NW. corner of N. head wall of small bridge; chiseled square
Williamstown, about 1.2 mi . W. of, cor. secs. $19,20,29$, and 30 , T. 63 N., R. 8 W., 535 ft . W. of T-rd. S., 15 ft . S. of rd., in S. side of 22-in. elm tree; copper nail and washer

Williamstown, about 2.5 mi . W. of, in NE $1 / 4$ sec. 25 , T. 63 N., R. 9 W., 20 ft . N. and 55 ft . E. from rd. forks, in root on S . side of 18 -ir. walnut tree; copper nall and washer

Feet 628.61
5. 63 N., R. 9 W., in NW $1 / 4 \mathrm{sec} .25$, on top of pier at NE. corner of bridge over North Fabius River, on top of bolt head; chiseled square
Willamstown, 3.3 mi . W. of, quarter cor. between secs. 25 and 26 , T. 63 N., R. 9 W., 10 ft . S. and 20 ft . E. from T-rd. W., in concrete post; standard tablet stamped "I T 123 C 1936"
602.90
604.519
T. 63 N., R. 9 W., in $S 1 / 2 \sec .26,65 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from rd. cormer's.-E., in SE. corner of farmyard of W. H. Miller, in root on E. side of 10-in. cedar tree; crossed nails
T. 63 N., R. 9 W., near $W$. sixteenth cor. between secs. 26 and 35 , 15 ft . S. and 12 ft . E. from T-rd. N., in root on $N$. side of $8-1 n$. wainut tree; copper nail and washer
704.63
725.31
T. 63 N., R. 9 W., in $\mathrm{S} 1 / 2$ sec. 27 , at rd. corner S.-W., 700 ft . N. of T-rd. E., 700 ft . E. of rd. corner N.-E., 200 ft . E. of T-rd. N., at corner of farmyard, in root on S. side of $22-1 n$. mulberry tree; copper nail and washer
725.55

T-rd. N., 15 ft . S. and 135 ft . E. from, in root on N . side of $8-1 \mathrm{n}$. wild-cherry tree; copper nail and washer
688.01
T. 63 N., R. 9. W., in sec. $28,25 \mathrm{ft}$. N. and 45 ft . W. from T-rd. S., in SE. corner of barnyard, in root on $N$. side of $14-1 n$. olm tree; copper nail and washer
718.48

Barn, at SW. corner of, 52 ft . N. of rd., on top of NE. corner of concrete cistern top; painted square
T. 63 N., R. 9 W., near quarter cor. between secs. 29 and $30,210 \mathrm{ft}$. E. of crossroads, 20 ft . S. of rd ., in root on S . side of l8-in. elm tree; copper nail and washer
Concrete culvert, on $S$. end of $W$. head wall; chiseled square
(For balance in Wyaconda quadrangle, see line 8.)
T. 63 N., R. 10 W., near quarter cor. between secs. 22 and $27,25 \mathrm{ft} . \mathrm{S}$. and $110^{\circ} \mathrm{ft}$. W. from T-rd. N., in fence corner, in root on E. side of 26-1n. elm tree; copper nail and washer
638.89
(Continued in Edina quadrangle; see line 6.)
For an additional level line along Quincy, Omaha \& Kansas City R.R., refer to United States Coast and Geodetic Survey first-order line, Quincy, Ill. to Milan, Mo.

WYACONDA QUADRANGLE

Clark, Knox, Lewis, and Scotland Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees
In 1900)

Colony, $0.5 \mathrm{mi} . \mathrm{SE}$. of, near center sec. 23, T. 63 N., R. 10 W., in N.
foundation of dwelling of H. S. Coleman; standard tablet stamped "745 A"
F'airmont, in $S W 1 / 4 \mathrm{sec} .21, T .64$ N., R. 9 W., in NE. corner of public
square; iron post stamped " 780 A "
Medill, in front of R.R. sta.; top of rail
Medill, $10 \mathrm{ft} . \mathrm{S}$. and 468 ft . W. from crossing of Atchison, Topeka \&
Santa Fe Ry, and Chicago, Burlington \& Quincy R.R., in SW. side of con-
crete base of semaphore; standard tablet stamped " $703^{\circ} A^{\prime \prime}$
T. 66 N., R. 8 W., quarter cor. between secs. 28 and $33,21 \mathrm{ft}$. N. and 31 ft . E. from T-rd. S., in SE. corner of yard of J. 0. Murphy; iron post stamped "713 A"
T. 66 N., R. 9 W., quarter cor. between secs. 28 and 29, on property of J. S. Snyder; iron post stamped " 733 A"

Granger, in SW. corner of foundation of Granger Exchange Bank; standard tablet stamped "761 A"
2. FROM SEC. 8, T. 65 N., R. 8 W., WEST ALONG STATE HIGHWAY 4 TO SEC. 1l, T. 65 N., R. 10 W. (by B. A. Barnes in 1936)
T. 65 N., R. 8 W., in $S W 1 / 4 \mathrm{sec} .8,45 \mathrm{ft}$. S. and 45 ft . E. from crossroad, in concrete post; standard tablet stamped "1515 E R A 1935"
T. 65 N., R. 9 W., quarter cor. between secs. 11 and $14,46 \mathrm{ft}$. S. and 21 ft . E. from junction of rd. N., in concrete post; standard tablet stamped "1514 ERA 1935"
T. $65 \mathrm{~N} ., \mathrm{R}$. $9 \mathrm{~W} .$, in $\mathrm{NE} 1 / 4$ sec. $8,45 \mathrm{ft}$. S . and 175 ft . E. from junction of County Route $A$, in concrete post; standard tablet stamped " 1513 E R A 1935"
T. 65 N., R. 10 W., E. sixteenth cor. sec. $11,45 \mathrm{ft}$. S. and 30 ft . W. from crossroad, in concrete post; standard tablet stamped "1512 ERA 1935"

## 3. FROM MEDILL EAST ALONG STATE HIGHWAY 4 INTO KAHOKA QUADRANGLE <br> (by B. A. Barnes in 1936)

U.S.C. \& G.S. standard disk stamped "U 85 1935"
T. $65 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W}$., center sec. $22,160 \mathrm{ft}$. N. and 140 ft . W. from rd. corner N. -W., 130 ft . SW. of highway at curve, in concrete post; standard tabiet stamped "1516 ER A 1935"
Junction of rd. S.; surface of highway
(Continued in Kahoka quadrangle; see line 2.)

> 4. FROM FOINT ABOUT 2 MILES EAST OF LURAY WEST TO LURAY, THENCE NORTH, THENCE EAST INTO KEOSAUQUA QUADRANGLE AT SEC. 35 , T. 66 N., R. 8 W. (by F. Y. Brown in 1936)
U.S.C. \& G.S. standard disk stamped "V 85 1935"

Gate to airplane landing field, 10 ft . N. of, 35 ft . S. of rd., in center of $W$. head wall of concrete culvert; copper washer
U.S.C. \& G.S. standard disk stamped "W 85 1935"

Luray, 0.5 mi . N. of, on line between secs. 3 and 10 , T. 65 N., R. 9 W., 700 ft . N. of T-rd. E., 25 ft . E. of rd., on W. bank of small pond, in root on $N$. side of $14-1 n$. mapie tree; copper nail and washer
Luray, 1.4 ml . NE. of, near center sec. $3, T_{0} .65 \mathrm{~N} ., \mathrm{R} .9 \mathrm{~W}, \mathrm{l} 28 \mathrm{ft} . \mathrm{s}$. and 60 ft . W. from ra. fork W., 5 ft . E. of hedge fence, in concrete post; standard tablet stamped "T T 112 C 1936"
Tps. 65 and 66 N., R. 9 W., E: sixteenth cor. between secs. 3 and 34, 20 ft . S. and 410 ft . E. from T-rd. N., in fence line, in root on E . side of 18-in. elm tree; copper nail and washer
Tps. 65 and 66 N., R. 9 W., near W. sixteenth cor. between secs. 2 and 35 , 600 ft . N. and 35 ft . E. from T-rd. N., 50 ft . W. of farmhouse, in root on S. side of l2-in. maple tree; copper nail and washer
T. 66 N., R. 9 W., in $W 1 / 2 \mathrm{sec} .35,15 \mathrm{ft}$. N. and 30 ft . E. from T-rd. E., in fence line, in root on S. side of $10-1 n$. hedge tree; copper nail and washer
Top of ridge, 35 ft . N. of rd., in root on S . side of $26-1 \mathrm{n}$. white-ook tree; crossed nalls
Bridge, 15 ft . E. of rd., on center of E. wing wall of N. abutment; chiseled square
T. 66 N., R. 9 W., in $S W 1 / 4$ sec. $25,0.1 \mathrm{mi}$. N. of bridge over creek, 12 ft . N. and 30 ft . W. from ra. corner E. S., 4 ft . S . of fence, in concrete post; standard tablet stamped "T T ill C 1936 "
T. 66 N., R. 9 W., on line between secs. 25 and $36,15 \mathrm{ft} . \mathrm{S}$. and 125 ft . W. from T-rd. N., on S. wing wall of E. abutment of small bridge; chiseled square
Top of ridge, 25 ft . N. of rd., 300 ft . E. of double curve, in fence inne, in telephone pole at surface of ground; spike
35 ft . N. and 30 ft . W. from T-rd. W., in root on W. side of $16-1 \mathrm{n}$ white-oak tree; copper nall and washer
(For balance in Keosauqua quadrangle, see line 2.)
T. 66 N., R. 8 W., cor. secs. $27,28,33$, and $34,100 \mathrm{ft}$. E. of T-rd. S., in root on N. side of $20-1 \mathrm{n}$. white-osk tree; copper nail and washer
Top of ridge, 25 ft . S. of rd., at head of draw NE., in root on S. side of 12-in. hickory tree; crossed nails
Medill, 3.5 mi . N. of, in NW $1 / 4 \mathrm{sec} .35$, T. $66 \mathrm{~N} .$, R. 8 W ., at top of hill, 38 ft . W. of rd. forks, 2 ft . W. of fence, in concrete post; standard tablet stamped "T T 101 C 1936"
721.554
708.847
718.017
729.82
696.237
703.1
744.532
730.64
730.84
719.96
640.61
629.413
640.01
715.20

Feet
*714.156
*734.431
761.897
718.346
738.083
729.315
723.551
645.76
710.52
699.73
666.791
(Continued in Keosauqua quadrangle; see line 2.)

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5. FROM KAHOKA QUADRANGLE AT SEC. 2, T. 64 N., R. 8 W., SOUTH INTO La BELLE QUADRANGLE AT SEC. \(14, \mathrm{~T}\). 63 N., R. 8 W. (by F. Y. Brown in 1936) (Continued from Kahoka quadrangle; see line 8.)
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Tps. 64 and 65 N., R. 8 W., near W. sixteenth cor. between secs. 2 and 35 , 15 ft . S. and 25 ft . E. from $T$-rd. S., on center of S . head wall of concrete culvert; chiseled square

Feet
691.73
T. 64 N., R. 8 W., in $S W 1 / 4 \mathrm{sec} .2,380 \mathrm{ft}$. S. of rd. corner S.-E., 15 ft . E. of rd., on E . wing wall of N. abutment of concrete bridge; chiseled square
T. $64 \mathrm{~N} ., \mathrm{R}$. 8 W. , W. sixteentri cor. between secs. 2 and $11,277 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from crossroads, 2 ft . N. and 5 ft . E. from rence corner, in concrete post; standard tablet stamped "T T 114 C 1936"
687.436
T. 64 N., R. 8 W., in $W 1 / 2 \mathrm{sec} .11,240 \mathrm{ft} . \mathrm{SW}$. of Union School, 30 ft . E. of rd., on 17W. corner of concrete well top; chiseled square
T. 64 N., R. 8 W., W. sixteenth cor. between secs. 11 and $14,60 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from T-rd. N., in root on W. side of twin B-in. wildcherry tree; copper nall and washer
T. 64 N. , R. 8 W. , on line between secs. 10 and $15,15 \mathrm{ft}$. S. of rd. corner E.-S., on concrete block; chiseled square
T. 64 N., R. 8 W., in SW $1 / 4 \mathrm{sec} .15$, on top of $S$. pier at NW. end of bridge over Wyaconda River; top of joint bolt
T. 64 N., R. 8 W., in SE $1 / 4$ sec. 15 , 75 ft . E. of T-rd. W., in root on S. side of 22-in. hickory tree; copper nail and washer
T. 64 N., R. 8 W., in $S W 1 / 4$ sec. $15,650 \mathrm{ft}$. S. of T-rd. E., 40 ft . SE. of small iron bridge, 25 ft . E. of rd., in root on W. side of $30-\mathrm{in}$. maple tree; copper nail and washer
Farmhouse of Fred Miller, 30 ft . E. of rd., in fence line, in root on $W$. side of 30-in. white-oak tree; crossed nails
713.38
T. 64 N., R. 8 W., W. sixteenth cor. between secs. 22 and $27,30 \mathrm{ft}$. S. and 200 ft . W. from crossroads, 75 ft . N. of NE. corner of farmhouse of Joseph M. Wells, in root on N. side of 8-1n. cedar tree; copper na1l and washer
T. 64 N., R. 8 W., W. sixteenth cor. between secs. 22 and $27,105 \mathrm{ft}$. S. and 200 ft . W. from crossroads, on NE. corner of foundation of farmhouse of Joseph M. Wells; painted square
Farmhouse, 260 ft . NW. of, 15 ft . W. of rd., in hedge fence, in root on W. side of $10-1 \mathrm{n}$. hedge tree; crossed nails
T. 64 N., R. 8 W., near center sec. $34,700 \mathrm{ft} . ;$ s: of crossroads, 310 ft . NE. of farmhouse, 30 ft . E. of rd., in root on $W$. side of twin $14-1 \mathrm{n}$. oak tree; copper nail and washer
Steel bridge over small creek, on top of bolt head at top of N. pier at W. end; chiseled square
T. $63 \mathrm{~N} .$, R. 8 W., in $\mathrm{N} 1 / 2 \mathrm{sec} .3,400 \mathrm{ft}$. N. and 15 ft . W. from T-rd. N., in root on E. side of 20-in. hlack-oak tree; copper nail and washer
T. 63 N., R. 8 W., near N. sixteenth cor. between secs. 2 and $3,185 \mathrm{ft}$. N. and 40 ft. E. from rd. corner S. W. produced and dim rd. N., at corner of hedge fence, in root on $N$. side of 10-in. hedge tree; copper nail and washer
T. 63 N., R. 8 W., cor. secs. 2, 3, 10 , and $11,78 \mathrm{ft}$. N. and 23 ft . W. from T-rd. W., in concrete post; standard tablet stamped "T T 115 C 1936"
T. 63 N., R. 8 W., quarter cor. between secs. 10 and $11,130 \mathrm{ft}$. S. and 25 ft . E. from T-rd. E., in root on W. side of l2-in. black-oak tree; copper nall and washer
T. 63 N., R. 8 W., cor. secs. $10,11,14$, and $15,25 \mathrm{ft} . \mathrm{N}$. and 30 ft . E. from THd. E., in root on $W$. side of I4-in. hedge tree; copper nail and. washer
T. 63 N., R. 8 W., quarter cor. between secs. 14 and $15,40 \mathrm{ft}$. E. of T-rd. W., in root on W. side of l6-in. hedge tree; copper nail and washer
T. 63 N., R. 8 W., cor. secs. $14,15,22$, and $23,540 \mathrm{ft} . \mathrm{N}$. and 40 ft . E. from T-rd. E., 100 ft . SW. of large barn, on base on W. side of concrete watering tank; chiseled square
(Continued in La Belle quadrangle; see line 5.)

## 6. FROM SEC. 22, T. 64 N., R. 8 W., EAST INTO KAHOKA QUADRANGLE

 AT SEC. 23, T. 64 N., R. 8 W. (by F. Y. Brown in 1937)T. $64 \mathrm{~N} ., \mathrm{R} .8 \mathrm{~W} .$, in $\mathrm{N} 1 / 2$ sec. 27 , $40 \mathrm{ft} . \mathrm{N}$. and 20 ft . E. from T-rd. S., in root on S. side of $14-1 \mathrm{n}$. hickory tree; copper nail and washer T. 64 N., R. 8 W., near N. sixteenth cor. between secs. 26 and $27,30 \mathrm{ft}$. S. and 10 ft . E. from T-rd. N., in root on W. side of 18-in. white-oak tree; copper nail and washer
T. 64 N., R. 8 W., in N $1 / 2 \mathrm{sec} .26,160 \mathrm{ft}$. N. and 310 ft . E. from T-rd. S., 210 ft . E. of farmhouse, 55 ft . S. of rd., in root on S. side of 24-in. white-oak tree; copper nail and washer
7. FROM SEC. 22, T. 64 N., R. 8 W., WEST INTO MEMPHIS QUADRANGLE AT SEC. Il., T. 64 N., R. 10 W. (by F. Y. Brown in 1937)
T. 64 N., R. 8.W., on line between secs. 21 and $28,15 \mathrm{ft}$. S. and 65 ft . W. from T-rd. N., in root on N. side of. 32-in. black-oak tree; copper nall and washer

Feet
inkade triangulation sta.; U.S.C. \& G.S. standard disk stamped "Kinkade $1934^{\prime \prime}$
U.S.C. \& G.S. standard reference disk stamped "Kinkade No $11934^{n \prime}$
U.S.C. \& G.S. standard reference disk stamped "Kinkade No 2 1934"
728.146
U.S.C. \& G.S. standard rererence disk stamped "Kinkade Azi 1934
T. 64 N. R. 8 W., near quarter cor. between secs. 20 and $21,20 \mathrm{ft} . \mathrm{N}$.
and 250 ft . E. from crossroads, in farmyard, in root on N. side of
14-1n. maple tree; copper nail and washer
$724 \cdot 78$
T. 64 N., R. 8 W., near center sec. $20,15 \mathrm{ft}$. N. and 200 ft . W. from

T-rd. S., in root on S. side of i4-in. post-oak tree; copper nail and washer
734.58
T. 64 N., R. 8 W., in NE $1 / 4$ sec. 19, 135 ft . N. and 25 ft . W. from T-rd.
N., in root on S. side of 30-in. mulberry tree; copper nail and washer
735.03
T. 64 N., R. 8 W., in sec. 19, 15 ft . N. of rd., in SE. corner of farmyard, in root on S. side of l4-in. elm tree; crossed nails
736.19
T. 64 N., Rs. 8 and 9 W. , near quarter cor. between secs. 19 and 24 , $25 \mathrm{ft} . \mathrm{S}$. and 60 ft . E. from T-rd. E., in farmyard, in root on N . side of 16-in. pine tree; copper nail and washer
T. 64 N., R. 9 W., near center of $N W 1 / 4 \mathrm{sec}$. $24,100 \mathrm{ft}$. N. of rd., in farmyard, on concrete cistern top; chiseled square
734.09
T. 64 N., R. 9 W., cor. secs. $13,14,23$, and $24,21 \mathrm{ft}$. N. and 42 ft . W. from T-rd. W., 3 ft . N. and 25 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 107 C 1936"
T. 64 N., R. 9 W., in $W 1 / 2 \mathrm{sec} .13,40 \mathrm{ft}$. S. and 15 ft . W. from T-rd. E., on center of W. head wall of concrete culvert; chiseled square
T. 64 N., R. 9 W., near cor. secs. $11,12,13$, and $14,25 \mathrm{ft}$. E. of T-rd. W., 10 ft . E. of N.-S. fence, in root on N. side of 8 -in. hedge tree; copper nall and washer
729.94

Grain shed, at SE. end of, 15 ft . N. of rd., in root on S. side of 10-1n. elm tree; crossed nalls
737.29
T. 64 N., R. 9 W., E. sixteenth cor. between secs. 10 anc 15 , 15 ft . S. and 290 ft . E. from crossroads, in root on W. side of $16-1 \mathrm{n}$. hedge tree; copper nail and washer
674.973
718.61
. 64 N., R. 9 W., cor. secs. $9,10,15$, and $16,31 \mathrm{ft}$. S. and 2 ft . W.
from rd. at fences $N$. and $S ., 9 \mathrm{ft}$. S . and 2 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 106 C 1936"
T. 64 N., R. 9 W., quarter cor. between secs. 9 and 16 , 10 ft. S. and 15 ft . E. from crossroads, on center of S . head wall of concrete culvert; chiseled square
725.73

Top of hill, 25 ft . S . of $\mathrm{rd} .$, in farmyard, in root on N . side of $20-\mathrm{in}$. maple tree; crossed nails
739.78
730.703
T. 64 N., R. 9 W., near cor. secs. 7, 8, 17 , and $18,90 \mathrm{ft}$. N. and 20 ft . E. from T-rd. E., in root on W. side of $30-1 n$. locust tree; nail and washer
T. 64 N., R. 9 W., cor. secs. $17,18,19$, and $20,15 \mathrm{ft}$. s. and 34 ft . E. from T-rd. W., 1 ft . N. and 15 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 105 C 1936"
T. 64 N., Rs. 9 and 10 W., S. sixteenth cor. between secs. 13 and 18 , 15 ft . S. and 20 ft . E. from T-rd. E., on $S$. end of concrete fence corner wall, 1 ft . above ground; chiseled square
T. 64 N., Rs. 9 and $10 \mathrm{~W} .$, cor. secs. 7, 12,13 , and $18,30 \mathrm{ft}$. S. and 15 ft . W. from T-rd. W., on center of W. wing wall of concrete culvert; chiseled square
E. from crossroads, 2 ft. N. of fence, in concrete post; standard tablet stamped "T T 104 C 1936"
Rd., $10 \mathrm{ft} . \mathrm{S}$. of, on head wall of large concrete culvert; chiseled square
750.707
T. 64 N., R. 10 W., in NW $1 / 4 \mathrm{sec}$. 14 , at top of hill, 20 ft . S. of rd., in farmyard, in root on N. side of 22-in. elm tree; copper nail and washer
Farmhouse, 210 ft . S. of, 15 ft . E. of rd., in root on W . side of $16-\mathrm{in}$. post-oak tree; crossed nails
(Continued in Memphis quadrangle; see line 7.)
8. FROM La beLLE QUADRANGLE AT SEC. 19, T. 63 N., R. 9 W., WEST

INTO La BELLE QUADRANGLE AT POINT ABOUT 0.5 MILE WEST OF COLONY (by F. Y. Brown in 1937)
(Continued from La Belle quadrangle; see line 6.)
T. 63 N., R. 9 W., cor. secs. $17,18,19$, and $20,100 \mathrm{ft}$. S. and 30 ft . W. from T-rd. S. on Clark-Lewis county line, in root on N. side of 30-in. elm tree; copper nall and washer
64.57
T. 63 N., R. 9 W., quarter cor. between secs. 18 and $19,18 \mathrm{ft}$. S. and 75 ft . W. from T-rd. S. and lane N., on Clark-Lewis county line, in concrete post; standard tablet stamped "T T 124 C 1936"
T. 63 N., Rs. 9 and 10 W., cor. secs. $13,18,19$, and 24 , at center of T-rd. S. at W. corner of Clark and Lewis Counties, in root on N. side of $36-1 n$. elm tree; copper nail and washer
672.468
T. $63 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., \mathrm{E} . \mathrm{sixteenth}$ cor. sec. $23,40 \mathrm{ft} . \mathrm{N}$. and $90 \mathrm{ft} . \mathrm{W}$. from rd. forks, in root on W. side of 20-in. black-oak tree; copper nail and washer

Colony, in NW $1 / 4 \mathrm{sec} .23, \mathrm{~T} .63 \mathrm{~N} .$, R. $10 \mathrm{~W} ., 30 \mathrm{ft} . \mathrm{N}$. and $16 \mathrm{ft} . \mathrm{W}$. from NW. corner of schoolhouse, 25 ft . E. of rd., in concrete post; standard tablet stamped "T T 125 C 1936"
Colony, 0.5 ml . W. of, in NE $1 / 4 \mathrm{sec} .22$, T. $63 \mathrm{~N} ., \mathrm{R}$. $10 \mathrm{~W} .$, at ra.
forks, et NE. corner of cemetery, in root on $S$. side of $14-1 n$. post-
oak tree; copper nail and washer
(Continued in La Belle quadrangle; see line 6.)
For additional level lines along Chicago, Eurlington $\varepsilon$ Quincy R.R. and Atchison, Topeka \& Santa Fe Ry., refer to United States Coast and Geodetic Survey second-order lines, Medill to Glenwood Jct. and Hurdland to Fort Madison, Iowa.

KEOSAUQUA QUADRANGLE*
(Latitude $40^{\circ} 30^{\prime}-40^{\circ} 45^{\prime}$; longitude $91^{\circ} 45^{\prime}-92^{\circ} 00^{\prime}$ )
Clark and Scotland Counties


1. FROM DONNELLSON QUADRANGLE NORTHVEST ALONG STATE HIGHWAY 81 TO IOWA-MISSOURI STATE LINE, THEICE WEST ALONG IOWA-MISSOURI STATE LINE INTO CANTRIL QUADRANGLE AT SEC. 14, T. 67 N., STATE 10 W. (by B. A. Barnes in 1936 and F. Y. Brown in 1936-37) (Continued from Donnellson quadrangle; see line 1.)
T. 67 N., R. 8 W., near center sec. $34,220 \mathrm{ft}$. S. and 44 ft . W. from highway at E.-W. hedge fence, on top of concrete right-of-way marker; (mark not described)
T. 67 N., R. 8 W., quarter cor. between secs. 27 and $34,12 \mathrm{ft}$. N. and 24 ft . E. from crossroad, on center of N. head wall of concrete culvert; chiseled square
T. 67 N., R. 8 W., in $N 1 / 2$ sec. $27,80 \mathrm{ft}$. S. and 24 ft. W. from highway at hedge fence, in center of W. head wall of concrete culvert; iron pin
Junction of rd. W., 18 ft . S. and 27 ft . W. from, on center of S . head wall of concrete culvert; chiseled square
Junction of ra. E.; surface of highway
T. 67 N., R. $8 \mathrm{~W} .$, in sec. $15,0.2 \mathrm{ml}$. S. of Iowa-Mo. Stete line, 28 ft . S. and 50 ft . W. from highway at fence $W$., 28 ft . S. and 2 ft . W. from fence corner, in concrete post; standard tablet stamped "T T 91 C 1936"
T. 67 N., R. $8 \mathrm{~W} .$, in NW $1 / 4 \mathrm{sec} .15$, $140 \mathrm{ft} . \mathrm{S}$. and 66 ft . W. from Iowa State Highway $114_{4}$ at rd. W., in root on E. side of 28 -in. elm tree; copper nail and washer
T-rd. E., about 780 ft . S. and 18 ft . E. from, in root on W. side of 22-1n. elm tree; copper nall and washer
Iowa-Mo. State line at rd . W. and lane E.; surface of rd.1 mi . S. of Iowa-Mo. State ine, 4 ft . S. of crossroads, in concrete post; standard tablet stamped "T T 90 C $1936^{\circ}$
T. 67 N., R. 8 W., E. sixteenth cor. sec. 20, 18 ft . S. and 9 ft . E. from T-rd. S., on center of $E$. head wall of concrete culvert; chiseled square
T. 67 N., R. 8 W., in $S W 1 / 4 \mathrm{sec} .20,150 \mathrm{ft}$. S . of SE . corner of Duncan School, $15 \mathrm{ft} . \mathrm{N}$. and 150 ft . E. from T-rd. S., on center of N . head wall of concrete culvert; chiseled square
T. 67 N., R. 8 W., in SE $1 / 4$ sec. 19, 150 ft . E. of T-rd. S., on center of $S$. head wall of concrete culvert; chiseled square
T. 67 N., R. 9 W., 300 ft. S. of E. quarter cor. sec. $24,22 \mathrm{ft}$. S. and 2 ft . E. from T-rd. N. at NW. corner of Union churchyard, in concrete post; standard tablet stamped "T T 89 C $1936^{\prime \prime}$

[^15]T. 67 N., R. 9 W., near center sec. 24,12 ft. S. and 60 ft. E. from T-rd.

Feet
695.20
T. 67 N., R. 9 W. near quarter cor. between secs. 23 and 24 , 35 ft . E: of Upp School, 160 ft . S. and 60 ft . E. from T-rd. N., on NE. corner of concrete well top; chiseled square
T. $67 \mathrm{~N} ., \mathrm{R} .9 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .23,40 \mathrm{ft}$. N. and 15 ft . E. from T-rd. S., in fence line, in root on S . side of 14 -in. box-elder tree; copper nail and washer
729.97
T. 67 N., R. 9 W., in NE $1 / 4 \mathrm{sec} .22,25 \mathrm{ft}$. N. and 60 ft . W. from T-rd. S., in fence line, in root on S. side of $16-1 \mathrm{n}$. box-elder tree; copper nail and washer
T. 67 N., R. 9 W., E. sixteenth cor. between secs. 22 and $27,22 \mathrm{ft}$. S. of T-rd. N., in concrete post; standard tablet stamped "T T 88 C 1936"
Bridge, at NE. corner of, in S. pier; top of bolt head
T. 67 N., R. 9 W., on line between secs. 21 and 28 , opposite farmhouse of R. M. Kennel, 60 ft . E. of rd. corner from S. - W., in root on N. side of 14 -in. hickory tree; copper nall and washer
Dwelling on Low Todd farm, 40 ft . SE. of, in root on W. side of $30-\mathrm{in}$. elm tree; crossed nails
T. $67 \mathrm{~N} ., \mathrm{R}$. $9 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .20$, near top of hill, about 700 ft . W. of dweiling, 265 ft . N. and 55 ft . W. from rd. corner N.-E., in root on N. side of $26-1 n$. white-oak tree; copper nall and washer
T. 67 N., R. 9 W., in NW. cor. sec. 19, 20 ft . N. and 30 ft . E. from T-rd. S., in root on W. side of $14-1 n$. white-oak tree; copper nail and washer
T-rd. N. on Iowa-Mo. State line, 20 ft . N. and 50 ft . E. from, in root on S. side of 12-in. elm tree; crossed nails
729.62
730.28
T. 67 N., Rs. 9 and 10 W., N. cor. secs. 19 and $24,36 \mathrm{ft} . \mathrm{S}$, and 22 ft . W. from rd. corner E.-S., in concrete post; standard tablet stamped "T T 27 G 1935"
Rd. corner from N. -W. on Iowa-Mo. State line, 30 ft . S. and 40 ft . E. from, in root on $N$, side of 14 -in. elm tree; crossed nalls
T. 67 N., R. 10 W., in NE $1 / 4$ sec. 24 , 30 ft . N. and 40 ft . W. from T-rd. S. on Iowa-Mo. State line, in root on W. side of $24-1 \mathrm{n}$. mulberry tree; copper nail and washer
T. 67 N., R. 10 W., in NE. cor. sec. $23,240 \mathrm{ft}$. S. and 20 ft . E. from T-rd. N. on Iowa-Mo. State line, in root on N. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
714.22
T. 67 N., R. 10 W., about 0.1 mi . S. of W. sixteenth cor. between secs. 11 and $14,0.2 \mathrm{mi}$. S. of small 1 ron bridge, 300 ft . S. of creek junction, on W. bank of E. creek, 130 ft . W. of well platform, in root on S. side of $26-1 n$. elm tree; copper nail and washer
690.73
(Continued in Cantril quadrangle; see line 2.)

> 2. FROM WYACONDA QUADRANGLE AT SEC. 35, T. 66 N., R. 8 W. ${ }^{\text {EAST }}$ INTO DONNELLSON QUADRANGLE AT SEC. $22, \mathrm{~T} .66 \mathrm{~N} .$, R. 8 W. (by F. Y. Brown in l936)
> (Continued from Wyaconda quadrangle; see line 4.)
T. 66 N., R. 8 W., in NE $1 / 4$ sec. $30,26 \mathrm{ft}$. N. and 15 ft . W. from T-rd. S., 15 ft . N. and 1 ft . E. from fence corner, in concrete post; standard tablet stamped "T T $110^{\circ} \mathrm{C} 1936^{\circ}$
Dwelling on Kaylor farm, about 200 ft . SW. of, 20 ft . W. of rd., in fence line, in root on E. side of $\mathrm{I}_{4}$-in. maple tree; crossed nails
T. 66 N., R: 8 W., in $S E 1 / 4 \mathrm{sec} .20$, about 600 ft . S. of rd. forks, 60 ft . N. of rd., $\mathrm{l}_{4} \mathrm{ft}$. W. of farmhouse, on top of concrete well platform; chiseled square
T. 66 N., R. 8 W. , cor. secs. 20, 21, 28; and 29, 0.1 mi . E. of schoolhouse, 200 ft . W. of rd. corner from S.-W., 25 ft . N. of rd., in S . side of $20-i n$. locust tree; copper nall and washer
(For balance in Wyaconda quadrangle, see line 4.)
T. 66 N., R. 8 W., in NE. cor. sec. 26 , about 0.1 mi . S. of bridge over Fox River, 60 ft . NW. of farmhouse, in fence corner, in root on W. side of 26-1n. black-oak tree; copper nail and washer
T. 66 N., R. 8 W., in $W 1 / 2$ sec. 23 , about 600 ft . E. of T-rd. S., on top of $N$. head wall of concrete culvert; chiseled square
(Continued in Donnellson quadrangle; see line 2.)

## 3. FROM CANTRIL QUADRANGLE AT SEC. 15, T. 66 N., R. 10 W., INTO CANTRIL QUADRANGLE (by W. V. Kennedy in 1937) <br> (Continued from Centril quadrangle; see line 3.)

T. 66 N., R. 10 W., in $W 1 / 2 \mathrm{sec} .15$, 21 ft . S. and $\mathrm{I}_{4} \mathrm{ft}$. E. from T-rd. N., 29 ft . E. of NE. corner of farmhouse of Roy Smith, 4 ft . N. of fence, in concrete post; standard tablet stamped "T T 24 G 1935"


1. ISOLATMED BENCHMARK (not shown on diagram; by H. V. Rees in 1900)
T. $66 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., 0.1 \mathrm{mi}$. E. of NW. cor. of, in fence corner on property of Joseph Miller; iron post stamped "745 A"
2. FROY KEOSAUQUA QUADRANGLE WEST ABOUT 2 MILES ALONG IOWA-MISSOURI STATE LINE ROAD (by B. A. Barnes in 1936 and F. Y. Brown in 1936-37)

## (Continued from Keosauqua quadrangle; see line 1.)

T. $67 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} .$, in NE $1 / 4$ sec. $21,25 \mathrm{ft} . \mathrm{S}$. and 30 ft . E. from T-rd. N., about 400 ft . E. of small farmhouse, 5 ft . N. of fence, in concrete post; standard tablet stamped "T T 26 G 1935 "
T. 67 N., R. 10 W., near N. quarter cor. sec. $21,22 \mathrm{ft}$. S. and 27 ft . W. from T-rd. S., on concrete base of corner fence post; chiseled square
Large barn, about 500 ft . SE. of, 15 ft . S. of rd., on center of S . end of concrete culvert; chiseled square
T. 67 N., R. $10 \mathrm{~W} .$, in NW $1 / 4 \mathrm{sec} .20,60 \mathrm{ft}$. NE. of NE. corner of South Upton School, 30 ft . S. of rd., in root on N. side of large, twin elm tree; copper nall and washer
T. 67 N., R. 10 W. , near E. sixteenth cor. on N. line sec. $19,0.5 \mathrm{mi}$. W. of South Upton School, 21 ft . S. and 148 ft . W. from rd. at hedge fence S., 2 ft . S. of fence, in concrete post; standard tablet stamped "T T $22^{\prime}$ G $1935^{\prime \prime}$

> 3. FROM MEMPIIS QUADRANGLE AT SEC. 27, T. $66 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., \mathrm{NORTH}$ TO IOWA-MISSOURI STATE LINE AT SEC. $19, \mathrm{~T} .67 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W}$. (by W. V. Kennedy in 1937)
> (Continued from Memphis quadrangle; see line 9.)
T. 66 N., K. 10 W., cor. secs. $21,22,27$, and $28,145 \mathrm{ft} . \mathrm{s}$, and 18 ft . E. from T-rd. E. and private rd. W., in root on SW. side of $24-\mathrm{in}$. elm tree; copper nall and washer
672.26
T. 66 N., R. 10 W., near S. sixteenth cor. between secs. 21 and 22, on NW. corner of pier of steel bridge over North Wyaconda River; painted square
670.38
T. 66 N., R. 10 W., S. sixteenth cor. between secs. 15 and $16,15 \mathrm{ft} . \mathrm{S}$. and 145 ft . E. from T-rd. W., in farmyard of John W. Miller, on concrete foundation; chiseled square
771.03
(For balance in Kcosauqua quadrangle, see line 3.)
T. 66 N., R. 10 W., quarter cor. between secs. 9 and $10,15 \mathrm{ft}$. S. and 80 ft . W. from crossroads, in root on E. sicie of 24 -in. elm tree; copper nail and washer
T. 66 N., R. 10 W., on line between secs. 9 and $10,90 \mathrm{ft}$. N. of bridge over small creek, E. of ra., in root on W. side of 14 -in. elm tree; crossed nails
T. 66 N., R. 10 W., quarter cor. between secs. 3 and $4,100 \mathrm{ft}$. S. and 40 ft . W. from crossroads, in root on E. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
T. 66 N., R. 10 W., N. cor. secs. 3 and $4,30 \mathrm{ft} . \mathrm{N}_{\mathrm{t}}$ and 290 ft . E. from T-rd. S., in SW. corner of farmyard, in root on SE. side of 36-1n. maple tree; crossed nails
**Accuracy doubtful because of insufficient connections.

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T. 67 N., R. 10 W., S. quarter cor. sec. \(33,24 \mathrm{ft}\). N. and 57 ft. E. from T-rd. N., 1 ft. S. of fence, in concrete post; standard tablet stamped "T T 23 G 1935"
T. \(67 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., 750 \mathrm{ft}\). N. of quarter cor. between secs. 28 and 33, on SW. pier of steel bridge over Little Fox Creek; painted bolt head
T. 67 N., R. 10 W., 425 ft . N. of quarter cor. between secs. 21 and 28 , 21 ft . S. and 25 ft . W. from T-rd. W., at dim crossroads, in root on E. side of l2-in. elm tree; copper nail and washer
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MEMPHIS QUADRANGLE<br>(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 50^{\prime}$; longitude $92^{\circ} 00^{\prime}-92^{\circ} 15^{\prime}$ )

Knox and Scotland Counties


## 1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1900)

T. 63 付., R. 11 W., in SE. cor. sec. 6, in corner of dooryard of M. Beck; iron post stamped "777 A"
T. 64 N., R. 10 W., in $S W 1 / 4 \mathrm{sec}, 28$, in SW . corner of dooryerd of Mary poyer; iron post stamped $652 \mathrm{~A}^{\prime \prime}$
Sand Hill, center sec. 33, T. 64 N., R. 11 W., 600 ft . from post office, in brick foundation of dwelling of S. P. Childers; aluminum tablet stamped "802 A"
Memphis, in front of Chicago, Burlington \& Quincy R.R. sta.; top of rail
Memphis, in N. part of, in schoolyard, in top of meridian post; standard tablet stamped "786 A"
T. 65 N., R. 12 W., in NW $1 / 4 \mathrm{sec} .25$, in NW. corner of yard of Miller School; iron post stamped "796 A"
2. FROM DOWNING QUADRAYGLE EAST ALONG STATE HIGHWAY 4 TO JUNCTION OF COUNTY ROUTE A, THENCE SOUTH ALONG COUNTY ROUTE A TO GORIN, THENCE SOUTH ALONG ROADS INTO EDINA QUADRANGLE AT SEC. 20, T. 63 N., R. 10 W. (by G. R. Hamlin in 1936)
(Continued from Downing quadrangle; see line 2.)
Memphis, 3.8 mi . W. of, 20 ft . S. and 20 ft . W. from N.-S. crossroad, on W. end of $N$. concrete head wall of culvert; chiseled square

Memphis, $2.7 \mathrm{mi} . W$. of, 40 ft . N. and 25 ft . W. from junction of rd. S., on top of concrete base of corner fence post; chiseled square
Memphis, 1 mi . W. of, 55 ft . N. and 10 ft . W. from junction of State Highway 15, in concrete post; standard tablet stamped " 1505 C W A 1935"
Reference mark, 440 ft . S. $70^{\circ} \mathrm{W}$. of tablet, on W . end of S. head wall of culvert; chiseled square

Memphis, at W. limits of, 27 ft . N. and 15 ft . W. from junction of rd. NE., on $S$. end of W. concrete head wall of culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "Memphis 1934"

Memphis, at E. limits of, 22 ft . S. and 15 ft . E. from highway at street W., on W. end of $S$. concrete head wall of culvert; chiseled square

Memphis, about l mi. E. of, 35 ft . S. and 15 ft . E. from highway at fence S., in concrete post; standard tablet stamped " 1509 ER A 1935"

Memphis, 1.5 mi . E. of, 27 ft . S. and 17 ft . W. from N.-S. crossroad, in root on E. side of l2-in. maple tree; copper nall and washer
Memphis, 2 mi . E. of, 35 ft . N. and 12 ft . E. from junction of rd. S., in root on S. sicie of $24-1 n$. elm tree; copper nail and washer
Memphis, about 2.8 mi . E. of, 70 ft . S. and 190 ft . E. from junction of rd. E., at W. end of curve, on W. end of $S$. concrete head wall of culvert; chiseled square
T. 65 N., R. 11 W., approximate center sec. $11,40 \mathrm{ft}$. N. of highway on curve at fence S., in concrete post; standard tablet stamped " 1510 E R A 1935"
$804 \cdot 47$
810.81
694.402
697.48
694.35
800.661
730.52
794.426
782.91
784.32
785.85
780.713
*778.165
652.943
*805. 490
755.0
*786.469
*795.916

[^16]T. 65 N., R. 11 W., quarter cor. between secs. 11 and $12,48 \mathrm{ft}$. S. and 12 ft . W. from N.-S. crossroad, on $S$. end of $W$. concrete head wall of culvert; (mark not described)
T. 65 N., Rs. 10 and 11 W., quarter cor. between secs. 7 and $12,40 \mathrm{ft}$. S. and 15 ft . W. from N. -S . crossroad, on $S$. end of W. concrete head wall of culvert; chiseled square
T. 65 N., R. 10 W., near E. sixteenth cor. sec. 7, 20 ft . S. and 90 ft . W. from junction of rd. S., on W. end of S. concrete head wall of culvert; chiseled square
Culvert, on W. end of S. concrete head wall; chiseled cross
T. 65 N., R. 10 W., quarter cor. between secs. 8 and $9,40 \mathrm{ft} . \mathrm{N}$. and 115 ft . W. from junction of County Route $A$ and rd. N. to Arbela, in concrete post; standard tablet stamped "1511 E R A 1935"
Bridge, on N. end of $E$. concrete curbing at $N$. end of; chiseled square
T. 65 N., R. 10 W., S. sixteenth cor. between secs. 16 and 17 , 18 ft . N. and 72 ft . E. from junction of rd. E., in root on S. side of 30-1n. elm tree; nall and washers
T. $65 \mathrm{~N}_{.}$, R. 10 W., N. sixteenth cor. between secs. 20 and 21 , 225 ft . N. and 35 ft . E. from junction of rd. W., in root on E. side of triple mulberry tree; copper nall and washer
T. 65 N., R. 10 W., cor. secs. $20,21,28$, and $29,200 \mathrm{ft} . \mathrm{S}$. and 35 ft . E. from crossroad, in root on W. side of $18-i n$. maple tree; copper nail and washer
T. $65 \mathrm{~N} .$, R. $10 \mathrm{~W} .$, cor. secs. $28,29,32$, and $33,55 \mathrm{ft} . \mathrm{S}$. and 38 ft . W. from crossroad, 30 ft . S. and 4 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 102 C 1936"
Tps. 64 and 65 N., R. 10 W., cor. secs. $4,5,32$, and $33,70 \mathrm{ft}$. N. and 60 ft . E. from junction of rd. E., in root on S. side of $10-\mathrm{in}$. elm tree; copper nail and washer
T. 64 N., R. 10 W., cor. $\operatorname{secs} .4,5,8$, and $9,35 \mathrm{ft}$. N. and 25 ft . W. from crossroad, in root on E. side of 30-in. elm tree; copper nail and washer
U.S.C. \& G.S. standard disk stamped "X 84 1935"
T. 64 N., R. 10 W., near cor. secs. 19, 20,29 , and 30, at SE. corner of steel bridge over drainage canal, on SE. corner of steel header plate; painted square
T. 64 N., R. 10 W., near E. sixteenth cor. between secs. 29 and 32 , on top of NW. corner of NW. concrete pier of steel bridge over dralnage canal; chiseled square
T. 64 N., R. 10 W., 0.2 mi . W. of S. cor. secs. 32 and $33,25 \mathrm{ft}$. N. and 25 ft . E. from T-rd. N., in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped "T T 126 C 1936"
T. 63 N., R. 10 W., near E. sixteenth cor. sec. $5,100 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from $T$-rd. E., in root on $N$. side of $18-1$. walnut tree; copper nail and washer

Feet 754.86
749.33
738.34
759.78
363.347
685.53
$735 \cdot 50$
749.87
755.66
765.685
760.28
727.63 720.576
648.18
$645 \cdot 98$
675.057
651.23
737.52
743.72
763.19
758.65
648.38

## 3. FROM JUNCTION OF STATE HIGHWAYS 4 AND 151 MILE WEST OF MEMPHIS, SOU'MI ALONG HIGHVAY 15 INTO EDINA QUADRANGLE (by G. R. Hamlin in 1936)

Memphis, 2 ml . SW. of, 15 ft . S. and 25 ft . W. from crossroads, on W. end of $S$. concrete head wall of culvert; chiseled square
Junction of lane to farmhouse, $12 \mathrm{ft} . \mathrm{S}$. and 30 ft . E. from, on S. end of iron pipe culvert; chiseled square
T. 65 N., R. 12 W., near W. sixteenth cor. sec. $25,300 \mathrm{ft} . \mathrm{N}$. and 30 ft . E. from junction of rd. S., 250 ft . N. of Miller School, in root on N. side of 8-1n. elm tree; copper nail and washer
729.67
779.06
T. 65 N., R. 12 W., center sec. $26,45 \mathrm{ft}$. S. of rd. W., 5 ft . E. of fence, at curve in highway from E.-S., in concrete post; standard tablet stamped "1506 C W A 1935"
803.25
795.769
T. 65 N., R. 12 W., center sec. $35,20 \mathrm{ft}$. S. and 25 ft . W. from E. W. crossroad, in root on W. side of $12-1 n$. maple tree; copper nail and washer
Tps. 64 and 65 N., R. 12 W., quarter cor. between secs. 2 and 35 , 30 ft . N. and 17 ft . W. from junction of rd . W., on S . end of W. concrete head wall of culvert; chiseled square
752.20
T. 64 N., R. 12 W., near center sec. $2,40 \mathrm{ft}$. S. and 35 ft . E. from E.-W. crossroad, in root on W. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
T. 64 N., R. 12 W., in $S 1 / 2 \mathrm{sec} .2$, on S. end of $E$. wing wall of steel bridge over Tobin Creek; chiseled square
T. 64 N., R. $12 \mathrm{~W} .$, in $\mathrm{N} 1 / 2 \mathrm{sec}$. $11,20 \mathrm{ft}$. S. and 35 ft . E. from Junction of ra. E., on $S$. end of 1 ron pipe culvert; chiseled square
T. $64 \mathrm{~N} ., \mathrm{R} .12 \mathrm{~W} .$, near W . sixteenth cor. sec. 14 , 31 ft . W. of highway, $40 \mathrm{ft} . \mathrm{S}$. of County Route T , in concrete post; U.S.C. \& G.S. and State Survey standard ds.sk. stamped "T T 12 G 1935"
806.77

Reference mark, 70 ft . N. $80^{\circ} \mathrm{W}$. of tablet, on W. end of s . concrete head wall of culvert; chiseled square

| T. 64 N., R. 12 W. , near W. sixteenth cor. between secs. 14 and $23,15 \mathrm{ft}$. Feet |  |
| :---: | :---: |
| locust tree; copper nail and washer | 27 |
| T. 64 N., R. 12 W., near W. sixteenth cor. sec. $23,20 \mathrm{ft} . \mathrm{N}$. and 33 ft . |  |
| E. from junction of rd. E., in root on S. side of $30-1 n$. maple tree; copper nall and washer | 65.60 |
| T. 64 N., R. 12 W., near W. sixteenth cor. between secs. 23 and 26 , |  |
| 245 ft . SW. of Junction of County Route W, on E. end of NE. wing wall of bridge over Middle Fabius River; chiseled square | 71 |
| 64 N., R. 12 W., cor. secs. $26,27,34$, and $35,25 \mathrm{ft}$. S. and 35 |  |
| W. from junction of rd. W., on W. end of S . concrete head wall of culvert; chiseled square | 762.23 |
| Tps. 63 and 64 N., R. 12 W., cor. secs. $2,3,34$, and $35,32 \mathrm{ft}$. N. and |  |
| 42 ft . W. from crossroad on Knox-Scotland county line, in concrete post; standard tablet stamped " 1507 C W A 1935" | 811.960 |
| Greensburg, 30 ft . S. and 45 ft . E. from E.-W. crossroad, on NW. corner |  |
| T. 63 N., R. 12 W., S. sixteenth cor. between secs. 10 and $11,12 \mathrm{ft}$. S. and 22 ft . W. from E.-W. crossroad, on $S$. end of concrete pipe culvert; chiseled square |  |
| chiseled square 814.43 |  |
| 20 ft . W. from junction of rd. W., on S. end of W. concrete head wall |  |
| of culvert; chiseled square | 792.24 |
| ulvert, on S. end of W. concrete head wall; chiseled square | 765.17 |

(Continued in Edina quadrangle; see line 2.)
4. FROM GREENSEURG WEST INTO DOWNING QUADRANGLE AT SEC. 9, T. 63 N., R. 12 W. (by G. R. Hamlin in 1936)
T. 63 N., R. 12 W., quarter cor. between secs. 3 and $4,125 \mathrm{ft}$. N. and 55 ft . W. from crossroads, in root on S. side of 30 -in. elm tree; copper nall and washer
807.78
(Continued in Downing quadrangle; see line 3.)
5. FROM SEC. 14, T. 64 N., R. 12 W., WEST ALONG COUNTY ROUTE T INTO DOWNING QUADRANGLE (by G. R. Hamlin in 1936)
T. $64 \mathrm{~N} ., \mathrm{R}$. $12 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .15,50 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from junction of rd. S., in root on $N$. side of $12-1 n$. locust tree; copper nail and washer
T. 64 N., R. 12 W., in $W 1 / 2 \mathrm{sec} .16$, on $N$. end of $W$. concrete curbing of bridge; chiseled square
818.64
720.22
(Continued in Downing quadrangle; see line 5.)
6. FROM POINT 1.5 MILES EAST OF MEMPHIS NORTHEAST TO POINT NEAR
CENTER OF SEC. $5, \mathrm{~T} .65 \mathrm{~N} ., \mathrm{R}$. 11 W . (by G. R. Hamlin in 1936)
U.S.C. \&G.S. standard disk stamped "D 861935 "

Crossroads, at NW. corner of, on N. end of iron pipe culvert; painted square
Memphis triangulation sta.; U.S.C. \& G.S. standard disk designated "Memphis 1934"
U.S.C. \& G.S. standard reference disk designated "Memphis No 2 1934"
7. FROM WYACONDA QUADRANGLE AT SEC. 10, T. 64 N., R. 10 W.,
(Continued from Wyaconda quadrangle; see line 7.)
T. $64 \mathrm{~N} ., \mathrm{R}, 10 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .10,700 \mathrm{ft}$. E. of T-rd. W., $25 \mathrm{ft} . \mathrm{N}$.
of rd.; in root on S . side of 16-1n. oak tree; copper nail and washer
T. 64 N., R. 10 W., approximate quarter cor. betweon secs. 9 and 16 , near gate to farm of Charles Ammond, 15 ft . S. of rd., on center of S . head wall of concrete culvert; chiseled square
Gorin, $35 \mathrm{ft} . \mathrm{N}$. and 162 ft . E. from crossroad at cor. secs. 8, 9, 16, and $17, \mathrm{~T}_{\mathrm{o}} 64 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W} ., 35 \mathrm{ft}$. N. and 100 ft . B. from center line of Atchison, Topeka and Santa Fe R.R., in concrete post; standard tablet stamped ${ }^{\mathrm{T} T}$ T 103 C 1936"
777.774
781.83
799.064
799.138
8. FROM GORIN WEST TO SEC. 12, T. 64 N., R. 12 W . (by w. V. Kennedy
in 1937 )

Gorin, about 0.2 mi . Sw. of Atchison, Topeka \& Santa Fe Ry. sta., 45 ft . S. and 80 ft . W. from rd. crossing, 45 ft . S. and 30 ft . W. from crossroads, on $E$. end of concrete curbing of culvert; chiseled square
Gorin, 0.8 mi. W. of, W. sixteenth cor. between secs. 8 and 17, T. 64 N., R. $10 \mathrm{~W} ., 100 \mathrm{ft}$. N. of farmhouse of N. P. W. Miller, 45 ft . S. and 200 ft . E. from T-rd. N., in root on N. side of 18-1n. maple tree; copper nail and washer
Gorin, 1.5 mi . W. of, near quarter cor, between secs. 7 and 18 , T. 64 N. , R. 10 W ., on concrete wing wall at SW. corner of smail bridge over creek; chiseled square
Gorin, 2.5 ml . W. of, near quarter cor. between secs. 12 and 13 ,
T. $64 \mathrm{~N} ., \mathrm{R}$. 11 W ., 150 ft . E. of rd. fork. S., on concrete pier at SW . corner of steel bridge over drainage canal; chiseled square
Gorin, 3.2 mi . W. of, approximate E. sixteenth cor. between secs. 11 and 14 , T. 64 N., R. 11 W., $48 \mathrm{ft} . \mathrm{N}_{\text {. }}$ and 25 ft . W. from T-rd. N., in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped "K 10 1937"

Reference mark, 600 ft . E. of tablet, on S. head wall of concrete culvert;
Feet
665.50
T. 64 N., R. 11 W., E. sixteenth cor. between secs. 2 and $11,25 \mathrm{ft}$. s . and 15 ft . W. from rd. corner S.-W., on W. head wall of concrete culvert; chiseled square
T. 64 N., R. 11 W., near cor. secs. $2,3,10$, and $11,250 \mathrm{ft}$. S. and 20 ft . E. from rd. fork S., in root on E. side of $14-1 n$. eim tree; copper nall and washer
T. 64 N., R. 11 W., in SE $1 / 4 \mathrm{sec} .10$, about 600 ft . below South Liberty School, at SW. corner of bridge over Indian Creek, in painted square; bolt head
744.29
T. 64 N., R. 11 W., near cor. secs. $2,3,10$, and 11 , about 0.2 mi . S . of South Liberty School, 25 ft . N. and 30 ft . W. from T-rd. W. and abandoned lane E., in root on SE. side of l2-in. white-oak tree; copper nail and washer
741.50

T-rd. S., 90 ft . N. and 15 ft . W. from, in root on W. side of forked wild-cherry tree; crossed nails
T. 64 N., R. 11 W., quarter cor. between secs. 9 and $16,8 \mathrm{ft}$. I. and 90 ft . E. from T-rd. N., on E. end of N. concrete head wall of culvert; chiseled square
749.74
T. 64 N., R. 11 W., W. sixteenth cor. between secs. 9 and $16,25 \mathrm{ft}$. S . and 37 ft . W. from T-rd. S., on land owned by Ben Mickel, in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped "71 C WA 1934"
T. 64 N., R. 11 W., quarter cor. between secs. 8 and $17,12 \mathrm{ft}$. S. and 90 ft. E. from T-rd. N., in root on N. side of 18-in. elm tree; copper nail and washer
T. 64 N., R. 11 W., E. sixteenth cor. between secs. 7 and $18,45 \mathrm{ft}$. N.
and 60 ft . W. from crossroads, in root on $E$. side of $20-1 \mathrm{n}$. elm tree; copper nall and washer
796.55
T. 64 N., Rs. 11 and 12 w., cor. secs. $7,12,13$, and $18,10 \mathrm{ft}$. N. and 120 ft . E. from T-rd. S., on $N$. head wall of concrete culvert; chiseled
T. 64 N., R. 12 W., approximate $E$. sixteenth cor. between secs. 12 and
749.91 13 , 25 ft . N. and 25 ft . W. from rd. forks, 150 ft . N. of dwelling, in concrete post; U.S.C. \& G.S. and State Survey stendard disk stamped "K 11 1937"
773.88
T. 64 N., R. 12 W., in NE $1 / 4 \mathrm{sec} .12,50 \mathrm{ft}$. S. and 20 ft . W. from crossroads, in root on NE. side of $20-i n$. mulberry tree; copper nail
T. 64 N., R. 12 W ., in $\mathrm{NW} 1 / 4 \mathrm{sec} .12$, at SE . corner of steél bridge
804.338 over Tobin Creek, on top of rivet head; painted square

> 9. FROM POINT ABOUT 2 MILES WEST OF ARBELA EAST TO ARBELA, THENCE NORTHEAST INTO CANTRIL QUADRANGLE AT SEC. $28, \mathrm{~T} .66 \mathrm{~N}$. , R. $10 \mathrm{~W} .($ by W. V. Kennedy in 1937 )
U.S.C. \& G.S. standard disk stamped "B 86 1935"
U.S.C. \& G.S. standard disk stamped "A 86 1935"

Arbela, 0.4 mi . N. of, on NE. pier of steel bridge over creek, on bolt head; painted square
Arbela, 1 mf . N. and 0.5 mi . E. of, E. sixteenth cor. between secs. 4 and 33, Tps. 65 and $66 \mathrm{~N} ., \mathrm{R}$. $10 \mathrm{~W} ., 80 \mathrm{ft}$. N. and 160 ft . E. from junction of rd. E., in root on S. side of $48-1 n$. black-oak tree; copper nail and washer
T. 66 N., R. 10 W., E. sixteenth cor. between secs. 28 and $33,50 \mathrm{ft}$. S. and 21 ft . W. from T-rd. W., 2 ft . W. of fence, in concrete post; standard tablet stamped "T T $25 \mathrm{G} 1935^{\circ}$
T. $66 \mathrm{~N} ., \mathrm{R}$. $10 \mathrm{~W} .$, in $\mathrm{NW} 1 / 4 \mathrm{sec} .28,12 \mathrm{ft}$. N. and 7 ft . W. from rd.
corner S.-E., on concrete base of corner fence post; chiseled square
743.795
733.74
(Continued in Cantril quadrangle; see line 3.)
For additional level lines along Chicago, Burlington \& Quincy R.R. and Atchison, Topeka \& Santa Fe Ry., refer to United States Coast and Geodetic Survey second-order lines, Medill to Glenwood Jct. and Hurdland to Fort Madison, Iowa.


1. ISOLATED BENCHMARKS (not shown on diagram; by H. Vo Rees in 1900)
T. 61 N., R. 10 W., quarter cor. between secs. 8 and 9, NE. of crossroads; iron post stamped "696 A"

Feet 695.538
T. 61 N., R. 11 W., in $\operatorname{SE} 1 / 4 \mathrm{sec} .9$, in corner of dooryard of Robert Hysell; iron post stamped " 735 A"
Edina, in front of Quincy, Omaha \& Kansas City R.R. sta.; top of rail T. 62 N., R. 12 W., in NE $1 / 4 \mathrm{sec} .21$, about 90 ft . S. of Quincy, Omaha \& Kansas City R.R. at rd. corner; iron post stamped " 842 A"

## 2. FROM MEMPHIS QUADRANGLE NEAR BARING, WEST ALONG STATE HIGHWAY 11 INTO La PLATA QUADRANGLE (by G. R. Hamlin in 1936) (Continued from Memphis quadrangle; see line 3.)

U.S.C. \& G.S. standard disk stamped "Q 84 1935"
811.193

Baring, 0.8 mi . W. of Atchison, Topeka \& Santà Fe Ry. sta., 43 ft . S. and 230 ft . W. from junction of State Highways 11 and 15 , in concrete post; standard tablet stamped "3 G 1935"
T. 63 N., R. 12 W., in NW $1 / 4$ sec. $27,15 \mathrm{ft} . \mathrm{S}$. and 370 ft . E. from N.-S. crossroad, on W. end of $S$. concrete head wall of culvert; chiseled square
826.524
815.15
T. 63 N., R. 12 W., N. sixteenth cor. sec. $28,15 \mathrm{ft}$. N. and. 480 ft . E. from junction of rd. S., on W. end of N. concrete curbing of bridge; chiseled square
773.67
(Continued in La Plata quadrangle; see line 7.)
3. FROM La BELLE QUADRANGLE AT SEC. 10, T. 60 N., R. 10 W., NORTH TO NORTHEAST CORNER, THENCE WEST TO BARING, TIIENCE SOUTH TO EDINA (by F. Y. Brown in 1936)
(Continued from La Belle quadrangle; see line 4.)
T. 60 N., R. 10 W., E. sixteenth cor. sec. $10,20 \mathrm{ft}$. S. of T-rd. N., in field, 3 ft . S. of fence corner, in concrete post; U.S.C. \& G.S. and State Survey standard disk
748.963
T. 60 N., R. 10 W., near quarter cor, between secs. 3 and 4, 500 ft. N. of T-rd. N., 30 ft . W. of rd., in root on E. side of $22-\mathrm{in}$. elm tree; copper nail and washer
Rd., $70 \mathrm{ft} . \mathrm{W}$. of, in farmyard, in root on E. side of 20-1n. maple tree; crossed nails
759.07

Small wooden bridge, 12 ft . W. of, on center of W . head wall of concrete culvert; chiseled square
724.73
T. 61 N., R. 10 W., cor. secs. $27,28,33$, and $34,25 \mathrm{ft} . \mathrm{N}$. and 60 ft . W. from T-rd. W., in root on E. side of l8-in. hickory tree; copper nail and washer
T. 61 N., R. 10 W., on line between secs. 27 and $28,20 \mathrm{ft}$. E. of rd., in root on W. side of $14-1 n$. Wild-cherry tree; crossed nails
Knox City, 5.5 mi . S. of, cor. secs. $21,22,27$, and 28, T. 61 N., R. 10 W., $25 \mathrm{ft} . \mathrm{N}_{\text {. }}$ and 35 ft . W. from crossroads, on top of bank, in fence line, in concrete post; standard CW A disk'stamped "T T 1 C 1937"
T. 61 N., R. 10 W., on linc between secs. 21 and 22 , on N. end of $W$. head wall of concrote pipe culvert; chiseled square
703.19

Knox City, about 4.7 ml . S. of, near N. sixteenth cor. between secs. 21 and $22, \mathrm{~T} .61 \mathrm{~N} ., \mathrm{R}$. $10 \mathrm{~W} ., 20 \mathrm{ft}$. N. and 35 ft . E. from T-rd. E., in root on W. side of 20-in. elm tree; copper nail. and washer
Dwelling, $25 \mathrm{ft} . \mathrm{N}$. and 60 ft . E. from NE. corner of, 30 ft . W. of rd., in root on $S$. side of $14-1 n$. maple tree; crossed nails

Knox City，about $3.8 \mathrm{mi} . \mathrm{S}$ ．of，near N．sixteenth cor．between secs． 15 and $16, \mathrm{~T} .61 \mathrm{~N} .$, R． $10 \mathrm{~W} ., 40 \mathrm{ft}$ ．N．and 20 ft ．E．from iron bridge， in fence line，in root on W．sice of 20－in．elm tree；copper nail and washer

Feet
Knox City， $3 \mathrm{mi} . \mathrm{s}$ ．of，quarter cor．between secs． 9 and $10, \mathrm{~T} .61 \mathrm{~N}$. ， R． $10 \mathrm{~W} ., 33 \mathrm{ft}$ ．S．and 42 ft ．E．from crossroacis，in concrote post； U．S．C．\＆G．S．and State Survey standard disk
T． 61 N．，R． 10 W．，in sec．9， 20 ft ．S．of rd．，in root on N．side of 40－in．burr－oak tree；crossed nails
684.91
755.277

Knox City， 1.7 ms ．S．of，near S．six．teenth cor．between secs． 3 and 4 ， T． 61 N．，R． $10 \mathrm{~W} ., 30 \mathrm{ft}$ ．E．of dwelling of E．E．Benstine， 40 ft ．W． of rd．，in root on E．side of $14-1 n$ ．cedar tree；copper nail and washer
Knox City， 1 ml ．S．of，near cor．secs．3，4， 33 ，and 34, Tps． 61 and 62 N．，K． 10 W．， $15 \mathrm{ft} . \mathrm{N}$ ．and 90 ft ．W．from $\mathrm{T}-\mathrm{rd} . \mathrm{W} .$, in root on N．sicie of $10-1 n_{1}$ ．locust tree；copper nail－and washer
T． 62 N．，R． 10 W．，on line between secs． 33 and $34,250 \mathrm{ft}$ ． N ．of steel bridge， 35 ft ．E．of rd．，in root on N ．side of 16－1n．elm tree； crossed nails
753.38

Knox City， 0.2 mi ．S．of， 140 ft ．S．and 20 ft ．W．from T－rd．E．，in fence line，in root on $N$ ．side of $26-1 n$ ．elm tree；copper nail and washer
Knox City， 3 blocks F ．of business district， 1 block S ．of righ school， 25 ft ．S．and 50 ft ．E．from State HiEhway 6 at N．-S ．cross street，in concrote post；U．S．C．\＆G．S．and State Survey stendard disk stamped ＂T T 9 G 1935＂
Reference mark， 60 ft ．W．of tablet，on corner of concrete curbing； chiseled square
U．S．C．\＆G．S．standard disk stamped＂X 15 1933＂
Knox City， 0.8 ml ．N．of，near cor．secs．21， 22,27 ，and 28，T． 62 N. ， R． 10 W．， 60 ft ．S．and 40 ft ．W．from crossroads， 50 ft ．E．of farm－ house of W．A．Filler，in root on W．side of l4－in．black－jocust tree； copper nail and washer
760.32

Small wooden bricge， 200 ft .3 ．of， 40 ft ．W．of rd．，in root on S ．side of 12－in．White－oak tree；crossed nails
Knox City，about 2 mp ．N．of，near $S$ ．sixteenth cor．between secs． 15 and $16, T .62 \mathrm{~N} ., \mathrm{R}$ ． $10 \mathrm{w} ., 10 \mathrm{ft}$ ．S．and 45 ft ．E．from T－rd．NE．， 10 ft ． S．of fence line，in root on $N$ ．side of $24-1 n$ ．locust tree；copper nail and washer
Steel kricge， 6 ft ．W．of FW ．corner of， 15 ft ．W．of rd．，in root on E ． side of $16-1 n$ ．elm tree；crossed nails
Knox City，about 2.5 ml ．N．of，in $\mathrm{NE} 1 / 4 \mathrm{sec} .16$ ，T． $62 \mathrm{~N} ., \mathrm{R} .10 \mathrm{w} .$, 110 ft ．NE．of steel bridge， 25 ft ．S．of rd．，in root on $\%$ ．side of twin 40－in．elm tree；copper nall and washer
Knox City， 3 mi ．N．of，quarter cor．between secs． 9 and 10，T． 62 N ． R． 10 W．， 225 ft ．N．and 43 ft ．W．from T－rd．E．，SW．of rd．fork NW．， in concrete post；U．S．C．\＆G．S．and State Survey standard disk stamped＂T＇T 8 G $1935^{\circ}$
Knox City，about 3.6 mi ．N．of，about 800 ft ．N．of cor．secs．3，4，9， and 10，T． 62 N．，R． 10 W．， 625 ft ．S．of T－rd．NW．， 10 ft ．S．and 6 ft ．W．from S ．end of steel bricge over Pridge Creek，in root on W． side of $30-1 n$ ．cottonwood tree；copper nail and ：rasher
Knox City，about 4.3 mi ．N．of，on line letween secs． 3 and 4，T． 62 N. ， R． $10 \mathrm{~W} ., 25 \mathrm{ft}$ ．N．and 70 ft ．E．from rd．forks，in fence ine，in root on S．sice of 14－1n．white－oak tree；copper nail and washer
Knox City，about 4.7 ml ．N．of，on line between secs． 4 and 33，Tps． 62 and 63 N．，R． 10 W．， 150 ft ．N．and 60 ft ．W．from dim crossroads， 25 ft ． N ．of rd．，in root on N．side of 22－in．white－ook tree；copper nail and washer
Knox City，ebout 5．］mi．N．of，in $\mathrm{S} 1 / 2 \mathrm{sec} .33, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W}$. ， 40 ft ．S．of T－rd．N．，in root on N ．sicie of i6－in．black－oak tree； copper nail and washer
Knox City， $6 \mathrm{ml} . \mathrm{N}$. of，near E．sixteenth cor．between secs． 28 and 33 ， T． 63 N．，R． $10 W_{\text {．}}, 137 \mathrm{ft}$ ．W．of SW．corner of Brushy School， 23 ft ． N．and 19 ft ．W．from crossroads，in concrete post；U．S．C．\＆G．S．and State Survey standard disk stamped＂T T 7 G 1935＂
740.626

Rd．corner from S．－E．， 35 ft ．S．and 35 ft ．W．from，on top of iron stanchion at NE．corner of base of windmill；iron point
654.74

T． 63 N．，R． 10 W．，near E．sixteenth cor．between secs． 21 and 2.8 ， 60 ft ．N．of rd．，in field，in root on E．side of 30－in．water－oak tree （southernmost one of 2 large oaks）；copper nall and washer
T． $63 \mathrm{N},$.R ． 10 W. ，cor．secs． $20,21,28$ ，and $29,16 \mathrm{ft} . \mathrm{N}$. and 29 ft ． E．from crossroads，in concrete post；U．S．C．\＆G．S．and State Survey standard disk stemped＂T T 6 G 1935＂
Top of hill， 35 ft ．S．of rd．，in front yard of farnhouse of D．L．Sharp， in root on S．side of $16-1 \mathrm{n}$ ．elm tree；crossed nails
T－rd．S．， 45 ft ．S．and 25 ft ．W．from，in fence post at surface of ground；spike
T． 63 N．，R． 10 W．，neer E．sixteenth cor．between secs． 19 and 30 ， 350 ft ．W．of T－rd．N．， 40 ft ．S．of rd．at steel bridge， 10 ft ．S．of fence line，in root on W．side of l4－in．black－oak tree；copper nail and washer
T． $63 \mathrm{~N} ., \mathrm{R}$ ． 10 W ．，on line between secs． 19 and 30 ， 40 ft ．W．of small bridge， 25 ft ．N．of rd．，in root on E．sice of $30-5 \mathrm{n}$ ．white－cak tree； crossed nalls
T． 63 N．，Rs． 10 and 11 W．， $32 \mathrm{ft} . \mathrm{N}$. and 18 ft ．W．from cor．secs． 19 ， 24,25 ，and $30,56 \mathrm{ft}$ ．N．and 16 ft ．W．from $\mathrm{T}-\mathrm{rd}$ ． $\mathrm{S} ., 25 \mathrm{ft}$ ．S．and 60 ft ．E．from SE．corner of farmbouse of L．A．Schauf， 2 ft ．E．of fence line，in concrete post；standard tablet stamped＂10 B 1936＂
T. 63 K., K. 11 .7., near quarter cor. between secs. 24 and $25,40 \mathrm{ft} . \mathrm{S}$. and 60 ft. E. from T-rd. S., in root on S. side of 16 -in. biack-oak tree; copper nail and washer
T. 63 N., R. 11 W., near W. sixteenth cor. between secs. 24 and 25 , 20 ft . N. and 70 ft . E. from T-rd. N., 40 ft . S. of farmhouse of Ross Saulsbury, in root on N. side of 14 -in. elm tree; copper nail and washer
'I'. 63 N., R. 11 W., near cor. secs. $23,24,25$, and $26,125 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from T-rd. S., in fence line, in root on N . side of l6-in. elm tree; copper nail and washer

Feet
T. 63 N., R. 11 W., near W. sixteenth cor. between secs. 23 and 26 , 40 ft . S. and 250 ft . W. from crossroads, in root on N . side of 28-in. elm tree; copper nail and washer
766.66
T. 63 N., R. 11 W., E. sixteenth cor. between secs. 22 and $27,35 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from crossroads, in concrete post; standard tablet stamped "- T 5 G 1935"
Top of hill, 110 ft . S. of rd., in root on W. side of 30-in. white-oak tree; crossed nails
T. 63 N., R. 11 W., near quarter cor. between secs. 21 and $28,25 \mathrm{ft}$. N. and 10 ft . E. from dim crossroads, about 900 ft . E. of iron bridge, in root on N. side of twin 8-in. oak tree; copper nail and washer
T. 63 N., R. 11 W., on line between secs. 27 and 28 , at SW. corner of steel bridge; surface of floor
T. 63 N., R. 11 W., near cor. secs. 20, 21,28 , and $29,20 \mathrm{ft}$. N. and 75 ft . E. from crossroads, in root on N . side of $18-1 \mathrm{n}$. elm tree; copper nail and vasher
T. 63 N., R. $11 \mathrm{~W} .$, on line between secs. 20 and 29,45 ft. N. of rd., in SW. corner of yard of J. Bruegenhemke, in root on E. side of 10-in. hickory tree; nail and washers
T. 63 N., R. 11 W., on line between secs. 20 and $29,45 \mathrm{ft}$. N. of rd., in barnyerd, on top of SW. corner of concrete scale foundation; chiseled square
Earing, 2.5 mi . E. of, cor. secs. 19, 20, 29, and $30, \mathrm{~T} .63$ N., R. 11 W., $16 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from E. W. rd. at rd. S., 19 ft . E. of rd. N., in concrete post; standard tablet stamped "T T 4 G 1935"
T. $63 \mathrm{~N} ., \mathrm{R}$. 11 W. , on line between secs. 19 and 30 , 130 ft . s. of ra. at SE. end of steel bridge, in root on N. side of $20-1 n$. elm tree; crossed nails
T. 63 li., R. 11 W., in NW $1 / 4 \mathrm{sec} .30,300 \mathrm{ft}$. N. of rd. corner N. $-W .$, 20 ft . W. of rd., in root on W. side of 14 -in. elm tree; copper nail and washer
T. 63 N., Rs. 11 and 12 W., near N. sixteenth cor. between secs. 25 and $30,40 \mathrm{ft}$. N. and 100 ft . W. from crossroads, in root on w. side of 14-in. white-oak tree; copper nail and washer
Baring, 0.4 mi . E. of, near N. sixteenth cor. between secs. 25 and 26 , T. 63 N., R. 12 W., 60 ft . N. and 25 ft . W. from old State Highway 15 at crossroed, in root on W.side of $15-\frac{1 n}{}$. olm tree; copper nail and washer
U.S.C. \& G.S.standard disk stamped "Q $841935^{\prime \prime}$

TJ.S.C. \& G.S. standard disk stamped "QQ 84 1935"
Earing, $0.8 \mathrm{mi} . \mathrm{S}$. and 0.4 mi . E. from, near cor. secs. 25,26 , 35 , and 36, T. 63 N., R. 12 W., 22 ft. W. of old State Highway 15, on N. end of W. head wall of concrete culvert; chiseled square
Tps. 62 and 63 N., R. 12 W., cor. secs. $1,2,35$, and $36,200 \mathrm{ft} . \mathrm{N}$. and 125 ft . E. from, 25 ft . SW. of old State Highway 15 at curve, on NW. corner of SW . head wall of concrete culvert; chiseled square
Tps. 62 and $63 \mathrm{~N} .$, Rs. 11 and 12 W ., cor. of, $28 \mathrm{ft} . \mathrm{S}$. and $1 / 43 \mathrm{ft}$. W. from T-rd. S.; 135 ft . NE. of highway at curve, in concrete post; standard tablet stamped "T T 1508 E R A 1935"
T. 62 N., R. 12 W., in SE $1 / 4 \mathrm{sec} .1$, 110 ft . W. of State Highway 15 , about 800 ft . NW. of dwelling, in E . side of twin wild-cherry tree; copper nail and washer
Edina, l.E mi. N. of, along State Highway $15,25 \mathrm{ft}$. S. and 140 ft . W. from junction of rd. W., in root on $W$. side of $18-1 n$. maple tree; copper nall and washer
Edina, 0.6 mi. N. of, along State Highway 15, on concrete base at SE. end of bridge over North Fork of South Fabius River; chiseled square
U.S.C. \&c G.S. standerd disk stemped "X 1341935 "
U.S.C. \& G.S. standard disk stamped "Z 15 1933"
T. 61 N., R. 10 W., quarter cor. between secs. 8 and 9, NE. of crossroads; iron post stamped "696 A"

## 4. FROM POINT 4.4 MILES EAST OF EDINA WEST ALONG STATE HIGHWAY 6 INTO La PLATA QUADRANGLE (by F. Y. Brown in 1936)

U.S.C. \& G.S. standard disk stamped "U 15 1933"

Edina, 3 mi . E. of, 45 ft . N. and 30 ft . E. from junction of rd. N., in concrete post; standard tablet stamped "1427 C W A 1934"
Reference mark, 15 ft . N. of highway, 12 ft . W. of rd. N., on N. end of W. head wall of culvert; chiseled square
T. 62 N., R. 11 W., on line between secs. 16 and $21,25 \mathrm{ft}$. N. of highway, on N. end of E. abutment of bridge J-549 1933; chiseled square
T. 62 N., R. 11 W., on line between secs. 16 and $21,60 \mathrm{ft}$. E. of front yard gate to dwelling of $L$. Haffarman, $20 \mathrm{ft}^{\mathrm{f}} \mathrm{N}$. of highway, on center of $N$. head wall of small concrete culvert; chiseled square
Edina, 2 ms . E. of, at drive to Clancy School, 15 ft . S. of highway, on $N$. end of $E$. head wall of culvert; chiseled square
Edina, 0.6 ml . E. of, 575 ft . W. of junction of rd. S., $\mathrm{l}_{4} \mathrm{ft}$. S. of highway, on S. end of E. abutment of bridge J-550 over North Fork of South Fabius River; chiseled square
Edina, near E. limits of, 60 ft . N. of junction of rd. SE., in root on N. side of 18-in. white-oak tree; crossed nails
763.958
780.07
775.95
708.8
740.19
780.86
788.59
802.423
726.89
$785.86^{\circ}$
746.99
808.52
811.193
812.548
768.93
$784 \cdot 56$
805.188
806.46
794.12
737.73
732.758
734.123
695.538
774.828
754.619
745.87
742.27
770.78
777.93
729.71
792.76

Edina, 40 ft. S. of SE. corner of courthouse, in concrete post; aluminum tablet stamped "814 A" (as reset in 1936; old elev. 814.916)
Reference mark, 15 ft . N. and 15 ft . E. from tablet, in root on N . side of 18-1n. elm tree; copper nail and washer
U.S.C. \& G.S. standard disk stamped "Y 1341935 "

Edina, $0.5 \mathrm{mi} . \mathrm{S}$. of, 0.2 mi . N. of junction of State Highway 15, 20 ft . E. of highway, on E. end of S. abutment of bridge H-770 1933 over South Fork of South Fabius River; chiseled square

Feot 814.079 814.15 816.337
$735 \cdot 95$
764.68
813.520
779.32
768.31
803.96
$84+5 \cdot 32$
$849 \cdot 32$
(Continued in La Plata quadrangle; see line 8.)
5. FROLi SEC. $28, \mathrm{~T} .61 \mathrm{~N}$. R. 10 W. , WEST INTO La PLATA

QUADRANGLE AT SEC. 28, T. 61 N., R. 12 W. (by F. Y. Brovm in 1936)
T. 61 N., R. 10 W., on line between secs. 28 and $33,225 \mathrm{ft}$. W. of entrance to farm, 30 ft . S. of rd., in roct on N . side of 22-in. elm tree; crossed nails
T. 61 N., R. $10 \mathrm{~W} .$, near cor. secs. $28,29,32$, and $33,20 \mathrm{ft} . \mathrm{N}$. and 40 ft . E. from crossroads, 25 ft . E. of fence corner, in root on $W$. side of 8-in. hedge tree; copper nail and washer
732.58
763.24
$774 \cdot 60$
743.24
707.540
682.39
$764 \cdot 55$
783.71
702.88
748.08
772.07
806.705
797.749
798.72
796.39
786.68
790.639
743.84
806.67
785.19
786.11
T. 60 N., Rs. 11 and 12 W. , near N . sixteenth cor. between secs. 1 and 6 , 20 ft . E. of State Highway $15,16 \mathrm{ft}$. N. of rd. E., on center of E . head wall of concrete culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "S 1341935 "
Feet
mall steel bridge, 20 ft . W. of, 15 ft . S. of rd., in fence line, in root on W. side of $40-i n$. elm tree; crossed nails
801.43
781.731
Tps. 60 and $61 \mathrm{~N} ., \mathrm{R}$. 12 W ., on line between secs. 2 and 35, 25 ft . N. and 350 ft . E. from T-rd. S., 25 ft . N. and 300 ft . E. from T-rd. N., about 65 ft . SE. of barn, in fence line, in root on w. side of $14-\mathrm{in}$. ash tree; copper nail and washer
T. 61 N., R. 12 W., quarter cor. between secs. 26 and $35,250 \mathrm{ft}$. S. and 42 ft . W. from crossroads, 10 ft . S. and 40 ft . E. from SE. corner of Pleasant Run School, in concrete post; standard tablet stamped "l3 B 1936"
T. 61 N., R. 12 w., near E. sixteenth cor between secs. 27 and 34 , 25 ft . N. and 60 ft . W. from T-rd. N., in root on S. side of 20-1n. black-oak tree; copper nail and washer
T. 61 N., R. 12 W., near W. sixteenth cor. between secs. 27 and 34, 200 ft . S. and 20 ft . E. from T-rd. S., 10 ft . E. of fence line, in root on N. side of 22-1n. elm tree; copper nail and washer
T. 61 N., R. 12 W., near E. sixteenth cor. between secs. 28 and 33, SE. of rd . corner from E.-S., in root on W. side of $8-1 \mathrm{n}$, hedge tree; crossed nails
T. 61 N., R. 12 W., near W. sixteenth cor. between secs. 28 and 33, 45 ft . S. and 20 ft . E. from T-rd. W., in fence line, in root on S . side of 12-in. water-oak tree; copper nail and washer
(Continued in La Plata quadrangle; see line 10.)
6. FROM La BELLE QUADRANGLE AT SEC. 22, T. 63 N., R. 10 W. (by F. Y. Brown in 1937)
(Continued from La Belle quadrangle; see line 6.)
T. 63 N., R. 10 W., near W. sixteenth cor. between secs. 22 and 27, 15 ft . S. and 15 ft . W. from T-rd. S., on W. end of concrete culvert; (mark not described)
TIE BETWEEN UNITED STAMES COAST AND GEODETIC SURVEY FIRST-ORDER
LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE
AEOUT 3 MILES WEST OF EDINA (by F. Y. Brown in 1936)
2N., R. 12 W., near E. sixteenth cor. between secs. 21 and 28 ,
ft. N. of highway, 12 ft. E. of rd. N., on center of E. head wall
small concrete culvert; chiseled square
C. \& G.S. standard disk stamped "A 16 1933"
For additional level lines along Quincy, Omaha \& Kansas City R.R., Atchison, Topeka \& Santa Fe Ry, and State Highway 15, refer to United States Coast and Geodetic Survey first-order ine, Quincy, Ill. to Milan, Ho.; and second-order lines, Hurdiand to Fort Madison, Iowa and Laddonia to Edina.

# SHELBYVILLE QUADRANGLE <br> (Latitude $39^{\circ} 45^{\prime}-40^{\circ} 00^{\prime}$; longitude $92^{\circ} 00^{\prime}-92^{\circ} 15^{\prime}$ ) 

Knox and Shelby Counties


## 1. ISOLATED BENCHMARKS (not shown on diagram; by D. V. Vandiver in 1905)

Pleasant View School, 4 mi . N. of Cherry Box, 60 ft . W. of school, at ra.
Feet forks, opposite mail boxes; iron post stamped "1905 849 Adj"
848.836

Plevna, l.5 mi. S. and 0.5 ml . W. from, near N. cor. secs. 2 and 3 , T. 59 N., R. 11 W., 700 ft . S. of Knox-Shelby county Ilne, in NW. corner of foundation stone of Hickman dwelling; aluminum tablet stamped "1205 791 Adj"
791.627
T. 58 N., R. 11 W., near cor. secs. 1, 2, 11, and $12,5 \mathrm{~ms}$. NW. of Shelbyville, 300 ft . E. of O'Brien Chapel, in NE. cornerstone of O'Brien School; aluminum tablet stamped "1905 788 Adj "
T. 58 N., R. 10 W., near cor. secs. $5,6,7$, and $8,3 \mathrm{mi}$. NW. of

Shelbyville, in SW. corner of dwelling of William Werter; aluminum tablet stamped " 1905785 Acij"
Shelbyville, 2 ft . E. of S. entrance to courthouse, in foundation stone; aluminum tablet stamped "1905 774 Adj"
Shelbyville, 4 mi . S. of, near T-rd. E., in NW. corner of field of C. J. Anderson, 2 ft . SE. Of corner fence post; Iron post stamped "Prim Trav Sta No 71905762 Adj"
Cherry Box, 3 mi . S. of, cor. secs. 27, 38,33 , and $34, \mathrm{~T} .59 \mathrm{~N}$. , R. 12 W., 35 ft . N. and 20 ft . E. from crossroads, in fence corner; iron post stamped "Prim Trav Sta No 41905835 Adj"
Hagers Grove, 0.5 mi . S. and 0.5 mi . W. (? 1.5 mi . SW.) from, at top of hill, in orchard; iron post stamped "Prim Trav Sta No 161905 Adj"
Tps. 57 and 58 N., R. 12 W., quarter cor. between secs. 4 and 33 , 16 ft .
N. stamped "Prim Trav Sta No 171905803 Adj"
r. 60 N., R. 12 W., in $S 1 / 2 \mathrm{sec} .28,765 \mathrm{ft}$. W. of Pleasant View School, 20 ft . N. of T-rd. S.; iron post stamped "1905 849 Adj" (same as " $849^{\text {" above) }}$
2. FROM NEWARK QUADRANGLE AT POINT ABOUT 1 MILE EAST OF BETHEL SOUTHWEST TO POINT 0.5 MILE SOUTH OF BETHEL (by A. R. Friend in 1936)
(Continued from Newark quadrangle; see line 4.)
Bethel, one-half block $S$. of post office, 42 ft . N. and 32 ft . E. from State Highway 15 at cross street, in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped " 85 C W A 1934"
Bethel, on NW. corner of State Highway 15 bridge over North River, in base of concrete handrail; standard tablet (set by water-resources branch of U.S.Geol. Survey)
708.163
3. FROM ATLANTA QUADRANGLE AT SEC. 33 , T. 58 N., R. 12 W., NORTH THROUGH HAGERS GROVE TO POINT ABOUT 2 MILES EAST OF LEONARD (by Cornish Beck in 1936)
(Continued from Atlanta quadrangle; see line 5.)
T. 58 N., R. 12 W., in $E 1 / 2 \mathrm{sec} .33,210 \mathrm{ft} . \mathrm{N}$. and 45 ft . W. from rd. forks, in root on SE. side of $24-1 n$. cottonwood tree; copper nail and washer
Bridge, $15 \mathrm{ft} . \mathrm{S}$. and 20 ft . E. from SE. corner of, in E. side of $30-\mathrm{in}$. olm tree; nail
816.14
, 27 , and 20 , 218 er. 725.84
forks, 15 ft . W. of rd., in root on SE. side of 26-in. hickory tree; copper nail and washer
T. 58 N., R. 12 W., S. sixteenth cor. between secs. 15 and $16,20 \mathrm{ft}$. S. and 43 ft . W. from T-rd. W., 2 ft . S. of fonce, in concrete post; standard tablet stamped "4 B 1936"

Bridge over Salt River, on SW. rivet of SW. pier; chiseled cross
Hagers Grove, 0.1 mi . N. and 0.2 mi . E. from, 6 ft . S. and 16 ft . E. from T-rd. E., on head wall of culvert; chiseled square
Hagers Grove, 1 ml . N. of, E. sixteenth cor. sec. 10, T. 58 N., R. 12 W., 60 ft . N. and 60 ft . E. from $\mathrm{T}-\mathrm{rd} . \mathrm{S} ., 3 \mathrm{ft}$. N. and 1 ft . W. from sW. corner of schoolhouse, in concrete post; standard tablet stamped "6 S 1936"
T. 56 N., R. 12 W., quarter cor. between secs. 3 and 10 , 35 ft . E. of rd. at E.-W. fences, in root on NW. side of 22-in. post-oak tree; copper nail and washer
T. 58 N., R. 12 W., W. sixteenth cor. on N. line sec. $3,25 \mathrm{ft}$. S. and 25 ft . E. from T-rd. S., in corner fence post; nail
T-rd. W., $27 \mathrm{ft} . \mathrm{N}$. and $30 \mathrm{ft} . \mathrm{W}$. from, in corner fence post; nail
T. 59 N., R. 12 W., cor. secs. $26,27,34$, and $35,18 \mathrm{ft} . \mathrm{S}$. and 80 ft . W. from rd. at N.-S. fence, in root on NW, side of $\psi_{4}$-in. elm tree; copper nail and washer
T. 59 N., R. 12 W., cor. secs. $25,26,35$, and $36,55 \mathrm{ft}$. N. and 25 ft . E. from T-rd. W., in SW. side of 26-1n. elm tree; nail

Leonard, 1 ms. S. of, cor. secs. $25,30,31$, and 36, T. 59 N., Rs. 11 and $12 \mathrm{~W} ., 60 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from crossroads, in concrete post; standard tablet stamped "7 B 1936"
Leonerd, $1 \mathrm{mi} . \mathrm{S} .$, thence 0.5 mi . E. from, near quarter cor. between secs. 30 and $31, T .59 \mathrm{~N} ., \mathrm{R}$. $11 \mathrm{~W}_{\mathrm{L}}, 20 \mathrm{ft}$. S. and 25 ft . E. from T-rd. S., in gatepost; nail
Ieonard, 1 ml . S., thence 0.8 ml . E. from, E. sixteenth cor. betveen secs. 30 and 31, T. 59 N., R. 11 W., $18 \mathrm{ft} . \mathrm{N}$. and 33 ft . E. from T-rd. N., in root on N. side of $24-i n$. hickory tree; copper nail and washer
Leonard, 1 mi . S., thence 2 ml . E. from, cor. secs. 28, 29, 32, and 33, T. 59 N., R. $11 W_{.}, 21 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from crossroads, in W. side of fence post; copper nail and washer
Leonard, about 2 mi . E. of, along County Route M, cor. secs. 20, 21, 28, and 29, T. 59 N., R. 11 W., 40 ft. S. and 20 ft. W. from crossroad, in S. side of coiner fence post; copper nail and washer
U.S.C. \& G.s. stendard disk stamped "K 134 1935"

## 4. FROM SHELBINA QUADRANGLE AT SEC. 12, T. 57 N., R. 12 W. NORTHEAST TO STATE HIGHWAY 15 AT POINT AEOUT 3 MILES SOUTH OF SHELBYVILLE (by Cornish Beck in 1936)

(Continued from Sheibina quadirangle; see line 5.)
T. 57 N., R. 12 W., E. cor. secs. 12 and $13,24 \mathrm{ft} . \mathrm{S}$. and 9 ft . W. from Trrd. W., on head wall of culvert; chiseled square
780.84
796.16 E. from T-rd. S., in root on S. side of $20-1 n$. elm tree; copper nail and washer
783.00
E. from T-rd. N., in W. side of apple tree; nail
778.957
(For balance in Shelbina quadrangle, see line 5.)
T. $57 \mathrm{~N} ., \mathrm{R} .11 \mathrm{~W} ., 0.1 \mathrm{mi} . \mathrm{S}$. of cor. secs. 3, 4, 9, and $10,12 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from T-rd. W., in W. side or gatepost; nail
Bridge over Salt River, on W. rivet of SW. pier; chiseled cross
T. 50 N., R. 11 W., S. cor. secs. 33 and $34,5 \mathrm{ft}$. S. and 73 ft . W. from T-rd. N., in concrete post; standard tablet stamped "2 B 1936"
716.40
696.62
700.689
T. 58 N., R. 11 W., S. cor. secs. 34 and $35,10 \mathrm{ft}$. N. and 35 ft . W. from T-rd. N., on head wall of culvert; chiseled square
Tps. 57 and 58 N., R. 11 W., on line between secs. 2 and 35 , at crossroads, on NE. corner of concrete floor of bridge; chiseled square
T. 57 N., R. 11 W., N. cor. secs. $l$ and $2,6 \mathrm{ft}$. . $\mathrm{i}_{\mathrm{i}}$ and 300 ft . E. from T-rd. S., on concrete head wall of bridge; chiseled square
Tps. 57 and 58 N. , Rs. 10 and 11 Vi ., cor. of, 31 ft . S. and 21 ft . E. from crossroads, in concrete post; standard tablet stamped "3 B 1936"
T. $57 \mathrm{~N}_{\mathrm{A}}$, R. $10 \mathrm{~W}_{.}$, near $\mathrm{N}_{\text {. }}$ quarter cor. sec. 6, $20 \mathrm{ft} . \mathrm{N}$. and 65 ft . E. from T-rd. S., on concrete base of gatepost; chiseled square
T. 57 N., R. 10 W., N. cor. secs. 5 and $6,18 \mathrm{ft}$. S. and 15 ft . W. from rd. at hedge fence $S .$, in $S$. side of gatepost; nail
T. 57 N., R. 10 W. , near N. quarter cor. sec. $5,18 \mathrm{ft} . \mathrm{S}$. and $25 \mathrm{ft} . \mathrm{W}$. from State Highway 15 at crossroad, on iron pipe culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "Z 133 1935"
698.45
704.08
737.76
770.009
769.80
769.40
766.62
764.838
5. FROM NEWARK QUADRANGLE AT POINT 4 MILES NORTH OF BETHEL, WEST TO STATE HIGHWAY 15, THENCE SOUTH ALONG HIGHWAY TO BETHEL (by F. Y. Erown in 1936)
(Continued from Newark quadrangle; see line 7:)
T. 59 N., R. 10 W., near center sec. $10,40 \mathrm{ft}$. N. and 20 ft . E. from T-rd. E., 400 ft . W. of Shiloh Church, in root on S . side of $16-1 \mathrm{n}$. white-oak tree; copper nail and washer
754.05
765.61
756.60

Eethel, $1.5 \mathrm{mi} . \mathrm{N} .0 \mathrm{f}, 25 \mathrm{ft}$. N. and 40 ft . W. from crossroad, on center of N . head wall of concrete culvert; chiseled square

Feet
773.72
775.32

Crossroad, 15 ft . N. and 55 ft . W. from, in fence line, in root on W. side of $20-\mathrm{in}$. elm tree; crossed nalls
Bethel, 0.5 mi . N. of, $160 \mathrm{ft} . \mathrm{S}$. and 40 ft . W. from junction of rd. W., in root on $E$. side of $24-i n$. elm trec; copper nail and washer
773.21

Bethel; at N. limits of, $15 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from junction of rd. E., on $S$. end of W. head wall of concrete culvert; chiseled square

## 6. FROM EDINA QUADRANGLE AT SEC. 21, T. 60 N., R. 12 W., SOUTH TO POINT 3 MILES SOUTH OF CHERRY BOX (by F. Y. Brown in 1936) (Continued from La Plata quadrangle; see line 9.)

T. 60 N., R. 12 W., cor secs. $16,17,20$, and $21,30 \mathrm{ft} . \mathrm{N}$. and 95 ft . W. from T-rd. N., 10 ft . S. and 7 ft . W. from SW. corner of Perry School, in concrete post; standard tablet stamped "I B 1936" (2 ft. S. and 100 ft . W. from ${ }^{\prime \prime}$ Prim Trav Sta $31905^{\circ}$, rusted off at ground level)
Feference mark, $27 \mathrm{ft} . \mathrm{N}$. and 60 ft . E. from tablet, in root on SE. side of 30-in. black-oak tree; copper nail and washer
822.272
822.96
T. 60 N., R. $12 \mathrm{~W}_{\mathrm{W}}$, near E. sixteenth cor. between secs. 16 and $21,45 \mathrm{ft}$. N. and 140 ft . W. from T-rd. S., 3 ft . N. and 3 ft . E. from entrance to yard of Jess Craggs, in root on S. side of $30-1 n$. maple tree; copper nail and washer
738.88
846.87
T. 60 N., R. 12 ., near E. sixteenth cor. between secs. 16 and 21 , $125 \mathrm{ft} . \mathrm{N}$. and 95 ft . W. from T-rd. S., 24 ft . E. of SE. corner of farmhouse, in root on SE. side of 14-in. maple tree; copper nail and washer
Dwelling of Ace Browning, 15 ft . W. of, 55 ft . E. of rd., in root on $E$. side of $16-1 \mathrm{n}$. cedar tree; crossed nails
836.36

Dwelling of Grover Easley, 50 ft . E. of SE . corner of, 40 ft . W. of rd., in root on E. side of $14-i n$. elm tree; crossed nails
828.35
T. 60 N., R. $12 \mathrm{~W} .$, near quarter cor. between secs. 27 and $28,455 \mathrm{ft}$. N. of T-rd. E., 60 ft . W. of rd., in root on SE. side of $20-1 \mathrm{in}$. maple tree; copper nail and washer
821.82
T. 60 N., R. 12 W. , on line between secs. 27 and $28,140 \mathrm{ft} . \mathrm{S}$. and 30 ft . E. from T-rd. W., in farmyard of 0 . C. Stockham, in root on N. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
Farmhouse of L. J. Turner, 500 ft . S. of, 25 ft . W. of rd., in fence corner, in root on $E$. sice of $24-1 n$. elm tree; crossed nails
843.95
T. 60 N., R. 12 W., near S. sixteenth cor. between secs. 33 and 34, 0.3 ml . S. of T-rd. E., 20 ft . S. of SW . corner of farmhouse of Cary Wallace, 60 ft . E. of rd., in root on W. side of $36-1 \mathrm{n}$. maple tree; copper nail and washer
838.22
T. 59 N., R. 12 W., N. cor. secs. 3 and $4,50 \mathrm{ft} . \mathrm{S}$. and 210 ft . E. from T-rd. W., in root on $S$. side of $24-1 n$. elm tree; crossed nails
810.59
T. 59 N., R. 12 W., near quarter cor. between secs. 3 and $4,150 \mathrm{ft}$. S. and 110 ft . E. from crossroads, in root on S. side of $10-\mathrm{in}$. elm tree; copper nail and washer
Cherry Eox, 1 mi . N. of, in front of farmhouse of Melvin Dutton, 20 ft . E. of rd., on center of concrete step; chiseled square
823.73

Cherry Box, 0.5 ml . N. of, 100 ft . W. of rd., in schoolyard, on NW. corner of concrete cistern top; chiseled square
843.24

Cherry Box, $60 \mathrm{ft} . \mathrm{N}$. and 50 ft . E. from NE. corner of Christian Church, 45 ft . W. of rd., in concrete post; standard tablet stamped "2 B $1936^{\circ}$
Cherry Box, 0.5 ml . S. of, 60 ft . W. of ri., in farmyard, in root on E. side of $40-1 \mathrm{n}$. elm tree; crossed nalls
838.86
832.254
836.67

Cherry Box, 1 mi . S. of, cor. secs. $15,16,21$, and $22, \mathrm{~T} .59 \mathrm{~N}$. , R. 12 W., 60 ft . N. and 35 ft . W. from crossroads, in yard, in root on W. side of dead, twin 16-in. maple tree; nall and washer
841.20
T. 59 N., R. 12 W., on line between secs. 21 and 22 , in front of Church of The Brethern, 15 ft . W. of rd., on center of W . head wall of concrete culvert; ch1seled square
810.13

Cherry Box, 2 mi. S. of, cor. secs. $21,22,27$, and 28, T. 59 N., R. 12 W., 130 ft . S. and 70 ft . E. from crossroads, $20 \mathrm{ft} . \mathrm{N}$. and 15 ft . W. from NW. corner of Methodist Church, in root on W. side of 20-1n. elm tree; copper nall and washer
835.29
T. 59 N., R. 12 W ., on line between secs. 27 and $28,15 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from T-rd. W., on center of $S$. head wall of concrete culvert; chiseled square
T. 59 N., R. 12 W. , on line between secs. 27 and $28,45 \mathrm{ft}$. E. of Fairview School, 40 ft . W. of rd., on center of concrete step; chiseled square
830.90
821.90

## 7. FROM SEC. $10, T .60$ N., R. 12 W., EAST TO POINT 1 MILE NORTH OF PLEVNA, THENCE EAST ALONG COUNTY ROUTE B INTO NEWARK QUADRANGLE AT SEC. 22, T. 60 N., R. 10 W. (by F. Y. Brown in 1936)

Shelby County Northwestern R.R. (now abandoned) at rd. crossing, 20 ft . N. and 300 ft . W. from, opposite barn of C. V. Norris, in root on E. side of $12-1 n$. elm tree; copper nail and washer
Novelty, 1 ms . S. of, near quarter cor. between secs. 15 and 22, T. 60 N. , R. 12 W., $35 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from crossroads, in root on N . side of 18-in. black-oak tree; copper nail and washer
T-rd. N., 30 ft . N. and 75 ft . E. from, in root on $W$. side of lu-in. hickory tree; crossed nails
T. $60 \mathrm{~N} .$, R. 12 W , on line between secs. 14 and $23,15 \mathrm{ft}$. N. and 90 ft . W, from T-rd. N., in root on E. side of ll-in. hickory tree; copper nail and washer

| Farmhouse of James Ross, in front yard, 25 ft . S. of rd., in root on N . side of l8-in. catalpa tree; crossed nails |  |
| :---: | :---: |
| T. 60 N., Rs. 11 and 12 W. , approximate cor. secs. $13,18,19$, and 24 , |  |
| ft. S. and 50 ft . E. from County Route H at crossroad, in farmyard |  |
| of B. F. Hunsaker, in root on W. side of $40-\mathrm{in}$. elm tree; copper nail and washer |  |
|  | 820.550 |
| T. 60 N., R. 11 W., in $\mathrm{N} 1 / 2 \mathrm{sec} .19,195 \mathrm{ft}$. W. of small steel bridg |  |
| 50 ft . S. of rd., in root on N. side of $36-1 \mathrm{n}$. white-aak tree nails | $767 \cdot 34$ |
| 60 N., R. 11 W., near N. sixteenth cor. between secs. 19 and 20, 20 ft . |  |
| and 210 ft . e from |  |
| $8-1 \mathrm{n}$. ash tree; copper nail and washer 60 N . $21,63 \mathrm{ft}$. N. and 15 ft . W. 769.83 |  |
|  |  |
| rom dim T-rd. N. and hedge fence S., in root on NE. side |  |
| cust tree; copper |  |
| T. 60 N., R. 11 W., E. sixteenth cor. sec. $21,24 \mathrm{ft}$.N . and 12 ft . W. |  |
| from State IIfehway 15 at rd. W., in root on N. side of 18-in. black-oak tree; copper nail and washer | . |
| T. 60 N., R. 11 W., W. sixteenth cor. sec. $22,70 \mathrm{ft}$. N. and 115 ft . E. |  |
| from State Highway 15 at rd. S., in yard of farmhouse of R. E. Allen, |  |
| in root on S. side of $30-1 \mathrm{n}$. maple tree; copper nail and washerevna, $1 \mathrm{mi} . \mathrm{N}$. and 1 mi . W . from, near center sec. $22, \mathrm{~T} .60 \mathrm{N.}$,809.89 |  |
|  |  |
| R. 11 W., 50 ft . N. of State Highway l5, 2 ft . E. of fence, in concrete post; standard tablet (set to replace "Prim Truv Sta No L" $^{\prime \prime}$ ) |  |
| Plevna, 1 ml . N. and 0.5 ml . W. from, quarter cor. between secs. 22 and |  |
| 23, T. 60 N., R. 11 W., 15 ft . S. of State Highway $15,180 \mathrm{ft}$. W. of |  |
| junction of rd. N., in root on S. side of $14-1 n$. wild-cherry copper nail and washer |  |
| copper nail an |  |
| Junction of State Highway 15 and County Route B, 295 ft . E. of cross- |  |
| evna, 1 ml . N. and 0.5 mi . E. from, quarter cor. between secs. 23 and |  |
| 24. T. 60 N., R. 11 W., 35 ft . S. and 15 ft . W. from junction of rd. |  |
| S., in root on E. side of 22-in. elm tree; copper nail |  |
| T. 60 N., R. 11 W., in $\mathrm{W} 1 / 2 \mathrm{sec} .24,20 \mathrm{ft}$. N. of highway, 200 ft . W. of |  |
| rd. S., 60 ft . SW. of large barn, in root on S. side of $30-\mathrm{in}$. blackoak tree; crossed nails | 02.57 |
| 60 N., R. 11 W., near center sec. 24, 21 ft . W. of SW. corner of steel |  |
| bridge over Littie Fabius River, 25 ft . S. of highway, 100 ft . W. of |  |
| rd. N., in fence corner, in root on E. side of $40-i n$. maple tree; copper nail and washer | 694.81 |
| ount Salem Church, 600 ft . W. of, at top of hill, 25 ft . N. of highway, |  |
| T. 60 N., R. 10 W., quarter cor. between secs. 19 and $20,35 \mathrm{ft}$. . ${ }^{\text {d }}$. and |  |
| 24 ft . E. from junction of rd. N., 3 ft . NE. of corner fence post, in |  |
| . $60 \mathrm{N.}, \mathrm{R} 10 W.$. , center sec. $20,40 \mathrm{ft}$. N. and 35 ft . E. from junction |  |
| of rd. S., 6 ft . N. of fence line, in root on S. side of 25-1r. |  |
| . 60 N., F. 10 W., quarter cor. between secs. 20 and $21,355 \mathrm{ft}$. W. of |  |
| junction of rd. N., 20 ft . N. of highway, in root on $N$. side of 16 -in. |  |
| T. $60 \mathrm{~N} ., \mathrm{R} .10 \mathrm{~W}$. , in $\mathrm{W} 1 / 2 \mathrm{sec} .21,300 \mathrm{ft}$. E. of junction of rd. S., |  |
| 60 ft . N. of NW. corner of farmhouse of B. F. Janey, 45 ft . S. of high- |  |
| T. 60 N., R. 10 W., in SE $1 / 4 \mathrm{sec} .21,50 \mathrm{ft}$. S. and 45 ft . E. from |  |
| junction of rd. N., 20 ft . S. of highway, in root on $N$. side of $12-\mathrm{in}$. |  |
| elm tree; copper nail and washer |  |
| . 60 N., R. 10 W., on line between secs. 21 and $22,25 \mathrm{ft}$. N. of |  |
| base of telephone | 740 |

(Continued in Newark quadrangle; see line 6.)

## 8. IN SEC. 28, T. 60 N., R. 12 W. (by F. Y. Brown in 1936)

T. 60 N., R. 12 W., in $S 1 / 2$ sec. $28,14 \mathrm{ft}$. N. of rd., on center of $N$. head wall of concrete culvert; chiseled square
T. 60 N., R. 12 W., in $S 1 / 2 \mathrm{sec} .28,765 \mathrm{ft}$. W. of Pleasant View School,
848.836

For an additional level line along State Highway 15 and County
Routes $M$ and $H$, refer to United States Coast and Geodetic
Survey second-order line, Laddonia to Edina.

# SHELBINA QUADRANGLE <br> (Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $92^{\circ} 00^{\prime}-92^{\circ} 15^{\prime}$ ) <br> Monroe and Shelby Counties 



1. FROM SHELBINA WEST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD INTO MACON QUADRANGLE (by D. V. Vandiver in 1905)

Shelbina, opposite W. end of sta. across from Waverly Hotel; iron post stamped "1905 780 Adj"

Feot
779.923
789.404
791.717
790.299
(Continued in Macon quadrangle; see line 2.)
2. FROM HUNHEWELL QUADRANGLE AT SEC. 11 , T. 57 N., R. 10 W., WEST TO SEC. 16, T. 57 N., R. 10 W. (by J. H. Vinyard in 1934)
(Continued from Hunnewell quadrangle; see line 3.)
Shelbina, $4 \mathrm{ml} . \mathrm{N}$. and 2 mi . E. from, E. sixteenth cor. between secs. 10 and $15, \mathrm{~T} .57$ N., R. 10 W., opposite T-rd. E., in concrete post; standard tablet stamped "84 CW A 1934"
Reference mark, 6 ft . NE. of tablet, in root of twin hickory tree; copper nail and washer
T. 57 N., R. 10 W., near quarter cor. between secs. 15 and 16, at NE. corner of T-rd., on concrete base of fence post; chiseled square
T. 57 N., R. 10 W., 500 ft . W. of cor. secs. $15,16,21$, and $22, \mathrm{~N}$. of rd., in root of $18-1 \mathrm{n}$. elm tree; copper nail and washer

## 3. FROM HUNNEWELL QUADRANGLE NORTHWEST ALONG U.S. HIGHWAY 36 INTO MACON QUADRANGLE (by Cornish Beck in 1936) <br> (Continued from. Hunnewell quadrangle; see line 4.)

Shelbina, at E. limits of, 110 ft . S. and 380 ft . E. from junction of rd. E., $15 \mathrm{ft} . \mathrm{S}$. of highway at curve, on head wall of culvert; chiseled square
Shelbina triangulation sta.; U.S.C. \& G.S. standard disk stamped "Shelbina 1934"
Shelbina, at $W$. 11 mits of, $40 \mathrm{ft} . \mathrm{N}$. and 8 ft . W. from crossroad, 12 ft . N. of rd. E., on head wall of culvert; chiseled square
T. 57 N., Rs. 10 and il W., on line between secs. 31 and 36 , 20 ft . S. and 175 ft . W. from junction of rd. N., on NW. corner of base of R.R. semaphore; chiseled square
Junction of rd. N., 27 ft . N. and 12 ft . E. from, on head wall of culvert; chiseled square
T. 57 N., R. 11 W., in $S E 1 / 4 \mathrm{sec} .26,40 \mathrm{ft}$. S. and 2 ft . E. from highway at fence N., in concrete post; standard tablet stamped "1538 E R A 1935"
T. 57 N., R. 11 W., in $S l / 2$ sec. $26,30 \mathrm{ft}$. S. and 18 ft . E. from crossroad, on head wall of culvert; chiseled square
T. 57 N., R. 11 W., on line between secs. 26 and $27,20 \mathrm{ft}$. S. of highway, 345 ft . W. of fence $\mathrm{N}_{\text {. , }}$, on $S$. head wall of culvert; chiseled square
T. 57 N., R. 11 W., on line between secs. 27 and $28,27 \mathrm{ft} . \mathrm{S}$. and 18 ft . E. from crossroad, on head wall of culvert; chiseled square

Lentner, on line between secs. 28 and 29, T. 57 N., R. 11 W., 40 ft . S. and 110 ft . W. from N.-S. crossroad, in concrete post; standard tablet stamped " 1539 E R A $1935^{\circ}$
Lentner, about 1 mi . W. of, on SE. wing wall of bridge over Crooked Creek; chiseled square
T. 57 N. , Rs. 11 and 12 W ., on line between secs. 19 and 24 , 30 ft . S. and 30 ft . W. from $\mathrm{N} .-\mathrm{S}$. crossroad; top of right-cf-way post
T. 57 N., R. 12 W. , on line between secs. 23 and $24,35 \mathrm{ft}$. N. and 60 ft . E. from N.-S. crossroad, in concrete post; standard tablet stamped " 1540 E R A 1935"
T. 57 N., R. 12 W., in NW $1 / 4 \mathrm{sec} .23,30 \mathrm{ft} . \mathrm{S}$. and 120 ft . E. from crossroad, on head wall of culvert; chiseled square
T. 57 N., R. 12 W., on line between secs. 15 and $16,30 \mathrm{ft} . \mathrm{S}$. and 65 ft . E. from highway at fence N., on head wall of culvert; chiseled square
(Continued in Macon quadrangle; see line 7.)
4. FROM MACON QUADRANGLE AT SEC. 21, T. 56 N., R. 12 W., EAST TO
SEC. 32, T. 56 N., R. 10 W. (by Cornish Beck in 1936)
T. 56 N., R: 12 W., E. sixteenth cor. between secs. 21 and $28,12 \mathrm{ft}$. N. and 150 ft . E. from T-rd. N., on head wall of concrete culvert; chiseled square
T-rd. N., 9 ft . S. and 565 ft . W. from, on head wall of culvert; chiseled square
T. 56 N., R. 12 W., cor. secs. $22,23,26$, and $27,14 \mathrm{ft}$. S. and 15 ft . E. from T-rd. S., on head wall of culvert; chiseled square
from T-rd. S., on head wall of culvert; chiseled square $\quad$. 56 . R. 12 . cor. secs. $23,24,250$ and $26,25 \mathrm{ft}$. E. from rd. at fence N., 2 ft . N. and 18 ft . E. from lone elm tree, in concrete post; standard tablet stamped "8 B 1936"
T. 56 N., R. 12 W., on line between secs. 24 and 25 , near crossroads, on pump foundation; chiseled square
T. 56 N., R. 11 W., W. cor. secs. 19 and $30,12 \mathrm{ft}$. S. and 12 ft . E. from T-rd. E. at crossroads, on Monroe-Shelby county line, on head wall of culvert; chiseled square
T. 56 N., R. 11 W., cor. secs. $19,20,29$, and $30,18 \mathrm{ft} . \mathrm{N}$, and 15 ft . E. from crossroads, on E. edge of iron pipe culvert; painted square
T. 56 N., R. 11 W., on line between secs. 20 and $29,25 \mathrm{ft} . \mathrm{N}$. of T-rd.
S., in S. side of telephone pole; nail
T. 56 N., R. 11 W., cor. secs. $20,21,28$, and $29,30 \mathrm{ft}$. N. and 13 ft . W. from T-rd. N., in concrete post; standard tablet stamped "9 B 1936"
T. 56 N., R. 11 W., cor. secs. $21,22,27$, and $28,10 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from crossroads, on head wall of culvert; chiseled square
T. $56 \mathrm{~N} ., \mathrm{R}$. $11 \mathrm{~W} .$, E. sixteenth cor. between secs. 22 and $27,65 \mathrm{ft} . \mathrm{s}$. and 10 ft . E. from T-rd. S., on E. edge of iron pipe culvert; painted square
772.22
787.352
775.90
762.47
780.64
785.51
775.421
755.36
754.83
. 56 N., R. 11 W., in $S W 1 / 4$ sec. 26,2 ft. S. and 7 ft . E. from NE. corner of church, 35 ft . S. of rd., in concrete post; standard tablet stamped "10 S 1936
T-rd. S., $16 \mathrm{ft} . \mathrm{S}$. and 30 ft . E. from, in corner fence post; nail
T-rd. M., $18 \mathrm{ft} . \mathrm{N}$. and 18 ft . E. from, in corner fence post; nail
747.216
T. 56 N., R. 11 W., near W. sixteenth cor. between secs. 25 and 36 , $12 \mathrm{ft} . \mathrm{K}$. and 50 ft . W. from rd. corner N. -W., in SW. side of 14-in. elm tree; copper nail and washer
T. 56 N., R. $10 \mathrm{~W} ., \operatorname{in} \mathrm{sW} 1 / 4 \mathrm{sec} .30,100 \mathrm{ft}$. SW. of W . corner of bridge over Crooked Creek, 20 ft . E. of rd., at gatepost, in w. side of 12-in. birch tree; nall
T. $56 \mathrm{~N} ., \mathrm{R}$. 10 W. , in $\mathrm{W} 1 / 2 \mathrm{sec} .30$, near T-rd. E., on $N$. end of iron pipe culvert; painted square
T. 56 M., R. 10 W., near quarter cor. between secs. 29 and $30,10 \mathrm{ft}$. N. and 65 ft . W. from rd . forks, 3 ft . S . of fence, in concrete post; standard tablet stamped "ll B 1936"
696.46
698.21
699.438
T. $56 \mathrm{~N}_{\text {. }}$ R. 10 W., E. sixteenth cor. between secs. 29 and $32,14 \mathrm{ft} . \mathrm{S}$.
and 9 ft . E. from crossroads, on head wall of culvert; chiseled square
State Highway 15 at crossroad, 395 ft . S. and 30 ft . W. from, on base of concrete gatepost; chiseled square
U.S.C. \& G.S. standard disk stamped "S 133 1935"
694.26
727.80
5. FROM POINT 2 MILES WEST OF LENTNER NORTH, THENCE WEST INTO
SHELBYVILLE QUADRANGLE AT SEC. 9, T. 57 N., R. Ii W.
(by Cornish Beck in 1936)
T. 57 N., R. 12 W., E. cor. secs. 13 and $24,15 \mathrm{ft}$. N. and 12 ft . W. from T-rd. W., on concrete retaining wall of bridge; chiseled square
(For balance in Shelbyville quadrangle, see line 4.)
T. 57 N., R. 11 W. , on line between secs. 9 and $16,10 \mathrm{ft}$. N : and 30 ft . T. 57 from T-rd. N. 11 W., on head wall of culvert; chiseled square T. 57 N., R. 11 W., cor. secs. $9,10,15$, and $16,35 \mathrm{ft}$. N. and 19 ft . E. from crossroads, in W. side of corner fence post; nail
6. FROM MACON QUADRANGLE EAST ALONG COUNTY ROUTE J, THENCE SOUTH ALONG COUNTY ROUTE T, THENCE EAST ALONG ROADS TO SEC. 34 , T. 55 N., R. 10 W. (by Cornish Beck in 1936)
(Continued from Macon quadrangle; see line 8.)
T. 55 N., R. 12 W., E. sixteenth cor. between secs. 3 and $10,30 \mathrm{ft}$. N. and 15 ft . E. from crossroad, on concrete foundation of corner fence post; chiselea square

Feet
796.14

Woodlawn, 25 ft . S. and 100 ft . W. from junction of rd. N., on concrete floor of porch; chiseled square
785.50

Woodlawn, 0.5 mi . E. of, near E. sixteenth cor. between secs. 2 and 11, T. 55 N., R. 12 W., 35 ft. N. and 65 ft. E. from junction of County Route T, in root on S. side of $30-1 \mathrm{n}$. maple tree; copper nail and washer
Woodlawn, 0.5 ml . E., thence 1 ms . S. from, 77 ft . N. $39^{\circ}$ E. of NE. corner of Oak Grove Church; iron post stamped "Prim Trav Sta No 11 1905"
T. 55 N., R. 12 W. , on line between secs. 12 and $13,20 \mathrm{ft}$. S. and 245 ft . E. from T-rd. S., in root on NE. side of 26-in. elm tree; copper nail and washer
787.98
785.957

T-rd. N., 15 ft . N. and 135 ft . W. from, in N . side of $7-\mathrm{in}$. elm tree; nail
, cor secs. 7,8 and 18 , i2 ft s. and 100 ft from crossroads, on head wall of culvert; chiseled square
from crossroads, on head wall of culvert; chiseled square $\quad 55 \mathrm{~N} ., \mathrm{R}$. 11 W ., near cor. secs. 8,9 , 16 , and 17 (? 0.2 mi . , $18 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from T-rd. S., in concrete post; standard tablet stamped "13 B 1936"

- 55 stamped 13 B 1936
777.287

100 ft . S. and 12 ft . W. from County Route A at crossroad, on NW. corner of bridge; chiseled square
728.45
T. 55 N., R. il W., in $S W 1 / 4 \mathrm{sec} .15,17 \mathrm{ft} . \mathrm{N}$, and 30 ft . E. from County Route $A$ at rd. E., in W. side of corner fence post; nail
T. 55 N., R. 11 W., W. sixteenth cor. sec. 22, on County Route A, 20 ft . N. and 20 ft . E. from stone in E. -W. crossroad, in SW. corner of field of W. J. Williams; iron post stamped "Prim Trav Sta No 10 1905"
708.639

T-rd. S., 24 ft . S. and 10 ft . E. from, in root on N. side of $34-1 \mathrm{n}$. elm tree; nall
745.01
T. 55 N., R. 11 W., near center sec. $23,23 \mathrm{ft}$. S. and 15 ft . W. from T-rd. S., in root on N. side of 17-1n. elm tree; copper nall and washer
T. 55 N., R. 11 W., in $S W 1 / 4 \mathrm{sec} .24,285 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from junction of private rd., in root on E. side of 24-in. water-oak tree; copper nail and washer
T. 55 N., R. 11 W., near E. sixteenth cor. between secs. $2 l_{4}$ and $25,23 \mathrm{ft}$. N. and 22 ft . E. from T-rd. N., in concrete post; standard tablet stamped "14 B 1936"
T. 55 N., R. 10 W ., cor. secs. $19,20,29$, and $30,15 \mathrm{ft} . \mathrm{N}$. and 15 ft . W. from T-rd. W., in S. side of corner fence post; nails
T. $55 \mathrm{~N} .$, R. 10 W. , near center sec. 29, in yard of Smiser School, on carriage block; chiseled square
T. 55 N., R. 10 W., near E. sixteenth cor. between secs. 29 and 32, $13 \mathrm{ft} . \mathrm{N}$. and 100 ft . E. from T-rd. N., on head wall of culvert;
chiseled square .
761.16
T. 55 N., R. 10 W., near cor. secs. $27,28,33$, and $34,24 \mathrm{ft}$. N. and 21 ft . W. from T-rd. W.; iron post stamped "Prim Trav Sta No 9 1905"
Noel triangulation sta.; U.S.C. \& G.S. standard disk stamped "Noel 1934"
T-rd. N., 25 ft . S. and 8 ft . W. from, in root on NE. eide of $24-\mathrm{in}$. oak tree; nall
730.96
T. 55 N., R. 10 W., near center sec. $34,10 \mathrm{ft}$. S. and 150 ft . W. from T-rd. S., on head wall of culvert; chiseled square
729.40

## 7. FROM MOPERLY QUADRANGLE EAST ALONG U.S. HIGHWAY 24 TO PARIS (by Cornish Beck in 1936)* (Continued from Nacon quadrangle; see line 7.)

T. 54 N., R. 12 W., near E. sixteenth cor. sec. $16,50 \mathrm{ft}$. N. and 12 ft . W. from junction of rd. S., in S. side of 16-1n. water-oak tree; nall
T. 54 N., R. lL W., near quarter cor. between secs. 15 and $l 6,50 \mathrm{ft}$. N. and 35 ft . W. from junction of rd. N., in concrete post; standard tablet stamped "64 C W A 1934"
805.44
T. 54 N., R. 12 W. , near center sec. $15,25 \mathrm{ft} . \mathrm{s}$. and 18 ft . W. from Junction of rd. S., on head wall of culvert; chiseled square
791.368
T. $54 \mathrm{~N}_{\mathrm{H}}, \mathrm{R}$. 12 W., near quarter cor. between secs. 14 and $15,25 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from crossroad, on head wall of culvert; chiseled square
776.72

Madison, 0.6 mi . W. of,
807.71 on head wall of culvert; chiseled square
J.S.C. \& G.S. standard disk stamped "V 123 1935"

Madison, at E. limits of, 25 ft . S. and 20 ft . W. from junction of County Route $T$, on end of curb; chiseled square
786.98

T. 54 N. , R. 11 W., in $\mathrm{SE} 1 / 4 \mathrm{sec}, 7,75 \mathrm{ft}$. N. and 13 ft . W. from junction of rd. N., on head wall of culvert; chiseled square
778.36
T. 54 N., R. 11 W., on line between secs. 7 and $8,25 \mathrm{ft}$. S. and 15 ft . E. from junction of rd. S., on head wall of culvert; chiseled square

Holliday triangulation sta.: U.S.C. \& G.S. standard disk stamped "Holliday 1934"
U.S.C. \& G.S. standard reference disk stamped "Holliday Azi 1934"
U.S.C. \&G.S. standard disk stamped "X 1231935 "
795.48
T. 54 N. , R. 11 W. , in sec. $9,25 \mathrm{ft}$. S. and 75 ft . F. from junction of rd. S., on head wall of culvert; chiseled square
Holliday, 0.9 mi . S. of, $11 \mathrm{ft} . \mathrm{N}$. and 90 ft . E. from junction of County Route A, on NW. wing wall of bridge; chiseled square
737.91

F Published also as line 5 of the Madison quadrangle (see Bull. 898-9, pp. 873-874).

|  | eet |
| :---: | :---: |
| Holliday, $0.9 \mathrm{mi} . \mathrm{S}$. and about 0.2 mi . E. from, 20 ft . S . and 16 ft . E. from function of rd. S., on head wall of culvert; chiseled squere U.s.C. \& G.S. standard disk stamped "Y 123 1935" |  |
|  |  |
|  |  |
| R. 11 W., 44 ft . S. and 56 ft . W. from crossroad, 143 ft . NE. of NE. corner of farmhouse of E. H. Willikms, 2 ft . inside fence, in concrete |  |
| post; standard tablet stamped "1413 C W A 1934 |  |
| S.C. \& G.S. standard disk stamped Z ( 1231935 , 784.241 |  |
| N. and 12 ft . W. from crossroad, on head wall of culvert; chiseled square |  |
|  |  |
| T. 54 N., R. 10 W., near E. sixteenth cor. between secs. 7 and $18,24 \mathrm{ft}$. |  |
|  |  |
| U.S.C. \& G.S. standard disk stamped "A 1241935 " |  |
| T. 54 N., R. 10 W., near quarter cor. between secs. 8 and $17,235 \mathrm{ft}$. F. of junction of rd. N., 55 ft . S. and 24 ft . E. from junction of private rd. S., 131 ft . N. and 32 ft . W. from NW. corner of farmhouse of $R$. L. |  |
|  |  |
|  |  |
| em, in concrete post; standard tablet stamped "1414 C W A 1934" 760.3 |  |
|  |  |
| 的 |  |
| U.S.C. \& G.s. standard disk stamped "B 124 1935" 761.852 |  |
| T. 54 N., R. 10 W., near line between secs. 15 and $16,35 \mathrm{ft}$. N. and 16 ft . E. from Junction of rd. N., in telephone pole; nail |  |
|  |  |

For an additional level line along State Highway 15 , refer to United States Coast and Geodetic Survey second-order line, Laddonia to Edina.

MACON QUADRANGLE
(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $92^{\circ} 15^{\prime}-92^{\circ} 30^{\prime}$ )
Macon, Monroe, Randolph, and Shelby Counties


1. FROM MOBERLY QUADRANGLE NORTH ALONG WABASH RAILROAD INTO ATLANTA QUADRANGLE (by D. V. Vandiver in 1905)
Cairo, at NE. corner of Bank of Cairo, in N. face of wall 4 ft . above concrete sidewalk; aluminum tablet stamped "1905 864 Adj"
acksonville, on N. side of Randolph Street, 300 ft . W. of tracks, 6 ft . W. of SE. corner of bank; aluminum tablet stamped "1905 868 Adj"
867.156

Excello, 360 ft . SW. of sta., 200 ft . W. of tracks, in wall of Powell's drug store; aluminum tablet stamped "1905 871 Adj"
Macon, 3.5 ml . S. of, in small cemetery on Grant farm, 600 ft . E. of track, 150 ft . E. of rd., in base of Grant's monument; aluminum tablet stamped "1905 849 Adj"
Macon, 20 ft . W. of $S$. entrance to courthouse, in limestone foundation; aluminum tablet stamped "1905 875 Adj"
870.204

Macon, 100 ft . SW. of S . entrance to courthouse, in granite post; standard tablet stamped " 1905873 Adj"
(Continued in Atlanta quadrangle; see line l.)
2. FROM SHELBINA QUADRANGLE NEAR CLARENCE WIEST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD TO MACON (by D. V. Vandiver in 1905)
(Continued from Shelbina quadrangle; see line l.)
Clarence, in city park, 30 ft . S . and 25 ft . W. from intersection of Center and Walnut Streets, 120 ft . S. of track; iron post stamped "Prim Trav Sta No 181905 '823"

4. FROM ENTERPRISE WEST TO COX, THENCE SCUTHWEST TO JACKSONVILLE (by D. V. Vandiver in 1905)

Enterprise, 3 mi . W. of, near cor. secs. $13,24,23$, and $24, \mathrm{~T} .56 \mathrm{~N} .$, R. 13 W., in SW. corner of yard of W. N. Trussell; iron post stamped "1905 781 Adj "
Cox, in $\mathrm{S} 1 / 2 \mathrm{sec} .20, \mathrm{~T} .56$ N., R. $13 \mathrm{~W} .$, near NE. corner of Fairview Church; Iron post stamped "833"
jacksonville, 3.8 ms . E. and 0.2 mt . N. from, in $\mathrm{SW} 1 / 4 \mathrm{sec} .5, \mathrm{~T} .55 \mathrm{~N}$. , R. 13 W., NE. of T-rd. E., in SN. cormer of yard of D. R. Haliburton; fron post stamped "811"
780.711
832.873
810.374

## 5. FROM COLLEEE MOUND QUADRANGLE EAST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD TO MACON (by S. R. Archer in 1920) (Continued from College Mound quadrangle; see line 1.)

Macon, about 0.z mi. W. of, near E. sixteenth cor. between secs. 17 and 20, T. 57 N., R. 14 W., 35 ft . N. and 10 ft . E. from right-of-way fence at N.-S. fence, in top of NW. sice of bent trunk of 5-in. oak tree; copper nail and washer
Macon, at Yabash Ry. bridge 1940 over R.R. tracks, at W. sice of N. abutment, on top step of $W$. end of sixth layer of stone above concrete l.ower section (also third layer of stone below concrete parapet wall and bridge seat); chiseled square
Macon, at city waterviorks tower, on top of N . corner of concrete base of NE. leg of tower; chiseled square
6. FROM HOBERLY QUADRAMGLE: AT SEC. 6, T. 54 N., R. 12 W., NORTH
$A L O N G$ ROADS TO ASH (by O. D. Wililams and J. H. Vinjará in 1934.)

Ash, $0.5 \mathrm{ml} . \mathrm{S}$. of, quarter cor. between secs. 6 and $31, \mathrm{Tps} .54$ and 55 N., R. 12 W., S. of rd., in root of 48-1n. locust tree; copper nail and washer
7. FROM SIIELBINA QUADRANGLE MEAR CLARENCE SOUTH BY WAY OF

ENTIERPKISE, DUNCANS BRIDGE, AND ASH, INTO M:OBERLY QUADRANGLE
AT SEC. 6, T. 54 N., R. 12 W. (by Cornish Beck in 1936)
(Continued from Shelbina quadrangle; see line 3.)
Clarence, 1.5 mi .3 . of, cor. secs. $20,21,28$, and $29, \mathrm{~T} .57 \mathrm{~N} .$,
R. 12 W., $10 \mathrm{ft} . \mathrm{N}$. and 18 ft . W. from croseroads, on head wall of culvert; chiseled square
Clarence, 2.5 mi . S. of, cor. secs. $28,29,32$, and 33, T. 57 N.
R. 12 W., 15 ft . S. and 16 ft . E. from crossroads, on S. end of iron pipe culvert; painted square
Clarence, 4.5 mi . S. of, cor. secs. 4, 5, 8, and 9, T. 56 N., R. 12 W., 18 ft . S. and 13 ft . E. from crossroads, on E. edge of iron pipe culvert; painted square
T. 56 N. , R. 12 W., on line between secs. 8 and $9,12 \mathrm{ft}$. N. and 15 ft . E. from T-rd. E., on head wall of culvert; chiseled square

| arence, $5.5 \mathrm{mi} . \mathrm{S}$. of, cor. secs. 8, 9, 16 , and 17, T. 56 N., R. 12 W ., $15 \mathrm{ft} . \mathrm{S}$. and 18 ft . W. from T-rd. W., on head wall of culvert; chiseled square | 776.00 |
| :---: | :---: |
| Enterprise, i mi. S. of, cor. secs. 20, 21, 28, and 29, T. 56 N., R. 12 W., 15 ft . N. and 16 ft . E. from crossroads, on E. edge of iron pipe culvert; painted square | 810.56 |
| Enterprise, 2 mi. S. of, cor. secs. 28, 29, 32, and 33, T. 56 N., R. 12 W., $50 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from crossroads, in W . side of fence post; bent nail | 792.17 |
| Enterprise, 3 mi. S. of, S. cor. secs. 32 and 33, T. 56 N., R. 12 W., $2 L_{4} \mathrm{ft}$. N. and $2 L_{4} \mathrm{ft}$. W. from E.-W. rd. and abandoned rd. N.; iron pipe stamped "12 B 1936" | 808.117 |
| Duncans Bridge, about 1.3 mi . N. of, in $\mathrm{E} / 2 \mathrm{sec} .5, \mathrm{~T} .55 \mathrm{~N} ., \mathrm{R} .12 \mathrm{~W}$. 23 ft . N. and 23 ft . W. from T-rd. W., in root on E. side of $22-\mathrm{in}$. oak tree; copper nall and washer | 764.21 |
| Duncans Bridge, about 0.4 mi . N. of, 12 ft . S. and 130 ft . E. from T-rd. E., on head wall of culvert; chiseled square | 714.01 |
| Duncans Bridge, on SE. wing wall of bridge over Salt River; chiseled square | 705.39 |
| Duncans Bridge, 0.5 mi . W. of, 75 ft . N. of T-rd. S., in E. side of 22-1n. wild-cherry tree; nall | 726.95 |
| T. 55 N., R. 12 W., in NW $1 / 4$ sec. 17, on NW. wing wall of bridge; chiseled square | 705.19 |
|  |  |
| E., in root on S. side of $24-1 \mathrm{n}$. post-oak tree; copper nail and washer | 729.71 |
| 55 N., R. 12 W., on IIne between secs. 17 and 18 , on top of E. rivet of NE. wing wall of bridge; chiseled cross | 724.96 |
| T. 55 N., R. $12 \mathrm{~W} .$, cor. secs. 17, 18, 19, and 20; $40 \mathrm{ft} . \mathbb{N}$. and 26 ft. W. from T-rd. N., in root on SE. side of $26-1 n$. white-oak tree; copper nail and washer | 762.4 |
| T. 55 N., R. 12 W., near E. sixteenth cor. sec. 19; 27 ft . S. of N.; iron pipe stamped "13 B 1936" | 806.69 |
| T. $55 \mathrm{~N} ., \mathrm{R}$. $12 \mathrm{~W} .$, in $\mathrm{E} 1 / 2 \mathrm{sec} .30$, on SE . handrail support of bridge over Mud Creek; chiseled square | 715.10 |
| T. $55 \mathrm{~N} ., \mathrm{R} .12 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .30$, 55 ft . N. and 16 ft . W. from rd. corner N.-W., in root on N. side of l2-in. white-oak tree; copper nail and washer | 778.92 |

## 8. FROM DUNCANS BRIDGE EAST INTO SHELBINA QUADRANGLE (by Cornish Beck in 1936)

T. 55 N., R. 12 W., quarter cor. between secs. 4 and 9,30 ft. N. and 15 ft . W. from T-rd. S., in S. side of corner fence port; nail
(Continued in Shelbina quadrangle; see line 6:)
9. FRON CLARENCE NORTH INTO ATLANTA QUADRANGLE (by Cornish Beck in 1936)

Clarence, at $N$. Iimits of, 50 ft . E. of intersection of U.S. Hichwáy 36 and County Route $C$; top of right-of-way post
(Continued in Atlanta quadrangle; see line 5.)
10. FROM EXCELLO WEST INTO COLLEGE MOUND QUADRANGLE (by J. J. Crine in 1937)
U.S.C. \& G.S. standard disk stamped "A 122 1935"

Excello, 0.9 mi . W. of, along Ardmore-Excello rd., $100 \mathrm{ft} . \mathrm{s}$. and 300 ft . E. from junction of dim rd. S., in root on E. side of 20-in. black-oak tree; crossed nails
$867: 344$
8̀ั7:91
(Continued in College Mound quadrangle; see line 2.)
For additional level lines along Wabash Ry. and Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey second-order lines, Hurdland to St. Charles and Laclede to Macon.
(Latitude $39^{\circ} 45^{\prime}-40^{\circ} 00^{\prime} ;$ longitude $92^{\circ} 15^{\prime}-92^{\circ} 30^{\circ}$ )
Knox, Macon, and Shelby Counties


1. FROM MACON QUADRANGLE NORTH ALONG WABASH RAILWAY INTO La PLATA
QUADRANGLE (by D. V. Vandiver in 1905 )
(Continued from Macon quadrangle; see line l.)

Macon, 3.5 ml . N. of, NW. of rd. crossing; iron post stamped "1905 887 Adj"
Axtell, 200 ft . W. of track, 200 ft . N. of rd., in SW . corner of
foundation of dwelling of A. L. Epperson; aluminum tablet stamped "1905 895 Adj"

Feet 886.543
893.996
899.978
901.612
913.696
936.379
883.911

Love Lake, 3.8 mi . E. of, approximate cor. secs. $1,2,35$, and 36,
Tps. 59 and 60 N., R. il W.; iron post stamped "í905 885 Adj"
Sue City, in E. side of SE. corner of foundation stone of Baptist
Church; aluminum tablet stamped "1905 871 Adj"
870.352
768.265
T. 60 N., R. $13 \mathrm{~W} ., 0.2 \mathrm{mi}$. E. of Salling Branch, 0.2 mi . S. of
dwelling of Asa Blanchard; iron post stamped " 1905768 Adj"

> 3. FROM SEC. 4, T. 57 N., R. 13 W., NORTH TO SUE CITY (by D. V. Vandiver in 1905 )
T. 57 N., R. 13 W., N. sixteenth cor. sec. 4, 12 ft. from S. end of tall
hedge, 8 ft . from W. edge of rd.; iron post stamped "1905 841 adj"
T. 58 N., R. 13 W., S. sixteenth cor. sec. 16 , W. of T-rd. E., 50 ft . SE. of SE. corner of dwelling, N. of rd., 4 ft . from yard fence; iron. post stamped "1905 849 Adj"
841.710
848.664
. 59 N., R. 13 W., S. quarter cor. sec. $33,25 \mathrm{ft}$. N. and 27 ft . E.
from T-rd. N., 25 ft . N. and 14 ft . W. from T-rd. S.; iron post stamped "T T 27 W 19361905836 Adj"
836.037
. 59 N., R. 13 W., cor. secs. $16,17,20$, and $21,7 \mathrm{ft} . \mathrm{s}$. and 7 ft . W. from SW. corner of crossroads, 3 ft . NE. of corner post; iron post stamped "1905 825 Adj"
825.110
4. FROM La PLATA QUADRANGLE AT SEC. 20, T. 60 N., R. I4 W., south
TO WABASH RAILWAY (by R. W. Mattox in 1935)
(Continued from La Plata quadrangle; see line 3.)
T. 60 N., R. 14 W., quarter cor. between secs. 17 and $20,45 \mathrm{ft}$. S. and 40 ft . E. from U.S. Highway 63 at crossroad, in concrete post; standard tablet stomped "789 C W A 1934
5. FROM MACON QUADRANGLE NORTH ALONG COUNTY ROUTE C INTO SHELBYVILLE QUADRANGLE (by Cornish Beck in 1936)
(Continued from Macon quadrangle;see line g.)
$\begin{array}{lll}\text { T. } 57 \text { N., R. } 12 \text { W., cor. secs. } 4,5,8 \text {, and } 9 \text {, } 14 \text { ft. N. and } 15 \mathrm{ft} . \mathrm{W} . & \text { Feet } \\ \text { from crossroad, on head wall of culvert; chiseled square } \\ \text { T. } 57 \text { N., R. } 12 \text { W., about } 200 \text { ft. W. of N cor. secs. } 4 \text { and } 5 \text {, } 18 \mathrm{ft.} \mathrm{~s} . & 808.78 \\ \text { and } 30 \text { ft. E. from junction of rd. E., in corner fence post; nail } & 827.19\end{array}$
827.19
(Continued in Shelbyville quadrangle; see line 3.)
6. FROM ATLANTA WEST 1.5 MILES INTO ELMER QUADRANGLE (by B. A. Barnes in 1936)
U.S.C. \& G.S. standard disk stamped "N 121 1935"
U.S.C. \& G.S. standard disk stamped "F 121 1935"
915.477
T. 59 N., R. $1 l_{4}$ W., in $S W 1 / 4 \mathrm{sec} .20$, on center of SW. concrete wing
wall of steel bridge over Long Branch; chiseled square
T. 59 N., R. $1 l_{4}$ W., cor. secs. 19, 20,29 , and $30,30 \mathrm{ft}$. N. and 27 ft . W. from $T$-rd. S., in root on W. side of $\mathbb{H}_{4}-1 \mathrm{n}$. elm tree; copper nail and washer
(Continued in Elmer quadrangle; see line 2.)

TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY SECOND-ORDER LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE AT LOVE LAKE (by R. W. Mattox in 1936)

Love Lake, 200 ft . W. of sta., in SE. corner of foundation of post office; aluminum tablet stamped "1905 915 Adj"
913.696
900.822

TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY SECOND-ORDER LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE AT ATLANTA (by R. W. Mattox in 1936)

Atlanta, 12 ft . S. of Atlanta State Bank, in NW. cornerstone of foundation of Attlebury brick building; aluminum tablet stamped "1905 902 Adj"
U.S.C. \& G.S. standard disk stamped "P 121 1935"

For an additional level line along Wabash Ry., refer to United States Coast and Geodetic Survey second-order line, Hurdland to St. Charles.

La PLATA QUADRANGLE
(Latitude $40^{\circ} 00^{\prime}-40^{\circ} 15^{\prime}$; longitude $92^{\circ} 15^{\prime}-92^{\circ} 30^{\prime}$ )
Adair, Knox, and Macon Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in 1900 and S. R. Archer in 1911)
Hurdland, 4.5 ml . 5 . and 1.5 ms . E. from, cor. secs. $17,18,19$, and 20 , T. 61 N., R. $12 W_{.}, 69 \mathrm{ft} . \mathrm{N}_{\text {. }}$ and 522 ft . E. from crossroads, 95 ft . SE. of dwelling; iron post stamped " $855 \mathrm{~A}^{\prime \prime}$
T. 61 I., I. 13 W., in SW. cor. sec. 1l, in corner of dooryard of
T. 62 N., R. 14 W., in NE $1 / 4$ sec. $22,420 \mathrm{ft}$. N. of Quincy, Omaha

Feet
921.550
\& Kansas City R.R., at T-rd. W., in corner of rd. adjacent to property of G. M. Leo; iron post stamped "g21 A"
U.S.C. \& G.S. standard disk stamped "La Plata 1934"
U.S.C. \& G.S. standard disk stamped "H 121 1935"

La Plata, l.1 mi. N. of, in $\mathrm{SW} 1 / 4 \mathrm{sec} .32, \mathrm{~T} .61 \mathrm{~N} ., \mathrm{R} . \mathrm{I} \mathrm{l}_{4} \mathrm{~W} ., 35 \mathrm{ft} . \mathrm{W}$. of highway, in concrete post; standard tablet stamped "790 C'W A 1934"
Highway in line with whistle board of Wabash Ry., 30 ft . E. of, in fence line, on base of corner post; chiseled square
941.519
942.01
T. 61 N., R. 14 W., in $S W 1 / 4$ sec. 29, on right-of-way line between

Wabash Ry. and highway, 150 ft . E. of dwelling, in root on SW. side of $30-1 \mathrm{n}$. maple tree; copper nail and washer
926.87
917.89
(Continued in Kirksville quadrangle; see line 2.)
3. FROM La PLATA SOUTH ALONG U.S. HIGHWAY 63 INTO ATLANTA QUADRANGLE (by R. W. Mattox in 2935)
T. 60 N., R. $\mathcal{H}_{4}$ W., on line between secs. 8 and 17 , NW. of crossroad; top of fence post
T. 60 N., R. 14 W., near center sec. 17, on top of W. head wall of culvert under highway; chiseled square
(Continued in Atlanta quadrangle; see line 4.)

## 4. FROM KIRKSVILLLE QUADRANGLE AT SEC. 18, T. 62 N., R. 14 W., SOUTH ALONG WEST BORDER OF QUADRANGLE INTO KIRKSVILLE QUADRANGLE AT SEC. 5, T. 61 N., R. 14 W. (by R. W. Mattox in 1935)

(Continued from Kirksville quadrangle; see line 1.)
T. 62 N., R. $l_{4}$ W., near quarter cor. between secs. 17 and $20,500 \mathrm{ft}$. W. of State Highway 6 at rd. N. to Bullion, on N. head wall of culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "H 16 1933"

Top of ridge, in root on E. side of $24-1 \mathrm{n}$. elm tree; (mark not described)
T. 62 N., R. I4 W., in NW. cor. sec. 29, at T-rd. S., in root on N. side of 18-in. maple tree; copper nail and washer
908.978
950.68
963.32
T. 62 N., R. $1_{4}$ W., in $S 1 / 2$ sec. 29 , E. of crossroads, on $N$. end of iron pipe culvert; (mark not described)
T. 62 N., R. $\mathcal{H}_{4}$ W., near center sec. 32, in fence line E. of rd., in root on W. side of $12-1 \mathrm{n}$. oak tree; nails
942.74
934.50
T. 62 N., R. $l_{4}$ W., in $S W 1 / 4 \mathrm{sec} .31$, on top of ridge, 100 ft . W. of dwelling, 40 ft . W. of rd., in root on E. side of twin $24-1 \mathrm{n}$. oak tree; copper nail and washer
938.14
., ${ }^{\text {. }}$., quarter cor. between secs. 5 and 6, NW. of T-rd. N., in fence line, in root on S. side of 18-in. oak tree; copper nail and washer
913.23
(Continued in Kirksville quadrangle; see line 3.)
5. FROM DOWNING QUADRANGLE AT SEC. 26 , T. 63 N., R. 13 W., SOUTH TO HURDLAND (by G. R. Hamlin in 1936)
(Continued from Downing quadrangle; see line 4.)
T. 63 N., R. 13 W., in $\mathrm{N} 1 / 2$ sec. $26,6 \mathrm{ml}$. N. and 1 ml . W. from Hurdiand, 60 ft . S. and 33 ft . E. from State Highway 11 at rd. S., in concrete post; standard tablet stamped "T T 133 C 1936"
T. 63 N., R. 13 W., N. sixteenth cor. between secs. 25 and 26,27 ft. N. and 20 ft . E. from State Highway 11 at $\mathrm{N} .-\mathrm{S}$. crossroad, in root on W. side of 12-in. black-oak tree; copper nail and washer
T. 63 N., R. 13 W., in $S 1 / 2$ sec. $35,20 \mathrm{ft}$. N. and 12 ft . w. from T-rd.
S. $\dot{6}$ in root on $S$. side of triple black-oak tree; copper nail and washer
. $62 \mathrm{~N} .$, R. $13 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .2,20 \mathrm{ft}$. S. and 40 ft . W. from T-rd.
N., in root on W. side of $14-1 n$. white-oak tree; crossed neils
851.44
789.93

T-rd., SW. of, on center of W. head wall of concrete culvert; chiseled square
T. 62 N., R. 13 W., in N $1 / 2$ sec. 2 , in SE. corner of steel bridge; crossed nails


## 6. LINE TO DETERMINE ELEVATION OF HURDLAND TRIANGULATION STATION 3 MILES NORTHWEST OF HURDLAND (by G. R. Hamlin in 1936)

T. 62 N., R. 13 W., quarter cor. between secs. 2 and $11,57 \mathrm{ft}$. N. and 10 ft . E. from crossroads, on S. end of E. head wall of concrete culvert; chiseled square
Hurdland triangulation sta.; U.S.C. \& G.S. standard disk stamped Hurdland 1934
U.S.C. \& G.S. standard reference disk stamped "Hurdland No 2 1934"

## 7. FROM EDINA QUADRANGLE WEST ALONG STATE HIGHWAY 11 TO SEC. 25, T. 63 N., K. 13 W. (by G. R. Hamlin in 1936 ) <br> (Continued from Edina quadrangle; see line 2.)

T. 63 N., R. 12 W., N. sixteenth cor. sec. $29,3.5 \mathrm{ml}$. W. of Baring, 36 ft . N. and 25 ft . E. from junction of rd. N., in concrete post; standerd tablet
T. 63 N., R. 12 W. , near N. sixteenth cor. sec. $30,18 \mathrm{ft}$. s . and 140 ft . E. from function of rd. S., on S. end of iron pipe culvert; painted square
T. 63 N., Rs. 12 and 13 W., near N. sixteenth cor. between secs. 25 and $30,40 \mathrm{ft}$. S . and 30 ft . W. from junction of rd. N., in root on W. side of 10-in. walnut tree; copper nail and washer
38.17
902.791
900.490
855.010
867.62
884.48

## 8. FROM EDINA QUADRANGLE WEST ALONG STATE HIGHWAY 6 TO HURDLAND <br> (by F. Y. Brown in 1937) <br> (Continued from Edina quadrangle; see line 4.)

Hurdland, 2.8 mi . E. of, 100 ft . E. of highway at rd. S., 30 ft . N. of rd. E., in concrete post; standard tablet. stamped "I4 25 C W A 1934"
Reference mark, $18 \mathrm{ft} . \mathrm{S}$. and SO ft . W. from tablet, on center of E head wall of concrete culvert; chiseled square
Hurdiand, 2.1 mi . E. of, 320 ft . E. of Rock Creek School, 35 ft . S. and 15 ft . E. from crossroad, on center of S . head wall of concrete culvert; chiseled square
856.576
849.12
828.41

Hurdiand, about 2.1 mi . E. of, 140 ft . N. and 20 ft . E. from NE. corner of Rock Creek School, in root on N. side of $\mathrm{I}_{4}$-in. hickory tree; copper nail and vasher
27.99
822.15

Double concrete culvert, on $W$. end of $S$. head wall; chiseled square
Hurdland, $1.3 \mathrm{ml}:$ E. of, $20 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from junction of rd. S., on center of $N$ : hêad wall of concrete culvert; chiseled square
841.51

Hurdland, 0.6 mi . Es of, 25 ft . S. and 12 ft . E. from junction of rd. S. to cemetery, on center of W. head wall of concrete culvert; chiseled square
874.70
urdland, $25 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from Junction of County Route Z , on center of E. head wall of concrete culvert; chiseled square
883.26

## 9. FROM SEC. 32, T. 62 N., R. 12 W., SOUTH INTO EDINA QUADRANGLE AT SEC. 17, T. 60 N., R. 12 W. (by F. Y. Erown in 1937)

T. 62 N., R. 12 W., in $N 1 / 2 \mathrm{sec} .32,150 \mathrm{ft}$. C . and 25 ft. W. from T-rd. E., in hedge row, in root on NE. side of $20-1 n$. cherry tree; copper nail and washer
Tps. 61 and 62 N., R. 12 W., near quarter cor. between secs. 5 and 32, 1.5 ml . S. and 2 mi . E. from Hurdland, 110 ft . E. of dweliing, 25 ft. W. of rd., in concrete post; U.S.C. \& G.S. and State Survey standard disk stamped "T T 3 C 1937"
854.69
. 61 N., R. 12 W., in $S 1 / 2$ sec. $5,0.3 \mathrm{mi}$. S. of crossroads, 20 ft . W. of rd., 3 ft . W. of fence line, in root on E . side of 48 -in. elm tree; copper nall and washer
861.479
854.23
T. 61 N., R. 12 W ., near center sec. $8,140 \mathrm{ft}$. N. and 95 ft . E. from crossroads, 10 ft . N. and 40 ft . W. from NW. corner of Vanhorn School, in root on S. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
845.49
R. corner from N.-W., $85 \mathrm{ft} . \mathrm{S}$. of, in $\mathrm{N} .-\mathrm{S}$. fence ilne, in root on W. side of 12-in. elm tree; crossed nails
856.96
T. 61 N., R. 12 W., N. sixteenth cor. between secs. 17 and $18,380 \mathrm{ft}$. S. of rd. corner from E. $-S ., 25 \mathrm{ft}$. S. and 10 ft . W. from $S W$. corner of drolling of Frank H. Milis, 45 ft . E. of ra., in root on S. side of 10-1n. elm tree; copper nail and washer
T. 61 N., R. $12 \mathrm{~W} . ;$ on line between secs. 17 and 18 , 180 ft . S. of T-rd. W., opposite dweiling of J. M. Gibler, 20 ft . W. of rd., in root on E. side of 22-in. black-oak tree; crossed nails
T. 61 N., R. 12 W., on line between secs. 19 and $20,15 \mathrm{ft} . \mathrm{S}$. and 15 ft . E. from SE. corner of farmhouse of Martha Halbert, 70 ft . W. of rd., in root on E. side of 24-in. maple tree; crossed neils

Feet $8 4 \longdiv { 4 . 6 0 }$
870.35
867.38
871.78
(Continued in Shelbyville quadrangle; see line 6.)
10. FROM EDINA QUADRANGLE AT SEC. 28, T. 61 N., R. 12 W., WEST INTO KIRKSVILLE QUADRANGLE AT SEC. $20, \mathrm{~T} .61 \mathrm{~N} .$, R. $\mathrm{ll}_{4}$ W. (by F. Y. Brown ini 1937)
(Continued from Edina quadrangle; see line 5.)
T. 61 N., R. 12 W., quarter cor. between secs. 29 and $32,18 \mathrm{ft}$. S. and $55 \mathrm{ft} . \mathrm{E}$. from crossroads, in concrete post; standard tablet stamped "14 B $1936^{\prime \prime}$
T. 61 N., R. 12 W., on line between secs. 19 and 30, at gate to field, 25 ft . N. of rd:; near ground, in lnot on fence post; crossed nails
T. 61 N., R. 13 W., quarter cor. between secs. 24 and $25,45 \mathrm{ft}$. N. and 60 ft . E. from crossroads, in root on S. side of 16-in. elm tree; copper nail and washer
Nichols triangulation sta.; U.S.C. \& G.S. standard disk stamped "Nichols 1934"
Reference mark 1 ; U.S.G. \& G.S. standard reference disk stamped "Nichols No 1 1934"
Reference mark 2; U.S.C. \& G.S. standard reference disk s̀tamped "Nichols No $21934^{\prime \prime}$
U.S.C. \& G.S. standerd disk stamped "Nichols Azimuth 1934"
T. 61 N., R. 13 W., on line between secs. 23 and $26,400 \mathrm{ft} . \mathrm{W}$ : of smail iron bridge, about 300 ft . E: of old dweliling, in root on S : side of 16-in. white-oak tree; crossed nails
T. 61 N., R. 13 W., near quarter cor. ketween secs. 23 and 26; at NW. corner of Mount Vernon School, 45 ft . N. and 200 ft : W: from T-rd. S., on concrete doorstep; chiseled square
T. 61 N., R. 13 W., cor. secs. $22,23,26$, and $27 ; 100 \mathrm{ft}$. N. and 60 ft . E. from rd. corner N.-E., in root on N. side of 16-in. hickory tree; copper nall
T. 61 N., R. 13 W., near S. sixteenth cor. between secis. 22 and 23 , 125 ft . N. and 60 ft . W. from T-rd. NW., on top of concrete doorstep of smokehouse; chiseled square
T. 61 N., R. $13 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .22,45 \mathrm{ft}$. H . of steel bricige over Salt River, 25 ft . $S$ : of rd., in root on $W$ : side of $12-1 n$. black-oak tree; crossed nails
T. 61 N., R. 13 W., approximate quarter corr. between secs. 21 and 22, 150 ft . W. of Adair-Fnox county line, 100 ft . SE. of SE. corner of barn, 35 ft . S. of rd., on top of concrete well platform; chiseled square
T. 61 N., R. 13 W.; near W. sixteenth cor. sec. $21,25 \mathrm{ft}$. N. and 10 ft . W. from T-rd. S., at gate to fleld, in root on $N$. side of $20-1$. hedge tree; copper nall and washer
T. 61 N., R. 13 W., E. sixteenth cor. sec. 20 , 23 ft . S. and 55 ft . W. from crossroads, in concrete post; standard tablet stamped "15 B 1936"
T. 61 N., R. 13 W., near E. sixteenth cor. between secs. 17 and 20 , 18 ft . N. of T-rd. S., in root on S. side of l8-in. mulberry tree; copper nail and washer
T. 61 N., R. 13 W., corr. secs. $17,18,19$, and 20 , about 400 ft . S. of crossroads, 60 ft . W. of farmhouse, 40 ft . F. of rd., in root on N. side of 60-in. maple tree; copper nail and washer
T. 61 N., R. 13 W., near W. sixteenth cor. between secs. 18 and 19 , 125 ft . N. and 30 ft . W. from T-rd. S., in fence line, in root on S .side of $8-1 n$. wild-cherry tree; copper nail and washer
11. FROM DOWNING QUADRANGLE AT SEC. 20, T. 63 N., R. 14 W., SOUTH TO BULLION (by W. V. Kennedy in 1938) (Continued from Downing quadrangle; see line 9.)
T. 63 N., R. 14 W., in $N 1 / 2$ sec. 29, 135 ft . N. of East Center Church, 25 ft . S. and 75 ft . E. from crossroads, in root on SW. side of $20-1 \mathrm{n}$. maple tree; copper nail and washer
T. 63 N., R. 14 W., center sec. $32,1.7 \mathrm{mi}$. N. and 5.5 mi . E. from Kirksville, 20 ft . S. and 7 ft . W. from $T$-rd. N., in concrete post; standard tablet stamped "T T 130 C $1936 "$
T. $63 \mathrm{~N}_{\text {. }}$ R. $\mathcal{I}_{4} W_{\text {. }}$, quarter cor. between secs. 32 and $33,550 \mathrm{ft}$. S. of rd. corner S.-W., 30 ft . S. and 20 ft . W. from State Highway 11 at curve and rd. N., on W. end of iron pipe culvert under highway; chiseled square
State Highway 11 at rd. E., 15 ft . N. and 30 ft . E. from, in root on W. side of $14-1 n$. elm tree; crossed na1ls
T. 62 N., R. 14 W., in NW $1 / 4$ sec. 4, on NE. corner of concrete curb of State Highway ll bridge over Steer Creek; chiseled square
T. 62 N., R. 14 W., cor secs. $4,5,8$, and 9, 6 mi . E. of Kirksville, along State Highway $11,35 \mathrm{ft}$. S. and 2 ft . W. from intersection of E.-W. rd. and tangent of highway N., in concrete post; standard tablet stamped "T T 129 C 1936"
T. 62 N., R. 14 W., W. sixteenth cor. between secs. 5 and $8,45 \mathrm{ft}$. N. and $115 \mathrm{ft} . \mathrm{W}$. from State Highway 11 at rd. S., 75 ft . SN. of Fairview
T. 62 N., R. 14 W., in $S W 1 / 4$ sec. 8,500 ft. S. of T-rd. W., about 840 ft . N. of T-ra. N., on SE. wing wall of large concrete culvert; chiseled square
T. 62 N., R. 14 W., on line between secs. 8 and $17,15 \mathrm{ft}$. s. and 190 ft . 914.23

TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY FIRST-ORDER SEC. 22, T. 62 N., R. 14 W. (by R. W. Mattox in 1935)
T. 62 N., R. 14 W., in NE $1 / 4 \mathrm{sec} .22,0420 \mathrm{ft}$. N. of Quincy, Omaha \& Kansas City R.R., at T-rd. W., in corner of rd. adjacent to property of G. M. Leo; Iron post stamped "g21 A"
U.S.C. \& G.S. standard disk stamped "G 16 1933"

For additional level lines along Quincy, Omaha \& Kansas City R.R., Atchison, Topeka \& Santa Fe Ry., and Wabash Ry., refer to
United States Coast and Geodetic Survey first-order line;
Quincy, Ill. to liilan, Mo.; and second-order lines; Hurdiand, Mo.
to Fort Madison, Iowa and Hurdland to St. Charles.
(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 30^{\prime}$; longitude $92^{\circ} 15^{\prime}-92^{\circ} 30^{\prime}$ )
Adair, Knox, Schuyler, and Scotland Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by H. V. Rees in
1900) 

T. 63 N., R. 12 W., in NW $1 / 4$ NW $1 / 4$ sec. $c$, in $W$. face of stone foundation of dwelling of James NoWilliams; aluminum tablet stamped " 845 A"
Adair, in w. face of brick foundation of Catholic parish house; aluminum tablet stamped "926 A" (reported destroyed)

Feot
*847.967
*928.732
*839. 522
873.418 939.283
*854.039
828.504
*790.601
876.104
858.53
925.304
954.95
939.96

## 2. FROM PULASKI QUADRANGLE NEAR DOWNING SOUTHEAST ALONG STATE HIGHWAY 4 INTO MEMPHIS QUADRANGLE (by G. R. Hamlin in 1936) (Continued from Pulaski quadrangle; see line 2.)

Downing, 1.1 mi . NW. of, $25 \mathrm{ft} . \mathrm{S}$. and 35 ft . W. from highway at fences N. and S., in concrete post; standard tablet stamped " 1502 C W A 1935"

Downing, at E. end of Chicago, Burlington \& Quincy R.R. sta., on SW. corner of concrete well curb; chiseled square
U.S.C. \& G.S. standard disk stamped "L 86 1935"

Downing, 1.4 mi . SE. of, 35 ft . S. and 30 ft . W . from junction of rd. S., in concrete post; standard tablet stamped " 1503 CW A $1935^{\circ}$
880.067
874.18
872.741
865.592
858.92
857.422
emphis, 7.5 ml . W. of, 40 ft . S. and 25 ft . E. from junction of rd. N.,
in concrete post; U.S.C. \& G.S. and State Survey standard disk
861.446
861.936
861.936
862.360
832.70
820.98
831.548

Downing triangulation sta.; U.S.C. \& G.S. standard disk stamped "Downing 1934 ${ }^{\text {B }}$
Reference mark l; U.S.C. \& G.S. standard reference disk
Reference mark 2; U.S.C. \& G.S. standard reference disk
Nemphis, 7 ml . W. of, 25 ft . S. and 15 ft . W. from junction of rd. S., on S. end of W. concrete head wall of culvert; chiseled square
on E. end of iron pipe culvert; chiseled square T. $65 \%$., R. 12 W., 35 ft . S. of highway, 3 ft . N. and 3 ft. E. from fence corner, in concrete post; standard tablet stamped "1504 C W A 1935"

[^17]Memphis, $5.1 \mathrm{mi} . W$. of, $27 \mathrm{ft} . \mathrm{S}$. and 18 ft . W. from junction of rd. S., on $S$. end of $W$. concrete head wall of culvert; chiseled square

Feet
826.49
(Continued in hemphis quadrangle; see line 2.)
3. FROM MEMPHIS QUADRANGLE AT SEC. 9, T. 63 N., R. 12 W., WEST AND SOUTH ABOUT 1 MILE (by G. R. Hamlin in 1936)
(Continued from Memphis quadrangle; see line 4.)
T. 63 N., R. 12 W., quarter cor. between secs. 4 and $5,25 \mathrm{ft}$. S. and 85 ft . E. from crossroads, in root on $W$. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
828.02
4. FROM POINT ON STATE HIGHWAY 4, 7.5 MLLES VEST OF NEMPHIS, SOUTH
THROUGH BIELE GROVE INTO La PLATA QUADRANGLE AT SEC. 26, T. 63 N., R. 13 W. (by G. R. Hamlin in 1936)
T. 65 II., R. 13 W., near center sec. ll, 20 ft. S. and 85 ft. W. from T-rd. N., on W. end of $S$. concrete head wall of culvert; chiseled square T. $65 \mathrm{~N} ., \mathrm{R} .13 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec}$. 11 , on top of railing at SW. corner of steel bridge; top of $S$. bolt (painted)
796.14
T. 65 N., R. 13 W., in NW $1 / 4$ sec. 14 , 125 ft . E. of rd. corner E. $-\mathrm{S} .$, on N. end of iron pipe culvert; painted square
767.04
T. 65 N., R. 13 W., near cor. secs. 14, 15,22 , and $23,12 \mathrm{ft} . \mathrm{N}$. and 100 ft . W. from crossroads, on $N$. end of NE. wing wall of culvert; chiseled square
820.52
. 65 N., R. 13 W., near.E. sixteenth cor. between secs. 14 and 23 , 25 ft . N. and 30 ft . W. from rd. forks, in root on s. side of 6-1n. hackberry tree; copper nail and washer
766.88
T. $65 \mathrm{~N} ., \mathrm{R}$. $13 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .23,25 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from T-rd.
N., in root on S. side of 12-in. hickory tree; copper nail and washer
T. 65 N., R. 13 W., near cor. secs. $23,24,25$, and 26 , at T-rd. S., on E. end of iron pipe culvert; painted square
T. 65 N., R. $13 \mathrm{~W} .$, cor . secs. 25,26 , 35 , and $36,25 \mathrm{ft}$. S. and 5 ft . W. from T-rd. N., in concrete post; U.S.C. \& G.S. and State Survey standard
disk
827.35
T. 65 N., R. $13 \mathrm{~W} .$, quarter cor. between secs. 35 and $36,22 \mathrm{ft}$. S . and 144 ft . F. from T-rd. S., in root on W. side of $18-1 \mathrm{n}$. maple tree; copper nail and washer
767.30

64 II., R. 13 W., S. sixteenth cor. between secs. 1 and 2 , 12 ft . S . and 40 ft . W. from crossroads, at SE . corner of steel bridge, on $S$. end of steel girder plate; painted square
827.20
T. 64 N, R. $13 \mathrm{~W} ., 0.1 \mathrm{mi}$. E. of cor. secs. $11,12,13$, and $14,90 \mathrm{ft}$. S. and 55 ft . W. from T-rd. N., in root on W. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
799.03
T. 64 N., R. 13 W., quarter cor. between secs. 12 and $13,15 \mathrm{ft}$. S. and 210 ft . W. from T-rd. S., in top of wing wall piling at SE. corner of small steel bridge; copper nail and washer
791.40

Bible Grove, at W. limits of, 28 ft . S . and 24 ft . W. from County Rnute T at rd. S., on property of Virgil Blaine, in concrete post; standard tablet stamped "T T 10 G 1935"
850.360
T. 64 N., R. 13 W., in NW $1 / 4$ sec. $24,105 \mathrm{ft}$. N. and 60 ft . E. from junction of rd. NE., in root on N. side of l2-in. ash tree; copper nail and washer
732.72
T. 64 N., R. 13 W., in $S W 1 / 4 \mathrm{sec} .24,60 \mathrm{ft} . \mathrm{N}$. (?) and 12 ft . S. (?) from junction of rd. NW., in root on $N$. side of 24 -in. ash tree; copper nail and washer
729.47
T. 64 N., R. 13 W., in $S 1 / 2$ sec. $25,50 \mathrm{ft}$. S . and 12 ft . E. from rd. forks, in root on N. side of $10-1 n$. white-oak tree; copper nail and washer
854.09

Rd. corner NE, -S., 30 ft . W. of, in root on E. side of $10-\mathrm{in}$. hickory tree; crossed nails
T. 64 N., R. 13 W., quarter cor. between secs. 35 and $36,20 \mathrm{ft}$. S. and 45 ft . E. from T-rd. N., in top of 6-in. hedge stump; copper nail and washer
Clark trianguiation sta.; U.S.C. \& G.S. standard disk stamped "Clark 1934"
Reference mark 2; U.S.C. \& G.S. standard reference disk stamped "No 2 1934"
884.509
T. 63 N., R. 13 W., quarter cor. between secs. 2 and $3,80 \mathrm{ft}$. N. and 75 ft . W. from crossroads, in root on E. side of 12-1n. elm tree; copper nail and washer
864.33
T. $63 \mathrm{~N}_{\text {. }}, \mathrm{R}_{\text {. }} 13 \mathrm{~W}_{\text {., }}$ on line between secs. 10 and 11 , on $W$. end of angleiron brace at SW. corner of steel bridge over North Fork of South Fabius River; painted square
803.24
T. $63 \mathrm{N},. \mathrm{R} .13 \mathrm{~W} .$, cor. secs. $10,11,14$, and $15,150 \mathrm{ft}$. N. and 20 ft . E. from crossroads, on E. side of $15-\mathrm{in}$. elm tree; copper nail and washer
896.30
T. 63 N., R. 13 W., cor. secs. $14,15,22$, and $23,58 \mathrm{ft}$. N. and 30 ft . W. from T-rd. E., on W. end of S. concrete head wall of culvert; chiseled square
T. 63 N., R. 13 W., quarter cor. between secs. 22 and $23,275 \mathrm{ft}$. S. and 20 ft . E. from State Highway 11 at rd. N., on $E$. end of iron pipe culvert; painted square

# 5. FROM MEMPHIS QUADRANGLE WEST ALONG COUNTY ROUTE T TO BIBLE GROVE (by G. R. Hamlin in 1936) <br> (Continued from Memphis quadrangle; see line 5.) 

Bible Grove, 3 mi . E. of, 38 ft . N. anci 2 ft . E. from highway at fences N. and S., in concrete post; standard tablet stanped "T T il G 1935"

Bible Grove, about 1.4 mi . E. of, 15 ft . S. and 75 ft . W. from N.-S. crossroad, on W. end of $s$. concrete head wall of culvert; chiseled square

## 6. FROM POINT 1.5 MILES EAST OF ADAIR WEST TO SEC. 20 , T. 63 N.,

 R. $\mathcal{L}_{4}$ W. (by G. R. Hamlin in 1936)Adair, $1.5 \mathrm{mi} . E$. of, along State Highway ll, on Adair-Knox county line, 45 ft . N . and 160 ft . E. from crossroad, in root on S . side of $12-\mathrm{in}$. maple tree; copper nail and washer
Adair, 0.5 mi . E. of, 195 ft . S. and 30 ft . W. from State Highway 11 at crossroad, in root on E. side of $30-\mathrm{in}$. elm tree; copper nail and washer
Adair, $100 \mathrm{ft} . \mathrm{S}$. and 90 ft . E. from State Hichway 11 at street S., in front of Catholic Church, on N. side of concrete well curb; chiseled square
Adair, 0.2 mi . N. and 0.3 ml . W. from, in $\mathrm{NW} 1 / 4 \mathrm{sec} .20, \mathrm{~T} .63 \mathrm{~N}$. , R. 13 W., 12 ft . N. and 5 ft . E. from rd. cormer W.-S., in concrete post; standard tablet stamped "T T 132 C 1936"
T. 63 N., R. 13 W., cor. secs. $17,18,19$, and $20,195 \mathrm{ft} . \mathrm{S}$. and 25 ft. E. from T-rd. W., on N. end of E. concrete head wall of culvert; chiseled square
T. 63 N., Rs. 13 and 14 W., cor. secs. $13,18,19$, and $24,65 \mathrm{ft}$. S, and 25 ft . E. from crossroads, in root on S. side of 20-in. elm tree; copper nail and washer
T. 63 N., R. $1 l_{4}$ W., W. sixteenth cor. between secs. 13 and $24,15 \mathrm{ft}$. N. and 15 ft . W. from T-rd. N., on S . end of W. concrete head wall of culvert; chiseled square
T. 63 N., R. 14 W., E. sixteenth cor. between secs. 14 and $23,20 \mathrm{ft}$. N. and 200 ft. W. from T-rd. S., in root on N. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
T. 63 N., R. 14 W., cor. secs. $14,15,22$, and $23,25 \mathrm{ft} . \mathrm{N}$. and 100 ft. W. from crossroads, in concrete post; standard tablet stamped "T T 131 C $1936^{\prime \prime}$
T. 63 N., R. 14 W., on line between secs. 15 and 22 , on W. end of sw. concrete wing wail of bridge; chiseled square
T. 63 N., R. 14 W., cor. secs. $15,16,21$, and $22,40 \mathrm{ft} . \mathrm{s}$. and 35 ft . E. from crossroads, in root on $N$. 3ide of $24-1 n$. elm tree; copper nail and washer
T. 63 N., R. 14 W., on line between secs. 17 and $20,50 \mathrm{ft}$. NW. of NW. corner of steel briage over North Fork of Salt River, in root on $N$. side of $18-1 n$. elm tree; copper nail and washer
7. FROM BIBLE GROVE WEST INTO QUEEN CITY QUADRANGLE AT SEC. 32, T. 65 N., R. 14 W. (by W. V. Kennedy in 1937)

Eible Grove, 0.7 mi . W. of, in $\mathrm{S} 1 / 2 \mathrm{sec} .14, \mathrm{~T} .64 \mathrm{~N} . \mathrm{K} .13 \mathrm{~W} ., 30 \mathrm{ft}$. N. and 60 ft . W. from T-rd. N., in root on SW. side of 14 -in. black-oak tree; copper nail and washer
741.94

Bible Grove, about $1: 5 \mathrm{ml}$. W. of, on line between secs. 14 and 15 , T. 64 N., R. 13 W., on top of ridge, 15 ft . N. and 30 ft . W. from T-rd. S., on N. end of iron pipe culvert; chiseled square
828.33

Bible Grove, 1.7 mi. W. of, in $\mathrm{SW} 1 / 4 \mathrm{sec} .15, \mathrm{~T} .64 \mathrm{N.}, \mathrm{R} .13 \mathrm{~W} ., 150 \mathrm{ft}$. W. of farmhouse of Victor Ketchem, 40 ft . W. of rd., in root on SE. side of $10-1 \mathrm{n}$. elm tree; copper nail and washer
858.37

Bible Grove, 2.5 mi . W. of, in E $1 / 2$ sec. 16 , T. 64 N., R. 13 W., about 0.1 ml . W. of Schuyler-Scotland county line, 50 ft . S. and 15 ft . E. from T-rd. S., in concrete post; standard tablet stamped "T T 137 C 1936"
T. 64 N., R. 13 W., near quarter cor. between secs. 9 and $16,180 \mathrm{ft}$. S. and 35 ft . E. from rd. forks, on W. end of concrete walk to farmhouse of Corbett Brun; chiseled square
T. 64 N., R. 13 W., quarter cor. between secs. 8 and $17,50 \mathrm{ft}$. S. and 12 ft . W. from T-rd. N., in root on E. side of 12-in. white-oak tree; copper nail and washer
T. 64 N., R. 13 W., E. sixteenth cor. between secs. 7 and $18,10 \mathrm{ft} . \mathrm{N}$ and 30 ft . W. from County Route $A$ at rd. E., in concrete post; standard tablet stamped "T T 136 C $1936^{\circ}$
T. 64 N., R. 13 W., in $\mathrm{NE} 1 / 4 \mathrm{sec} .18,30 \mathrm{ft}$. N. and 30 ft . W. from County Route $A$ at rd. W., on top of concrete rieht-of-way post; chiseled cross
T. 64 N., Rs. 13 and 14 W., N. sixteenth cor. between secs. 13 and 18, 10 ft . S. and 25 ft . W. from E.-S. jog in rd., in root on SE. side of 10-in. walnut tree; copper nail and washer
916.31
T. $64 \mathrm{~N} ., \mathrm{R}$. $1 \mathrm{I}_{4}$ W., center of NW $1 / 4 \mathrm{sec} .13,25 \mathrm{ft}$. S. and 30 ft . W. from T-rd. N., in root on E. side of 22-1n. elm tree; copper nail and washer
T. 64 N., R. 14 W., center of $N W 1 / 4 \mathrm{sec} .12,14 \mathrm{ft}$. S . and 17 ft . E. from ra. fork NW., in concrete post; standard tablet stamped "T T 135 C $1936^{\prime \prime}$
T. 64 N., R. 14 W., in $S 1 / 2 \mathrm{sec} .2$, about 500 ft . E. of T-rd. E., 30 ft . N. and 15 ft . W. from Y-fork, in farmyard of C. L. Eiffert, in root on W. side of twin maple tree; copper nall and washer
T. 64 N., R. 14 W., quarter cor. between secs. 2 and $3,35 \mathrm{ft}$. S. and 35 ft . E. from crossroads, in root on N . side of 18 -in. maple tree; copper nail and washer
T. $64 \mathrm{~N} ., \mathrm{R} .14 \mathrm{~W} .$, center sec. 3, 20 ft . S. and 145 ft . E. from T-rd. S., in root on NE. side of $36-1 \mathrm{n}$. elm tree; crossed nails

Feet 902.038
938.16
939.02
938.26
923.80
960.192
916.19
886.26
(Continued in Queen City quadrangle; see line ll.)
8. NORTH IN SEC. 35, T. 65 N., R. IH W. (by W. V. Kennedy in 1937)
T. 65 N., R. $l_{4}$ W., S. quarter cor. sec. $35,25 \mathrm{ft}$. N. and 15 ft . W. from T-rd. N., in E. side of $30-i n$. post-oak tree; copper nail and washer
873.99
T. 65 N., R. 14 W., N. sixteenth cor. sec. 35 , 135 ft . SE. of crossroads, at E. side of dwelling of Abner Aldrich, on concrete wing wall of driveway to basement garage; chiseled square
915.01
9. FROM QUEEN CITY QUADRANGLE AT SEC. 32, T. $66 \mathrm{~N} ., \mathrm{R}$. I4 W., SOUTH THROUGH WILLMATHSVILLE AND SPERRY INTO La PLATA QUADRANGLE AT SEC. $17, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .14 \mathrm{~W}$.
(by W. V. Kennedy in 1937-38)
(Continued from Queen City quadrangle; see line 9.)
T. 66 N., R. Il $W$., in $N 1 / 2 \mathrm{sec} .32,35 \mathrm{ft}$. N. and 125 ft . E. from T-rd. E., 55 ft . SE. of farmhouse of Ray Starrett, in root on SW. side of $\dot{I}_{4}-1 \mathrm{n}$. black-locust tree; crossed nails
T. 66 N., R. $l_{4}$ W., near E. sixteenth cor. sec. $32,15 \mathrm{ft}$. N. and 40 ft . W. from rd. corner N.-E., 300 ft . W. of junction of rd. S., in concrete post; standard tablet stamped "12 K 1937"
957.099
T. 65 N., R. 14 W., near quarter cor. between secs. 4 and 5, 140 ft . N. of farmhouse of C. E. Gardine, 15 ft . E. of rd., in root on S. side of large, twin elm tree; copper nail and washer
941.44
T. 65 N., R. $\mathcal{I L}_{4}$. ., near center sec. $9,400 \mathrm{ft}$. N. of T-rd. E., 30 ft . S. and 25 ft . W. from junction of rd. NW., in concrete post; standard tablet stamped "13 K 1937"
821.208
T. $65 \mathrm{~N} ., \mathrm{R} . \mathrm{l}_{4} \mathrm{~W}$., in NE $1 / 4 \mathrm{sec}, 16,200 \mathrm{ft}$. NW. of farmhouse, 145 ft . N . and 20 ft . E. from ra. corner N.-W., in root on NE. side of $16-1 \mathrm{n}$. hickory tree; copper nail and washer
934.13
T. 65 N., R. 14 W., quarter cor. between secs. 16 and $21,270 \mathrm{ft}$. S. and 60 ft . E. from T-rd. N., 45 ft . N. of NE. corner of farmhouse of Albert Hoten, in root on N. side of 22-in. maple tree; nopper nail and washer
947.14
T. 65 N., R. 14 W., on line between secs. 20 and $21,275 \mathrm{ft}$. N. and 15 ft . W. from T-rd. E., in root on S. side of $12-1 n$. wild-cherry tree; crossed nalls
953.88
T. 65 N., R. 14 W., in NE $1 / 4 \mathrm{sec} .20,550 \mathrm{ft}$. N. of T-rd. N., 20 ft . S. and 20 ft . W. from rd. corner S.-E., on NE. corner of concrete porch of Figgee's general store; chiseled square
961.94
T. 65 N., R. $l_{4}$ W., quarter cor. between secs. 28 and $29,20 \mathrm{ft}$. S. and 10 ft . W. from T-rd. N., 3 ft. N. of fence, in concrete post; standard tablet stamped "IL K $1937^{\prime \prime}$
T. 65 N., R. ل1 W., on line between secs. 29 and $32,0.2 \mathrm{mi}$. W. of T-rd. N., on concrete wing wall at NE. corner of bridge; chiseled square
(For balance in Queen City quadrangle, see line 10.)
T. 64 N., R. 14 W., quarter cor. between secs. 7 and 8,235 ft. S. and 20 ft . E. from crossroads, in root on NW. side of 16 -in. maple tree; copper nail and washer
975.31
T. 64 N., R. IL W., E. sixteenth cor. sec. 8, 250 ft . S. and 65 ft . E. from T-rd. S., in root on S. side of 12-in. elm tree; copper nail and washer
T. 64 N., R. 14 W., E. sixteenth cor between secs. 8 and $17,25 \mathrm{ft}$. N. and 20 ft . E. from rd. corner N.-E., in fence line, in root on N . side of 8-in. hedge tree; copper nail and washer
T. 64 N., R. 14 W., cor. secs. $16,17,20$, and $21,50 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from crossroads on Adair-Schuyler county line, 2 ft . W. of hedge fence, in concrete post; standard tablet stamped "15 K 1937"
970.33
T. 64 N., R. 14 W., cor. secs. $20,21,28$, and $29,30 \mathrm{ft}$. N. and 35 ft . E. from County Route A at N. -S. croseroad, in root on NE. side of 16-in. maple tree; copper nail and washer
T. 64 N., R. $1_{4}$ W., quarter cor. between secs. 22 and 27,20 ft. S. and 40 ft . W. from County Route $A$ at crossroad, on E . end of iron pipe culvert; chiseled square
(Continued in La Plata quadrangle; see line 11.)
10. FROIS SEC. 17, T. 63 N., R. 14 W., WEST AND SOUTH ABOU' 1 MILE INTO QUEEN CITY QUADRANCLE (by'w. V. Kennedy in 1938)
T. 63 N., R. 14 W. , on line between secs. 17 and $18,175 \mathrm{ft}$. W. of farmhouse, 75 ft . S. and 30 ft . E. from rd. corner S.-E., in root on W. side of 14-1n. elm tree; crossed nails
T. 63 N., R. 14 W., near SW. cor. sec. $17,30 \mathrm{ft}$. NE. of T-rd. N.; 1ron post stamped "Prim Trav Sta No 11910 Mo" :
(Continued in Queen City quadrangle; see line l2.)
For an additional level line along Chicago, Eurlington \& Quincy R.R., refer to United States Coast and Geodetic Survey secondorder line, Medill to Glenwood Jct.

PULASKI QUADRAMGLE*<br>(Latitude $40^{\circ} 30^{\prime}-4.0^{\circ} 45^{\prime}$; longitude $92^{\circ} 15^{\prime}-92^{\circ} 30^{\prime}$ )<br>Schuyler and Scotland Counties



1. ISOLATED BENCHMARKS (not shown on diagram; by P. W. McMillen in 1911)
T. 66 N., R. 14 W., in NW $1 / 4 \mathrm{sec}$. 27, at Pin Oak School, 600 ft . S. of T-rd. E., 25 ft . W. of rd., in root of $15-1 n$. elm tree; copper nail
T. 66 N., R. 14 W ., in NE $1 / 4$ sec. 26 , 30 ft . S. and 85 ft . E. from T-rd.
S., $80^{\prime} \mathrm{ft}$. N. of cemetery; iron post stamped " 900 A "

Feet $93 \overline{4.63}$
901.640
2. FROM MOULTON QUADRANGLE SOUTHEAST ALONG STATE HIGHWAY 4 INTO DOWNING QUADRANGLE (by G. R. Hamlin in 1936)
(Continued from Moulton quadrangle; see line 4.)
Lancaster, 2.4 ml . E. of, $35 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from N.-S. crossroad, on $S$. end of $W$. concrete head wall of culvert; chiseled square
Lancaster, 2.9 mi . E. of, 45 ft . N. and 132 ft . W. from junction of rd.
$\mathrm{N} ., 10 \mathrm{ft}$. S. and 33 ft . W. from SVI. corner of schoolhouse, in concrete post; standard tablet stamped "800 C W A 1935"
936.827

Lancaster, 3.4 ml . E. of, 25 ft . S. and 25 ft . W. from junction of ra.
S., on S. end of $\mathbb{W}$. concrete head wall of culvert; chiseled square
894.17

Lancester, 4.4 mi . E. of, 35 ft . S . and 25 ft . W. from $\mathrm{N} .-\mathrm{S}$. crossroad, on E. end of S. concrete head wall of culvert; chiseled square
Lancaster, 5 mi . E. of, 27 ft . S. and 15 ft . W. from junction of rd. S., on $S$. end of $W$. concrete head wall of culvert; chiseled square
Lancaster, 5.8 mi . E. of, 30 ft . S. and 45 ft . W. from. junction of rd .
W., in concrete post; standard tablet stumped " 1501 CW A 1935"

Downing, 3 mi . NW. of, 35 ft . S. and 20 ft . W. from N. -s. crossroad, on $S$. end of $W$. concrete head wall of culvert; chiseled square
U.S.C. E G.S. standará disk stamped "N 86 1935"
904.02
815.356

Downing, 1.7 mi . NW. of, 16 ft . N. and 45 ft . W. from E.-W. crossroad,
on N. end of W. concrete head wall of culvert; chiseled square
(Continued in Downing quadrangle; see line 2.)
For an additional level line along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey secondorder line, Miedill to Glenwood Jct.

[^18]
# moULTON QUadrangle * <br> (Latitude $40^{\circ} 30^{\prime}-40^{\circ} 45^{\prime}$; longitude $92^{\circ} 30^{\prime}-92^{\circ} 45^{\prime}$ ) <br> Putnam and Schuyler Counties 



1. FROM CENTERVILIE QUADRANGLE AT SEC. 24, T. 66 N., R. 17 W., EAST ALONG ROADS TO POINT ABOUT 1.4 MILES SW. OF GLENWOOD, THENCE EAST ALONG STATE HIGHWAY 4 TO LANCASTER (by Cornish Beck in 1936)
(Continued from Centerville quadrangle; see line 1.)
T. $66 \mathrm{~N} ., \mathrm{Rs} .16$ and $17 \mathrm{~W} ., 0.2 \mathrm{~ms}$. N. of cor. secs. $19,24,25$, and 30 , 10 ft . 'W. of rd. corner N. -E., 20 ft . N. and 8 ft . E. from fence corner; iron post stamped "Prim Trav Sta No 131910 Mo"
T. 66 N., R. $16 \mathrm{~W} ., 500 \mathrm{ft}$. S. of quarter cor. between secs; 19 and 20 , 25 ft . S. and 180 ft . E. from T-rd. S., in root on N. side of 22-in. locust tree; copper nail and washer

Feet 847.780

[^19]2. FROM CENTERVILLE QUADRANGLE EAST ALONG IOWA-MISSOURI STATE LINE TO SMALL TRIANGULATION STATION AT SEC. $13, \mathrm{~T} .67 \mathrm{~N} ., \mathrm{R} .14 \mathrm{~W}$. (by Cornish Eeck in 1936)
(Continued from Centerville quadrangle; see line 3.)
T. 67 N., R. 16 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .18$, in top of NW. pile of wooden bridge over Spring Creek; copper nail and washer
T. 67 N., R. 16 W., quarter cor, between secs. 17 and 18 , about 790 ft . S. of T-rd. W., on NE. wing wall of bridge; chiseled square

Feet
838.82
830.06
838.991
949.89
958.488
962.90
873.64
924.21
991.794
991.504
950.87
942.12
951.711
889.85
957.52
959.019
989.06
985.24
981.56
973.301
820.02
865.77
944.54
856.924
4. FROM LANCASTER EAST ALONG STATE HIGHWAY 4 INTO PULASKI

QUADRANGLE (by G. R. Hamlin in 1936)
U.S.C. \& G.S. standard disk stamped "R 86 1935"

Lancaster, 1.2 ml . E. of, on $S$. end of $W$. concrete wing wall of bridge
J-690 1931; chiseled square
855.01
(Continued in Pulaski quadrangle; see line 2.)
5. FROM LANCASTER SOUTH INTO QUEEN CITY QUADRANGLE AT SEC. 30, T. 66 N., R. it W. (by W. V. Kennedy in 1937)

Lencaster, 1.5 mi . SE. of, near E. sixteenth cor. between secs. 19 and 30, T. 66 N., R. 14 W., 300 ft . N. and 15 ft . W. from $T-\mathrm{rd}$. E., on W. end of iron pipe culvert; chiseled square

Feet 946.09
(Continued in Queen City quadrangle; see line 9.)
For additional level lines along Wabash Ry. and Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey second-order lines; Moulton, Iowa to Kirksville, Mo. and Medill to Glenwood Jet.

## QUEEN CITY QUADRANGLE

(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 30^{\prime}$; long1 tude $92^{\circ} 30^{\prime}-92^{\circ} 45^{\prime}$ )
Adair, Putnam, and Schuyler Counties


1. ISOLATED BENCHMARKS (not shown on diagram; by P. W. McMillen in 1910-11)
T. 63 N., R. 14 W., in SE $1 / 4$ sec. 7, about 1 mi . W. of Sperry, 700 ft . W. of wooden bridge over Salt River, at $N$. edge of rd., in root of 6-in. oak tree; copper nail
T. $66 \mathrm{H} ., \mathrm{R} .14 \mathrm{~W} .$, near quarter cor. between secs. 30 and $31,100 \mathrm{ft}$. W. of smail wooden bridge, 50 ft . N. of rd., in root of 24 -in. elm tree; copper nail and washer
2. FROM SEC. 14 , T. 63 N., R. 15 W., NOFTH THROUGH GREENTOP AND QUEEN CITY TO SEC. $30, \mathrm{~T} .66 \mathrm{~N} ., \mathrm{R} .14 \mathrm{~W}$. (by P. W. McMillen in 19i0-11)
T. 63 N., R. 15 W., quarter cor. between secs. 11 and $12,0.5 \mathrm{ml}$. E. of Bryant School, NW. of T-rd. N.; iron post stamped "973"
T. 63 N., R. 15 W., near S. sixteenth cor. between secs. 1 and $2,600 \mathrm{ft}$. W. of large dweling, at S . edge of rd. near sharp turn, in root of 8-in. tree; copper nail
Tps. 63 and $64 \mathrm{~N} ., \mathrm{R}$. 15 W ., quarter cor. between secs. 2 and $35,1.5 \mathrm{ml}$. E. of Sublette, NE. of crossroads, in root of willow tree; copper nail
T. 64 N., R. 15 W., in N $1 / 2$ sec. 35 , opposite $T-$ rd. E.; iron post stamped "973"
T. 64 N., R. $15 \mathrm{~W} .$, abont 0.1 mi . S. of cor. secs. $26,27,34$, and 35 , 600 ft . N . of T-rd. N., at W. edge of rd., in root of 8-in. elm tree; copper nall
Greentop, 1.3 ml . N. of, along Wabash Ry., 100 ft . W. of rd. crossing, at $N$. edge of rd.; Iron post stamped "979"
Queen City, on S. side of public square, $50 \mathrm{ft} . \mathrm{N}$. of post office, at $N$. edge of Main Street; iron post stamped "1005"
T. $65 \mathrm{~N} ., \mathrm{R} .15 \mathrm{~W}$. , near center sec. $23,0.5 \mathrm{ml}$. SW. of Blacks School, at N. edge of private rd. E., inside of gate; iron post stamped "Mo 986

1,002.951
T. 65 N., R. 15 W., near N. sixteenth cor. sec. 14, 150 ft . W. of dwelling, 40 ft . E. of rd., in root of $18-1 \mathrm{n}$. elm tree; copper nail
T. 65 N., R. 15 W., in NE $1 / 4 \mathrm{sec} .21,60 \mathrm{ft}$. NW. of New Hope Church, 20 ft . E. of rd.; iron post stamped "Mo 852"
3. FROM SEC. 36 , T. $66 \mathrm{~N} ., \mathrm{R}, 15 \mathrm{~W} .$, WEST THROUGH NORTH PART OF QUADRANGLE INTO GREEN CITY GUADRANGLE AT SEC. 25 , T. 66 N., R. 17 W. (by P. W. McMillen in 1910-11)
T. 66 N., R. 15 W., near S. line sec. $35,0.9 \mathrm{~ms}$. W. of liount Zion Church, on bank of small stream, at $S$. edge of ra., in root of $24-1 n$. elm tree; copper nail
Tps. 65 and 66 N., R. 15 W., on line between secs. 3 and 34 , opposite T-ra. S.; iron post stamped "Mo 941".

Feet 883.01
938.352
T. $66 \mathrm{~N} .$, R. 15 W. , about 0.1 mi . E. of center sec. $33,3 \mathrm{mi}$. S. of Glenwood, opposite T-rd. W., in root of elm tree; copper nail
989.93
T. $66 \mathrm{~N} ., \mathrm{R}_{\mathrm{L}} 15 \mathrm{~W}$. , near line between secs. 32 and 33 , 1 mi . NE. of Julesburg, 75 ft . W. of Wabash Ky. at rd. crossing, in root of $24-\mathrm{in}$. elm tree; copper nail
976.59
T. 66 N., R. 15 W., in $\mathrm{SW} 1 / 4 \mathrm{SW} 1 / 4 \mathrm{sec} .32,0.7 \mathrm{ml}$. W. of Eethel Church, at N. edge of ra.; iron post stamped "Mo 984"
T. $66 \mathrm{H} ., \mathrm{Rs} .15$ and $16 \mathrm{~W} .$, near S. sixteenth cor. between secs. 31 and 36, on E. bank of Elm Creek, 20 ft . S. of rd., in root of 24 -in. maple tree; copper nail
T. $66 \mathrm{N}$. , R. 16 W ., near center sec. 35 , at rd. junction, 75 ft . W. of dwelling; iron post stamped "Mo $965^{11}$
T. $66 \mathrm{~N} ., \mathrm{R}$. 16 W. , in $\mathrm{SE} 1 / 4 \mathrm{NE} 1 / 4 \mathrm{sec}$. $34,1.3 \mathrm{mi}$. E. of Grogan Bridge, at $N$. edge of rd., in root of $24-1 n$. oak tree; copper nail
Livonia, 0.5 mi . SE. of, in SE. abutment of Grogan Bridge over Chariton River; bolt head
Livonia, 0.7 mi . W. of, about 200 ft . N. of E . sixteenth cor. between secs. 29 and $32, \mathrm{~T} .66 \mathrm{~N} .$, R. $16 \mathrm{~W} ., 110 \mathrm{ft} . \mathrm{S}$. and 10 ft . E. from State Highway 4 at rd. S.; iron post stamped "Mo 957"
981.808
832.85
962.504
923.62
801.52
954.508
T. 66 N., R. 16 W. , near SW. cor. sec. 29, 50 ft . E. of bridge over Little Brusb Creek, at N. edge of rd., in root of $10-1 \mathrm{n}$. maple tree; copper nail
826.79
T. 66 N., R. $16 \mathrm{~W} .$, in $\mathrm{Mm} 1 / 4 \mathrm{sec}$. $31,200 \mathrm{ft}$. W. of bridge over Big Brush Creek, 100 ft . S. of rd. forks, at W. edge of rd., in root of oak tree; copper nail

840.07

(Continued in Green City quadrangle; see line l.)
4. FROM GREEN GITY QUADRANGLE AT SEC. 25, T. 65 N., R. 17 W., EAST TO QUEEN CITY (by P. W. McMillen in 1910-11)
T. $65 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, in NE $1 / 4 \mathrm{NW} 1 / 4 \mathrm{sec} .29,1.5 \mathrm{mi}$. W. of Worthington, 0.2 ml . NW. of Erashfield School, at top of ridge, at E. edge of rd.; iron post stamped "Mo 947"
941.443

Worthington, 0.5 mi . W. of, near W . sixteenth cor. sec. 28 , T. 65 N. , R. 16 W., at F. edge of rd., on boulder; chiseled mark
855.23

Worthington, 0.6 mi . NE. of, in $\mathrm{SW} 1 / 4 \mathrm{SW} 1 / 4 \mathrm{sec} .22, \mathrm{~T} .65 \mathrm{~N} ., \mathrm{R} .16 \mathrm{w}$. , 100 ft . W. of Slate ford across Chariton River, at S. edge of rd.; iron post stamped "Mo 795 "
T. $65 \mathrm{~N} ., \mathrm{R}$. 16 W., in $\mathrm{NE} 1 / 4 \mathrm{sec} .22$, in SW . corner of iron bridge over Elm Creek; bolt head
793.093
T. 65 N., R. 16 W., in NE $1 / 4$ NE $1 / 4 \mathrm{sec} .23$, 1 mi . N. of Satterfield School, on top of ridge at rd. forks, at N . edge of rd., in root of 12-1n. oak tree; copper nail
T. $65 \mathrm{~N} ., \mathrm{R}$. 16 W ., near cor secs. $23,24,25$, and $26,200 \mathrm{ft}$. W. of Satterfield School, at H. edge of rd., in root of $2 L_{4}$-in. oak tree; copper nail
798.35
920.40
921.92
T. 65 N., R. 15 W., in NW $1 / 4 \mathrm{SW} 1 / 4 \mathrm{sec} .30,1.2 \mathrm{mi}$. W. of Patterson School, at S. edge of rd.; iron post stamped "Mo 975"
972.617
T. $65 \mathrm{~N}_{.}, \mathrm{R}_{\mathrm{L}} 15 \mathrm{~W} .$, in NE $1 / 4 \mathrm{SE} 1 / 4 \mathrm{sec} .30,300 \mathrm{ft}$. W. of Patterson School, 50 ft . S. of rd., in root of 10 -in. hickory tree; copper nail
989.22

## 5. FROM GREEN CITY QUADRANGLE AT SEC, $24, \mathrm{~T} .64 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, EAST <br> TO SEC. $11, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .15 \mathrm{~W}$. (by P. W. McMilion in 1910-11) (Continued from Green City quadrangle; see line 1.)

T. 64.N., R. 16 W., about 0.1 mi . E. of quarter cor. between secs. 19 and 30, about 1 mi . NW. of Green Grove School, at turn in rd. at top of hill, 200 ft . SW. of log dwelling, at S . edge of rd., on boulder; chiseled mark
926.58
T. $64 N_{.}, R_{\text {l }} 16$ W., in $S W 1 / 4$ SW $1 / 4$ sec. $29,200 \mathrm{ft}$. S. of Green Grove School, at $W$. edge of rd., in root of oak tree; copper nail
T. 63 N., R. 16 W., near center sec. $5,700 \mathrm{ft}$. E. of iron bridge over Shuteye Creek, NW. of T-rd. N., in root of $2 L_{4}$-in. maple tree; copper nail
Connelsville, about 0.2 ml . N. of old Iowa and St. Louis R.R. sta.
(now abandoned), 600 ft . N. of iron bridge over Shuteye Creek, 200 ft . W. of track, at E. edge of rd.; iron post stamped "Mo 768".

Connelsville, 0.8 mi . S. of, in NW. abutment of iron bridge over Chariton River; bolt head
Connelsville, about I mi. E. of, in NW $1 / 4 \mathrm{sec} .10$, T. $63 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W}$. , at top of ridge, 100 ft . E. of dwelling, at S . edge of rd., in root of 18-in. h1ckory tree; copper nail
782.01
egley, 0.8 mi. W. of, in $S W 1 / 4$ sec. 2, T. $63 \mathrm{~N} .$, R. $16 \mathrm{~W} ., 300 \mathrm{ft}$. E. of T-rd. N., 50 ft . E. of rd., in root of l2-in. oak tree; copper nail
Fegley, near cor. secs. 1, 2, 11 , and 12 , T. 63 N., R. 16 W., about 700 ft . S. of store, at E. edge of ra.; iron post stamped "Mo 941"
Fegley, about 1 mi . E. of, in $\mathrm{SE} 1 / 4 \mathrm{SE} 1 / 4 \mathrm{sec} .1, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W}$. , 100 ft . N. of dwelling of W. F. Miller, at N. edge of rd., in root of 10-in. oak tree; copper nail
765.595

Sublette, 2.5 mf . SW. of, in NE $1 / 4 \cdot \mathrm{SE} 1 / 4$ sec. 6 , T. $63 \mathrm{~N} .$, R. $15 \mathrm{~W} .$, at top of hill, 150 ft . W. of large dweiling, at N. edge of rd., in root of $12-i n$. hickory tree; copper nail
0.8 mi . W. of Wabash Ry., 100 ft . W. of small dwelling, at N . edge of rd., in root of $14-1 n$. cottonwood tree; copper nail
Refuge Church, 250 ft . S. of, near W. sixteenth cor. between secs. 10 and $15, \mathrm{~T} .63 \mathrm{~N}_{.}, \mathrm{R} .15 \mathrm{~W} .$, at SE . corner of cemetery, 25 ft . N. of rd.; iron post stamped "Mo 937"
T. $63 \mathrm{~N} ., \mathrm{R} .15 \mathrm{~W} .$, near cor. secs. $10,11,14$, and $15,200 \mathrm{ft}$. E. of large dwelling, 30 ft . N . of rd., in root of $12-1 \mathrm{n}$. elm tree; copper na1l
934.756
6. FROM GREEN CITY QUADRANGLE AT SEC. 1, T. 63 N., R. 17 W.
(by P. W. McM111en in 1910-11)
(Continued from Green City quadrangle; see line 2.)
T. 63 N., R. 16 W., near W. sixteenth cor. sec. $6,50 \mathrm{ft}$. N. of Bethel Church, in root of l2-in. oak tree; copper nail

## 7. FROM SEC. 32, T. $66 \mathrm{~N} ., \mathrm{R} .15 \mathrm{~W} .$, EAST TO SEC. $34, \mathrm{~T} .66 \mathrm{~N} .$, R. 15 W. (by R. W. Mattox in 1935)

T. 66 N., R. 15 W., in $S W 1 / 4$ sec. $32,300 \mathrm{ft}$. E. of dwelling, 150 ft . N. of rd., in root on S. side of $30-1 n$. oak tree; copper nail and washer
T. $66 \mathrm{~N} .$, R. $15 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .32,30 \mathrm{ft}$. E. of E. door of Bethel Church, in root on N. side of 10-in. hickory tree; nall and washer
T. 66 N., R. 15 W., near line between secs. 32 and $33,1 \mathrm{mi}$. NE. of N. switch of Wabash Ry. at Julesburg, 50 ft . E. of rd. crossing, in right-of-way fence, in root on W. side of 20 in. elm tree; nail and washer
T. 65 N., R. 15 W., in NE $1 / 4 \mathrm{sec} .5,0.5 \mathrm{ml}$. N. of N. switch of Wabash Ry. at Julesburg, 150 ft . SE. of rd. crossing, in root on W. side of 24-1n. oak tree; nail and washer
U.S.C. \& G.S. standard disk stamped "Y 83 1935"
T. 65 N., R. 15 W., in NE $1 / 4 \mathrm{sec} .5$, 100 ft . W. of T-rd. W., $12 \mathrm{ft} . \mathrm{S}$. of S. fence, in root on SE. side of $40-1 \mathrm{n}$. elm tree; nail and washer
T. $65 \mathrm{~N} .$, R. $15 \mathrm{~W} .$, in NE $1 / 4$ sec. $5,300 \mathrm{ft}$. E. of dwelling, $75 \mathrm{ft} . \mathrm{N}$. of old rd., 100 ft . NW. of barn, in root on S . side of $36-1 \mathrm{n}$. elm tree; nail and washer
T. 65 N., R. 15 W., in NW $1 / 4 \mathrm{sec} .4$, in root on $S$. side of twin 36-in. elm tree; nail and washer
977.44
998.180
967.18
T. 65 N., R. $15 \mathrm{~W} .$, near N. sixteenth cor. sec. 4, in fence line E. of rd., in root on W. side of 18-1n. elm tree; nail and washer $974 \cdot 72$
T. 65 N., R. 15 W., near N. quarter cor. sec. 4, in S. fence line, in root on N. side of tree; nail and washer
T. 66 N., R. 15 W., in $S E 1 / 4$ sec. 33 , in fence line N. of rd., in root on S. side of 10-in. haw tree; nail and washer
Tps. 65 and $66 \mathrm{~N} ., \mathrm{R}$. 15 W ., on line between secs. 3 and 34 , opposite T-rd. S.; iron post stamped "Mo 941"
Reference mark, about 310 ft . W. of post, N. of old rd., in root on S . side of lo-in. elm tree; nail and washer

## 8. FROM MOULTON QUADRANGLE AT SEC. 30 , T. 66 N., R. 16 W., SOUTH to STATE HIOHWAY 4 (by Cornish Beck in 1936)

T. 66 N., R. 16 W., near E. sixteenth cor. sec. $30,70 \mathrm{ft}$. N. and 19 ft . W. from T-rd. E., in root on E. side of $26-1 n$. white-oak tree; copper nail and washer
T. $66 \mathrm{~N} ., \mathrm{R}$. $16 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .31,18 \mathrm{ft}$. N. and 15 ft . E. from State Highway 4 at rd. N., on head wall of culvert; chiseled square

## 9. FROM MOULTON QUADRANGLE AT SEC. 30, T. 66 N., R. IL W., SOUTHEAST INTO DOWNING QUADRANGLE AT SEC. $32, \mathrm{~T} .66$ N., R. 14 W. (by W. V. Kennedy in 1937) <br> (Continued from Moulton quadrangle; see line 5.)

T. 66 N., R. 14 W., in SE $1 / 4$ SE $1 / 4$ sec. $30,700 \mathrm{ft}$. W. of T-rd. S., 575 ft . E. of rd. forks S., E., and NW., 28 ft . N. of rd., in rrot on W. side of twin black-locust tree; copper nail and washer
(Continued in Downing quadrangle; see line 9.)
5 10. FROM DOWNING QUADRANGLE AT SEC. 30, T. 65 N., R. 14 W., SOUTH INTO DOWNING QUADRANGLE AT SEC. $7, \mathrm{~T} .64 \mathrm{~N} ., \mathrm{R} .14 \mathrm{~W}$. (by W. V. Kennedy in 1937)
(Continued from Downing quadrangle; see line 9.)
T. $65 \mathrm{~N} ., \mathrm{Rs}$. 14 and $15 \mathrm{~W} .$, cor. secs. $25,30,31$, and 36 , SW. of crossroads, on center of head wall of concrete culvert; chiseled square
945.85
T. 64 N., Rs. 14 and 15 W., S. sixteenth cor. between secs. 31 and 36 , 65 ft . SE. of farmhouse of Walter Ayres, 35 ft . N , and 240 ft . E. from T-rd. E., in root on $W$. side of $18-1 n$. wainut tree; copper nail and washer
T. 64 N. , Rs. 14 and $15 \mathrm{~W} ., \mathrm{N} . \operatorname{cor}$. secs. 1 and $6,15 \mathrm{ft}$. S. of T-rd.
Meyer triangulation sta.; U.S.C. \& G.S. standard disk stamped "Meyer 1934" Reference mark l; U.S.C. \& G.S. standard reference disk stamped "Meyer No 1 1934 ${ }^{\prime \prime}$
Reference mark 2; U.S.C. \& G.S. standard reference disk stamped "Meyer No 2 1934
Azimuth mark; U.S.C. \& G.S. standard disk stamped "Meyer Azi 1934"
zimuth mark; U.S.C. \& G.S. standard disk stamped "Moyer Azi 1934"
T. 64 N., R. 14 W., near W. sixteenth cor. between secs. 6 and 7, 200 ft . $N$. and 18 ft . E. from T-rd. E., in root on S. side of l2-in. elm tree; copper nail and washer W. from T-rd. N., in root on NE. side of $16-1 \mathrm{n}$. elm tree; crossed nails
(Continued in Downing quadrangle; see line 9.)

> 11. FROM DOWNING QUADRANGLE AT SEC. 32, T. 65 N., R. 14 W. (by W. V. Kennedy in 1937) (Continued from Downing quacrangle; see line 7.)
T. 65 N., R. 14 W., about 700 ft . W. of S. sixteenth cor. between secs. 31 and $32,90 \mathrm{ft}$. N. of farmhouse of Stanley Moot, 30 ft . S. of rd., in root on N. side of twin maple tree; copper nail and washer
986.71
12. FROM DOWNING QUADRANGLE AT SEC. 18 , T. 63 N., R. Il W., WEST
TO SEC. $22, T \cdot 63$ N., R. 15 W. (unchecked single-run spur
line by W. V. Kennedy in 1938 ) line by w. V. Kennedy in 1938)
(Continued from Downing quadrangle; see line 10.)
T. 63 N., Rs. 14 and 15 W., cor. secs. $13,18,19$, and $24,15 \mathrm{ft}$. S. and 20 ft . W. from T-rd. S., on S. end of iron pipe culvert; chiseled square
T. 63 N., R. 15 W., in NW $1 / 4 \mathrm{sec} .24,70 \mathrm{ft}$. N. and 40 ft . W. from T-rd. S., on SE. corner of bottom concrete step to Oak Grove Church; chiseled square
946.71
T. 63 N., R. 15 W., conter sec. 23,20 ft. N. and 170 ft . E. from T-rc. S., 2 ft . N. of fence, in concrete post; standard tablet stamped " 2 K 1938
T. 63 N., R. 15 W., quarter cor. between secs. 22 and $23,365 \mathrm{ft}$. N. and 15 ft . E. from crossroeds, in root on NW. side of $18-1 \mathrm{n}$. walnut tree; copper nail and washer

TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY SECOND-ORDER LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE IN QUEEN CITY (by R. W. Mattox in 1935)

For an additional level line along Wabash Ry., refer to United
States Coast and Geodetic Survey second-order line, Moulton,
Iowa to Kirksville, Mo.

Adair and Macon Counties


1. FROM NOVINGER WEST ALONG STATE HIGHWAY 6 ABOUT 1.4 MILES, THENCE SOUTH ALONG ROADS TO SEC. 32, T. 62 N., R. $16 \mathrm{~W} .$, THENCE EAST ALONG STATE HIGHWAY 11 TO JUNCTION OF U.S. HIGHWAY 63, THENCE NORTH ALONG U.S. HIGHWAY 63 TO JUNCTION OF STATE HIGHWAY 6 , THENGE EAST ALONG STATE HIGHWAY 6 INTO La PLATA QUADRANGLE (by R. W. Mattox in 1935)

Feet
769.811
769.88

Novinger, on SW. wing of bridge over Davis Creek; chiseled square
Novinger, about 0.8 ml . W. of, in $\mathrm{SW} 1 / 4 \mathrm{sec} .29$, T. 63 N. , R. $16 \mathrm{w} ., \mathrm{N}$. of highway, in root on S. side of $18-1$. oak tree; copper nail and washer
799.78
889

Culvert, on top of N. head wall; chiseled square
T. 63 N., R. 16 W., S. of crossroad, on E. head wall of side rd. cul-
vert; chiseled square
T. 63 N., R. 16 W. ., in $N W 1 / 4 \mathrm{sec} .31,150 \mathrm{ft}$. S. of T-rd. W., in root on E. side of 16-in. oak tree; copper nail and washer
920.12
T. 63 N., R. 16 W., in $S W 1 / 4$ sec. $31,75 \mathrm{ft}$. NW. of T-rd. W., in root on SE. side of $18-1 n$. oak tree; copper nail and washer
949.01
T. 62 N., R. 17 W., in NE $1 / 4$ sec. $1,50 \mathrm{ft}$. N. of angle in rd., in root on S. side of $30-1 n$. oak tree; copper nail and washer
948.82
T. 62 N., R. 17 W., in NE $1 / 4$ sec. 1 , along rd. near Billy Creek, in root on E. side of 24 -in. elm tree; copper nail and washer
(For balance in Winigan quadrangle, see line l.)
T. $62 \mathrm{~N} .$, Rs. 16 and 17 W. , quarter cor. between secs. 19 and $24,500 \mathrm{ft}$. SE. of dwelifing, in root on E. side of 14-in. oak tree; copper nail and washer
935.43
T. 62 N., R. 16 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .19,120 \mathrm{ft}$. NE. of dwelling, in root on N. side of 14 -in. maple tree; copper nail and washer
893.81
T. $62 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, near S. sixteenth cor. sec. 19, on top of ridge, 20 ft . S. of fence line, in root on N. side of $24-1 \mathrm{n}$. oak tree; copper nail and washer
T. $62 \mathrm{~N} ., \mathrm{R}$. 16 W ., in $\mathrm{SE} 1 / 4 \mathrm{sec}$. 30 , near crossroads, in root on SW . side of $30-1 \mathrm{n}$. maple tree; copper nail and washer
T. 62 N., R. 16 W., in $S W 1 / 4 \mathrm{sec} .30$, on top of ridge, 900 ft . SE. of school, in fence line W. of ra., in root on NE. side of 20-in. oak tree; copper nail and washer
T. 62 N., R. $16 \mathrm{~W} .$, in $\mathrm{NE} 1 / 4 \mathrm{sec}$. 31 , 50 ft . SW. of greenhouse, 50 ft . N. of rd., on E. edge of driveway, in root on SW. side of 30-in. maple tree; copper nail and washer
T. 62 N., R. 16 W., in $N W 1 / 4$ sec. $32,400 \mathrm{ft}$. N. of dwelling in angle of rd., 15 ft . E. of E . fence, in root on W. side of l4-in. hickory tree; copper nall and washer
Tps. 61 and $62 \mathrm{~N}_{\mathbf{\prime}}, \mathrm{R}^{2} 16 \mathrm{~W}$. , quarter cor. between secs. 5 and $32,50 \mathrm{ft}$. N. and 30 ft . E. from crossroad, in concrete post; standard tablet stamped "795 C W A 1935"
T. 61 N., R. 16 W. , in NW $1 / 4 \mathrm{sec} .4$, N. of crossroad, on top of $E$. head wall of culvert; chiseled square
T. $61 N_{\text {., }}$ R. $16 \mathrm{~W} .$, in $\mathrm{N} 1 / 2 \sec .4,200 \mathrm{ft}$. W. of highway maintenance depot, in fence $N$. of rd., in root on S. side of 30-1n. elm tree; copper nail and washer
Bridge over Chariton River; surface of floor
T. 61 N., R. 16 W., in NE $1 / 4$ sec. 4, E. of bridge over Chariton River, on top of S . pile in E. retaining wall of overflow bridge; copper nail and washer
Bridge $K-298$ 1933, on top of $N$. pile in E. retaining wall; copper nail
T. 62 N., R. 16 W., in $\mathrm{SW} 1 / 4$ sec. 34 , N. of highway, 20 ft . from fence, in root on S . sice of $20-1 \mathrm{n}$. oak tree; copper nail and washer

Feet 883.04 T. $62 \mathrm{ll}$. , R. $16 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .34,50 \mathrm{ft}$. N. of highway, 40 ft . E. of rd. N., in root on S. side of $10-1 \mathrm{n}$. oak tree; copper nail and washer 933.29 T. $62 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .35,65 \mathrm{ft}$. S . of highway, 75 ft . W. of rd. S., in root on N. side of 10-1n. oak tree; copper nail and washer T. $61 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, approximate N. quarter cor. sec. $2,40 \mathrm{ft}$. S. and 60 ft . W. from junction of rd. S., in concrete post; standard tablet stamped "794 C W A 1934"
T. $62 \mathrm{~N} ., \mathrm{R}$. 16 W. , in $\mathrm{SE} 1 / 4 \mathrm{sec} .35,30 \mathrm{ft}$. N. of highway, E. of private rd. N., in root on S. siãe of 12-in. oak tree; copper nail and washer
T. $62 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W}$. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .36,500 \mathrm{ft}$. W. of junction of County Route $N$, in E. W. fence line, in root on N. side of 24 -in. oak tree; copper nail and washer
923.80
944.146
953.23
961.24
T. 62 N., R. $16 \mathrm{w} .$, in $S E 1 / 4 \mathrm{sec} .36,400 \mathrm{ft}$. S. of dwelling, $63 \mathrm{ft} . \mathrm{W}$. of highway, in root on $E$. side of triple oak tree; copper nail and washer
971.40
T. 62 N., R. $16 \mathrm{~W} .$, in SE $1 / 4 \mathrm{sec} .36$, N. of highway, on top of N. head wall of culvert; chiseled squere
T. 62 N., R. 15 W., in $N W$ 1/4 sec. $31,50 \mathrm{ft}$. W. of highway, in root on E. side of $30-i n$. osk tree; copper nail and washer
T. 62 N., R. 15 W., in $S W 1 / 4 \mathrm{sec} .30,35 \mathrm{ft}$. W. of highway, in concrete
post; standard tablet stamped "793 C W A 1934"
960.480
, of barn, $25 \mathrm{ft} . \mathrm{S}$. of fence, $S$. of highway, in root on $N$. side of twin 36-in. maple tree; copper nail and washer
973.71
T. 62 N., R. 15 W., W. sixteenth cor. sec. 29 , on top of ridge, 150 ft . SW. of dweiling, $120 \mathrm{ft} . \mathrm{N}$. of highway, in root on S. side of $10-1 \mathrm{n}$. hickory tree; copper nail and washer
979.37
T. $62 \mathrm{~N} ., \mathrm{R}$. 15 W ., near center sec. $29,150 \mathrm{ft}$. W. of school, 100 ft . S. of dwelling, at junction of rd. S., on W. head wall of culvert; chiseled square
T. 62 N., R. 15 W., in NW $1 / 4$ sec. $29,420 \mathrm{ft}$. W. of junction of rd. N., E. of Wabash Ry., on N. head wall of culvert; chiseled square
975.02
964.09
T. 62 N., R. 15 W., center sec. 28 , S. of highway, 5 ft. N. of fence, in
root on N. side of $14-1 n$. elm tree; copper nail and washer
943.78
T. $62 \mathrm{~N} ., \mathrm{R}$. $15 \mathrm{~W} .$, in $\mathrm{NE} 1 / 4$ sec. 28 , 100 ft . S. of highway, in E.-W. fence, in root on N. side of twin 24-in. elm tree; copper nail and washer
967.95

Kirksville, 2.2 mi . S. of S . limits of, 225 ft . S. and 57 ft . W. from junction of $\mathrm{J} . \mathrm{S}$. Highway 63, in concrete post; standard tablet stamped "785 C W A 1934"
Kirksville, 2 mi . S. of S. limits of, 175 ft . W. of highway, W. of dwelling on Roger farm, in root on E. side of $36-1$. locust tree; copper nail and washer
T. $62 \mathrm{~N} ., \mathrm{R}$. 15 W ., in $\mathrm{E} 1 / 2 \mathrm{sec} .21$, on top of ridge, 100 ft . W. of highway, in root on E. side of 16 -in. oak tree; copper nail and washer
Kirksvilie, 1 mi . S . of S . 11 mits of, at S . junction of State Highway 6 , on N. head wall of concrete culvert; chiseled square
905.011
T. 62 N., R. 15 W., on line between secs. 15 and $22,50 \mathrm{ft}$. S. of highway, 50 ft . E. of junction of rd. S., E. of cemetery, in root on N. side of 12-1n. white-oak tree; copper nail and washer
925.04
T. 62 N., R. 15 W., E. sixteenth cor. between secs. 15 and $22,150 \mathrm{ft}$. W. of junction of rd. N., on N. head wall of culvert; chiseled square
T. 62 N., R. 15 W., in SW $1 / 4$ sec. 14 , 100 ft . E. of dwelling, N. of highway, S . of rd., on N . head wall of culvert; chiseled square
966.22
T. 62 N., R. 15 W., near quarter cor. between secs. 14 and $23,200 \mathrm{ft}$. SW. of Radical School, at Junction of rd. N., on W. head wall of culvert; chiseled square
T. 62 N., R. 15 W., cor. secs. $13,14,23$, and $24,33 \mathrm{ft} . \mathrm{N}$. and 3 ft . W. from junction of rd. S., in concrete post; standard tablet stamped "1421 C W A 1934"
T. $62 \mathrm{~N}_{\text {. }}$, R. 15 W., quarter cor. between secs. 13 and 24 , at junction of rd. S., on W. head wall of culvert; chiseled square
T. $62 \mathrm{~N} ., \mathrm{Rs} .1 \mathrm{l}_{4}$ and 15 W, cor. secs. $13,18,19$, and $2 \mu_{4}, 400 \mathrm{ft}$. W. of
junction of rd. N., on S. head wall of culvert; chiseled square
919.94
T. 62 N., R. $1 H_{4}$. W., E. sixteenth cor. between secs. 18 and $19,150 \mathrm{ft}$. E. of junction of rd.: S., on N. head wall of culvert; chiseled square
950.58
(Continued in La Plata quadrangle; see line 4.)
2. FROM La pLata quadrangle northwest along u.s. highway 63 TO JUNCTION OF STATE HIGHWAY 11 (by R. W. Mattox in 1935)
(Continued from La Plata quadrangle; see Ine 2.)
T. 61 N., R. 14 W ., in SE $1 / 4$ sec. 19, 200 ft . SE. of farmhouse, on W. head wall of culvert; chiseled square
Concrete culvert, opposite Wabash Ry. culvert 1998, on W. head wall; chiseled square
T. 61 N, Rs. 14 and 15 W ., about 0.2 mi . E. of cor. secs. $13,28,19$, and $24,40 \mathrm{ft}$. N. and 60 ft . W. from crossroad, in concrete post; standard tablet stamped "791 C W A 1934"
Mlepost 144 on Wabash Ry., 100 ft . S. of, $54 \mathrm{ft.E}$. of highway, 3 ft . W. of N.-S. fence, in root on W. side of 12-1n. elm treej nails
T. 61 N., R. 15 W., in sec. 13, opposite Wabash Ry. trestle 2002, on W. end of head wall of concrete culvert; chiseled square
Telephone pole on N.-S. rd., 100 ft . S. of highway, on base; chiseled square
T. 61 N., R. 15 W., in SE $1 / 4$ sec. 11 , near Millard, 300 ft . N. of S . switch of Wabash Ry., on top of W. head wall of culvert; chiseled square

Millard, in front of Wabash Ry. sta., at base of signboard; surface of ground
T. 61 N., R. $15 \mathrm{~W} .$, in SE $1 / 4 \mathrm{sec} .3,30 \mathrm{ft}$. S. of junction of rd. N., in concrete post; standard tablet stamped "792 C W A 1934"

Feet

Wabash Ry, culvert 2003, 200 ft . S. of, 50 ft . E. of highway, in root on S. side of 18-in. elm tree; spike
970.643

Tps. 61 and $62 \mathrm{~N} .$, R. 15 W ., on line between secs. 3 and $34,150 \mathrm{ft}$. S. of junction of rd. W., near point where Wabash Ry. and highvay separate, on top of W. head wall of culvert; chiseled square
Stucco dwelling, 150 ft . S. of, N. of highway, on W. head wall of culvert; chiseled square
T. 62 N., R. 15 W., in $\mathrm{SW} 1 / 4 \mathrm{sec} .27$, N. of crossroad, on W. head wall. of culvert; chiseled square
T. 62 N., R. 15 W., in NW $1 / 4$ sec. 27 , on top of hill, near junction of

State Highway 11, on W. head wall of cattle underpass; chiseled square

## 3. FROM La PLATA QUADRANGLE AT SEC. 5, T. 61 N., R. 14 W., SOUTHEAST TO SEC. 18, T. 61 N., R. 14 W. <br> (by R. W. Mattox in 1935) <br> (Continued from La Plata quadrangle; see line 4.)

Bear Creek; surface of water at 2:30 p.m. Dec. 31, 1935
855.9
T. 61 N., R. $l_{4}$ W., in E $1 / 2 \mathrm{sec} .6,500 \mathrm{ft}$. E. of T-rd. S., 300 ft . W. of dwelling, 8 ft . N. of fence, in root on S . side of $10-1 \mathrm{n}$. walnut tree; nails
909.60
T. 61 N., R. 14 W., in $S W 1 / 4$ sec. 6 , in farmyerd $E$. of rd., in root on N. side of $12-1 n$. box-elder tree; copper nail and washer
T. 61 N., R. 14 W., on line between secs. 6 and 7, at T-rd. S., in N. fence ine, in root on s. side of 24-1n. oak tree; nails
T. 61 N., R. 14 W., in NW $1 / 4$ sec. 7 , near top of ridge, 600 ft . N. of school, in farmyard, in root on W. side of $30-1 \mathrm{n}$. maple tree; copper nail and washer
T. 61 N., R. 14 W., in $S W 1 / 4$ sec. 7, NE. of T-rd. E., E. of rd., at base of telephone pole; surface of ground
4. FROM WINIGAN QUADRANGLE AT? SEC. 12, T. 60 N., R. 17 W., EAST BY WAY OF SOUTH GIFFORD INTO ELMER QUADRANGLL AT SEC. 15, T. 60 N., R. 15 W. (by B. A. Barnes in 1936)
(Continued from Winigan quadrangle; see line 2.)
T. 60 N., R. 17 W., on line between secs. 12 and $13,131 \mathrm{ft} . \mathrm{N}$. and 36 ft . E. from crossroads, in root on S. side of $36-1 \mathrm{n}$. elm tree; copper nall and washer
779.50
T. 60 N., R. 16 W., in $N 1 / 2$ sec. 18 , $189 \mathrm{ft} . \mathrm{N}$. and 120 ft . E. from rd. corner N.-E., in root on S. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
784.26
T. $60 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .8,150 \mathrm{ft}$. N. and 42 ft . W. from rd. junctions E. and SW., 3 ft . S. and 7 ft . W. from NW. corner of Star School, on SW. corner of concrete well block; chiseled square
898.16

South Gifford, 1.5 mi . W. of, near center sec. 8, T. 60 N., R. 16 W.,
115 ft . N. and 90 ft . W. from T-rd. E., on concrete base of S. steel frame member of airplane beacon; chiseled square
904.90

South Gifford, 1.4 mi . W. of, about 600 ft . N. of E. sixteenth cor sec. 8, T. 60 N., R. 16 W., 30 ft. N. and 20 ft. W. from rd. corner W.-S., in concrete post; standard tablet stamped "1547 E R A 1935"
South Gifford, 0.7 mi . W. of, quarter cor. between secs. 8 and 9 ,
T. 60 N., R. $16 \mathrm{~W} ., 35 \mathrm{ft} . \mathrm{N}$. and 150 ft . W. from junction of lane N., 380 ft . W. of rd. at N.-S. fence, in root on S . side of 28-in. maple tree; copper nail and washer
735.30

South Gifford, on front step to door of Gifford Savings Bank; chiseled square
T. 60 N., R. 16 W., in $S W 1 / 4 \mathrm{sec} .11,55 \mathrm{ft} . \mathrm{N}$. of County Route D at rd. S., in root on SE. side of 20-1.n. black-cak tree; copper nail and washer
Junction of rd. S.; surface of highway
T. 60 N., R. $16 \mathrm{~W} ., 380 \mathrm{ft}$. W. of S. sixteenth cor. between secs. 11 and 12 , 30 ft . N. and 4 ft . W. from County Route D at rd. S., 30 ft . S. and 81 ft . E. from SE. corner of school, in concrete post; standard tablet stamped " 1548 ERA 1935"
763.973
T. 60 N., R. $16 \% .$, in $S I / 2 \mathrm{sec} .12,18 \mathrm{ft} . \mathrm{S}$. and 180 ft . W. from County Route $D$ at rd. S., on center of S . head wall of concrete culvert; chiseled square
T. 60 N., R. 16 W., in NW $1 / 4$ sec. $13,51 \mathrm{ft} . \mathrm{S}$. and 30 ft . W. from T-rd. S., 27 ft . E. of farmhouse, in root on SE. side of 12-in. black-oak tree; copper nail and washer
891.41
T. 60 N ., R. 16 w ., in $\mathrm{SE} 1 / 4 \mathrm{sec} .13,48 \mathrm{ft}$. N. and 10 ft . W. from T-rd. N., 260 ft . E. of E. face of farmhouse, in root on E. side of l2-in. white-oak tree; copper nail and washer
T. 60 N., R. 15 W., S. sixteenth cor. sec. 18,20 ft. N. and 200 ft. W. from T-rd. W., in root on E. side of 16-in. white-oak tree; copper nail and washer
T. 60 N., R. 15 W., near quarter cor. between secs. 17 and 20 ,

15 (? 20) ft. N. and 30 ft . W. from T-rd. W. (? E.), in concrete post; standard tablet stamped "1549 E R A 1935"
926.38
tchison, Topoka \& Santa Fe Ry. at rd. crossing; top of E. rail.
T. 60 N., R. 15 W. , cor. secs. $15,16,21$, and $22,153 \mathrm{ft} . \mathrm{N}$. and 43 ft . W. from T-rd. W., 1 ft . S. and 4 ft . E. from NE, corner of Center School, on NE. corner of concrete porch; chiseled square

## 5. FROM WINIGAN QUADFANGLE ALONG QUINCY, OMAFA \& KANSAS CITY RAILROAD EAST AEOUT 1 MILE (by H. B. Pyle and F. Y. Brown in 1937) (Continued from Winigan quadrangle; see line 5.)

T. 63 N., Ii. 17 W., in SE $1 / 4 \mathrm{sec} .24,275 \mathrm{ft}$. W. of Quincy, Omaha \& Kansas City R.R. at rd. crossing, 100 ft . N. of track, 12 ft . N. of
rd., on top at center of $N$. head wall of concrete bridge; chiseled square
U.S.C. \& G.S. standard disk stamped "U 16 1933"

Feet

## 6. FROM SEC. 5, T. 61 N., R. 16 W., SOUTHWEST INTO WINIGAN

 QUADRANGLE AT SEC. 13, T. 60 N., R. 17 W. (by J. J. Crane in 1937)T. 61 N., Rs. 16 and 17 W., on line between secs. 1 and $6,20 \mathrm{ft}$. S. and 15 rt . W. from State Highway 11 at N.-S. crossroad, on W. ond of head wall of concrete culvert; chsseled square
State Highway $11,0.4 \mathrm{ml}$. S. of, 150 ft . N. and 35 ft . W. from T-rd. N., in root on W. side of twin l6-in. white-cak tree; crossed nails
i. 61 N., R. 16 \%., near center sec. $7,25 \mathrm{ft}$. E. of M.-S. rd., 1 ft . E. of fence, in root on W. side of $15-1 n$. elm tree; crossed nails
T. 61 N., R. 16 W., near E. sixteenth cor. sec. $18,40 \mathrm{ft} . \mathrm{S}$. of T-rd. N., in concrete post; standard tablet stamped " $154 \psi_{4}$ E R A 1935"
(For balance in Winigan quadrangle, see ilne 9.)
T. 60 N., R. 17 W., in sec. $1,500 \mathrm{ft}$. S. and 60 ft . E. from T-rd. S.,
in root on $S$. side of 16 -in. white-oak tree; copper nail and washer
T. 60 It., R. 17 W., in $N 1 / 2$ sec. $12,60 \mathrm{ft}$. S. and 20 ft . E. from T-rd.
S., in root on $S$. side of $14-1 n$. white-oak tree; crossed nails
T. 60 N., R. $17 W_{\text {. }}$ in $S W 1 / 4 \mathrm{sec} .12,100 \mathrm{ft} . \mathrm{S}$. and 45 ft . W. from T-rd. S., in crotch of twin oak tree; copper nall and washer
T. 60 N., R. 17 W., on line between secs. 12 and $13,125 \mathrm{ft}$. N. and 40 ft . E. from crossroads, in root on S. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
(Continued in Winigan quadrangle; see line 9.)
7. FROM SEG. $5, \mathrm{~T} .61 \mathrm{~N}$, , R. 16 W ., WEST INTO WINIGAN QUADRANGLE AT SEC. 36, T. 62 N., R. 17 W. (by J. J. Crane in 1937)
T. 62 N., R. 16 W., near quarter cor. between secs. 31 and $32,350 \mathrm{ft} . \mathrm{N}$. and 60 ft . E. from T-rd. E., in root on W. side of $30-1 \mathrm{n}$. hickory tree; copper nail and washer
T-rd. S., 110 ft . N. and 100 ft . W. from, in root on E. side of 32-in. post-cak tree; crossed nails
(Continued in Winigan quadrangle; see line 6.)

[^20]

> 1. FROM BUCKLIN QUADRANGLE EAST AND SOUTHEAST ALONG CHICAGO, PURLINGTON \& QUINCY RAILROAD EY WAY OF CALLAC INTO COLLEGE MOUND QUADRANGLE (by S. F. Archer in 1920) (Continued from Eucklin quadrangle; see line 1.)

| T. 57 N., R. 16 W., in NW $1 / 4 \mathrm{sec} .6$, at E. end of cut, 35 ft . N. of fence, in smail drain, in root ( 4 in . underground) on S. side of 24-in. cottonwood tree; spike | Feet |
| :---: | :---: |
| $57 \mathrm{N}. . \mathrm{F} .16 \mathrm{~W}$. , on line between secs. 5 and 6 , in fence line N. of |  |
| track, in root on S. side of 42-in. cottonwood tree; copper nail and washer | 696.54 |
| T. 57 N., R. 16 W., in $N 1 / 2 \mathrm{sec} .5$, on top of $N$. end of parapet wall of <br> E. abutment of concrete bridge 84.02 ; chiseled square | 695.59 |
| T. 57 N., R. 16 W., near quarter cor. between secs. 4 and 5, on top of Ni . end of parapet wall of E. abutment of bridge 83.49 over Chariton River; chiseled square (elev. determined by U.S.C. \& G.S.) | 703.125 |
| T. $57 \mathrm{H} ., \mathrm{R} .16 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .4,50 \mathrm{ft}$. SW. of Methocist Church, |  |
| 160 ft . N. of rd. crossing, E. of rd.; iron post starnped "Prim Trav Sta |  |
| No 70 F 1924 1920 lio 692" | 51 |
| $57 \mathrm{H}$. , R. $16 \mathrm{~W}, \mathrm{l}$ in SE $1 / 4 \mathrm{sec} .4$, on top of I. end of E. concrete |  |
| 1 er of bridge 22.54 over drainage ditch; chiseled square | 691.99 |
| T. $57 \mathrm{~K} ., \mathrm{K} .16$ \%., on line between secs. 10 and 11 , SE. of rd. crossing, in fence corner; iron post stamped "19,20 Mo 750" |  |
| T. $57 \mathrm{N.}, \mathrm{R}$.16 W., near center sec. ${ }^{\text {l }}$ ll, 100 ft . E. of private rd. crose- |  |
| ing, S. of fence line S. of track, in root on WW. sicie of N. one of two |  |
| 10-in. oak trees; copper nail and washer | 770.02 |
| T. $57 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} ., \mathrm{near}$ W. sixteenth cor. sec. J.2, at overhead bridge, |  |
| S. of treck, at E. end of first bent, in top of E. end of 12- by li2-in. timber set on top of piling; spike | 812.50 |
| $57 \mathrm{N}$. , R. 16 W. , in E , $1 / 2 \mathrm{sec} .3 \mathrm{C}$, on top of E. end of $s$. heading of |  |
| bridge 79.42 over Stinking Croek; chiseled square | 784.83 |
| Callao, at sta., in front of operator's window, on top of S. side of con- |  |
| crete base of semaphore; chiseled square | 815.18 |
| Callao, at NW. corner of Front and Market Streets, in SE. corner of park; |  |
| iron post stamped "Prim Trav Sta No 71 F 19242920 No 819" | 818.03 |
| T. $57 \mathrm{~N} ., \mathrm{l} .15 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .8,500 \mathrm{ft}$. W. of sign marked "Callao", |  |
| 615 ft . F. of milepost $78,10 \mathrm{ft}$. S. of fence S . of track, in root on |  |
| E. sicie of 10-1n. hickory trec; copper nail and washer | 764.03 |
| 57 N., Fi. J. 5 W., in NE $1 / 4$ sec. 17 , on N . end of concrete pier at E. |  |
| end of bridge 77.37 over widilo Fork of Chariton Piver; chiseled square (elev, determined by U.S.c. \&c G.S.) <br> (Continued in College mound quadrangle; see line 1.) | 744.808 |
| 2. FROM ATLANTA QUADRANGLE AT SEC. 19, T. 59 N., R. 14 W., vEST BY WAY OF BARNESVILIE TO ETHEL, THENCE NORTH INCO BUCKLIN QUADRANGLE AT SEC. $1, \mathrm{~T} .59 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. <br> (by B. A. Parnes in 1936) <br> (Continued from Atlanta quadirangle; see line 6.) |  |
| T. 59 II., R. 14 W., quarter cor. between secs. 19 and $30,78 \mathrm{ft}$. S. and 33 ft . W. from T-rd. N., in root on NE. side of $20-1 \mathrm{n}$. elm tree; crossed nails | 873.03 |
| T. 59 N., R. 14 W., in W (1/4 sec. $30,36 \mathrm{ft}$. N . and 162 ft . W. from |  |
| T-rd. S., in root on Sll. side of $16-1 n$. white-oak tree; copper nail and washer | 902.94 |
| 59 N., \%. 15 W., in IEE $1 / 4 \mathrm{sec} .25$, on top of bolt on SW. pier of |  |
| bridge over East Fork of Chariton River; chiseled cross | 813.54 |
| 59 N., K. 15 W., in $N W 1 / 4 \mathrm{sec} .25,24 \mathrm{ft}$. N. and 90 ft . E. from |  |
| crossreads, in roct on $E$. side of $20-1 n$. black-oal tree; copper nail and washer | 822.17 |

T. 59 N., R. $15 \mathrm{~V} ., 480(? 48) \mathrm{ft}$. E. of N. sixteenth cor. betveen secs. 25 and $26,102 \mathrm{ft}$. S. of farmhouse of J . H. Emdee, 30 ft . S . of rdi at curve, in concrete post; standard tablet stamped "1551 E R A $19358944^{\prime \prime}$ T. 59 N., R. 15 W., in NW $1 / 4$ sec. $26,310 \mathrm{ft}$. W. of T-rd. S., on outside rivet head of end brace at NW. corner of steel bridge over Lick Branch; chiseled cross
T. $59 \mathrm{H} ., \mathrm{R} .15 \mathrm{~W}$. , in $\mathrm{NE} 1 / 4$ sec. $27,205 \mathrm{ft} . \mathrm{S}$. and 100 ft . E. from ra. forks, on NE. corner of concrete step to school; chiseled square
T. 59 N., R. 15 W., on line between secs. 22 and $27,78 \mathrm{ft}$. N. and 40 ft . E. from T-rd. N., in root on NW. side of 14 -in. black-oak tree; crossed nails
T. 59 N., R. 15 W., on line between secs. 21 and $28,260 \mathrm{ft}$. W. of T-rd. N., on S. end of E. concrete pier of small bridge over branch; chiseled square
T. 59 N., R. 15 W., cor. secs. $20,21,28$, and $29,35 \mathrm{ft}$. S. and 35 ft . E. from T-rd. S., in concrete post; standard tablet stamped "1552 ERA 1935 899"
T. 59 N., R. 15 W., S. cor. secs. 32 and $33,96 \mathrm{ft}$. N. and 9 ft . E. from crossroads, on center of $E$. head wall of concrete culvert; chiseled square
T. 59 N., R. $15 \mathrm{~W} ., \mathrm{S}$. cor. secs. 31 and $32,12 \mathrm{ft}$. N. and 110 ft . W. from T-rd. S., at rd. corner E.-N., on center of NE. head wall of concrete culvert; chiseled square
T. 59 N., R. 15 W., quarter cor. between secs. 31 and $32,18 \mathrm{ft}$. . and 75 ft . W. from T-rd. W., in root on S. side of 18-1n. maple tree; crossed nails
T. 59 N., Rs. 15 and 16 W. , quarter cor. between secs. 31 and $36,20 \mathrm{ft}$. N. and 335 ft . W, from crossroads, in root on N . side of 18-in. elm tree; copper nail and washer
T. 59 N., R. 16 W., 650 ft . W. of center sec. $36,5 \mathrm{ft}$. N. and $25 \mathrm{ft} . \mathrm{W}$. from T-rd. E., in concrete post; standard tablet stamped "1553ERA $1935877^{\prime \prime}$
T. $59 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, in NE $1 / 4$ sec. 35 , 35 ft . S. of SW . corner of farmhouse of J. P. Erookman, 12 ft . N . of rd., in root on NE. side of l4-in. white-oak tree; copper nall and washer
T. 59 N., R. 16 W. , in $\mathrm{S} 1 / 2 \mathrm{sec} .26,51 \mathrm{ft}$. N. and 127 ft . E. from crossroads, in root on N. side of $20-1 n$. black-oak tree; crossed nails
T. 59 N., R. $16 \mathrm{~W} .$, in NW $1 / 4 \mathrm{sec}$. 34 , in pier on upstream side of W. end of bridge over Chariton River, on bolt head; chiseled cross
T. 59 N., R. 16 W., 775 ft. W. of quarter cor. between secs. 27 and 28 , 545 ft . E. of bridge over Chariton River drainage ditch, 13 ft . N. and 18 ft . E. from rd. corner SE. -W., in concrete post; standard tablet stamped "1554 E R A 1935712 "
T. 59 N., R. 16 W., center sec. $29,20 \mathrm{ft}$. S. and 100 ft . W. from crossroads, 18 ft . $N$. and 1 ft . E. from NW. corner of church, in root on SW . side of $14-i n$. elm tree; copper nail and washer
T. 59 N., R. 16 W., near E. sixteenth cor. sec. $30,21 \mathrm{ft} . \mathrm{S}$. and 70 ft . W. from Atchison, Topeka \& Santa Fe Ry . at rd. crossing, on center of N. side of concrete base of signal box; chiseled square

Ethel, 25 ft . N. of school, in NW. corner of yard, in concrete post; standard tablet stamped "Prim Trav Sta No 67 F 1924 849 "
Top of ridge, I ft. N. and 24 ft . W. from private rd. NW., in base of corner fence post; spike
T. $59 \mathrm{~N} ., \mathrm{Rs} .16$ and $17 \mathrm{~W} .$, about 0.1 mi . N. of quarter cor. between secs. 19 and $24,6 \mathrm{ft}$. S. and 3 ft . W. from fence corner, 24 ft . W. of rd., in root on NE, side of $14-1 n$. cottonvood tree; copper nail and washer
T. 59 N., Rs. 16 and 17 W. , on line between secs. 13 and 18 , on SE. concrete wing wall of bridge; chiseled square
T. 59 N., Rs. 16 and 17 W., near N. sixteenth cor. between secs. 13 and 18, 9 ft . S. and 60 ft . F. from NE. corner of farmhouse of Kenneth Roger, 54 ft . W. of ra., in root on W. side of $8-1 \mathrm{n}$. walnut tree; copper nail and washer
Ethel, 3 ml . N. of, W. quarter cor. sec. 7, T. 59 N., R. 16 W., $30 \mathrm{ft} . \mathrm{N}$. and 4 ft . E. from abandoned T-rd. E., 9 ft . N. of fence corner, in concrete post; standard tablet stamped "Prim Trav Sta No 66 F 1924 810 "
T. 59 N., Rs. 16 and $17 \mathrm{~W} .$, on line between secs. 7 and $12,260 \mathrm{ft}$. S. and 20 ft. W. from T-rd. W., in root on E. side of $30-\mathrm{in}$. elm tree; crossed nails
T. 59 N., Rs. 16 and $17 \mathrm{~W} .$, on line between secs. 1 and $6,60 \mathrm{ft}$. N. of rd. corner S.-E., 27 ft . S. and 10 ft . W. from SW . corner of farmhouse. of H. F. Berghan, in root on NE. side of 10-in. white-oak tree; copper na11 and washer
T. 59 N., R. 16 W. , in $\mathrm{N} 1 / 2 \mathrm{sec}$. $6,54 \mathrm{ft}$. N. and 115 ft . W. from T-rd. E. to Elmer, 24 ft . S. and 61 ft . W. from $S W$. corner of farmhouse, in root on W. side of triple $8-1 n$. black-oak tree; copper nail and washer

Peet
893.637
833.28
905.94
890.94
818.58
899.055
(Continued in Buckin quadrangle; see line 2.)
3. FROM KIRKSVILLLE QUADRANGLE AT SEC. $15, \mathrm{~T} .60$ N., R. 15 W.,

SOUTHEAST INTO ATLANTA QUADRANGLE AT SEC. 19, T. 60 N., R. 14 W. (by B. A. Barnes in 1936)
(Continued from Kirksvilie quadrangle; see line 4.)
Crossroads, 54 ft . N. and 135 ft . E. from, in root on NE. side of $12-\mathrm{in}$. white-oak tree; crossed nails
888.18
T. 60 N., R. 15 W., quarter cor. between secs. 22 and $23,21 \mathrm{ft}$. S. and 279 st. E. from T-rd. $\mathrm{N}_{\text {. }}, 10 \mathrm{ft}$. E. of smali wooden cuivert, in root on N. side of 12-in. white-oak tree; copper nail and washer
885.55
T. 60 N., R. 15 W., center sec. $23,22 \mathrm{ft}$. S. and 12 ft . E. from rd. at fences $\mathrm{N}_{\mathrm{i}}$ and S. , in concrete post; standard tablet stamped " 1550 ER A 1935 892 ${ }^{11}$
T. 60 N., R. 15 W., W. sixteenth cor. sec. 24 , 21 ft . N. and 250 ft . W. ..... Feet
from T-rd. S., 4 ft . S. and 9 ft . W. from fence corner, in root on W. 921.63
side of $10-1 n . \operatorname{elm}$ tree; copper nail and washer
Junction of private rd. N., at base of telephone pole; surface of ground
Junction of private rd. N., at base of telephone pole; surface of groun
T. 60 . R. R. 14 w., near center sec. 19 , $14 \mathrm{ft}$. . and 18 ft . W. from
T-rd. N., in root on NW. side of 24-in. black-nak tree; copper nail and
washer
4. FROM ETHEL SOUTH INTO bucklin quadrangle at sec. 25, T. 58 n., R. 17 W. (by B. A. Barnes in 1936)

r. $59 \mathrm{~N} . \mathrm{N}^{\text {Rs. }} \mathrm{l}$. 16 and 17 W., quarter cor. between secs. 31 and 36 , 230 ft . tree; copper nall and washer
Top of hill, 70 ft . E. of ra., in SW. side of $10-1$ n maple tree, crossed na1ls
T. 58 N., Rs. 16 and 17 W., S. sixteenth cor, between secs. 1 and 6 , on ridge, 60 ft . N. of rd. W., 10 ft . E. of rd., in root on E. side of 10-in. white-oak tree; copper nall and washer
T. 58 N., Rs. 16 and 17 W., quarter cor. between secs. 7 and 12, 70 ft. N. and 18 ft . W. from T-rd. E., in root on NW. side of $8-\mathrm{in}$. black-oak tree; copper nail and washer
T. 58 N., R. 17 W., E. cor. secs. 12 and $13,15 \mathrm{ft}$. S. and 15 ft . W. from ra. corner N. -W., 1 ft . S. and 1 ft . W. from W. gatepost at ra. to field, in concrete post; standard tablet stamped "Prim Trav Sta No 68 F $1924770^{\prime \prime}$
(For balance in Bucklin quadrangle, see line 3.)
T. 58 N., R. 17 W., near E. sixteenth cor. between secs. 24 and 25 , 33 ft . E. of E. face of farmhouse of C. C. Norfolk, 21 ft . W. of rd., in root on SW. slde of 14 -in. elm tree; copper nail and washer
T. 58 N., R. $17 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .25,35 \mathrm{ft}$. s . and 10 ft . E. from rd. forks SW., NE., and SE., 15 ft . S. and 4 ft . E. from gatepost, in concrete post; standard tablet stamped "Prim Trav Sta No 69 F 1924880 "
(Continued in Bucklin quadrangle; see line 3.)

[^21]
# (Latitude $39^{\circ} 30^{\prime}-39^{\circ} 4^{\prime} 5^{\prime}$; 1ongitude $92^{\circ} 30^{\prime}-92^{\circ} 45^{\prime}$ ) 

Chariton, Macon, and Randolph Counties


1. FROM ELMER QUADRANGLE EAST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD INTO MACON QUADRANGLE (by S. R. Archer in 1920) (Continued from Elmer quadrangle; see line 1.)
T. 57 N., R. 15 W., in W $1 / 2$ sec. 16 , at bridge 76.68 over creek, on top of $S$. end of parapet wall of E. concrete abutment; chiseled square
Bevier, 45 ft . W. of sta., 70 ft . N. of main track; iron post stamped "Prim Trav Sta No 72 F igal Mo 791"

Feet
758.85
790.953

Bevier, 0.4 mi . E. of sta., 300 ft . E. of milepost 75 , at N. right-of way fence, in root on S. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer T. 57 N., R. 15 W., about 0.1 mi . S. of quarter cor. between secs. 13 and 14, on N. side of track opposite rd. corner S. of track, 10 ft . N. of right-of way fence, in N.-S. fence line, in root ( 3 in. underground) on S. side of S. one of two small oak trees; copper nail and washer
T. 57 N., R. 14 W., in SW $1 / 4 \mathrm{sec}$. 18 , at W. abutment of bridge 72.66 over East Fork of Chariton River, 10 ft . below track, at top of NE. corner of N. end of bridge seat, in E. end of W. concrete approach; standard tablet stamped " 1920 No $775^{"}$
T. 57 N., R. 14 W., about 150 ft. W. of line between secs. 17 and 18 , 500 ft . E. of private rd. crossing, 300 ft . E. of milepost $72,10 \mathrm{ft}$. N. of right-of-way fence, in root on NW. side of 12-in. oak tree; copper nail and washer
(Continued in Macon quadrangle; see line 5.)
2. FROM MACON QUADRANGLE AT SEC. 20 , T. 56 N., R. 14 W., WEST INTO MARCELINE QUADRANGLE AT SEC. 30, T. 56 N., R. 16 W.
(by J. J. Crane in 1937)
(Continued from Macon quadrangle; see line 10.)
Excello, 1.6 mi . W. of, cor. secs. 19, 20, 29, and 30, T. 56 N., R. 14 W., 30 ft . N. and 15 ft . E. from crossroads, in fence corner, on ilmestone outcrop; chiseled square
Excello, 3 ml . W. of, on line between secs. 24 and $25, \mathrm{~T} .56 \mathrm{~N} ., \mathrm{R} .15 \mathrm{~W}$. , at bridge over East Fork of Chariton River, on rivet at E. end of $S$. banister; chiseled cross
T. 56 N., R. 16 W., on line between secs. 26 and $35,80 \mathrm{ft}$. S. and 50 ft . W. from State Highway 3 at E. W. crossroad, in front of store of
T. $56 \mathrm{~N} ., \mathrm{R}$. 16 W ., W. sixteenth cor. between secs. 27 and $34,1.3 \mathrm{mi}$. W. $56 \mathrm{~N} .$, R. $16 \mathrm{~W} ., \mathrm{W}$. sixteenth cor between secs. 27 and $34,1.3 \mathrm{mi}$. W
of State Highway 3 , 100 ft . SE. of dwelling of R. P. Neeson, 30 ft . S. and 36 ft . W. from T-rd. E., in root on E. side of $12-i n$. pine tree; copper nail and washer
T. 56 N., R. 16 W., W. sixteenth cor. sec. $27,18 \mathrm{ft}$. S. and 28 ft . W. from crossroads, in concrete post; standard tablet stamped "T T 10 W 1936"
T. $56 \mathrm{~N} ., \mathrm{R}$. 16 W. , in $\mathrm{NW} 1 / 4 \mathrm{sec} .22,25 \mathrm{ft}$. S . and 85 ft . E. from E. end of briage over New Chariton River, in root on E. side of $\mathcal{L}_{4}-1$. cottonwood tree; copper nall and washer
Bridge over New Chariton River, 0.5 mi . W. of, 40 ft . S. and 60 ft . W. from T-rd. N., in root on N. side of $36-1 \mathrm{n}$. pecan tree; crossed nails
Bridge over New Chariton River, 1.3 mi . S. and 0.5 ml . W. from, on private rd. of Harry Cooper, 5 ft . S. of turn in rd. toward dwelling, in fence line, in root on $W$. side of $24-1 n$. pecan tree; copper nail and washer
T. $56 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W}$. , near center sec. $29,60 \mathrm{ft}$. S. and 20 ft . E. from dweliing of G. A. Ross, in fence line, in root on S. side of 22-in. hickory tree; copper nail and washer
T. $56 \mathrm{~N} ., \mathrm{R}$. 16 W ., near quarter cor. between secs. 29 and $30,20 \mathrm{ft}$. S. and 20 ft. W. from T-rd. E., on W. end of iron pipe culvert; pointed cross
T. $56 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W} .$, center $\mathrm{sec} .30,30 \mathrm{ft}$. S. of rd., 3 ft . E. of fence, in concrete post; standard tablet stamped "T T 11 W 1936"
T. $56 \mathrm{~N} ., \mathrm{R}$. 16 W ., on W. line sec. $30,90 \mathrm{ft}$. S. and 20 ft . E. from crossroads, on E. end of concrete cuivert; chiseled square
(Continued in Marceline quadrangle; see line l.)
For an additional level line along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey secondorder line, Laclede to Macon.

MARCELINE QUADRANGLE
(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $92^{\circ} 45^{\prime}-93^{\circ} 00^{\prime}$ ) $) ~$
Chariton, Linn, and Macon Counties


1. FROM COLLEGE MOUND QUADPANGLE AT SEC. 30 , T. 56 N., R. 16 W., WEST BY WAY OF BYNUMVILLE TO SEC. 25, T. 56 N., R. 18 W. (by J. J. Crane in 1937)
(Continued from College Mound quadrangle; see line 2.)

| 56 N., R. 17 W., in E $1 / 2 \mathrm{sec} .25,350 \mathrm{ft}$. E. of Dewey School, 40 ft . N . and 80 ft . E. from T-rd. N., in root on S. side of $26-\mathrm{in}$. elm tree; crossed nails | $\frac{\text { Feet }}{}$ |
| :---: | :---: |
| Bynumille, 1 mi . E. of, $55 \mathrm{ft} . \mathrm{N}$. and 20 ft . E. from T-rd. W., in root on E. side of triple maple tree; copper nail and washer | O |
| Bynumville, at $N$. limits of, 36 ft . S. and 31 ft . E. from T-rd. E., in concrete post; standard tablet stamped "Prim Trav Sta No 44 F 1924" | 66.805 |
| Bynumville, 0.5 mi . N. of, along State Highway 129, $30 \mathrm{ft} . \mathrm{S}$. and 55 ft . W. from junction of rd. W., in root on N. side of 23-in. elm tree; copper nail and washer | 774.07 |
| Bynumille, 0.5 ml . N. and 0.5 ml . W. from, 40 ft . N. and 150 ft . W. from crossroads, in root on S. side of $14-$ in. white-oak tree; crossed nails | 761.91 |
| 56 N., R. 17 W., cor. secs. 27, 28, 33 , and $34,30 \mathrm{ft}$. N. and 50 ft . E. from crossroads, in fence corner, in root on S. side of 22-in. elm tree; copper nail and washer | 768.56 |

Feot
731.87
691.00
766.805
774.07
761.91
768.56
T. 56 N., R. 17 W., cor. secs. 28, 29, 32 , and 33 , 3 ft. S. and 16 ft . E. ${ }_{\text {from }}$ from T-rd. W., in concrete post; standard tablet stamped "T T 12 W 1936 T. 56 N., R. 17 W. , on line between secs. 30 and $31,0.2 \mathrm{mi}$. W. of r-ra S., 50 ft . S. of rd., in root on It . side of $30-1 \mathrm{n}$. maple tree; copper T. 56 N., R. 17 W., on line between secs. 30 and $31,100 \mathrm{ft}$. N. and 20 ft . E. from T-ra. S., 8 ft . E. of driveway, in top of stump; crossed nails T. $56 \mathrm{~N} ., \mathrm{Rs}$.17 and $18 \mathrm{~W} .$, cor. secs. $25,30,31$, and $36,30 \mathrm{ft}$. N. and 50 ft . W. from T-rd. N., in root on NE. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. 56 N., R. 18 W., quarter cor. between secs. 25 and 36,30 ft. S. and 20 ft . W. from T-rd. S., in concrete post; standard tablet stamped "Prim Trav Sta No 53 F 1924"

> 2. FROM ROTHVILLE QUADRANGLE AT SEC. 2, T. 55 N., R. 19 W., EAST TO SEC. $25, \mathrm{~T} .56 \mathrm{N}$. R. 18 W . (by F. Y. Brown in 1937) (Continued from Rothville quadrangle; see line 3.)
T. 55 N., R. 19 W., N. cor. secs. 1 and $2,8 \mathrm{ft}$. S. and 20 ft . W. from T-rd. S., 185 ft . W. of T-rd. N., on center of S . head wall of concrete culvert; chiseled square

Feet
$7 4 \longdiv { 1 . 4 2 8 }$
806.31
$837 \cdot 53$
762.72
796.361
811.27
820.58
808.977
792.19
742.8
776.87
778.35
764.84
818.779
741.65
695.51
858.72
853.74
845.37
778.424
840.62
816.50
807.9
811.14
815.29
777.55
761.334
722.17
705.29
729.80
722.06
T. 56 N., Rs. 17 and $18 \mathrm{~W} .$, cor. secs. $19,24,25$, and $30,50 \mathrm{ft}$. S. and 20 ft . E. from crossroads, in root on N . side of l4-in. elm tree; copper nail and washer
T. $56 \mathrm{~N} ., \mathrm{Rs} .17$ and 18 W. , cor. secs. $25,30,31$, and $36,30 \mathrm{ft}$. N. and 50 ft . W. from T-rd. N., in root on NE. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. 56 N., R. 18 W., S. quarter cor. sec. $36,60 \mathrm{ft}$. W. of T-rd. N., on N. end of concrete culvert; chiseled square
T. 55 N., Rs. 17 and 18 W. , N. cor. secs. 1 and $6,200 \mathrm{ft}$. S. of T-rd. S., on $E$. end of concrete culvert; chiseled square

Feet
798.48
762.72
762.79
T. 55 N. , Rs. 17 and 18 W. , quarter cor. between secs. 1 and $6,20 \mathrm{ft}$. N. and 15 ft. W. from County Route D at N.-S. crossroad, on W. end of iron pipe culvert; chiseled square
T-rd. W., 12 ft . N. and 30 ft . W. from, in root on S . side of $8-1 \mathrm{n}$. postoak tree; crossed nalls
783.50
T. $55 \mathrm{~N} ., \mathrm{R}$. $16 \mathrm{~W} ., \mathrm{E}$. sixteenth cor. between secs. 1 and $12,15 \mathrm{ft}$. N.
and 20 ft . E. from rd. corner $\mathrm{S} .-\mathrm{E}$. and private rd. W., in root on S . side of 6-in. post-oak tree; copper nail and washer
787.48
T. 55 N., R. 18 W., E. sixteenth cor. between secs. 12 and $13,30 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from crossroads, in concrete post; standard tablet stamped "Prim Trav Sta No 54 F 1924"
807.53
771.901
774.62
754.19
775.21
765.89
742.03
766.690
737.78
733.17
738.15
(Latitude $39^{\circ} 45^{\prime}-40^{\circ} 00^{\prime}$; longitude $92^{\circ} 45^{\prime}-93^{\circ} \mathrm{CO} 0^{\prime}$ )
Linn and Macon Counties


1. FROM LINNEUS QUADRANGLE EAST ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD BY WAY OF BUCKLIN, LINGO, AND NEW CAMBRIA INTO ELMER QUADRANGLE (leveled twice by S. R. Archer in 1920)
(Continued from Linneus quadrangle; see ine 1.)
St. Catharine, 75 ft . W. of sta., 50 ft . S . of SE . corner of post office, in corner of yard; iron post stamped "Frim Trav Sta No 9 F 19241920 Mo 802"
T. 58 N. , R. 19 W. , in $\mathrm{SE} 1 / 4 \mathrm{sec} .36,20 \mathrm{ft}$. N. of fence, in field N. of track, in root on NW. side of 12-in. hickory tree; copper nail and washer
801.733
788.06
T. 58 N., R. 18 W., in $S 1 / 2$ sec. 31, on top of N. end of parapet wall of

Feet 756.25
770.15
764.995
763.38
801.25

$$
2
$$


816.302
T. 57 N., R. 18 W., in NE $1 / 4$ sec. $6,54 \mathrm{ft}$. S. and 75 ft . E. from private ra. crossing, in front of dwelling $S$. of tracks, 4 ft . S. of fence line, in root on NE. side of twin $24-i n$. elm tree; copper nail and washer
T. 57 NF ., R. 18 W. , in NE $1 / 4 \mathrm{sec}$. 5 , NE. of rd.crossing; iron post stamped "Prim Trav Sta No 36 F 19241920 Mo 766"
T. 57 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .5$, on top of S. end of parapet wall of E. abutment of bridge 96.41 over Sights Branch; chiseled square
T. 57 N., R. $18 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .4,60 \mathrm{ft} . \mathrm{S}$. and 90 ft . W. from rd. crossing (abandoned), 90 ft . W. of sign marked "Bucklin", in field S . of R.R., on $E_{\text {. bank }}$ of small drain, 10 ft . S. of fence line, in root on NW. side of 12-in. oak tree; copper nail and washer
T. 57 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .3$, at $W$. end of siding, N. of main track, $4 \mathrm{ft} . \mathrm{N}$. of N. rail, in front of telephone booth, on top of NW. corner of concrete base of semaphore (abandoned); chiseled square
T. 57 N., R. 18 W., in NE $1 / 4$ sec. $3,700 \mathrm{ft}$. W. of Atchison, Topeka ic Santa Fe Ry. bridge over Chicago, Burlington \& Quincy R.R., 70 ft. N. of rd. crossing, E. of track, in root on SE. side of 36 -in. elm tree; copper nall and washer over R.R.; iron post stamped "Frim Trav Sta No $37 \mathrm{~F} 19241920 \mathrm{Mo} \mathrm{910"}$
T. 57 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .11$, N. of R.R., 130 ft . N. of fence line, in root on $N$. side of $N$. one of two small cherry trees; copper nail and washer
T. 57 N., R. 18 W., in NW $1 / 4$ sec. 12 , S. of R.R., on top at E. side of concrete base of $E$. steel pillar of overhead bridge; chiseled square
T. 57 N., R. 17 W., in NW 1/4 sec. 7, on top of N. end of parapet wall
of W. abutment of bridge 91.70 over Mussel Fork Creek; chiseled square
T. 57 N., R. 17 W., in NW $1 / 4$ sec. $8,190 \mathrm{ft}$. W. of private ra. crossing at milepost 91 , N. of R.R., 10 ft . N. of fence ine, in root ( 4 in . under ground) on SW. side of 12-1n. oak tree; copper nail and washer
Lingo, $190 \mathrm{ft} . \mathrm{N}$. of rd. crossing, 190 ft . N . and 160 ft . W. from shelter shed; iron post stamped "Prim Trav Sta No 39 F 19241920 Mo 817"
T. 57 N., R. $17 \mathrm{~W} .$, in $N W 1 / 4 \mathrm{sec} .10$, on top of S . retaining wail of E . abutment of bridge 88.89 over Brush' Creek; chiseled square(JJ.S.C.s. G.S.elev.) 782.912
T. 57 N., K . 17 W. , in $\mathrm{NE} 1 / 4 \mathrm{sec}$. $10,60 \mathrm{ft}$. S. and 75 ft . E. from private rd. crossing, 10 ft . S. of fence line, in root on N . side of W . one of two small oak trees; copper nall and washer
T. $57 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, in $\mathrm{NE} 1 / 4 \mathrm{sec}$. $1 \mathrm{ll}, 90 \mathrm{ft}$. S. of rd. crossing, W. of rd., in root on NW. side of $14-1 \mathrm{n}$. elm tree; copper nail and washer
Nev Cambria, at sta., in front of operator's window, $S$. of tracks, on top of NW. corner of concrete base of semaphore; chiseled square
New Cambria, at E. corner of public park, 12 ft . SW. of w. corner of Jones and Main Streets; iron post stamped "Prim Trav Sta No 40 F 1924 1920 lio $856^{\prime \prime}$
(Continued in Elmer quadrangle; see line l.)
2. FROM ELMER QUADRANGLE AT SEC. 1, T. 59 N., R. 17 W., WEST TO GOLDSBERRY, THENGE NORTH INTO WINIGAN QUADRANGLE AT SEC. 24 , T. 60 N., R. 17 W. (by B. A. Barnes in 2936)
(Continued from Elmer quadrangle; see line 2.)
T. 60 N., R. 17 W., in $S W 1 / 4$ sec. $36,18 \mathrm{ft}$. N. and 20 ft . E. from T-rd. N., in root on S. side of $10-1 \mathrm{n}$. black-oak tree; crossed nails

Tps. 59 and 60 N., R. $17 \mathrm{~W} .$, cor. secs. $1,2,35$, and $36,22 \mathrm{ft}$. N. of Trrd. S., 1 ft. inside fence, in concrete post; standard tablet stamped "Prim Tray Sta No 65 F 192l""
970.953

Goldsberry, in $\mathrm{SW} 1 / 4 \mathrm{sec} .35$, T. $60 \mathrm{~N} ., \mathrm{R}$. $17 \mathrm{~W} ., 6 \mathrm{ft}$. W. of door of post office, on concrete step of sidewalk; chiseled square
Goldsberry, 1 mi . N. of, W. sixteenth cor. between secs. 26 and 35 , T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} ., 36 \mathrm{ft} . \mathrm{S}$. and 85 ft . W. from crossroads, 48 ft . N. and 3 ft . E. from NE. corner of farmhouse, in root on N. side of 26-in. maple tree; copper nail and washer
982.84
T. 60 N., R. 17 W., on line between secs. 26 and $35,33 \mathrm{ft}$. N. and 24 ft . E. from T-rd. E., 42 ft . S. and 31 ft . W. from farmhouse, in root on N . side of twin 24-in. maple tree; copper nail and washer
987.05
T. 60 N., R. $17 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec}$. 24 , 35 ft . E. of rd., in root on N . side of 24 -in. white-oak tree; copper nail and washer
(Continued in Winigan quadrangle; see line 2.)

> 3. FROM ELMEF QUADRANGLE AT SEC. 12, T. 58 N., R. 17 W., SOUTH TO NEW CAMBRIA (by B. A. Barnes In 1936)
> (Continued from Elmer quadrangle; see line 4.)
T. 58 N., R. 17 W., 0.1 mf . E. of cor. secs. $11,12,13$, and $14,66 \mathrm{ft}$. S. and 3 ft . W. from crossroads, near farmhouse of H . W. Dowell, 1 ft . W. of gate, on SE. corner of concrete sidewalk; chiseled square
T. $58 \mathrm{~N} ., \mathrm{R}$. 17 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .13,18 \mathrm{ft}$. N. and 6 ft . E. from junction of private rd. N., in root on E. side of 12-in. black-oak tree; copper nail and washer
T. 58 N., R. 17 W., near center sec. $24,10 \mathrm{ft}$. N. and 20 ft . W. from rd. corner N.-E. and private rd. W., in root on E. side of $12-i n$. elm tree; copper nall and washer
T. 58 N., R. 17 W., near W. sixtecnth cor. sec. 36 , at junction of rd. S.
and abandoned ra. NE., in root on NW. sicie of twin 12-in. locust treo; copper nail and washer
T. 56 N., R. 17 W., on S. Ilne sec. $36,90 \mathrm{ft}$. S. and 105 ft . E. from T-rd. S., in root on S. side of twin l2-in. white-oak tree; crossed nails
U.S.C. \& G.S. standard disk stamped "Q 120 1935"

> 4. FROM LINNEUS QUADRANGLE AT SEC. $2, \mathrm{~T} .59 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W} .$, NORTH AND EAST TO SEC. $25, \mathrm{~T} .60 \mathrm{~N}$., R. 18 W.
> (by F. Y. Brown and H. B. Pyie in 1937 )
> (Continued from Linneus quacirangle; see line 5.)
T. 59 N., R. 19 W., in $S W 1 / 4$ sec. 1 , 800 ft . W. of County Route $C$ at rd. N., 40 ft . S. of SW. corner of farmhouse of. H. S. Simpson, in root on W. side of li-in. cedar tree; crossed nalls
T. $59 \mathrm{~N} ., \mathrm{R}$. $19 \mathrm{~W} .$, in NW $1 / 4 \mathrm{sec} .1,60 \mathrm{ft}$. S. and 15 ft . E. from T-rd. W., on center of W. head wall of concrete culvert; chiseled square

Tps. 59 and $60 \mathrm{~N} ., \mathrm{R}$. 19 W. , on line between secs. 1 and $36,10 \mathrm{ft} . \mathrm{N}$. and 15 ft . W. from T-rd. N., on N. end of iron pipe culvert; (mark not described)
T. 60 N., R. 19 W., near center sec. $36,25 \mathrm{ft}$. S. of T-rd. N., 15 ft . W. of private rd., in NE, corner of farmyard, in root on W. side of 26-in. maple tree; copper nail and washer
T. $60 \mathrm{~N} ., \mathrm{R}$. $19 \mathrm{~W} .$, near center sec. $25,45 \mathrm{ft}$. N. and 20 ft . E. from T-rd. E., in concrete post; standard tablet stamped "Prim Trav sta No 56 F 1924"
T. $60 \mathrm{~N} .$, Rs. 18 and $19 \mathrm{~W} .$, near quarter cor. between secs. 25 and 30 , 245 ft . E. of T-rd. S., 20 ft . N. of rd., 45 ft . SW . of farmhouse, in root on N . side of $10-1 \mathrm{n}$. cedar tree; copper nail and washer
T. 60 N., R. 18 W. , near quarter cor. between secs. 29 and $30,475 \mathrm{ft}$. W. of T-rd. N., 45 ft . S. of rd., in root on W. side of $16-\mathrm{in}$. elm tree; copper nail and washer
T. 60 N., R. 18 W., near center sec. $29,740 \mathrm{ft}$. E. of T-rd. W., in NW. corner of churchyard, in root on $\mathbb{N}$. side of $10-1 \mathrm{n}$. elm tree; copper nail and washer
T. $60 \mathrm{~N} ., \mathrm{R}$. $18 \mathrm{~W} .$, near E . sixteenth cor. between secs. 20 and 29, 26 ft . N. and 36 ft . E. from T-rd. E., in concrete post; standard tablet stamped "Prim Trav Sta No 57 F 1924"
T. 60 N., R. 18 W., on line between secs. 21 and $28,10 \mathrm{ft}$. S. of ra., in SW. corner of briage; spike
T. $60 \mathrm{N},$. R. 18 W. , near cor. secs. $21,22,27$, and $28,25 \mathrm{ft} . \mathrm{S}$. and $1,000 \mathrm{ft}$. E. from crossroads, in root on N. side of $48-\mathrm{in}$. cottonwood tree; copper nail and washer

Feet

### 876.06

880.33
825.969

$$
904 \cdot 74
$$

T. 60 N., R. 18 W., noer cor. secs. $22,23,26$, and $27,720 \mathrm{ft}$. S. and 25 ft . W. from abandoned.rd. E., 564 ft . N. of T-rd. E., in root on S . side of 40-in. locust tree; copper nail and washer
T. 60 N., R. 18 W., quarter cor. between secs. 25 and $26,20 \mathrm{ft}$. N. and 25 ft . E. from r-rd. W., 200 ft . E. of State Highway li, in fence line, in concrete post; standard tablet stamped "Prim Trav Sta No 58 F 1924 "
967.664

> 5. FROM LINNEUS QUADRANGLE AT SEC. $2, \mathrm{~T} .58 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W} .$, EAST TO SEC. I, T. $58 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W}$. (by F. Y. Brown in 1937)
> (Continued from Linneus quadrangle; see line 9.)
T. 58 N., R. 19 W., W. sixteenth cor. betveen secs. 2 and $11,30 \mathrm{ft} . \mathrm{N}^{\mathrm{N} .}$ and 80 ft . E. from crossroads, in farmyard, in root on S. side of $14-1 \mathrm{n}$. white-col: tree; copper nail and washer
826.42
T. 58 N., R. 19 W., cor. secs. $1,2,11$, and $12,15 \mathrm{ft} . \mathrm{S}$. and 15 ft . W. from State Highway 11 at rd. W., on center of $S$. head wall of concrete culvert; chiseled square
850.89
T. 58 N., R. 19 W., quarter cor. between secs. 1 and $2,130 \mathrm{ft}$. S. and 40 ft . W. from T-rd. S., 33 ft . SE. of church, in concrete post; standard tablet stemped "Prim Trav Sta No 7 F 1924"
896.576
6. FROM WINIGAN QUADRANGLE AT SEC. 24, T. 60 N., R. 19 w., SOUTH
TO SEC. 25, T. $60 \mathrm{N.}, \mathrm{R}$.19 W. (by F. Y. Brown in 193j)
(Continued from Winigan quadrangle; see line 7.)
T. 60 N., R. 19 W., N. sixteenth cor. sec. $25,230 \mathrm{ft}$. S. of T-rd. W., 15 ft . W. of rd., in root on E. side of large locust tree; copper nail and washer
944.55
7. FKOM BUCKLIN SOUTH ALONG STATE HIGHWAY 129 TO JUNCTION OF U.S.

HIGHWAY 36, THENCE EAST ALONG STATE HI GHWAY 129 (U.S. IITGHWAY
36) ABOUT 1.2 MILES, THENCE SOUTH ALONG ROADS INTO MARCELINE QUADRANGLE AT SEC. $13, T .57 \mathrm{~N} ., \mathrm{R}$. 18 W .
(by W. V. Kennedy in 1937)
U.S.C. 2: G.S. standard disk stamped "K 120 1935"
887.137

Bucklin, 0.5 ms . S. of, cor. secs. 2, 3, 10 , and 11, T. $57 \mathrm{N}$. , R. 18 W. , 30 ft . N. and 15 ft . W. from junction of rd. W., on W. head wall of concrete culvert; chiseled square
906.09

Bucklin, 1.5 mi . S. of, 155 ft . N. and 20 ft . E. from junction of U.S. H1Ehway 36, on E. head wall of concrete culvert; chiseled square
Buckiin, $1.5 \mathrm{mi} . \mathrm{S}$. and 0.5 mi . E. from, on line between secs. 1 l and 14 , T. 57 N., R. 18 W., at center of junction of rd. S., on pavement; chiseled square

Eucklin, $1.5 \mathrm{mi} . \mathrm{S}$. anc 1.2 mi . E. from, W. sixteenth cor. between secs. 12 and 13 , T. $57 \mathrm{~N} .$, R. $18 \mathrm{~W} ., 50 \mathrm{ft}$. N. and 35 ft . W. from crossroad, in concrete post; standard tablet stamped "Prim Trav Sta No $38 \mathrm{~F} 1924^{\prime \prime}$
(Continued in Marceline quadrangle; see line 3.)
8. FROM ST. CATHARINE NORTH ALONG STATE HIGHWAY 11 TO JUNCTION OF COUNTY ROUTE $C$, THENCE WEST ALONG COUNTY ROUTE C INTO LINNEUS QUADRANGLE (by W. V. Kennedy in 1937)
U.S.C. \& G.S. standard disk stamped "G 120 1935"
802.236
836.91
791.54
838.33
819.93
856.698
872.04
881.24
850.89
894.27
880.97
889.30
883.98
887.829
911.17
887.95
885.57
897.32
863.78
795.99
9. FROM BUCKIIN NORTH ALONG STATE HIGHWAY 129 TO SEC. 1 , T. 58 N., R. 18 W., THENCE NORTH ALONG OTHER ROADS TO SEC. 13 , T. 59 N., R. 18 W., THENCE NORTH ALONG STATE HIGHWAY 129 TO NEW BOSTCN, THENCE NORTH ALONG STATE HIGHWAY 11 TO SEC. 25, T. 60 N., R. 18 W. (by W. V. Kennedy in 1937)

Bucklin, at Atchison, Topeka \& Santa Fe Ry. sta., in front of operntor's window; top of westernmost rail
921.5
883.50
W. on center of $S$. head wall of concrete culvert; chiseled square
T. 58 N., R. 18 W., in NE $1 / 4$ sec. 35 , 20 ft . W. of Atchison, Topeka \& Santa Fe Ry . at rd. crossing, on S . comer of concrete base of semaphore; chiseled square
910.74

Bucklin, 2 mi . N. of, 12 ft . N. and 20 ft . E. from junction of rd. E., on $N$. end of iron pipe culvert; chiceled square
T. 58 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .26,30 \mathrm{ft}$. S. and 17 ft . E. from junction of rd. W., on E. end of iron pipe culvert; chiseled square
Euckiin, 3 mi . N. of, 12 ft . N. and 30 ft . E. from junction of private rd. E., on $N$. end of iron pipe culvert; chiseled square
T. 58 N., R. 18 w., on ine between secs. 13 and 24 , 15 ft . S. and 18 ft . W. from junction of rd. W., on W. end of iron pipe culvert; painted square
915.40
T. 58 N., K . 18 W. , nor. secs. $13,14,23$, and $24,0.2 \mathrm{mi}$. W. of highway, 30 ft . N. and 15 ft . E. from rd. corner N. -E. , in concrete post; stendard tablet stamped "Prim Trav Sia No 62 F 1924"
I. 56 M., R. 18 W., W. sixteenth cor. sec. $13,20 \mathrm{ft}$. S . and 17 ft . W. from junction of rd. W., on W. end of iron pipe culvert; chiseled square
909.859
T. $5 \&$ N., $R$. 18 W., in NW $1 / 4 \mathrm{sec} .13$, NE. of function of rd. NE., on N. end of iron pipe culvert; painted square

Feet
862.569

St. Catharine, at N. limits of, SW. of crossroad, on E. head wall of concrete culvert; chiseled square
St. Catharine, 0.5 mi . N. of, 17 ft . N. and 27 ft . E. from crossroad, on N. head wall of concrete culvert; chiseled square
T. 58 N., R. 19 W., S. sixteenth cor. between secs. 23 and $24,12 \mathrm{ft}$. S. and 20 ft . W. from junction of rd . W., on S . head wall of concrete culvert; chiseled square
T. 58 N., R. 19 W., quarter cor. between secs. 23 and $24,12 \mathrm{ft}$. S. and 35 ft . W. from junction of rd. E., in concrete post; standard tablet stamped Prim Trav Sta No 8 F 1924
T. 58 N., R. 19 W., quarter cor. between secs. 13 and $14,20 \mathrm{ft}$. E. of highway at offset rds. E. and W., on N. head wall of concrete culvert; chiseled square
-

## 1.4

T. 58 N., R. 19 W., near cor. secs. $1,2,11$, and $12,12 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from junction of rd. W., on $S$. head wall of concrete culvert; chiseled square
T. 58 N., R. 19 W., in $W 1 / 2$ sec. 1,40 ft. SE. of junction of rd. W., on top of highway right-of-vay post; painted square

1. 50 N., R. 19 W., N. sixteenth cor. sec. $1,30 \mathrm{ft} . \mathrm{N}$. and 18 ft . W. from junction of rd. E., on W. head wall of concrete culvert; chiseled square
T. 59 N., R. 19 W., quarter cor. between secs. 25 and $36,12 \mathrm{ft}$. S. and 18 ft . W. from crossroad, on $S$. head wall of concrete culvert; chiseled
square
. 1. . R. 19 W., center sec. $25,12 \mathrm{ft}$. N. and 20 ft . E. from junction
of rd. E., on N. head wall of concrete culvert; chiseled square
. 59 N., R. 19 W., center sec. 24,23 ft. S. and 43 ft. W. from crossroad, in concrete post; standard tablet stamped "Prim Trav Sta No 6 F
T. 59 N., R. 19 W., quarter cor. between secs. 13 and 24,7 ft. N. and 20 ft . E. from crossroad, on N . head wall of concrete cuivert; chiseled square
junction of rd. E., on N. head wall of concrete culvert; chiseled square
T. 59 N., R. 19 W., quarter cor. between secs. 12 and. 13, 20 ft. N. and 15 ft . E. from junction of rd. W., on E . head wall of concrete culvert; chiseled square of junction of County Route $C$, on W. head wall of concrete culvert; chiseled square
T. 59 N., R. 19 W., in $S W 1 / 4$ sec. 1 , 17 ft . N. and 50 ft . W. from junction of $r d . N$. , on $N$. end of iron pipe culvert; painted square
T. 59 N., R. 19 W., on line between secs. 2 and 11 , on SW. corner of bridge over Yellow Creek; chiseled square
T. 58 N., R. 18 W., W. sixteenth cor. sec. $12,90 \mathrm{ft}$. S. and 85 ft . E.

Fe日t from junction of rd. W., in farmyard of F. E. Hockert, on N. side of concrete platform of cistern; chiseled square
920.23
T. $58 \mathrm{~N} ., \mathrm{R}$. 18 W. , on line between secs, 1 and $12,20 \mathrm{ft}$. N. and 20 ft . E. from crossroad, on $N$. end of iron pipe culvert; painted square
T. 58 N., R. 18 W., in $S W 1 / 4 \mathrm{sec} .1,190 \mathrm{ft}$. SW. of junction of rd. W., 30 ft . NT, of highway, at gate, on top of highway right-of-way post; painted square
T. 58 N., R. 18 W., quarter cor. between secs. 1 and $2,35 \mathrm{ft}$. N. and 25 ft . W. from T-rd. E., on center of E. edge of concrete platform of well; chiseled square
T. 59 N., R. 18 W., S. cor. secs. 35 and $36,50 \mathrm{ft}$. N. and 25 ft . W. from T-rd. N., 50 ft . N. and 85 ft . W. from T-rd. S. at N. cor. secs. 1 and 2, T. 58 N., R. 18 W. , in concrete post; standard tablet stamped "Prim Trav Sta No 61 F 1924" W. from crossroads, 50 ft . N. of gate, in root on E. side of $12-1 \mathrm{n}$.
locust tree; copper nall and washer
T. 59 N., R. 18 W., near quarter cor. between secs. 25 and. $26,18 \mathrm{ft}$. S . and 80 ft . E. from crossroads, in root on W. side of 22-in. maple tree; crossed nails
T. 59 N., R. 18 W., quarter cor. between secs. 23 and $24,25 \mathrm{ft}$. W. of rd. jog S.-E., in root on E. side of $30-1$. post-oak tree; copper nail and washer
T. 59 N., R. 18 W., cor. secs. $13,14,23$, and $24,25 \mathrm{ft}$. N. and 60 ft . E. from T-rd. N., 140 ft . W. of T-rd. S., in concrete post; standard

877.616
T. 59 N., R. 18 W., E. sixteenth cor. between secs. 13 and 24 , 225 ft . W. of crossroad, 30 ft . S. of barn, 35 ft . N. of rd., in root on S . side of 30-in. locust tree; copper nall and washer
T. 59 N., R. 18 W. , in NE $1 / 4$ sec. 13 , 350 ft . S. of farmhouse, 115 ft . E. of highway, in root on W. side of $22-1 \mathrm{n}$. elm tree; copper nail and washer
T. 59 N., R. 18 W. , near center sec. $12,90 \mathrm{ft}$. N. and 15 ft . W. from junction of rd. W., on W. end of iron pipe culvert; chiseled square
New Boston, 0.4 mi . SE. of, 25 ft . S. of junction of rd. SE., on SW. end of iron pipe culvert; painted square
New Boston, in NW. corner of yard of Christian Church, 30 ft . S. of highway, in concrete post; standard tablet stamped "Frim Trav Sta No 59 F 1924"
New Boston, 0.5 mi . W. of, 18 ft . N. of junction of State Highway 11, on N. end of concrete head wall of culvert; chiseled square

Tps. 59 and 60 N., R. 18 w., cor. secs. $1,2,35$, and $36,18 \mathrm{ft}$. S. and 15 ft . E. from crossroad, on center of E. head wall of concrete culvert; chiseled square
956.38
953.62
928.78
882.373
953.51
963.29
955.09
969.28
964.449
925.66
T. 60 N., R. 18 W., cor. secs. $25,26,35$, and $36,33 \mathrm{ft}$. N.' and 18 ft . E. from junction of rd . W., on $E$. head wall of concrete culvert; chiseled square

For an additional level line along Chicago, Purlington \& Quincy R.R., refer to United States Coast and Geodetic Survey second-order line, Laclede to Macon.

WINIGAN QUADRANGLE
(Latitule $40^{\circ} 00^{\prime}-40^{\circ} 15^{\prime}$; longitude $92^{\circ} 45^{\prime}-93^{\circ} 00^{\prime}$ )
Adair, Linn, Macon, and Sullivan Counties


1. FROM KIKKSVILLE QUADRANGLE AT SEC. 1, T. 62 N., R. 17 W., SOUTFWEST, SOUTH, AND SOUTHEAST INTO KIRKSVILLE QUADRANGLE AT SEC. 24, T. 62 N., R. 17 W. (by F. W. Mattox in 1935) (Continued from Kirksville quadrangle; see ine 1.)
T. 62 N., R. 17 W., near centor sec. $1,50 \mathrm{ft}$. NW. of T-rd. W., in fence line, in root on SE. side of twin $16-1 n$. oak tree; copper nail and washer
T. $62 \mathrm{NI} ., \mathrm{R} .17 \mathrm{~W} .$, quarter cor. between secs. 1 and $12,60 \mathrm{ft}$. SW. of rd. fork SW., in fence line, in root on E. side of 18-ir. oak tree; copper nall end vasher
T. $62 \% ., R .17 \mathrm{~W} .$, in $\mathrm{NW} 1 / 4 \mathrm{sec} .12,100 \mathrm{ft}$. W. of dwelling at rd corner, in root on W. side of l4-in. oak tree; copper nail and washer
T. 62 Ni. , R. 17 W. , in $\mathrm{HW} 1 / 4 \mathrm{sec} .12$, N. of rd. cormer, in N.-S. fence line, in root on s. side of il4-in. oal: tree; copper nail and vasher
T. 62 N., R. 17 W., in $s 1 / 2 \mathrm{sec} .12,150 \mathrm{ft}$. N. of cattle pass, 50 ft . W. of rd., in root on E. side of $24-1 n$. oak tree; copper nail and washer
T. 62 I., R. 17 W., in $N 1 / 2$ sec. 13, on SE. wing wall of bridge over Hog Creek; chiseled square
T. 62 N., R. 17 W., W. sixteenth cor. sec. $13,150 \mathrm{ft}$. W. of dwelling at top of hill, in root on E. side of 24 -in. Oak tree; copper nasl and washer
T. $62 \mathrm{H} .$, R. $17 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .13,0.8 \mathrm{mi}$. F. and 0.5 mi .11 . from Pure Air, 35 ft . N. and 50 ft . F. from T-rd. E., in concrete post; standard tablet stamped "T T 1543 E R A 1935"
T. 62 N., R. 17 W , , on line between secs. 13 and $l_{4}, 80 \mathrm{ft}$. s. of rd., in root on N. side of $2 l_{4}$ in. oak tree; copper nail and washer
T. $62 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, in $\mathrm{NE} 1 / 4 \mathrm{sec} .23,400 \mathrm{ft}$. E . of dwelling, $75 \mathrm{ft} . \mathrm{S}$. of rd., in N.-S. fence line, in root on S. sice of lo-in. oak tree; copper nail and washer
Pure Air, in NW $1 / 4 \mathrm{sec} .23$, T. $62 \mathrm{N}$. , R. 17 W. , in root on N. $\$ 1 \mathrm{de}$ of 16-in. heage tree; copper nail and washer
T. 62 N., R. 17 W., in $S W 1 / 4$ sec. 23 , on top of ridge in pasture, 40 ft . S. of fence, in root on $\mathrm{H} . \mathrm{side}$ of $20-1 \mathrm{n}$. oak tree; copper nail and washer
T. 62 I., R. 17 W., on line between secs. 23 and $26,250 \mathrm{ft}$. W. of dwelling, 20 ft . N. of fence, in root on S. side of 2 h-in. oak tree; copper nall and washer
T. $62 \mathrm{~N} ., \mathrm{R}$. $17 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .26,500 \mathrm{ft}$. NE. of T-rd. E., in fence ilne $N$. of ra., in root on $S$. side of $2 l-i n$. oak tree; copper nail and washer
T. $62 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .24,30 \mathrm{ft}$. N . of fence, in root on S . side of 24-in. oak tree; copper nail and washer
T. 62 N., R. 17 W., in $S 1 / 2 \mathrm{sec}$. 24 , in fence line N: of rd., in root on S. side of 20-in. oak tree; copper nail and washer
(Continued in Kirksville quadrangle; see line 1.)

> 2. FROM EUCKLIH QUADRANGLE AT SEC. 24, T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, NORTHEAST INTO KIRKSVILLE QUADRANGLE: AT SEC. 12, T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. (by E. A. Barnes in 1936)
> (Continued from Euckin quadrangle; see line 2.)
T. 60 N., R. 17 W., in NE $1 / 4$ sec. $23,70 \mathrm{ft}$. S. of dwelling, 20 ft . S. and 25 ft . E. from rd. fork E., 15 ft . S. of corner fence post, in root on W. side of 12-in. oak tree; copper nail and washer

Feet 969.96
956.19
969.70
961.36
933.06
803.17
957.61
T. $60 \mathrm{N}$. , R. 17 W., about 0.2 ml . W. of cor. secs. $13,14,23$, and 24 , 6 ft . S. and 25 ft . E. from N. $-\mathrm{s} . \mathrm{rd}$. at fence, in concrete post; standard tablet stomped "T T 1546 E R A 1935"
T. 60 N., R. 17 W., in $\mathrm{S} 1 / 2 \mathrm{sec} .14$, 400 ft . N. of rd. fork SE., in root on S. side of $18-1 n$. elm tree; crossed nails
T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. , on line between secs. 11 and $14,300 \mathrm{ft}$. S. and 20 ft . W. from T-rd. E., in root on NE. side of $48-1 n$. elm tree; copper nail and washer.
Feet
9.17 .236
774.38
773.12
(Continued in Kirksvilie quadrangle; see line 4.)

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3. FROM GREEN CITY QUADRANGLE IN SEC. 23, T. 63 N., R. 19 W. (by D. R. Stewart in 1936)
(Continued from Green City quadrangle; see line 7.)
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Concrete culvert, on SW. end of; chiseled square
T. 63 N., R. 19 W., in SE. cor. sec. 23, 0.2 mi. W. of Yellow Creek

Baptist Church, NW. of crossroads; iron post stamped "Prim Trav Sta No $91910 \mathrm{Mo}^{\prime \prime}$
Reference mark, 30 ft . S. and 125 ft . W. from post, on top of S . head wall of concrete culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "C 17 1933"

> 4. FROM EILAN GUADRANGLE AT SEC. $35, \mathrm{~T} .62 \mathrm{N.}, \mathrm{R} 19 \mathrm{~W} .,$. EAST ABOUT (MILE, THENCE NORTH TO SEC. $26, \mathrm{~T} .63 \mathrm{~N}$. , R. 19 W.
> (by H. W. Gross in 1936 )
> (Continued from Wilan quadrangle; see line l.)
T. 62 M., R. 19 W. , on line between secs. 26 and $35,200 \mathrm{ft}$. N. of winding rd. SW., 55 ft . N. and 20 ft . W. from rd. Junction, in root on S . side of 14 -in. white-oak tree; copper nail and washer
T. 62 N., R. 19 W., near cor. secs. $25,26,35$, and $36,25 \mathrm{ft}$. N. and 90 ft . E. from T-rd. S., in root on W. side of 18-in. post-oak tree; crossed nails
Owasco, quarter cor, between secs. 25 and 36, T. 62 N., R. 19 W., 25 ft . N. and 56 ft . E. from T-rd. N., in concrete post; standard tablet stamped "1559 E R A 1935"
Reference mark, 90 ft . E. of tablet, in root on N . side of $24-1 \mathrm{n}$. maple tree; copper nail and washer
T. 62 N., R. 19 W., N. sixteenth cor. sec. $25,20 \mathrm{ft}$. S. and 35 ft . E. from T-rd. S., in root on N. side of twin 12-1n. elm tree; copper nail and washer
Pd. at drain, 50 ft . N. and 50 ft . W. from, in root on S . side of $28-\mathrm{in}$. cottonvood tree; crossed nails
T. 62 N., R. 19 W., about 0.2 ml . E. of cor. secs. $23,24,25$, and 26 , 15 ft . S. and 500 ft . W. from rd. corner S. W., in root on NW. side of 30-1r. post-cak tree; copper nail and washer
Small bridge, at HF. corner of, on top of wing wall; chiseled square
T. $62 \mathrm{~N} ., \mathrm{R}$. 19 W ., on line between secs. 23 and $24,250 \mathrm{ft}$. S. and 45 ft . E. from crossroacis, in root on W. side of $18-1 n$. white-oak tree; copper nail and washer
Drain, 60 ft . N. and 25 ft . W. from, in root on $E$. sice of 14 -in. elm tree; crossed nails
T. 62 N., R. 19 W., near S. sixteenth cor. between secs. 13 and $14,50 \mathrm{ft}$. S. and 20 ft . W. from bridge, in root on SE. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. '62 N., R. 19 W., N. sixteenth cor. between secs. 13 and 14, 10 ft . S . and 75 ft . E. from $\mathrm{T}-\mathrm{ra}$. F., at SE. corner of bridge, on top of wing wall; chiseled square
T. 62 N., R. 19 W., near S. sixteenth cor. between secs. 11 and 12 , at SW. corner of small bridige, on top of wing wall; chiseled square
T. 62 N., R. $15 \mathrm{~W} .$, quarter cor. between secs. 21 and $12,270 \mathrm{ft}$. S. and

25 ft . E. from crossroads, in concrete post; standard tablet stamped "T T 1560 E R A $1935^{\prime \prime}$
Culvert, on E. head wall of; chiseled cross
T. 62 N., R. 19 W., quarter cor. between secs. 1 and $2,30 \mathrm{ft}$. E. of T-rd. W., in root on W. side of $14-1$. hedge tree; copper nail and washer
T. 62 N., R. 19 W., N. cor. secs. 1 and $2,15 \mathrm{ft}$. N. and 50 ft . W. from T-rd. S., $15 \mathrm{ft} . \mathrm{N}$ : and 155 ft . W. from T-rd. N., in root on E. side of $24-1 \mathrm{n}$. elm tree; copper nail and washer
Small bridge, at NW. corner of, on top of wing wall; chiseled square
T. 63 N., R. 19 W. , about 0.1 mf . N. of cor. secs. $25,26,35$, and 36 , at SW. corner of wooden bridge, in top of cap; copper nail and washer U.S.C. \& G.S. standard disk stamped "C 17 1933"
T. 63 N., R. 18 W., W. sixteenth cor. between secs. 19 and $30,15 \mathrm{ft} . \mathrm{S}$. and 140 ft . E. from T-rd. S., on S. head wall of concrete culvert; chiseled squaro
T. 63 f., R. 18 W., cor. secs. $19,20,29$, and $30,80 \mathrm{ft}$. N. and 15 ft . W. from County Route A at crossroad, on W. head wall of concrete culvert; chiseled square
T. 63 N., R. 18 W., quarter cor. between secs. 20 and 29, 1之 ft. N. and 100 ft . E. fron T-rd. S., on N. head wall of concrete culvert; chiseled
T. $\frac{6}{} 63$ N., R. $18 \mathrm{~W} .$, center $\mathrm{sec} .29,25 \mathrm{ft} . \mathrm{s}$. and 12 ft . W. from T-ra. E.; on $W$. head wall of concrete culvert; chiseled square
T. 63 N., R. 18 W., quarter cor. between secs. 28 and 29,30 ft. N. and 30 ft . W. from ${ }_{11}-\mathrm{rd}$. N., 9 ft . W. of fence, in concrete post; standard tablet stamped " 1 P 1937"
T. 63 N., R. 18 W., S. sixteenth cor. between secs. 27 and $28,25 \mathrm{ft}$. S. and 150 ft . W. from crossroads, in root on E . side of $12-1 \mathrm{n}$. elm tree; copper nall and washer
T. 63 N., R. 18 W., in $S 1 / 2 \mathrm{sec} .27,65 \mathrm{ft}$. NE. of NE. comer of school, 36 ft . S. of rd., in root on N. side of $40-1 \mathrm{n}$. oak tree; crossed nails
T. $63 \mathrm{~N} ., \mathrm{R} .16 \mathrm{~W}$. , near S. sixteenth cor. between secs. 26 and $27,25 \mathrm{ft}$. N. and 195 ft . W. from T-rd. W., in root on S. side of hedge-tree stump; copper nail and washer
Rd., $25 \mathrm{ft} . \mathrm{E}$. of, in root on W. side of 48 -in. maple tree; crossed nails
T. 63 N., R. 18 W., in $W 1 / 2 \mathrm{sec} .23$, $10 \mathrm{ft} . \mathrm{S}$. and 160 ft . E. from T-rd. W., in root on W. side of $30-1 n$. maple tree; copper nail and washer
T. 63 N., R. 18 W., near cor. secs. $23,24,25$, and $26,25 \mathrm{ft}$. W. of rd., in root on $E$. side of $36-1 \mathrm{n}$. maple tree; copper nail and washer
T. 63 N., R. 18 W., S. sixteenth cor. between secs. 25 and 26 , 110 ft . S. and 30 ft . W. from T-rd. E., in root on $N$. side of $36-\mathrm{in}$. maple tree; copper nall and washer
T. 63 N., R. 18 W., S. sixteenth cor. sec. $25,25 \mathrm{ft} . \mathrm{S}$. and 20 ft . E. from crossroads; iron post stamped "Prim Trav Sta No 81910 Mo"
T. 63 N., Rs. 17 and 18 W., S. sixteenth cor. between secs. 25 and 30 , 25 ft . N. and 30 ft . W. from T-rd. W. and private rd. E., on concrete base of corner fence post; chiseled square
T. 63 N., Rs. 17 and 18 W., on line between secs. 25 and $30,10 \mathrm{ft}$. E. of rd., in SE. pier of wooden bricige over deep drain; crossed nails
T. $63 \mathrm{N}$. . Rs. 17 and 18 W. , near cor. secs. $19,24,25$, and $30,15 \mathrm{ft} . \mathrm{N}$. and 160 ft . E. from T-rd. E., in root on S. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
Rd. fork NE., $90 \mathrm{ft} . \mathrm{N}$. and 20 ft . E. from, in root on $W$. side of $18-\mathrm{in}$. elm tree; crossed nails
T. 63 N., R. $17 \mathrm{~W}_{.}$, on line between secs. 18 and $19,27 \mathrm{ft}$. S. and 21 ft . E. from State Highway 6 at crossroad, on E. head wall of concrete culvert; chiseled square
T. 63 N., R. 17 W., near E. sixteenth cor. between secs. 17 and $20,30 \mathrm{ft}$. S. and 90 ft . E. from junction of rd. NW., 21 ft . S. of State Highway 6 , 528 ft . W. of junction of rd. S., on S. head wall of concrete culvert; chiseled square
T. 63 N., R. 17 W., in E $1 / 2$ sec. $21,20 \mathrm{ft}$. N. and 45 ft . W. from NW. corner of Union Church, 60 ft . S. and 30 ft . E. from State Highway 6 at rd. S., in concrete post; standard tablet stamped "P 2 1937"
T. 63 N., R. 17 W., in E $1 / 2 \mathrm{sec} .22,30 \mathrm{ft}$. S. and 75 ft . E. from State Highway 6 at rd. N., on S. head wall of concrete culvert; chiseled square
T. 63 N., R. 17 W., in NW $1 / 4$ sec. $26,25 \mathrm{ft}$. S. and 25 ft . E. from State Highway 6 at rd. S., 600 ft . W. of rd. N., on E. head wall of concrete culvert; chiseled square
T. 63 N., R. 17 W., in $S W 1 / 4$ sec. $25,210 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from State Highway 6 at rd. S., 490 ft . W. of rd. N.; iron post stamped "Prim Trav Sta No $71910 \mathrm{Mol}^{\prime \prime}$

Feet
1,009. 15

1,030.99
1,051.41
1,020.61
$1,030.924_{4}$

1,034.38
1,034.74

1,032.40
1,017.50
968.27

1,040.10

1,026.58
1,034.967

1,021.64
965.64
992.98

1,023.37
976.47

1,017.20
1,015.004
971.92
963.38
972.086
(Continued in Kirksville quadrangle; see line 5.)

## 6. FROM KIRKSVILLE QUADRANGLE AT SEC. 36, T. 62 N., R. 17 W., WEST To CWASCO (by J. J. Crane in 1937) <br> (Continued from Kirksville quadrangle; see line 7.)

T. 62 N., R. 17 W., in $S 1 / 2 \mathrm{sec} .36,20 \mathrm{ft}$. N. and 15 ft . E. from rd. forks, in root on E. side of 22-in. white-oak tree; copper nail and washer
T. 62 N., R. $17 W_{*}$, in $W 1 / 2 \mathrm{sec} .36,50 \mathrm{ft}$. N. and 25 ft . E. from T-rd. E., in root on N. side of 12-1n. white-oak tree; copper nail and washer
T. 62 N., R. 17 W., in NE $1 / 4$ sec. $35,40 \mathrm{ft}$. N. and 25 ft . E. from rd. forks, 20 ft . S. of Pratt Cemetery, in concrete post; standard tablet stamped "T T 1555 ERA 1935"
T. 62 N., R. 17 W., on line between secs. 34 and $35,40 \mathrm{ft} . \mathrm{N}$. and 50 ft . E. from T-rd. W., in root on W. side of 66-in. elm tree; copper nail and washer
900.31
$984 \cdot 94$
984.558
851.04
984.67
991.72
$1,033.442$
1,025.38
T. 62 N., Rs. 17 and 18 W., near S. sixteenth cor. between secs. 25 and $30,65 \mathrm{ft}$. N. and $20 \mathrm{ft} . \mathrm{E}$. from T-rd. E. on Adair-Sullivan county line, in root on S. side of 22-1n. elm tree; copper nail and washer

Feet
T. 62 N., R. 18 W., cor. secs. $25,26,35$, and $36,95 \mathrm{ft}$. S. and 20 ft . E. from crossroads, in concrete post; standard tablet stamped "T T 1557 ER A 1935"

1,009.169
T. 62 N., R. 18 W., near cor. secs. $26,27,34$, and $35,15 \mathrm{ft}$. N. and

20 ft . W. from W. end of iron bridge over Mussel Fork Creek, in root on S. side of 18-in. white-oak tree; copper nail and washer
904.10

Crossroads, 40 ft . S. and 20 ft . E. from, in root on E. side of $22-\mathrm{in}$. elm tree; crossed nails
T. 62 N., R. 18 W., quarter cor. between secs. 28 and $33,22 \mathrm{ft}$. N. and 36 ft . W. from County Koute A at crossroad, in concrete post; standard tablet stamped "T T 1558 E R A 1935"
953.64
T. 62 N., R. 18 W., quarter cor. between secs. 29 and $32,40 \mathrm{ft}$. N. and 400 ft . E. from crossroad, 40 ft . N. and 40 ft . E. from small iron bridge, in root on $S$. side of 22-1n. elm tree; copper nail and washer Owasco, 1 ml . E. of, 20 ft . S. and 500 ft . W. from Trd. S., in fence line, in N. side of stump; crossed nails

1,042.859
946.32
995.98
7. FROM OWASCO SOUTH INTO BUCKLIK QUADRANGLE AT SEC. 24, T. 60 N.,
R. 19 W. (by F. Y. Brown in 1937)
T. 62 N., R. 19 W., near cor. secs. $25,26,35$, and $36,15 \mathrm{ft}$. S. and 12 ft . W. from T-rd. S., on W. end of iron pipe culvert; painted square
T. 62 N., R. 19 W., quarter cor. between secs. 26 and $35,30 \mathrm{ft}$. S. and 35 ft . E. from N. end of jog in crossroads, in root on W. side of $1 l_{4}-1 \mathrm{n}$. white-oak tree; copper nail and washer
(For balance in Milan quadrangle, soe line 8.)
T. 61 N., R. 19 W., on line between secs. 11 and 14 , at NE. corner of steel bridge over Yellow Creek; top of handrail
T. 61 N., R. 19 W., cor. secs. 11, 12,13 , and $14,15 \mathrm{ft} . \mathrm{S}$, and 15 ft . E. from T-rd. S., in root on E. side of $14-i n$. white-oak tree; copper nail and washer
T. 61 N., R. 19 W., near quarter cor. between secs. 12 and 13 , 30 (? 80) ft. S. and 20 ft. E. from T-rd. E., in concrete post; standard tablet stamped "T T 1561 E R A 1935"
974.604
T. 61 N., R. 19 W., quarter cor. between secs. 13 and $24,700 \mathrm{ft}$. NE. of Baker Church, 500 ft . S. of T-rd. W., 25 ft . E. of rd., in root on W. side of 16-in. elm tree; copper nail and washer
T. 61 N., R. 19 W., center sec. 24 , 140 ft . N. and 15 ft . W. from T-rd. E., in root on E. side of 16-in. black-oak tree; copper nail and washer 992.84

Rd. forks $N ., S E .$, and $S W ., 25$ ft. NE. of, at corner fence post; surface of ground
T. 61 N., R. 19 W., near quarter cor. between secs. 25 and 36, at SE. corner of Nount Ólive School, on concrete porch; chiseled square
T. 61 N., R. 19 W., cor. secs. $25,26,35$, and $36,27 \mathrm{ft}$. N. and 21 ft E. from crossroads, in concrete post; standard tablet stamped "1562 ERA 1935"
869.172
T. 61 N., R. 19 W., near S. sixteenth cor. between secs. 35 and 36 , on concrete doorstep of farmhouse of R. H. Smith; chiseled square
T. 61 N., R. 19 W., 0.2 mi . E. of S. cor. secs. 35 and 36 , about 0.2 mi . NE. of North Salem, 15 ft . N. and 30 ft . E. from ra. fork SW. , in root on N. side of 16-in. elm tree; copper nail and washer
T. 61 N., Rs. 18 and $19 \mathrm{~W} ., \mathrm{s} . \operatorname{cor}$. secs. 31 and $36,20 \mathrm{ft}$. N. and 40 ft . E. from T-rd. N., 20 ft . N. and 270 ft . W. from T-rd. S., in root on S . side of 26-1n. maple tree; copper nail and washer
987.24
T. 60 N., R. 19 W., S. sixteenth cor. sec. $12,20 \mathrm{ft}$. S. and 15 ft . E. from crossroads, in root on N. side of l6-in. walnut tree; copper nail and washer
T. $60 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W} .$, in sec. $13,45 \mathrm{ft}$. E. of SE . corner of farmhouse, 15 ft . W. of rd., in root on W. side of $\mathrm{I}_{4}$-in. maple tree; crossed nails
T. 60 N., R. $19 W_{F}$, near N. sixteenth cor. sec. $24,10 \mathrm{ft}$. S. and 35 ft . W. from T-rd. W., in base of corner fence post; spike
T. 60 N., R. 19 W., quarter cor. between secs. 13 and $24,385 \mathrm{ft}$. S. and 15 ft . E. from T-rd. E., in root on W. side of $26-1 \mathrm{n}$. elm tree; copper nail and washer
(Continued in Bucklin quadrangle; see line 6.)

## 8. FROlif KIRKSVILLE QUADRANGLE SOUTHWEST ALONG STATE HIGHWAY Il TO SEC. 23, T. 60 N., R. 18 W. (by J. J. Crane in 1937)

T. 61 N., R. 17 W., in $N 1 / 2$ sec. $12,20 \mathrm{ft}$. N. and 10 ft . E. from crossroad, on E. head wall of concrete culvert; chiseled square
T. 61 N., R. 17 W., on line between secs. 11 and $12,50 \mathrm{ft}$. S. of highway, 4 ft . N. of fence corner, in concrete post; standard tablet stamped "T T 796 C W A 1934"
T. 61 N., R. 11 W., in sec. $11,20 \mathrm{ft}$. S. and 30 ft . W. from function of rd. N., on W. head wall of concrete culvert; chiseled squaro
T. $61 \mathrm{~N} .$, R. $17 \mathrm{~W} .$, in $\mathrm{S} 1 / 2 \mathrm{sec} .11,20 \mathrm{ft}$. S. and 10 ft . W. from junction of ra. S., on W. end of iron pipe culvert; painted cross
T. 61 N., R. 17 W., near cor. secs. $10,11,14$, and $15,25 \mathrm{ft}$. N. and 15 ft . W. from junction of rd. N., on W. head wall of concrete culvert; chiseled square
T. 61 N., R. 17 W., on line between secs. 10 and $15,40 \mathrm{ft}$. N. of highway, in root on W. side of $18-1 \mathrm{n}$. elm tree; crossed nails
T. $61 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .16$, 50 ft . S. and 170 ft . W. from 1934"
T. 61 N., R. 17 W., on line between secs. 20 and $21,20 \mathrm{ft}$. S. and 20 ft . W. from junction of rd. W., on S. head wall of concrete culvert; chiseled square
T. $61 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4$ sec. $20,30 \mathrm{ft}$. N. and 30 ft . E. from cross road, on $N$. head wall of concrete culvert; chiseled square
T. 61 N., R. 17 W., near center sec. 29 , 25 ft . S. and 30 ft . E. from crossroad, on $S$. head wall of concrete culvert; chiseled square
T. 61 N., R. 17 W., in NE $1 / 4$ sec. $31,600 \mathrm{ft}$. NE. of bridge over Hussel Fork Creek, 90 ft . N. of highway, in concrete post; standard tablet stamped "T T 798 C W A 1934 "
T. 61 N., Rs. 17 and 18 W ., on 11 ne between secs. 31 and $36,20 \mathrm{ft}$. S. and 10 ft . W. from junction of rd. S. on Adair-Sullivan county line, on W. head wall of concrete culvert; chiseled square

Feet
1,023.135
994.30
998.75
869.02
864.145
882.54
.. 60 N., R. 18 W., on line between secs. 11 and $12,30 \mathrm{ft} . \mathrm{N}$. and 15 ft . W. from junction of rd. N., on W. head wall of concrete culvert; chiseled square
989.95
T. 60 N., R. 18 W., E. sixteenth cor. between secs. 11 and $14,30 \mathrm{ft}$. S. and 40 ft . E. from junction of County Route A A and rd. E., in concrete post; standard tablet stamped "T T 799 C W A 1934"
955.793
T. 60 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .23,20 \mathrm{ft}$. S. and 30 ft . E. from junction of rd. E., on S. head wall of concrete culvert; chiseled square
T. 60 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .23$, on N. end of E. side of culvert K-403 1934; chiseled square

## 9. FROM KIRKSVILLE QUADRANGLE AT SEC. $24, \mathrm{~T} .61 \mathrm{~N} ., \mathrm{R} .17$ W., SOUTH TO SEC. 13, T. 60 N., R. 17 W., THENCE WEST TO SEC. 14 , T. 60 N., R. 18 W. (by J. J. Crane in 1937) <br> (Continued from Kirksville quadrangle; see line 6.)

T. 61 N., R. 17 W., near center sec. $24,100 \mathrm{ft}$. S. and 40 ft . W. from crossroads, in root on W. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
802.78

Nind, about 1 mi . E. of, along Nind-Yarrow ridge rd., 15 ft . S. and
300 ft . W. from junction of rd. S., in root on S. side of $12-\mathrm{in}$. elm tree; copper nail and washer
941.78

Nind, about 0.5 mi . E. of, along Nind-Yarrow rd., 60 ft . N. and 300 ft . E. from junction of rd. E., in N. side of $25-i n$. white-oak tree; copper nail and washer
Nind, on S. end of concrete step of Farmers Exchange Store; chiseled square
944.12
817.91
963.52
W., in root on S. side of 22-1n. maple tree; copper nail and washer
T. 61 N., R. 17 W., in $w 1 / 2 \mathrm{sec} .36,40 \mathrm{ft}$. S. and 35 ft . E. from junction of abandoned rd. E., in concrete post; standard tablet stamped "T T 1545 ERA 1935"
929.116
T. 61 N., R. 17 W., in $S W 1 / 4$ sec. $36,12 \mathrm{ft} . \mathrm{S}$. and 150 ft . E. from T-rd. E., in fence line, in root on E. side of IO-in. elm tree; copper nail and washer
(For balance in Kirksville quadrangle, see line 6.)
T. 60 N., R. 17 W., in $E 1 / 2$ sec. 11 , 320 ft . S. and 25 ft . W. from T-rd. E., in root on E. side of $36-\mathrm{in}$. elm tree; copper nail and washer
773.12
T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} .$, in $\mathrm{E} 1 / 2 \mathrm{sec}$. $14,0.1 \mathrm{mi}$. N. of rd. fork, 100 ft . N. of smail wooden bridge, 25 ft . E. of rd., in root on S . side of i8-in. elm tree; crossed nails
$774 \cdot 39$
T. 60 N., R. 17 W., in SE $1 / 4$ sec. 15, at rd. corner E.-S., 15 ft . S. of private rd. W., in root on W. side of 10-1n. ash tree; copper nail and washer
T. 60 N., R. 17 W., in $N 1 / 2$ sec. $22,0.6 \mathrm{ml}$. E. of Grandview School, 0.2 mi . W. of rd. fork, at small bridge, 30 ft . N. of rd., in root on W. side of $24-1$. cottonwood tree; copper nall and washer

Grandview School, on E. side of, on SE. corner of concrete porch; chiseled square
805.16
968.56
T. 60 N., R. 17 W., near cor. secs. $16,17,20$, and $21,150 \mathrm{ft}$. S. of store, in concrete post; standard tablet stamped "I C C 1937"
T. 60 N., R. 17 W., near cor. secs. $8,9,16$, and $17,100 \mathrm{ft}$. N. of dwelling, 60 ft . E. of rd., in root on S. side of $28-1 \mathrm{n}$. maple tree; copper nail and washer
T. $60 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$., on line between secs. 8 and 17 , 15 ft . SE. of Lile School, 10 ft . N. of rd., in root on S. side of twin white-oak tree; copper nail and washer
T. 60 N., R. 17 W., near cor. secs. $7,8,17$, and $18,0.4 \mathrm{mi}$. W. of Lile School, 20 ft . S. and 160 ft . E. from crossroads, in root on w. side of 20-in. hickory tree; copper nail and washer
T. 60 N., R. 17 W., on line between secs. 7 and 18 , on W. end of bridge across Mussel Fork Creek; bolt head

2,002.467

1,004.30
$875 \cdot 54$
900.38
$841.2 l_{4}$
T. 60 N., R. $18 \mathrm{~W}_{.}$, in NE $1 / 4$ sec. $13,25 \mathrm{ft}$. N. and 25 ft . E. from T-rd. S., in root on S. side of twin 10-1n. hickory tree; copper nail and washer
994.71

GREEN CITY QUADRANGLE
(Latitude $40^{\circ} 15^{\prime}-40^{\circ} 30^{\prime}$; longitude $92^{\circ} 45^{\prime}-93^{\circ} 00^{\prime}$ )
Adair, Putnam, and Sullivan Counties


1. FROM QUELN CITY QUADRANGLE AT POINT 1 MILE EAST OF GLENDALE SCHOOL SOUTH BY WAY OF GRAYSVILLE AND MARTINSTOWN INTO QUEEN CITY QUADRANGLE AT POIITT 2 MILES NORTH OF SHIBLEY POINT (by P. W. MCMillen and J. Reyburn in 1911) (Continued from Queen City quadrangle; see line 3.)

Glendale School, about 1 mi . W. of, on Shoal Creek rd., 300 ft . E. of large dwelling, N. of rd., in root of large box-elder tree; copper nails

Feet
Glendale School, 0.5 mi . S. of, in NW $1 / 4$ sec. 36 , T. 66 N., R. 17 W., 700 ft . E. of dweiling of J. Steven, 200 ft . W . of wooden bridge over Shoal Creek, S. of rd.; iron post stamped "Ko $822^{\prime \prime}$
Graysville, about 2 mi . N: of, at foot of Keller Hill, 100 ft . S. of bridge over small stream, E. of rd., in root of 24 -in. maple tree; copper nail
846.99

Graysville, about 1 mi . N. of, 300 ft . NW. of dwelling of J. P. Collin, W. of rd., in root of $15-1 \mathrm{n}$. oak tree; copper nail
977.88

Graysville, 50 ft . W. of school, 25 ft . E. of large elm tree, in fence Ine; iron post stamped "Mo 1001
Graysville, 1.1 mi . S. of, 60 ft . E. of T-rd. S., 20 ft . N. of dwelling, on corner of sidewalk; chiseled mark
998.947
liartinstown, $0.5 \mathrm{mi} . \mathrm{N}$. of, 30 ft . N. of entrance to Lone Pine Cemetery, in root of 12-in. hickory tree; copper nail
981.23
artinatown 25 ft from yard; iron post stamped "Mo 993"
yard; iron post stamped "Mo 993"
Martinstown, 1.4 mi . S. of, on SW. corner of bridge over Blackbird Creek; bolt head
990.287
T. 65 N., R. 17 W., in $\mathrm{SW} 1 / 4 \mathrm{sec} .34$, on top of ridge at rd. forks, in root of 10-in. oak tree; copper nail
815.95

Sióney, 1.5 mi . NE. of, on line between secs. 3 and 10, T. 64 N., R. 17 W., $S W$. of crossroads; 1ron post stamped "Mo 811"
974.52

Eusted School, 0.5 mi . W. of, on top of hill, SE. of T-rd. s. (? W.), in root of $12-1 n$. oak tree; copper nail
808.845

Husted School, 1.2 mi . SW. of, near line between secs. 10 and 15 , T. 64 N., R. 17 W., W. of N.-S. rd., in root of $15-1 n$. bickory tree; copper nail
930.12
970.85
T. 64 N., R. 17 W., near center sec. $\frac{14}{4}, 50 \mathrm{ft}$. N. of dwelling of
E. Robinson, S. of rd., in root of 12-1n. hickory tree; copper nail
984.20
E. of T-rd. N.; iron post stamped "Mo 966 "
963.947
(Continued in Queen City quadrangle; see line 5.)
2. FROIM GLEEDALE SCHOOL WEST BY WAY OF HARTFORD TO UNIONVILLE, THENCE SOUTH BY WAY OF PENNVILLE TO GREEN CITY, THENCE EAST ALONG QUINGY, OMAHA \& KANSAS CITY RAILROAD AND ROADS INTO QUEEN CITY QUADRANGLE AT SEC. $1, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. (by P. W. McMillen and J. Rayburn in 1911)
Glendale School, 1.3 mi . W. of, at top of hill, N. of rd., in root of oak tree; copper nail
927.81

Glendale School, 2.4 mi . SW. of, in SW $1 / 4$ sec. 34 , T. 65 N., R. 17 W., at curve in rd. to N., N. of rd., in oak tree; copper nail
Hartford, $0 . \varepsilon \mathrm{mi}$. E. of, 200 ft . E. of dwelling of $W$. M. Wilison, at rd. corner N. -W., S. of rd.; iron post stamped "Mo 994"
991.973

Hartford, 1.4. mi. NW. of, NW. of T-rd. N., in tree; copper nail
Hartford, 2.7 mI . W. of, on line between secs. 35 and 36 , opposite dwelling, in fence line $N$. of rd.; iron post stamped "982"
980.024

Top of third hill W. of Blackbird Creek, 15 ft . S. of rd., in root of hickory tree; copper nail
Unionville, 3.8 mi . E. of, near S . sixteenth cor. between secs. 32 and 33, T. 66 N., R. 18 W., W. of T-rd. E.; 1ron post stamped "Mo 1045"

Feet
1,007.71
1,042.781
(For balence in Boynton quadrangle, see line 1.)
T. 65 N., R. 19 W., E. sixteenth cor. between secs. 11 and 14 , near dwelling $S$. of rd., in S. side of maple tree; copper nail
986.52
T. 65 N., Rs. 18 and 19 W., $0.3 \mathrm{mi} . \mathrm{N}$. of cor. secs. $13,18,19$, and

24, in floor at SW. corner of bridge over South Blackbird Creek; bolt
010.60
931.189
of crossroads; iron post stamped "Mo 933"
T. 65 N., R. 18 W., near W. sixteenth cor. betweon secs. 19 and 30 , N. of rd., in root of oak tree; copper nail
Tps. 64 and 65 N., Rs. 18 and 19 W., cor. of, at T-rd. S., on rock; chiseled square
T. 64 N., Rs. 18 and 19 W., N. sixteenth cor. between secs. 1 and 6, SE. of Trrd. E.; iron post stamped "Mo 1037"
T. $64 N_{.}$, R. $18 W_{\text {., }}$ in SE $1 / 4 \sec .6$, SW. of T-rd. N., in root of oak tree; copper nail
Fennville, about $850 \mathrm{ft} . \mathrm{N}$. of store building, 100 ft . W. of dwelling, W. of rd., in root of l2-in. hickory tree; copper nail
Pennville, about $1 \mathrm{mi} . S_{\text {. }}$ of, 200 ft . W. of small log cabin, W. of rd., in root of 18-in. oak tree; copper nall
Pennville, 1.5 mi . S. of, on line between secs. 18 and 19, T. 64 N. R. 18 W., 200 ft . N. of bridge over Spring Creek, E. of rd.; iron post stamped "Mo 896"
Boon Hill School, 0.2 mi . S. of, 100 ft . S. of T-rd. W., W. of rai., in root of 10-in. wild-cherry tree; copper nail
Tps. 63 and 64 N., Rs. 18 and 19 W., cor. of, opposite T-rd. E.; iron post stamped "Mo 1064"
Green City, 1 mi . N. of, cor. secs. $5,6,7$, and 8, T. $63 \mathrm{N.}, \mathrm{R} 18 w.$. , SE. of crossroads, in root of 20-in. maple tree; copper nail
Green City, $0.5 \mathrm{mi} . \mathrm{N}$. of, quarter cor. between secs. 7 and $8, \mathrm{~T} .63 \mathrm{~N}$. , R. 18 W ., in sw. corner' of cemetery; iron post stamped "Mo $1045^{\prime \prime}$

Green City, 600 ft . N. of Quincy, Omaha \& Kansas City R.R. sta.; top of rail
Green City, $0.5 \mathrm{mi} . \mathrm{E}$. of, on SW. corner of bridge 93.1 ; bolt head Green City, 1.5 ml . E. of, on SW. corner of bridge 92.2; bolt head Greencastle, 1.5 mi . W. of, S. sixteenth cor. between secs. 9 and 10 , T. 63 N., R. 18 W., at rd. corner E. - N.; iron post stamped "Ho $1041^{11}$ Greencastle, 1.2 ms . NE. of, in NW $1 / 4 \mathrm{sec} .12, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .18 \mathrm{~W} ., \mathrm{N}$. of rd., in root of $18-1 n$. tree; copper rail
Greencastle, 1.8 ml . NE. of, in NE $1 / 4 \mathrm{sec} .12, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .18 \mathrm{~W} ., \mathrm{S}$. of ra.; iron post stamped "Mo 1025"
Port Arthur School, 1.2 mi . SW. of, N. of junction of private rd. S., in root of $15-1$ n. oak tree; copper nail
Port Arthur School, 250 ft . S. of, E. of rd., in root of 12-in. oak tree; copper nall
Stahl, 1.8 mi . W. of, at NE. corner of bridge over Spring Creok; bolt head
Stahl, 0.4 ml . W. of, in NW $1 / 4$ sec. 3 , T. $63 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W} ., 100 \mathrm{ft}$. E. of smail wooden bridge, N. of rá.; iron post stamped "Mo 807"
Stahl, 1.2 ml . NE. of, at T-rd. S., in root of l2-in. oak tree; copper nail
Stahl, l. $\mathcal{E}$ mi. NE. of, at T-rd. N., in root of $15-i n$. oak tree; copper nail

1,050.01
1,043.99
1,035.325
1,036.58
?.,043.356
1,032.67
893.617

1,049.03
1,061.028
1,054.80
1,042.659
1,057.3
1,018.73
1,002.96
1,037.917
1,040.54
1,022.139
1,005.90
977.22
816.49
804.086
973.81
970.01
983.46
(Continued in Queen City quadrangle; see line 6.)

## 3. FROM SEC. 3, T. 64 N., R. 17 W., WEST TO PENNVILLE <br> (by P. W. McMillen and J. Rayburn in 1911)

Sidney, 1.5 mi . N. of, on line between secs. 4 and 9, T. 64 N., R. 17 W., N . of rd., on large boulder; chiseled square
Clark School, 0.5 mi . N. of, on top of ridge, at rd. forks, in root of 10-1n. oak tree; copper nail
Elko, about 2 mi . SE. of, on line between secs. 6 and 31, Tps. 64 and 65 N., R. 17 W., 200 ft . E. of $\mathrm{T}-\mathrm{rd}$. N., E. of rd., in root of $12-1 \mathrm{n}$. hickory tree; copper nail
T. 64 N., R. 18 W., in NE $1 / 4$ sec. $1,50 \mathrm{ft}$. W. of large dwelling, s . of rd.; 1ron post stamped "Mo 1018"
T. 64 N., R. $18 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec}$. 2, at SE. corner of bricige over Shuteye Creek; bolt head
Tps. 64 and $65 \mathrm{~N}_{\mathrm{C}}, \mathrm{R}_{\mathrm{L}} 18 \mathrm{~W}$. , near cor. secs. $2,3,34$, and $35, \mathrm{NW}$. of crossroads, in root of l2-in. hickory tree; copper nail
T. 64 N., R. 18 W., on line between secs. 3 and 4, at T-rd. N.; surface of ra.
Pennvilie, about 2 mi . NE. of, in NE $1 / 4 \mathrm{sec} .4$, T. 64 N., R. 18 W., at ra. corner E.-S.; 1ron post stamped "Mo 1034"
Pennville, about 1 mi . NE. of, 300 ft . E. of bridge over North Spring Creek, N. of rd., in root of $12-\mathrm{in}$. elm tree; copper nail
969.58
$1,004.00$
1,015.897
930.74

1,031.25
1,040.4
1,031.938
911.30
4. FROM BOYNTON QUADRANGLE AT UNIONVILLE EAST AND NORTH INTO CENTERVILLE QUADRANGLE AT SEC. 28, T. 66 N., R. 18 W. (by Cornish Beck in 1936)
(Continued from Boynton quadrangle; see line 2.)

Unionville, 1.4 mi . E. of courthouse, s. sixteenth cor. between secs. 31 and 36, T. 66 N. , Rs. 18 and $19 \mathrm{~W} ., 20 \mathrm{ft} . \mathrm{N}$. and 50 ft . E. from T-rd. N., on head wall of culvert; chiseled square

Feet
1,041.40
T. 66 N., Rs. 18 and 19 W., cor. secs. $25,30,31$, and 36,60 ft. S. and 50 ft . W. from T-rd. E., in root on SE. side of $30-\mathrm{in}$. post-oek tree; copper nail and washer
T. 66 N., R. 18 W ., on line between secs. 30 and $31, \mathcal{L}_{4} \mathrm{ft} . \mathrm{S}$. and 15 ft . W. from T-rd. N., in telephone pole; nails

1,043.36
1,040.14
980.37

29 and 32,8 rt
and 160 ft . W. from T-rd. N., on head wall of culvert; chiseled square
T. 66 N., R. 18 W. , in $\mathrm{SE} 1 / 4$ sec. 29, 70 ft . N. and 9 ft . W. from T-rd. W. on head wall of culvert; chiseled square
T. 66 N., R. 18 W., N. sixteenth cor. between seos. 28 and $29,45 \mathrm{ft} . \mathrm{N}$. and 22 ft. W. from T-rd. W., in concrete post; standard tablet stamped "1 C B 1936"

1,017.39
889.061
(Continued in Centerville quadrangle; see line 1.)
5. FROM CENTERVILLE QUADRANGLE AT SEG. 29, T. 66 N., R. 17 W., SOUTH TO HARTFORD (by Cornish Beck in 1936)
(Continued from Centerville quadrangie; see line 4.)
T. 66 N., R. 17 W., near W. sixteenth cor. sec. 28 , on NE. wing wall of bridge over Sandy Creek; chiseled square
T. 66 N., R. 17 W., 0.1 ml . E. of center sec. $33,71 \mathrm{ft}$. E. of T-rd. W., in root on SW, side of 16-in. hickory tree; bent nails
T. 66 N. , R. 17 W. , in $\mathrm{NW} 1 / 4 \mathrm{sec} .4$, 35 ft . N. and 78 ft . E. from junction of State Highway 4 and County Route $V$, on head wall of culvert; chiseled square
6. FROM BOYNTON QUADRANGLE AT EAST CITY LIMITS OF UNIONVILLE NORTH INTO CENTERVILLE QUADRANGLE AT SEC. 26, T. 66 N., R. 19 W. (by D. R. Stewart in 1936)

Unionville, at E. limits of, 2 ft . N. and 10 ft . W. from Chicago,
Burlington \& Quincy R.R. at rd. crossing, at NW. corner of semaphore; bolt head

1,016.36
(Continued in Centerville quadrangle; see line 5.)
7. FROM BOYNTON QUADRANGLE AT SEC. 14 , T. 63 N., R. 19 W., EAST AND SOUTH INTO WINIGAN QUADRANGLE AT SEC. 23, T. 63 N., R. 19 W. (by D. R. Stewart in 1936)
(Continued from Boynton quadrangle; see line 5.)
T. 63 N., R. 19 W., near E. sixteenth cor. sec. 14 , on SW. wing wall of bridge over Yellow Creek; chiseled square
931.03
T. 63 N., R. 19 W., in W $1 / 2$ sec. $13,20 \mathrm{ft}$. N. and 15 ft . W. from T-rd. S., in root on E. side of small wild-cherry tree; crossed nails
T. 63 N., R. 19 W., W. sixteenth cor. between secs. 13 and $24,50 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from crossroads, in root on W. side of $30-\mathrm{fn}$. locust tree; copper nall and washer
$1,032.58$
(Continued in Winigan quadrangle; see line 3.)
8. FROM SEC. 13, T. 63 N., R. 19 W., WEST INTO BOYNTON QUADRANGLE AT SEC. 23, T. 63 N., R. 19 W. (by W. V. Kennedy in 1936)
T. 63 N., R. 19 W., on line between secs. 14 and 23 , on SE. wing wall of bridge over drain; chiseled square
T. 63 N., R. 19 W., in $\mathrm{N} 1 / 2 \mathrm{sec} .23$, in NW. pier of bridge over Yellow

Creek; copper nail and washer
925.82
(Continued in Boynton quadrangle; see line 9.)
9. FROM SEC. 23, T. 63 N., R. 18 W., NORTH TO GREENCASTLE (by H. B. Pyle in 1937)
T. 63 N., R. 18 W., near E. sixteenth cor. between secs. $I_{4}$ and 23 , 15 ft . S. and 150 ft . W. from T-rd. N., on S. head wail of concrete culvert; chiseled square
Greencastle triansulation sta.; U.S.C. \& G.S. standard disk atamped "Greencastle 1934"
Reference mark 1, U.S.C. \& G.S. standard reference disk stamped "Greencastle No 1 1934"

1,031.56
1,047.325
Reference mark 2, U.S.C. \& G.S. standard reference disk stamped "Greencastle No 2 1934"

1,047.262
U.S.C. \& G.S. standard disk stamped "X 16 1933"

1,047.679.

For an additional level line along Quincy, Omaha \& Kansas City
R.R., refer to United States Coast and Geodetic Survey first-
order IIne; Quincy, IIl. to Milan, Mo.


1. FROM GREEN CITY QUADRANGLE AT SEC. $28, \mathrm{~T} .66 \mathrm{~N} ., \mathrm{R} .18 \mathrm{w}$. ,
NORTHEAST BY WAY OF OMAHA INTO MOULTON QUADRANGLE AT
SEC. 24 , T. 66 N., R. 17 W. (by Cornish Beck in 1936)
T. 66 N., R. $18 \mathrm{~W} .$, in SE $1 / 4 \mathrm{sec}$. 2l, on SE. wing wall of iron bridge; chiseled square
T. 66 N., R. 18 W., near center sec. $22,53 \mathrm{ft}$. N. and 24 ft . E. from T-rd. W., in W. side of telephone pole; nails
T. 66 N., R. 18 W. , on 11 ne between secs. 15 and $22,20 \mathrm{ft}$. S. and 165 ft . E. from T-rd. E., in S. side of telephone pole; nails
T. 66 N., R. 18 W., about 0.2 mi . W. of quarter cor. between secs. 14 and 23, 18 ft . N. and 15 ft . E. from rd. corner W.-NE., in root on W. side of $30-1 \mathrm{n}$. post-oak tree; copper nail and washer
T. $66 \mathrm{~N} ., \mathrm{R} .18 \mathrm{~W}$. , on 11 ne between secs. 13 and $14,15 \mathrm{ft} . \mathrm{S}$. and 30 ft . E. from T-rd. E., on head wall of culvert; chiseled square
895.69

1,013.89
1,037.13

1,013.46
1,001.63
1,001.799
885.76

1,003.84
993.56
975.20
840.99
944.58
980.34
996.26

1,002.573
873.21
852.81
(Continued in Moulton quadrangle; see line l.)
2. FROM MENDOTA WEST ALONG IOWA-MISSOURI STATE LINE TO SEC. 26, T. 67 N., R. 19 W. (by Cornish Beck in 1936)
U.S.C. \& G.S. standard disk stamped "A 10 1937"
884.457

1,036.21

[^22]T. $67 \mathrm{~N} ., \mathrm{R} .18 \mathrm{~W} ., \mathrm{S} . \operatorname{cor}$. secs. 20 and 21 , on Iowa-Mo. State line, concrete post; standard tablet stamped "T T 66 J J 1936 "
T. 67 N., R. 18 W., on N. line sec. 29, on Iowa-Mo. State line, 15 ft . N. and 310 ft . W. from T-rd. S., 12 ft . E, of NW. corner of wooden bridge, in N. end of sill; copper nail and washer
T. 67 N., R. 18 W., N. quarter cor. sec. 30 , on Iowa-Mo. State line, 30 ft . N. and 18 ft . W. from T-rd. N., in root on S . side of $28-\mathrm{in}$. elm tree; copper nail and washer
$1,048.97$

## 3. FROM MENDOTA EAST ALONG IOWA-MISSOURI STATE LINE INTO MOULTON QUADRANGLE (by Cornish Beck in 1936)

T. 67 N., R. 18 W., in NE $1 / 4 \mathrm{sec} .27$, about 0.7 mi . NE. of Chicago, Burlington \& Quincy R.R. sta. at Mendota, 28 ft . N. of rd. fork SW., in concrete post; standard tablet stamped "T T 67 J J 1936"
$1,014.822$
T. 67 N., R. 18 W., in $3 W 1 / 4$ sec. $26,30 \mathrm{ft}$. S . and 100 ft . E. from T-rd. E., in Jard, in root on N. side of $16-1 n$. maple tree; copper nail and washer
T. 67 N., R. 18 W., in $s 1 / 2 \mathrm{sec} .25,170 \mathrm{ft}$. S. and 150 ft . E. from rd. fork N., in yard, in root on N. side of 24-in. black-oak tree; copper nail and washer
T. 67 N., R. 17 W., in NW $1 / 4 \mathrm{sec} .31,12 \mathrm{ft}$. N. and 31 ft . E. from ra. forks, 67 ft . N. and 49 ft . W. from Friendship School, in concrete post; standard tablet stamped "T T 68 J J 1936"
T. 67 N., R. 17 W., in $S W 1 / 4$ sec. $29,20 \mathrm{ft}$. S. and 36 ft . E. from SE. corner of bridge over Shoal Creek, in root on N. side of 22-1n. elm tree; copper nail and washer
T. 67 N., R. 17 W., in $S W 1 / 4$ sec. $28,16 \mathrm{ft}$. N. and 25 ft . E. from T-rd. E., on W. side of corner fence post; nails
T. $67 \mathrm{~N} .$, R. $17 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4$ sec. 27 , 18 ft . N. and 25 ft . E. from T-rd. E., in corner fence post; spike

Feet
995.794
998.08
$1,008.76$
996.16
992.698
858.82
988.08
979.20
982.564 20 ft . N. and 50 ft. W. from T-rd. W., in concrete post; standard tablet stamped "T T 69 J J 1936 "
907.07

Bridge, on $S W$. wing wall; chiseled square
T. $67 \mathrm{~N} ., \mathrm{R}$. 17 W. , near $E$. sixteenth cor. between secs. 15 and $22,32 \mathrm{ft}$. N. and 435 ft . E. from T-rd. S., in root on S. side of 22-1n. post-oak tree; copper nail and washer
979.12
T. 67 N., R. 17 W., near quarter cor. between secs. 14 and $23,66 \mathrm{ft} . \mathrm{S}$. and 72 ft . W. from T-rd. S., on NW. corner of step of Union Church; chiseled square
T. 67 N., R. 17 W., on line between secs. 13 and 24 , in top of SW. piling of bridge over Spring Creek; bent nail
T. 67 N., R. 17 W., E. sixteenth cor. between secs. 13 and $24,90 \mathrm{ft}$. s . and 20 ft . E. from T-rd. S., in root on W. side of 26 -in. hickory tree; copper nail and washer
867.94
T. $67 \mathrm{~N} ., \mathrm{R}$. 17 W ., 300 ft . E. of N. quarter cor. sec. 25 , on Iowa-Mc. State iline, 16 ft . S. and 210 ft . E. from rd. corner N.-E., in concrete post; standard tablet stamped "TT T 70 J J 1936"
929.17
912.621
(Continued in Moulton quadrangle; see line 2.)
4. FROM SEC. 18, T. 66 N., R. 17 W ., SOUTH INTO GREEN CITY
QUADRANGLE AT SEC. $29, \mathrm{~T} .66 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$.
T. 66 N., R. 17 W., near N. sixteenth cor. between secs. 19 and 20 , 33 ft . S. and 19 ft . E. from T-rd. E., in concrete post; standard tablet stamped 14 C B $1936^{\circ}$
T. $66 \mathrm{~N} ., \mathrm{R}$. $17 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .20,12 \mathrm{ft}$. S. and 15 ft . W. from T-rd.
S.; in cormer fence post; nail
T. $66 \mathrm{~N} ., \mathrm{R} .17 \mathrm{~W}$. , in $\mathrm{SE} 1 / 4 \mathrm{sec} .20,70 \mathrm{ft} . \mathrm{N}$. and 40 ft . W. from NW. corner of dwelling of $0 . \mathrm{H}$. Graves, 13 ft . E. of rd., in root on W . side of $26-1 n$. white-oak tree; copper nail and washer
993.019
side of 26-1n. White-oak tree; copper nail and washer 66 N., R. $17 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .29$, 30 ft . N. and $33 \mathrm{ft}$. . from T-rd.
E., in root on S . side of $18-1 \mathrm{n}$. whiteooak tree; copper nail and washer
(Continued in Green City quadrangle; see line 5.)
5. FROM GREEN CITY QUADRANGLE AT SEC. 26, T. 66 N., R. 19 W., NORTH AND WEST INTO SEYMOUR QUADRANGLE AT SEC. 24 , T. 67 N., R. 19 W. (by D. R. Stewart in 1936)
(Continued from Green City quadrangle; see line 6.)
T. 66 N., R. 19 W., cor. secs. $23,24,25$, and 26 , on Sw. abutment of bridge; chiseled square
948.32
T. 66 N., R. 19 W., quarter cor. between secs. 23 and $24,25 \mathrm{ft}$. N. and 25 ft. W. from crossroads, in concrete post; standard tablet stamped T. 56 S 1936"
. 66 N., R. 19 W., near cor. secs. $11,12,13$, and 14 , on SE. abutment of bridge over Blackbird Creek; ch1seled square
T. $66 \mathrm{~N}_{\mathrm{H}}, \mathrm{R}$. $19 \mathrm{~W} .$, near quarter cor. between secs. 11 and $12,10 \mathrm{ft}$. s . and 35 ft . W. from T-rd. E., in top of large elm-tree stump; cross nails
923.36
T. 66 N., R. 19 W., near N. sixteenth cor. between secs. 11 and 12 , 963.75

25 ft . N. and 25 ft . W. from T-rd. W., in corner fence post; spike

[^23](Continued in Seymour quadrangle; see line 2.)

> 6. FROM SEC. 12, T. 66 N., R. 19 W., EAST TO HOWLAND (by D. R. Stewart in 1936)
T. 66 N., R. 19 W., E. sixteenth cor. sec. $12,50 \mathrm{ft}$. N. and 15 ft . E. from crossroads, in root on $S$. side of large elm tree; copper nail and washer
T. $66 \mathrm{~N} ., \mathrm{R}$. $18 \mathrm{~W} .$, in NW $1 / 4 \mathrm{sec} .7$, in yard of John Richardson, on SE . corner of concrete well platform; chiseled square
U.S.C. \& G.S. standard disk stamped "C 10 1930"

For an additional level line along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey firstorder line; Minneapolis, Minn. to Glasgow, Mo.

SEYMOUR QUADRANGLE ${ }^{*}$<br>(Latitude $40^{\circ} 30^{\prime}-40^{\circ} 45^{\prime}$; longitude $93^{\circ} 00^{\prime}-93^{\circ} 15^{\prime}$ )<br>Putnam County



1. FROM BOYNTON QUADRANGLE AT SEC. 23, T. 66 N., R. 21 W., NORTHWEST TO IOWA-MISSOURI STATE LINE AT SEC. 28, T. 67 N., R. 21 W. (by D. R. Stewart in 1936)
T. 66 N., R. 21 W., quarter cor. between secs. 13 and 14,60 ft. N. and 15 ft . E. from T-rd. W., in root on SW. side of 27-in. cottonwood tree; copper nall and washer
T. 66 N., R. 21 W., near center sec. 14, at crossroads, on NE. corner of concrete porch of Mount Hope Church; chiseled square

1,050.02
1,073.77
24 ft . W. from crossroads, in concrete post; standard tablet stamped "T T 59 J J 1936"
T. 66 N., R. 21 W., near N. sixteenth cor. sec. ll, at first bridge S. of T-rd. W., on E. end of iron cross beam; painted square
T. 66 N., R. 21 W., quarter cor. between secs. 2 and $11,25 \mathrm{ft} . \mathrm{S}$, and 35 ft . E. from T-rd. E., in root on NW. side of l2-in. maple tree; copper nall and washer
T. 66 N., R. 21 W., near center sec. $2,45 \mathrm{ft}$. N. and 20 ft . W. from T-rd. W., in root on SW. side of $12-1 n$. hedge tree; bent nails
T. 66 N., R. 21 W., quarter cor. between secs. 2 and 3 (?), 50 ft . S. of T-rd. N., in root on W. side of hedge-tree stump; copper nail and washer

1,054.18
1,045.172
069.81

1,074.25
1,074.37

[^24]T. 67 N., R. 21 W., S. quarter cor. sec. 35 , $95 \mathrm{ft} . \mathrm{S}$. and 130 ft . E. Feet from T-rd. N., on W. side of top concrete step to cellar; chiseled square
T. 67 N., R. 21 W., quarter cor. between secs. 34 and $35,20 \mathrm{ft}$. N. of rd. corner S.-W., in concrete post; standard tablet stamped "T T 58 J J 1936"

1,082.55
T. 67 N., R. 21 W., W. sixteenth cor. sec. $34,20 \mathrm{ft}$. N. and 230 ft . E. from T-rd. N., in root on N. side of 15-in. willow tree; copper nail and washer
$1,049.684$

1,061.46
T. 67 N., R. 21 W., E. (? W.) sixteenth cor. between secs. 27 and 34 , 25 ft . S. and 240 ft . W. from T-rd. S., in root on SW. side of $18-\mathrm{in}$. hedge tree; copper nail and washer

1,091.18
T. 67 N., R. 21 W., N. cor. secs. 27 and 28 , on Iowa-Mo. State line, 55 ft . S. and 205 ft . W. from T-rd. W., in root on NW. side of $28-1 \mathrm{n}$. maple tree; copper nail and washer

1,093.07

## 2. FROM CENTLRVILLE QUADRANGLE AT SEC. 24, T. 67 N., R. 19 W., WEST NEAR IOWA-MISSOURI STATE LINE TO SEC. 2, T. 66 N., R. 21 W. (by D. R. Stewart in 1936-37) <br> (Continued from Centerville quadrangle; see line 5.)

T. 67 N., R. 19 W., S. cor. secs. 23 and 24 , on Iowa-Mo. State Ine, 20 ft . S. of $\mathrm{T}-\mathrm{rd} . \mathrm{N} ., 2 \mathrm{ft}$. N. of fence, in concrete post; standard tablet stamped "Prim Trav Sta No 33 Mac 1923"

1,001.627
T. 67 N., R. 19 W., N. quarter cor. sec. $27,25 \mathrm{ft}$. N. and 25 ft . E. from State Highway 5 at ra. on Iowa-Mo. State ine, on SE. end of NE. head wall of culvert; chiseled square

1,066.15
T. 67 N., R. 19 W., W. sixteenth cor. on S. line sec. 22,90 ft. N. and 425 ft . E. from T-rd. N., in root on S. side of large cottonwood tree; copper nail and washer
T. 67 N., R. 19 W., N. cor. secs. 28 and $29,5 \mathrm{ft}$. S. and 17 ft . E. from stone on Iowa-Mo. State ine, 35 ft . N. and 60 ft . E. from dwelling of Mary Idieman, 25 ft . S. of rd., in concrete post; standard tablet stamped "T T 65 J J 1936"
T. 67 N., R. 19 W., W. sixteenth cor. on N. Ilne sec. 29, $155 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from T-rd. S., in root on NE. side of large, twin elm tree; copper nail and washer
T. 67 N., R. 19 W., W. sixteenth cor. between secs. 29 and $32,120 \mathrm{ft}$. N. and 20 ft . W. from crossroads, in W. side of small elm tree; spike
T. 67 N., R. 19 W., W. sixteenth cor. between secs. 30 and 31,15 ft. S. and 15 ft . E. from T-rd. N., in N. side of telephone pole; spike
T. $67 \mathrm{~N} .$, Rs. 19 and 20 W. , cor. secs. $25,30,31$, and $36,22 \mathrm{ft}$. N. and 5 ft . E. from Trid. S., in concrete post; standard tablet stamped "T T 64 J J 1936"
T. 67 N., R. 20 W., near cor. secs. $25,26,35$, and 36 , on SE. wing wall of small bridge; chiseled square
T. 67 N., R. 20 W., near W. sixteenth cor. between secs. 26 and 35,

65 ft . N. and 25 ft . W. from crossroads, in corner fence post; spike
T. 67 N., R. 20 W. , near quarter cor. between secs. 27 and 34 , on SE. wing wall of bridge; chiseled square

1,065.93

1,072.610
T. 67 N., R. 20 W., cor. secs. $27,28,33$, and 34 , about 850 ft . W. of T-rd. S., at SW. corner of small bridge, at concrete foundation of old structure; bolt head

1,017.91
1,060.54
1,052.26
985.193
959.52

1,057.68
940.06
943.84
T. $67 \mathrm{~N} ., \mathrm{R} .20 \mathrm{~F} ., \mathrm{E}$. sixteenth cor. between secs. 29 and $32,25 \mathrm{ft} . \mathrm{S}$. and 48 ft . W. from crossroads, in concrete post; standard tablet stamped "T T 63 J J 1936"

1,061.272
T. 67 N., R. 20 W., E. sixteenth cor. on S. line sec. 32,25 ft. S. and 25 ft . E. from T-rd. N., in root on W. side of 18-1n. maple tree; copper na11 and washer

1,063.46
T. $67 \mathrm{~N}_{\dot{\prime}}$, R. 20 W., near W. sixteenth cor. on S. line sec. $32,20 \mathrm{ft} . \mathrm{S}$. and 180 ft . E. from T-rd. S., in root on NW. side of $16-1 \mathrm{n}$. elm tree; bent nails
T. 67 N., R. 20 W., S. cor. secs. 31 and 32 , 145 ft . E. of T-rd. N., on SE. wing wall of bridge; chiseled square

1,011.91
$977 \cdot 10$
T. $67 \mathrm{~N} ., \mathrm{R}$. 20 W. , on S. line sec. 31 , 55 ft . N. and 40 ft . W. from NW. corner of small bridge, in root on E. side of 18-in. white-oak tree; crossed nails
Tps. 66 and 67 N., R. 21 W., E. sixteenth cor. between secs. 1 and 36 , 21 ft . S. and 31 ft . W. from T-rd. S., 20 ft . W. of fence, in concrete post; standard tablet stamped "T T 62 J J 1936"
957.21
T. 66 N., R. 21 W., near $N$. quarter cor. sec. $2,20 \mathrm{ft} . \mathrm{N}$. of T-rd. S., 20 ft . N. and 75 ft . W. from T-rd. N., in root on S. side of $10-\mathrm{in}$. elm tree; copper nail and washer
$1,067.612$
$1,045.15$

## 3. FROM BOYNTON QUADRANGLE AT SEC. 28, T. 66 N., R. 20 W., WEST <br> INTO BOYNTON QUADRANGLE AT SEC. 30, T. 66 N., R. 20 W. <br> (by D. R. Stewart in 1936) <br> (Continued from Boynton quadrangle; see line 8.)

T. 66 N., R. 20 W., quarter cor. between secs. 21 and $28,20 \mathrm{ft} . \mathrm{N}$. and 50 ft . W. from rd. corner S.-W., on W. side of S. end of concrete sidewaik; chiseled square

1,052.67
T. 66 N., R. 20 W., 0.1 mi . N. of quarter cor. between secs. 20 and 29 , 16 ft . S. and $20^{\circ} \mathrm{ft}$. E. from T-rd. N. and abandoned rd. S., in concrete post; standard tablet stamped "T T 61 J J 1936"
Bridge over West Locust Creek, on SW. wing wall; chiseled square
931.059
T. 66 N., R. 20 W., quarter cor. between secs. 19 and $30,175 \mathrm{ft}$. N. and 110 ft . E. from T-nd. N., in root on SE. side of large elm tree, copper T. 66 and washer
927.04
T. $66 \mathrm{~N} ., \mathrm{R}$. 20 W ., near w . cor. secs. 19 and $30,20 \mathrm{ft}$. S. and 30 ft . E. from T-rd. N., in root on NE. side of $8-1 n$. oak tree; copper nail

Putnam and Sullivan Counties


1. FROM GREEN CITY QUADRANGLE 1.8 MILES SOUTH OF UNIONVILLE SOUTH

INTO GREEN CITY QUADRANGLE AT SEC. 11, T. $65 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W}$. (by P. W. McMilien and J. Rayburn in 19li)
(Continued from Green City quadrangle; see line 2.)

Unionville, 1.8 mi . S. of, opposite awelling, E. of rd., in root of poplar T. $65 \mathrm{N}$. . R. 19 W. , cor . secs. $10,11,14$, and 15 , W. of rd., in elm tree; copper nail

Feet
1,052.20
940.73
(Continued in Green City quadrangle; see line 2.)
2. FROM UNIONVILLE EAST INTO GREEN CITY QUADRANGLE (by Cornish Eeck in 1936)
U.S.C. \& G.S. standard disk stamped "E 10 1930"
Unionville, in W. abutment of N. entrance to courthouse; standard tablet stamped "T T 74 J J 1936"
1.048 .830

1,067.282
(Continued in Green City quadrangle; see line 4.)
3. FROM SEC. 15, T. 64 N., R. 21 W., SOUTH TO SEC. 15, T. 63 N., R. 21 W. (by D. R. Stewart in 1936)*
T. 64 N., R. 21 W., quarter cor. between secs. 15 and $16,130 \mathrm{ft}$. S. and 10 ft . E. from T-rd. S., on NE. wing wall of bridge; chiseled square
T-rd. E., W. of rd., in fence post; nail
927.37
T. 64 N., R. 21 W., 185 ft . E. of E. sixteenth cor. between secs. 21 and 28 , 30 ft . N. and 28 ft . W. from T-rd. N., in SE. corner of schoolyard, In concrete post; standard tablet stamped "T T $1563 \mathrm{ER} \mathrm{A} 1935^{\prime \prime}$
Bridge over creek, at SE. corner of, on iron sill; chiseled square
T-rd. W., 45 ft . $S$. and 15 ft . E. from, in root on $S W$. side of $12-1 \mathrm{n}$. elm tree; crossed nails
T. 64 N., R. 21 W., center of NE $1 / 4 \mathrm{sec}$. $33,100 \mathrm{ft} . \mathrm{N} .(?)$ and 105 ft . S. (?) from T-rd. W., in root on NE. side of l2-in. walnut tree; copper nail and washer
Bridge over West Locust Creek, on first iron beam W. of NE. corner of; chiseled square
T. 64 N., R. 21 W., quarter cor. between secs. 32 and $33,30 \mathrm{ft}$. N. and 10 ft . W. from T-rd. S., in base of telephone pole; spike
T. 63 N., R. 21 W., in NE $1 / 4 \mathrm{sec} .5$, on SW. wing wail of bridge over creek; chiseled square
T-rd. W., 15 ft . N. and 54 ft . E. from, in root on S . side of small, twin elm tree; crossed nails
T. 63 N., R. 21 W., quarter cor. between secs. 5 and $8,85 \mathrm{ft}$. S. and 5 ft. E. from rd. corner E.-S., on E. end of concrete culvert; chiseled square
Harris triangulation sta.; U.S.C. \& G.S. standard disk stamped "Harris 1928"
Reference mark 3: U.S.C. \& G.S. standard reference disk stamped "Harris No 3 1934"
T-rd. N., 15 ft . N. and 25 ft . W. from, on concrete foundation of corner fence post; chiseled square
T. 63 N., R. 21 W., near cor. secs. $8,9,16$, and 17 , at T-rd. S., on SW.
head wall of large, abandoned concrete culvert; chiseled square
T. 63 N., R. 21 W., cor. secs. $16,17,20$, and $21,15 \mathrm{ft} . \mathrm{N}$. and 15 ft .
W. from crossroads, in root on W. sicie of large, twin mapie tree; copper nail and washer
926.81
${ }^{*}$ Published also as line 1 of the Lucerne quadrangle (see Bull. 898-D, pp. 453).
T. 63 N., R. 21 W., in $S W 1 / 4 \mathrm{SW} 1 / 4$ sec. $15,30 \mathrm{ft} . \mathrm{N}$. and 160 ft . W.

Feet
854.40 from W. end of bridge over West Locust Creek, in root on SE. side of large, twin elm tree; copper nail and washer

> 4. FROM SEC. 10, T. 64 N., R. 21 W., NORTH ALONG WEST BORDER OF QUADRANGLE INTO LUCERNE QUADRAIGLE AT SECG. $27, T \cdot 66 \mathrm{~N} .$, R. 21 W . (by D. R. Stewart in 1936 )
T. 64 N., R. 21 W., approximate quarter cor between secs. 10 and 11 , $36 \mathrm{ft}$. . S. and 20 ft . E. from crossroads, in concrete post; standard tablet stamped "T T 1564 E R A 1935"
Reference mark, $50 \mathrm{ft} . \mathrm{N}$. and 110 ft . W. from tablet, in root on N . side of $16-1 \mathrm{n}$. elm tree; copper nail and washer

1,021.582
1,017.47
T. 64 N., R. 21 W., N. cor. secs. 2 and $3,80 \mathrm{ft}$. S. and 35 ft . E. from crossroads, in root on SE. side of large elm tree; copper nail and washer

1,027.32
T. 65 N. , R. 21 W., cor. secs. $26,27,34$, and $35,10 \mathrm{ft}$. S. and 35 ft .
W. from crossroads, in concrete post; standard tablet stamped "7 5 1936"
994.860
T. 65 N., R. 21 W., cor. secs. $22,23,26$, and $27,150 \mathrm{ft}$. N. and 65 ft . W. from T-rd. E., in front of farmhouse, on $S W$. corner of concrete siciewalk; chiseled square
$1,050.39$
T. 65 N., R. 21 W., cor. secs. $34,15,22$, and $23,10 \mathrm{ft} . \mathrm{S}$. and 120 ft . E. from crossroads, on SW. Wing wall of concrete culvert; chiseled square
Fry triangulation sta.; U.S.C. \& G.S. standard disk stamped "Fry 1928"
Reference mark 2: U.S.C. \& G.S. standard reference disk stamped "Fry No 2 1928"
T-rec. E., 125 ft . N. and 85 ft . W. from, at well, on SE. corner of concrete platform; chiseled square

1,006.94
1,061.524
1,060.036
T. 65 N., R. 21 W., cor. secs. $2,3,10$, and ll, $85 \mathrm{ft} . \mathrm{S}$. and 65 ft . F. from crossroads, in root on NE. side of 20-in. elm tree; copper nail and washer
T. $66 \mathrm{H} ., \mathrm{R}$. 21 W., in $S E 1 / 4 \mathrm{SE} 1 / 4 \mathrm{sec} .35$, 80 ft . N. and 20 ft . W. from State Highway 4 at rd. N., in concrete post; standard tablet stamped "8 S 1936"

1,056. 3.7

1,026.57
T. 66 N., R. 21 W., quarter cor. between secs. 26 and $35,40 \mathrm{ft}$. S. and 30 ft . E. from crossroads, in root on SE. side of 24 -in. black-oak tree;
copper nail and washer
T. $66 \mathrm{~N} ., \mathrm{R} .21 \mathrm{~W} .$, cor. secs. $25,26,35$, and $36,20 \mathrm{ft}$. N. and 75 ft . E.
931.104 from T-rd. N., in roct on SW. side of 8 -in. wild-cherry tree; copper nail and washer
T. 66 N., R. 21 W., cor. secs. $23,24,25$, and $26,48 \mathrm{ft}$. S. and 18 ft . W. from crossroads, in concrete post; standard tablet stamped "T T 60 J J 1936"
Reference mark, $200 \mathrm{ft} . \mathrm{N}$. and 100 ft . W. from tablet, at cellar, on top of concrete doorvay; chiseled square
T. 66 N., R. 21 W., quarter cor. between secs. 23 and $26,10 \mathrm{ft} . \mathrm{N}$. and 200 ft . E. from crossroads, S. (? N.) of rd., in root on N. side of 16-1n. elm tree; copper nall and washer

1,022.20
$1,023.56$

1,059.158
1,067.53
986.98
T. 66 N., R. 21 W., in NE $1 / 4$ NE $1 / 4 \mathrm{sec} .27$, at small bridge, on SE . wing wall; chiseled square
965.92
5. FROLI POLLCCK EAST TO SEC. Il, T. 64 N., R. 19 W., THENCE SOUTH
INTO GREEN CITY QUADRANGLE AT SEC. $14, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W}$.
(by D. R. Stewart in 1936)
U.S.C. $\& G . S$. standard disk stamped "H 10 1930"

Follock, at S . limits of, 21 ft . S. and 18 ft . E. from T-rd. N., in N. side of telephone pole; nails
Pollock, 1.2 ml . E. of, 35 ft . N. and 105 ft . W. from cor. secs. 7, 8, 17 , and $18, T .64$ N., R. 19 W., 35 ft . N. and $200 \mathrm{ft} . \mathrm{W} . \mathrm{from} T-\mathrm{rc}$. N., in concrete post; standard tablet stamped "T T 55 J J 1936 "
935.516

1,031.70
T. 64 N., R. 19 W., on line between secs. 8 and 17, at SE. corner of bridge, on top of iron handrail; chiseled square
995.989
T. 64 II., R. 19 W., cor. secs. 8, 9,16 , and $17,40 \mathrm{ft}$. N. and 15 ft . E. from crossroads, in root on W. side of 18-1n. white-oak tree; copper nail and washer
949.27
T. $64 \mathrm{~N} ., \mathrm{R}$. 19 N. , quarter cor. between secs. 8 and $9,35 \mathrm{ft}$. S . and 12 ft . E. from SE. corner of Gilbert School, 65 ft . N. and 20 ft . W. from junction of abandoned rd. E., on E. side of concrete foundation of pump; chiseled square
T. 64 N., R. 19 W., quarter cor. between secs. 9 and $10,55 \mathrm{ft}$. N. and 17 ft . E. from T-rd. W., in root on SE. side of twin elm tree; copper nail and washer
T-rd. E., 98 ft . S. and 16 ft . W. from, in root on NW. side of $18-\mathrm{in}$. elm tree; nalls
T-rd. S., 15 ft . S. and 18 ft . E. from, in NW. sice of $10-1 \mathrm{n}$. corner fence post; nails
993.55
T. 64 N., R. 19 W. , about 0.3 mi . E. of N . sixteenth cor. sec. 10 , 61 ft . S. and 16 ft . W. from T-rd. W., 50 ft . E. of NE. corner of dweling, in root on N. side of $24-1 n$. maple tree; copper nail and washer

1,059.06

64 N., R. 19 W., near quarter cor. between secs. 10 and $11,175 \mathrm{ft}$. SE. of Chappel School, 10 ft . S. of fence corner; iron post stamped "Prim Trav Sta No 101910 No"
Reference mark, 70 ft . N. and 57 ft . W. from post, on front step of entrance to school; chiseled square

1,064.41
1,056.04
1,062.98

1,062.29
. 64 II., IR. 19 W., cor. secs. $10,11,14$, and $15,185 \mathrm{ft}$. . and 15 ft. E. from T-rd. W., on N. end of head wall of concrete culvert; chiseled square

1,056.258
1,058.85
978.49
$1,037.58$

Concrete culvert, on NW. corner of head wall; chiseled square
${ }^{4}$ Line 2 of Lucerne quadrangle includes a portion of this line (see Bull. 898-D,
pp. 453-454).
T. 64 N., R. 19 W., cor. secs. $14,15,22$, and $23,75 \mathrm{ft} . \mathrm{N}$. and 55 ft . E. from crossroads, 32 ft . W. of SW . corner of dwelling, in root on NW. side of $10-1 n$, box-elder tree; copper nail and washer
T. 64 N., R. 19 W., near quarter cor. between secs. 22 and $23,30 \mathrm{ft} . \mathrm{N}$. and 45 ft . W. from crossroads, in root on $W$. side of 19-1n. walnut tree; copper nall and washer
T. 64 N., R. 19 W., N. sixteenth cor. between secs. 26 and 27 , 35 ft . E. of T-rd. W., $34 \mathrm{ft} . \mathrm{S}$. and 50 ft . W. from dwelling, in concrete post; standard tablet stamped "l S 1936"
Bridge over East Yellow Creek, on SE. corner of wing wall; chiseled square
T. 64 N., R. 19 W., cor. secs. $26,27,34$, and $35,260 \mathrm{ft}$. S. and 15 ft . E. from T-rd. W., in rcot on W. side of twin soft-maple tree; copper nail and washer
T-rd. N., on S. end of iron pipe culvert; (mark not described)
T. 64 N., R. 19 W., W. sixteenth cor. sec. 35,220 ft. W. of T-rd. S., on NE. corner of concrete culvert; chiseled square
T. 63 N., R. 19 W., W. sixteenth cor. between secs. 2 and $11,33 \mathrm{ft} . \mathrm{N}$. and 32 ftt. W. from crossroads, in concrete post; standard tablet stamped "2 s 1936"
T-rd. E., on W. head wall of concrete culvert; chiseled square
T. 63 N., R. 19 W., W. sixteenth cor. between secs. 11 and $14,20 \mathrm{ft}$. S. and 18 ft . W. from State Eighway 6 at N.-S. crossroad, on W. head wall of concrete culvert; chiseled square
T-rd. N., 40 ft . S. and 60 ft . W. from, in root on E. side of small, white-celk tree; crossed nails

1,052.07
1,036.08
$1,037.624$
966.70

1,018.85
$1,020.24$
987.69

1,004.478
1,008.16
999.12

1,002.18
(Continued in Green City quadrangle; see line 7.)

## 6. FROM POLLOCK WEST TO SEC. 15, T. 64 N., R. 21 w. <br> (by D. R. Stewart in 1936)

T. 64 N., R. 20 W., in $S E 1 / 4 \mathrm{SW} 1 / 4 \mathrm{sec} .12,18 \mathrm{ft} . \mathrm{S}$. and 195 ft . E. from State Highway 5 at E.-W. rd., on $S$. head wall of concrete culvert; chiseled square
T. $64 \mathrm{~N} ., \mathrm{R}$. $20 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .14,25 \mathrm{ft}$. S . and 40 ft . W. from State Highway 5 at rd. W., in concrete post; standard tablet stamped "T T 54 J J 1936"
Reference mark, 65 ft . S. and 85 ft . E. from tablet, on E . head wall of concrete culvert; chiseled square
T. 64 N., R. 20 W., N. sixteenth cor. sec. $15,25 \mathrm{ft}$. N. and 253 ft . E. from T-rd. E., in root on E. side of 18-in. white-oak tree; copper nail and washer
T. $64 \mathrm{~N} ., \mathrm{R} .20 \mathrm{~W} .$, in $\mathrm{S} 1 / 2 \mathrm{sec} .10,10 \mathrm{ft} . \mathrm{N}$. and 35 ft . E. from T-rd. S., on N. end of iron pipe culvert; chiseled cross
T. 64 N., R. 20 W., in SE $1 / 4 \mathrm{sec} .9,80 \mathrm{ft}$. W. of NW. end of bridge over Locust Creek, in root on E. side of $72-1 n$. elm tree; copper nail and washer
T. 64 N., R. 20 W., center sec. 9, 100 ft . S. and 25 ft . E. from crossroads, in root on $N$. side of twin elm tree; copper nail and washer
T. 64 N., R. 20 W., center sec. 8, 20 ft . N. and 120 ft . E. from T-rd. N., 60 ft . S. of SE . corner of stucco school, in concrete post; standard tablet stamped "T T 53 J J 1936"
T. 64 N., R. 20 \%., near E. sixteenth cor. sec. $8,7 \mathrm{ft}$. N. and 120 ft . W. from T-rd. S., at NE. corner of bridge over creek; bolt head

Rd. forks, S. of rd., in telephone pole; nails
T. 64 N., Rs. 20 and 21 W., near quarter cor. between secs. 7 and 12, 40 ft . S , and 175 ft . E. from rd. forks, in root on NW. side of $12-\mathrm{in}$. white-cak tree; copper nail and washer
T. 64 N., R. 20 W. , in $\mathrm{E} 1 / 2 \mathrm{sec} .12$, at NE. corner of bridge over creek, on iron sill; chiseled square
T. 64 N., R. 21 W., quarter cor. between secs. 11 and $12,15 \mathrm{ft} . \mathrm{N}$. and 25 ft . W. from T-rd. S., in root on W. side of l2-in. elm tree; copper nall and washer
T-rd. N., 25 ft . S. and 10 ft . W. from, in root on NW. side of $12-1 \mathrm{n}$. black-oak tree; crossed nails
$1,031.83$

1,030.179
$1,024.23$
863.21
851.28
851.70
913.25

1,016.904
923.32
985.17
931.72
889.75
948.97
936.95
T. 64 N., R. 21 W., quarter cor. between secs. 14 and $15,300 \mathrm{ft}$. N. and 15 ft . E. from T-rd. N., in root on W. side of 6 -trunk maple tree; copper nail and washer

1,033.05

## 7. FROM SEC. 3, T. 64 N., R. 19 W., NORTH TO UNIONVILLE <br> (by D. R. Stewart in 1936)

T. 64 N., R. 19 W., quarter cor. between secs. 2 and $3,15 \mathrm{ft}$. N. and 7 ft . W. from T-rd. E., on W. head wall of concrete culvert; chiseled square
Putnam-Sullivan county line at N.-S. rd., 50 ft . N. of, on SE. corner of second section of concrete sidewalk W. of gate; chiseled square
966.1 .7
. 65 N., R. 19 W., cor. secs. $26,27,34$, and $35,27 \mathrm{ft} . \mathrm{S}$. and 40 ft . W. from crossroads, in concrete post; standard tablet stamped "3 S 1936" 1,062.674
T. $65 \mathrm{~N}_{*}$, R. 19 W., cor. secs. $22,23,26$, and 27 , 10 ft . N. and 30 ft . W. from crossroads, on E. end of N. head wall of concrete culvert; chiseled square
T. 65 N., R. 19 W., near N. sixteenth cor. between secs. 22 and $23,15 \mathrm{ft}$. S. and 55 ft . E. from T-rd. E., in root on W. side of $14-i n$. elm tree; bent nail
998.15
T. 65 N., R. 19 W., cor. secs. $\frac{14}{}, 15,22$, and $23,50 \mathrm{ft}$. S. and 15 ft . E. from T-rd. W., on S. end of E. head wall of concrete culvert; chiseled square
T. 65 N., R. 19 W., cor. secs. $10,11,14$, and $15,15 \mathrm{ft}$. S. and 20 ft . W. from T-rd. E., in concrete post; standard tablet stamped " 4 S 1936" T. 65 N., R. 19 W., cor. secs. 2, 3, 10 , and 11,6 ft. S. and 21 ft. W. from T-rd. E., in root on W, side of 18-in. elm tree; copper nail and washer
Unionville, 25 ft . S. and 20 ft . E. from intersection of Garfield and Twenty-second Streets, on NW. corner of sidewalk; chiseled square

## 8. FROM UNIONVILLE WEST INTO SEYMOUR QUADRANGLE AT SEC. 28, T. 66 N., R. 20 W. (by D. R. Stewart in 1936)

T. 66 N., R. 19 W., near W. sixteenth cor. on N. line sec. 3, 20 ft . N. and 25 ft . E. from intersection of State Highways 4 and 5, on wing wall at NE. end of concrete culvert; chiseled square

1,048.03
T. 65 N., R. 19 W., N. cor. secs. 4 and $5,25 \mathrm{ft}$. S. and 16 ft . W. from T-rd. S., on W. head wall of concrete culvert; chiseled square
T. 66 H., R. 19 W., S. quarter cor. sec. 32,25 ft. N. and 15 ft . W. from T-rd. N., on W. head wall of concrete culvert; chiseled square
T. 66 N., R. 19 W., near center sec. $32,20 \mathrm{ft}$. N. and 10 ft . E. from T-rd. E., on N. head wall of concrete culvert; chiseled square

1,049.18
1,068.25
1,069.77
T. 66 N., R. 19 W., near N. sixteenth cor sec, 32 , 30 ft. E. of Tird. 1923 Mo"
T. 66 N., R. 19 W., N. sixteerth cor. between secs. 31 and 32, $10 \mathrm{ft} . \mathrm{N}$. and 70 ft. W. from T-rd. N., on N. head wall of concrete culvert;
ch1seled square
T-rd. N., 25 ft . N. and 20 ft . E. from, in S . side of telephone pole; spike
T. 66 N., R. $20 \mathrm{~W} .$, center of NE $1 / 4 \mathrm{sec} .36,25 \mathrm{ft}$. N. and 30 ft . W. from T-rd. S., in root on SW. side of large, elm tree; copper nail and washer
T. $66 \mathrm{~N} .$, R. $20 \mathrm{~W} .$, in $\mathrm{SW} 1 / 4 \mathrm{sec} .25,60 \mathrm{ft} . \mathrm{S}$. and 45 ft . E. from T-rd. N., in root on SE. side of 24-in. post-oak tree; copper nail and washer
T. $66 \mathrm{~N} ., \mathrm{R}$. 20 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec}$. 26 , 110 ft . N. and 75 ft . E. from T-rd.
N., in root on SE. side of $2 l_{4}-1 n$. white-oak tree; copper nail and washer
T. 66 N., R. 20 W., in SE $1 / 4 \mathrm{sec} .27$, on SE. wing wall of concrete bridge over East Locust Creek; chiseled square
T. 66 N., R. 20 W., in $S E 1 / 4 \mathrm{sec} .27,22 \mathrm{ft}$. N. and 10 ft . E. from rd. fork SW., 45 ft . W. of old store builaing, in concrete post; standard tablet stamped "Prim Trav Sta No 80 L S $1923 \mathrm{Mo} "$
T. $66 \mathrm{~N} .$, R. $20 \mathrm{~W} ., \mathrm{S}$. sixteenth cor. sec. $28,90 \mathrm{ft}$. S. and 15 ft . E. from T-rd. E., in root on NW. side of 16-1n. wild-cherry tree; copper nail and wasber
T-rd. W., in telephone pole; spike
(Continued in Seymour quadrangle; see line 3.)

> 9. FROM GREEN CITY QUADRANGLE AT SEC. 23, T. 63 N., R. 19 W., WEST TO SEC. 22, T. 63 N., R. 21 W. (by W. V. Kennedy in 19j6) (Continued from Green City quadrangle; see line 8. )
T. 63 N., R. 19 W., in NE $1 / 4$ sec. $22,45 \mathrm{ft} . \mathrm{N}$. and 40 ft . E. from T-rd. E., in root on SE. side of il4-in. hickory tree; copper nail and washer

1,018.27
(For balance in Milan quadrangle, see line 2.)
Junction of private rd. W., on W. head wall of concrete culvert; chiseled square
T. 63 N., R. 19 W., quarter cor. between secs. 16 and $17,10 \mathrm{ft}$. S. and 18 ft . W. from State Highray 6 at rd. W., 60 ft . S. of rd. E., on S. head wall of concrete culvert; chiseled square
T. 63 N., R. 19 \%., quarter cor. between secs. 17 and $18,660 \mathrm{ft}$. S. of T-rd. E., 18 ft . W. of rd., in root on W. side of ly-in. black-sak tree; copper nail and washer
T. 63 N., R. 19 W., in $S W 1 / 4 \mathrm{sec} .18,38 \mathrm{ft} . \mathrm{S}$. and 24 ft . W. from T-rd. W., in root on $N$. side of triple birch tree; copper nail and washer
T. 63 N., R. 20 W., in center of SE $1 / 4 \mathrm{sec} .13$, $18 \mathrm{ft} . \mathrm{S}$. and 225 ft . W. from Chicago, Burlington \& Quincy R.R. at E.-W. rd. crossing, in root on NE. side of $20-i n$. maple tree; copper nail and washer
State Highway 5 at private rd. E., 10 ft . N. and 70 ft . E. from, on E. end of iron pipe culvert; chiseled square
T. 63 N., R. 20 W. , near E. sixteenth cor. between secs. 14 and $23,12 \mathrm{ft}$. S. and 58 ft. W. from State Highway 5 at crossroad, on $S$. end of concrete culvert; chiseled square
T. $63 \mathrm{~N} ., \mathrm{R}$. 20 W ., near quarter cor. between secs. $\mathcal{I}_{4}$ and 23 , at T -rd.
S., in deep drain, on $N$. end of concrete culvert; chiseled square
T. $63 \mathrm{~N} ., \mathrm{R} .20 \mathrm{~W}$., cor . secs. $14,15,22$, and $23,375 \mathrm{ft}$. N. and 20 ft . W. from crossrosds, in root on W. side of $1 \mathrm{C}-1 \mathrm{n}$. maple tree; copper nail and washer
T. 63 N., R. 20 W., near quarter cor. between secs. 15 and 22, at NE. corner of bridge over Elmwood Branch, in top of abutment post; crossed nails
997.94
$1,033.88$
996.16
899.52
869.59
977.82
963.78
T. 63 N., R. 20 W., near cor. secs. $15,16,21$, and $22,12 \mathrm{ft} . \mathrm{N}$. and 110 ft . E. from T-rd. E., in root on W. side of $8-1 \mathrm{n}$. elm tree; copper nail and washer
T. 63 N., R. 20 W., 1 n NE $1 / 4$ sec. 21 , 35 ft . N. and 15 ft . W. from rd. forks N., SW., and SE. ${ }^{2}$ ft. Inside fence; iron post. stamped "Prim Trav Sta No 171913 Mol
988.89
886.30
973.72
987.147
T. 63 N., R. 20 W., in SE 1/4 sec. $17,40 \mathrm{ft} . \mathrm{S}$. and 15 ft . W. from T-rd. S., in root on SE. side of 18-in. white-cak tree; copper nail and washer T-rd. W., $18 \mathrm{ft} . \mathrm{S}$. and 700 ft . W. from, in root on N. side of twin elm tree; crossed nails
T. 63 N., R. 20 W., quarter cor. between secs. 17 and $18,14 \mathrm{ft}$. S. and 110 ft . E. from T-rd. S., in root on N. side of twin 8-in. elm tree; copper nail and washer
T. 63 N., R. 20 W., in $S E 1 / 4$ sec. $18,63 \mathrm{ft}$. N. and 35 ft . E. from NE. corner of dwelling of L. T. Stroud, 25 ft . W. of end of rd., in concrete post; standard tablet stamped "2 K 1936"
Reference mark, about 70 ft . SW. of tablet; in root on S. side of triple elm tree; crossed nails

Feet
843.55
820.24
834.09
862.906
869.82
T. 63 N., R. 21 W., in NE $1 / 4 \mathrm{sec}$. 24 , 18 ft . E. of SE. corner of foundation of old dweliing, 90 ft . N. of rd., in root on side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
T-rd. S., 120 ft . S. and 12 ft . E. from, in root on N. side of $24-\mathrm{in}$. locust tree; crossed nails
994.06
989.60
(For baiance in Milan quadrangle, see line 2.)
T. 63 N., R. 21 W., cor. secs. $14,25,22$, and $23,20 \mathrm{ft}$. N. and 23 ft . E. from T-rd. N.; iron post stamped "Prim Trav Sta No 161913 Mo" Reference mark, 65 ft . N. and 20 ft . E. from post, on top of doorway to concrete cellar; chiseled square
970.272
970.59
10. LINE TO DETERMINE ELEVATION OF PAGE TRIANGULATION STATION
(by H. B. Pyle in 1936)
T. 63 N., R. 19 W., cor. secs. 8, 9,16 , and $17,135 \mathrm{ft}$. SE. of T-rd. E., 12 ft . SE. of State H1ghway 6, on head wall of concrete culvert; chiseled square

1,042.06
Wooden bridge over drain, in SW. abutment of; crossed nails
Page triangulation sta.; U.S.C. \& G.S. standard disk stamped "Page 1934"
Reference mark l; U.S.C. \& G.S. standard reference disk stamped "Page Ho 1 1934"
Reference mark 2; U.S.C. \& G.S. standard reference disk stamped "Page No 2 1934"

For an additional level line along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey firstorder line, Minneapolis, Minn. to Glasgow, Mo.

MILAN QUADRAM:GLE<br>(Latitude $40^{\circ} 00^{\prime}-40^{\circ} 15^{\prime}$; longitude $93^{\circ} 00^{\prime}-93^{\circ} 15^{\prime}$ )<br>Linn and Sullivan Counties



1. FROM SEC. 34 , T. $62 \mathrm{~N} ., \mathrm{R} .20 \mathrm{~W} .$, EAST INTO WINIGAN QUADRANGLE AT SEC. 26, T. 62 N., R. 19 W. (by H. W. Gross in 1936)
U.S.C. \& G.S. standard disk stamped "Q 10 1930"
796.832
T. 62 N., R. 20 W., on line between secs. 34 and $35,20 \mathrm{ft}$. N. and 40 ft . E. from E. end of bridge over drain, in root on SW. side of 16-in. maple tree; crossed nails
793.98
T. 62 N., R. 20 W., in NW $1 / 4 \mathrm{sec} .35,225 \mathrm{ft}$. N. and 80 ft . E. from rd. fork, 60 ft . S. of farmhouse, in root on SW. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. 62 N., R. 20 W., near center sec. $26,20 \mathrm{ft}$. N. of rd. fork NW., in concrete post; standard tablet stamped "T T C W A 1934"
T. 62 N., R. $2 Q$ W., in $N W 1 / 4 \mathrm{sec} .25,20 \mathrm{ft}$. S . and 220 ft . W. from rd. fork, in root on WV. side of l2-in. maple tree; crossed nails
T. 62 N., R. 20 W., near W. sixteenth cor. between secs. 24 and 25 , ..... Feet
150 ft . N. and 20 ft . W. from rd. forks, in root on N . side of $\mathrm{I}_{4}-1 \mathrm{n}$.
post-oak tree; copper nail and washer
T-rd. N., 75 ft . S. of, in root on SE. side of $8-1 \mathrm{n}$. post-oak tree; crossed nails
T. 62 N., R. 20 W., E. cor. secs. 24 and $25,40 \mathrm{ft}$. S. and 40 ft . W. from T-rd. W., in root on SW. side of 12-in. hickory tree; copper nail and
corner'N.-E., in root on NW. side of $14-1 n$. elm tree; crossed nails
T. 62 N., R. 19 W., 0.2 ml . W. of cor. secs. $19,20,29$, and $30,75 \mathrm{ft}$.
S. and 25 ft . E. from bridge over drain, in root on N . side of $40-1 \mathrm{n}$.
elm tree; copper nail and washer
$62 \mathrm{~N} ., \mathrm{R} 19 \mathrm{~W} .,$. cor. secs. 19 ,
E. from Th, W , and 50 ft . . from T-rd. W., $12 \mathrm{ft} . \mathrm{N}$. and 35 ft . E. from N. corner of cemetery, in concrete post; standard tablet stamped "T T 778 C W A 1934"
Reference mark, $15 \mathrm{ft} . \mathrm{S}$. and 27 ft . E. from tablet, in root on SW . side of 20-1n. black-locust tree; copper nail and washer
T. 62 N., R. 19 W., near quarter cor. between secs. 29 and 30, at T-rd. E., on top of concrete curb at NW. corner of iron bridge; chiseled square
828.91
T. 62 N., R. 19 W., quarter cor. between secs. 28 and $29,25 \mathrm{ft}$. N. and 85 ft . E. from T-rd. S. and lane N. at quarter cor. between secs. 28 and 29, in root on SW. side of 24-in. elm tree; copper nail and washer
T. 62 N., R. 19 W., 0.3 mi . W. of quarter cor. between secs. 27 and 28 , 100 ft . s . and 100 ft . W. from farmhouse, 20 ft . N. of rd., in root on SW. side of $24-1 n$. locust tree; copper nail and washer
T. 62 N., R. 19 W., quarter cor. between secs. 27 and $28,270 \mathrm{ft}$. S. and 25 ft . W. from T-rd. W., in NW. side of 24 -in. willow tree; spike
T. 62 N., R. 19 W., cor. secs. 27, 28, 33, and 34, $40(? 35) \mathrm{ft}$. S. of T-rd.. N., in concrete post; standard tablet stamped "T T $779 \mathrm{C} \mathrm{W} \mathrm{A} \mathrm{1934"}$
T. 62 N., R. 19 W., on line between secs. 27 and 34 , 25 ft . N. of rd. at top of hill, in root on SW. side of 20-in. black-jocust tree; crossed nails
T. $62 \mathrm{~N} ., \mathrm{R} .19 \mathrm{~W} ., 0.2 \mathrm{mi}$. E. of cor. secs. $26,27,34$, and $35,450 \mathrm{ft}$. NW. of bridge over Yellow Creek, 25 ft . N. and 50 ft . W. from rd. at small drain, in root on S. side of $36-1 n$. black-oak tree; copper nail and washer
(Continued in Winigan quadrangle; see line 4.)

> 2. FROM BOYYTON QUADRANGLE AT SEC. 22, T. 63 N., R. 19 W., WEST INTO BOYNTON QUADRANGLE AT SEC. $23, T .63$ N., R. 21 W.
> (by W. V. Kennedy in 1936)
> (Continued from Boynton quadrangle; see line 9.)
T. 63 N., R. 19 W., center sec. $22,15 \mathrm{ft}$. N. and 12 ft . E. from T-rd. S., on $N$. head wall of concrete culvert; chiseled square
T. 63 N., R. 19 W., quarter cor. between secs. 21 and $22,450 \mathrm{ft}$. E. of

T-rd. N., on NW. wing wall of concrete bridge; chiseled square
T. 63 N., R. 19 W., quarter cor. between secs. 20 and $21,100 \mathrm{ft}$. N. and 35 ft . W. from State Highway 6 at rd. E., 3 ft . inside fence, in concrete post; standard tablet stamped "1 K 1936"
Reference mark 1, SE. of junction of rd. E., on concrete head wall of culvert; chiseled square
Reference mark 2, NW. of junction of rd. E., on concrete head wall of culvert; chiseled square
(For balance in Boynton quadrangle, see line 9.)
T. 63 N., R. 21 W., quarter cor. between secs. 23 and $24,10 \mathrm{ft}$. S. and 20 ft . E. from T-rd. N., on S. head wall of concrete culvert; chiseled square
(Continued in Boynton quadrangle; see line 9.)

## 3. LINE TO DETERMINE ELEVATION OF MILAN TRIANGULATION STATION NEAR CENTER OF NORTH HALF OF QUADRANGLE (by H. B. Pyle in 1936)

U.S.C. \& G.S. standard disk stamped "G 17 1933"

Milan, 0.4 mi . S. of Quincy, Omaha \& Kansas City R.R. sta., at rd. crossing; top of E. rail
871.671
832.7
968.783
969.136
965.308
834.493
4. FROM SEC. 34 , T. 62 N., R. 20 W., WEST TO JUNCTION OF STATE HIGHWAYS 5 AND 6, THENCE WEST ALONG STATE HIGHWAY 6 INTO GALT QUADRANGLE (by H. B. Pyle in 1936-37)
T. 62 N., R. 20 W., on line between secs. 27 and $34,60 \mathrm{ft}$. S. and 20 ft . W. from rd. at small drain, in root on $\mathbb{N}$. side of 34 -in. elm tree; crossed nails
T. 62 N., R. 20 W., W. sixteenth cor. between secs. 27 and $34,180 \mathrm{ft}$. S. and 75 ft . W. from T-rd. S., in root on E. side of 18-in. white-oak tree; copper nall and washer
T. 62 N., R. 20 W., cor. secs. $27,28,33$, and $34,300 \mathrm{ft} . \mathrm{W}$. of T-rd. N., in top of cap on $S$. end of center retaining wall of small wooden bridge; crossed nalls
T. $62 \mathrm{~N} ., \mathrm{R}_{\mathrm{l}} 20 \mathrm{~W}$. , cor. secs. $26,29,32$, and $33,40 \mathrm{ft} . \mathrm{S}$. and $1,100 \mathrm{ft}$. E. from, $40 \mathrm{ft} . \mathrm{S}$. and 200 ft . W. from State Highways 5 and 6 at rd. E., on SW. corner of concrete head wall of culvert; chiseled square
T. 62 N., R. 20 W., 0.3 ml . W. of cor. secs. $28,29,32$, and $33,30 \mathrm{ft}$. S. and 4 ft . E. from junction of private rd. S. and produced rd. W., on E. end of concrete culvert; chiseled square
T. 62 N., R. 20 W ., in $S W 1 / 4 \mathrm{sec} .29,45 \mathrm{ft} . \mathrm{S}$. and 25 ft . W. from junction of rd. S., in N. side of corner fence post; spike
T. 62 N., R. 20 W ., in SE $1 / 4 \mathrm{sec} .30$, 12 ft . S. of highway, on SE. abutment of concrete bridge over Locust Creek; chiseled square

Feet
828.00
895.21
$835 \cdot 52$
936.57
880.87
855.14
792.30
785.48

Reger, $60 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from crossroad, on W. head wall of concrete culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "J 17 1933"
T. 62 N., R. 21 W., in $S 1 / 2$ sec. 25 , 25 ft . N. of highway, on N. head wall of concrete culvert; chiseled square
816.455
T. 62 N., R. 21 W., in $S W 1 / 4 \mathrm{sec} .25,38 \mathrm{ft}$. S. and 4 ft . W. from highway at fence N.; in concrete post; standard tablet stamped "T T 775 C W A 1934"
806.10
817.042
803.92
839.65
824.66
834.72
854.21
904.86
5. FROM SEC. 20, T. 63 N., R. 21 W., SOUTH TO SEC. 33, T. 62 N., R. 21 W. (by H. B. Pyle in 1936-37)*
T. 63 N., R. 21 W., cor. secs. $20,21,28$, and $29,210 \mathrm{ft} . \mathrm{S}$. and 300 ft . E. from crossroads, in yard of Prairie Dale School, in concrete post; standard tablet stamped "769 C W A 1934"
951.446
T. 63 N., R. 21 W., N. sixteenth cor. sec. $28,28 \mathrm{ft} . \mathrm{W}$. of NW. corner of farmhouse of R. F. Scott, 30 ft . E. of rd., in root on SW . side of 20-in. pine tree; copper nail and washer
T-rd. E., 25 ft . N. and 15 ft . W. from, on top of concrete fence post; chiseled square
T. 63 N., R. 21 W., quarter cor. between secs. 28 and $33,36 \mathrm{ft}$. E. of NE. corner of Caldwell farmhouse, 10 ft . W. of N.-S. rd., in root on SE. side of 20-in. elm tree; copper nail and washer
900.23

Steel bridge over drain, on NE. abutment; chiseled square
Tps. 62 and 63 N., R. 21 W., epproximate quarter cor. between secs. 4 and 33, 110 ft . N. and 15 ft . E. from T-rd. E., in root on W. side of $34-\mathrm{in}$. cottonwood tree; copper nail and washer
918.85
T. 62 N., R. 21 W., about 0.1 mi . E. of N. sixteenth cor. sec. $4,400 \mathrm{ft}$. NW. of dwelling of R. S. Bartimus, 5 ft . N. and 25 ft . W. from rd. at fence E. and W., in concrete post; standard tablet stamped "770 C W A 1934"
881.734
t-rd. S., $225 \mathrm{ft} . \mathrm{S}$. of, on NE. abutment of wooden bridge; chiseled square
T. 62 N., R. 21 W., quarter cor. between secs. 4 and $9,40 \mathrm{ft}$. N. and 30 ft . E. from rd. corner S.-E., in SW. corner of farmyard of H. Hatcher, in root on E. side of $30-1 n$. box-elder tree; copper nail and washer
Steel bridge over drain, on NW. abutment; chiseled square
T-rd. W., on SE. corner of concrete culvert; chiseled square
T. 62 N., R. 21 W., near R. sixteenth cor. between secs. 9 and $16,45 \mathrm{ft}$ E. of rd., 10 ft . E. of N.-S. fence, in root on S. side of 20-in. elm tree; copper nail and washer
954.88
917.21
868.07
825.76
814.21
898.40
851.07

Crossroads, 10 ft . E. of, on NE. abutment of bridge over drain; chiseled square
873.43
(N., R. 21 W., quarter cor. between secs. 16 and $21,445 \mathrm{ft}$. S. and

23 ft . E. from rd. at fences E. and W., 35 ft . E. of rd., in concrete post; standard tablet stamped "771 C W A 1934"
943.091
T. 62 N., R. $21 \mathrm{~W}_{\text {. }}$, center sec. $21,65 \mathrm{ft}$. S. and 25 ft . W. from T-rd.
N., in root on W. side of $24-i n$. walnut tree; copper nail and washer
T. 62 N., R. 21 W., center sec. 28 , 10 ft . N. and 125 ft . E. from T-rd. S., in middle pier on N. side of wooden bridge; copper nail and washer

Junction of abandoned rd. E., 180 ft . S. and 10 ft . E. from, in NE. corner of wooden bridge over drain; copper nail
\#Published also as line 2 of the Galt quadrangle (see Bull. 898-D, pp. 457-458).

State Highway 6 at crossroad, 30 ft . S. and 10 ft . E. from, on E. head wall of concrete culvert; chiseled square
T. 62 N., R. 21 W., $8 \mathrm{ft} . \mathrm{N}$. and 23 ft . E. from center sec. 33, 250 ft . S. of State Highway 6 at crossroad, E. of rd., in concrete post; standard tablet stamped "772 C W A 1934"

> 6. FROM SEC. $33, \mathrm{~T} .62$ N., R. 21 W., SOUTH INTO CHULA QUADRANGLE AT SEC. 2l, T. 60 N., R. 21 W. (by H. B. Pyle and F. Y. Brown in l937)

Feet
904.86
918.171

T-rd. E., 15 ft . S. and 18 ft . E. from, on S . head wall of concrete culvert; chiseled square
861.76
T. 61 N., R. 21 W., N. sixteenth cor. between secs. 3 and $4,12 \mathrm{ft} . \mathrm{S}$. and 85 ft . W. from T-rd. W., in root on N. side of l2-in. wild-cherry tree; copper nall and washer
U.S.C. \& G.S. standard disk stamped "L 17 1933"
T. 61 N., R. 21 W., on line between secs. 3 and $4,60 \mathrm{ft}$. s . and 570 ft . W. from T-rd. W., 35 ft . S. of fence, in root on N. side of $48-1 \mathrm{n}$. elm tree; copper nail and washer
T. 61 N., R. 21 W., near quarter cor between secs. 4 and $9,15 \mathrm{ft}$. N. of rd., in root on SW. side of $40-1 \mathrm{n}$. elm tree; copper nail and washer
T. 61 N., R. 21 W., W. sixteenth cor. between secs. 5 and $8,30 \mathrm{ft}$. N. and 25 ft . W. from T-rd. N., in top of hedge stump; copper nail and washer
T-rd. E., 95 ft . S. and 15 ft . E. from, on E. end of iron pipe culvert; chiseled square
haley triangulation sta.; U.S.C. \& G.S. standard disk stamped "Whaley 1928"

### 856.55

 813.384ference mark 3; U.S.C. \& G.S. standard reference disk stamped "Whaley No $31928^{\prime \prime}$
T. 61 N., R. 21 w., N. sixteenth cor. between secs. 17 and $18,300 \mathrm{ft}$. N. and 70 ft . W. from crossroads, 25 ft . S. of SE. corner of farmhouse, in root on S. side of $16-1 \mathrm{n}$. maple tree; copper nail and washer
T. 61 N., R. 21 W., N. sixteenth cor. between secs. 16 and $27,60 \mathrm{ft}$. S . and 40 ft . W. from $T-r d$. W., in root on W. side of $30-1 \mathrm{n}$. elm tree; copper nail and washer
899.70
T. 61 N., R. 21 W., cor. secs. $16,17,20$, and $21,130 \mathrm{ft}$. W. of crossroads, 40 ft . N. of rd., on $S W$. corner of concrete step in front of Hamilton Church; chiseled square
914.45
T. 61 N., R. 21 W., quarter cor. between secs. 20 and $21,290 \mathrm{ft}$. S. and 23 ft . E. from, 0.5 mi . S. of crossroads at Hamilton School, 23 ft . E. of rd., in concrete post; standard tablet stamped " 773 C W A, 1934"
T. 61 N., R. 21 W., cor. secs. 20, 21,28 , and $29,15 \mathrm{ft}: \mathrm{N}$. and 15 ft . E. from crossroads, on E. end of iron pipe culvert; painted square
T. 61 N., R. 21 W., cor. secs. $28,29,32$, and $33,15 \mathrm{ft} . \mathrm{N}$. and 13 ft.
W. from crossroads, on w. end of iron pipe culvert; painted square

T-rd. S., 30 ft . N. and 25 ft . E. from, on top of S . side of concrete well platform; chiseled square
922.002
920.98
887.49
864.68

T-rd. N., 25 ft . N. and 20 ft . W. from, 1 ft . above ground, in knot on E. side of corner fence post; crossed nails
882.84
T. 60 N., R. 21 W., N. quarter cor. sec. $9,29 \mathrm{ft}$. S. and 18 ft . W. from T-rd. S., in concrete post; standard tablet stamped "774 C W A 1934"
875.231
T. 60 N., R. 21 W., near center sec. $16,700 \mathrm{ft}$. N. of T-rd. W., 530 ft . S. of T-rd. E., 20 ft . E. of rd., in root on w. side of $32-1 \mathrm{n}$. elm tree; copper nail and washer
865.95
T. 60 N., R. 21 W., S. sixteenth cor. sec. $21,140 \mathrm{ft} . \mathrm{N}$. and 60 ft . E. from T'ra. E., in root on S. side of 8-in. black-locust tree; copper nail and washer
807.44
(Continued in Linneus quadrangle; see line 4.)
7. FROM LINNEUS QUADRANGLE AT SEC. 25, T. 60 N., R. 20 W., EAST

INTO LINNEUS QUADRANGLE AT SEC. 20, T. 60 N., R. 19 W.
(by H. B. Pyle and F. X. Brown in 1937)
(Continued from Linneus quadrangle; see line 5.)
T. 60 N., Rs. 19 and $20 \mathrm{~W} .$, cor. secs. 19, 24,25 , and $30,130 \mathrm{ft}$. S. and 20 ft . E. from T-rd. E., in concrete post; standard tablet stamped "Prim Trav Sta No 3 F 1924"
872.134
T. 60 N., R. 19 W., cor. secs. 19, 20,29 , and $30,25 \mathrm{ft}$. S. and 30 ft . E. from crossroads, in root on N. side of 26-1n. cottonwood tree; copper nail and washer
930.04
(Continued in Linneus quadrangle; see line 5.)
8. FROM WINIGAN QUADRANGLE AT SEC. 35, T. 62 N., R. 19 W., SOUTH INTO WINIGAN QUADRANGLE AT SEC. 14, T. 61 N., R. 19 W. (by F. Y. Brown in 1937)
(Continued from Winigan quadrangle; see line 7.)
T. 62 N., R. 19 W., in NW $1 / 4 \mathrm{sec} .35$, on pier at $S W$. corner of bricige over Yellow Croak, on bolt head; chiseled cross
870.77

Tps. 61 and $62 \mathrm{~N} .$, k. $19 \mathrm{~W} .$, cor. secs. $3,4,33$, and $34,100 \mathrm{ft}$. S. and 40 ft. E. from E.-W. jog in rd., in farmyard, in root on W. side of 16-in. maple tree; copper nall and washer
990.99
T. 61 N.; R. 19 W., quarter cor. between secs. 3 and $4,315 \mathrm{ft}$. S. of

T-rd. W. and abandoned rd. E., 15 ft . E. of rd., in W. side of $10-\mathrm{in}$. elm tree; copper nall and washer
919.07
T. 61 N., R. 19 W., cor. secs. $3,4,9$, and $10,45 \mathrm{ft}$. E. of T-rd. W., in root on W. side of $16-1 n$. locust tree; copper nail and washer

Feet
989.56

1,007.646
980.00
(Continued in Winigan quadrangle; see line 7.)
For additional level lines along Chicago, Burlington \& Quincy R.R. and Quincy, Omaha \& Kansas City R.R., refer. to United States Coast and Geodetic Survey first-order lines, Minneapolis, Mnn. to Glasgow, Mo.; Guincy, Ill. to Milan, Mo.; and Milan, Mo. to Hamburg, Iowa.

LINNEUS QUADRANGLE
(Latitude $39^{\circ} 45^{\prime}-40^{\circ} 00^{\prime}$; longitude $93^{\circ} 00^{\prime}-93^{\circ} 15^{\prime}$ )
Linn County


1. FROIA CHULA QUADRANGLE EAST ALONG CHICAGO, BURLINGTON \& QUINCY RAILNAY BY WAY OF LACLEDE AND BROOKFIELD INTO BUCKLIN QUADRANGLE (by S. R. Archer in 1920)
T. 57 K., R. 21 W., in sec. 3, on top of $S$. end of parapet wall of E. abutment of bridge 112.99; chiseled square 4
T. 57 N., R. 21 W., about 660 ft . W. of quarter cor. between secs. 2 and 3 , in top of $S$. end of $W$. concrete pier of bridge 112.60 over Locust Creek; standard tablet stamped "1920 Mo 694"
T. 57 N., R. 21 W., in sec. 2, on top of $S$. end of parapet wall of $E$. abutment of bridge 112.12; chiseled square
T. 57 N., R. 21 W., in sec. 2 , on top of S . end of parapet wall of E . abutment of bridge 1ll.70; chiseled square
T. 57 N., R. 21 W., in sec. 1, on top of N. end of parapet wall of E. abutment of bridge 111.20 over Muddy Creek; chiseled square
T. 57 N., R. 21 W., 115 ft . W. of E. quarter cor. sec. i, in fence ine N. of R.R., in root on S. side of $24-$ in. locust tree; copper nail and washer
T. 57 N., R. 20 W., near center sec. 6, N. of R.R., on top of N. end of 78-1n. concrete pipe culvert; chiseled square
Laclede, in SE. corner of park, 18 ft . N. and 45 ft . W. from rd. crossing; iron post stamped "Prim Trav Sta No 15 F 1924"
Laclede, Sw. corner of main track at rd. crossing; top of rail
T. 57 N., R. 20 W., near W. sixteenth cor. sec. 4, 230 ft . W. of dwelling, on top of $S$. head wall of concrete culvert; chiseled square
T. 57 N., R. 20 W., in sec. 4, on top of S. end of parapet wall of E. abutment of bridge 107.84 over Turkey Creek; chiseled square
T. $57 \mathrm{~N} ., \mathrm{R}$. $20 \mathrm{~W}_{\text {. }}$ near W . sixteenth cor. sec. 3 , S. of R.R., in field, in root on $N$. side of $24-1 n$. oak tree; copper nail and washer
691.51
693.005
691.83
692.04
696.38
$722.1+5$
730.50
790.600
785.3
752.56
739.70
779.51
T. 57 N., R. 20 W., in $E 1 / 2 \mathrm{sec} .3,415 \mathrm{ft}$. W. of rd. bridge over Little Turkey Creek, $20 \mathrm{ft} . \mathrm{S}$. of rd., in line with W . end of R.R. stone arch bridge over creek, in fence line; iron post stamped "Prim Trav Sta No $1_{4}$ F 19241920 Mo $755^{\prime \prime}$
T. 57 N., R. 20 W., near quarter cor. between secs. 1 and 2, N. of R.R., on top of SE. corner of E. concrete base of steel support to overhead rd. bridge; chiseled square
corner of concrete base of electric warning bell; chiseled square
Brookfield, E. of sta., at Main Street crossing; top of N. rail
Brookfield, 5 ft . N. of NE. corner of R.R. ice house; top of concrete base of wooden support to platform

Brookfield, W. of S. entrance to post office, in top of S. end of base of lamp post; standard tablet stamped "Prim Trav Sta No 12 F 19241920 Mo $768^{\prime \prime}$
Brookfield, 60 ft . N. of intersection of Main and John Streets, $6 \mathrm{ft} . \mathrm{N}$. of flagpole; 1ron post stamped "Prim Trav Sta No 13 F 19241920 Mo 782"
Brookfield, 0.3 mi . E. of sta., at NE. corner of briage 103.83 over Monroe Street, on base of corner post; chiseled square
T. 57 N., R. 19 W ., in sec. 5 , on top of N . end of parapet wall of E . abutment of bridge 102.99; chiseled square
T. 57 N., R. 19 W., near quarter cor. between sece. 4 and 5 , on top of $N$. end of W. abutment of bridge 102.60 over Yellow Creek; chiseled square
T. 57 N., R. 29 W., in $N W 1 / 4$ sec. 3, on top of S . end of concrete pipe culvert; chiseled square
T. 57 N., R. 19 W., in NW $1 / 4 \mathrm{sec} .2$, overhead highway bricge 100.48 , at foot of bent 6 ft. N. of track, in top of E. end of 12-by 12-in. timber set in top of piling; copper nail and washer
(Continued in Bucklin quadrangle; see line l.)
2. FROM SEC. 19, T. 60 N., R. 20 W., SOUTH ALONG CHICAGO, BURLINGTON \& QUINCY RAILROAD AND STATE HIGHWAY 5 TO PURDIN (by H. B. Pyle in 1937)
U.S.C. \& G.S. standard disk stamped "V 10 1930"

Purdin, about 3 mf . N. of, 85 ft . W. of R.R., 12 ft . E. of highway, on SE. pier of bridge J-96; chiseled square
Purdin, about 2 mi . N. of, cor. Tps. 59 and 60 N., Rs. 20 and 21 W., 21 ft . S. and 30 ft . E. from crossroad, 55 ft . E. of rd. S., on N. head wall of concrete culvert; chiseled square
U.S.C. \& G.S. standard disk stamped "W 10 1930"

## 3. FROM SEC. $36, T .60$ N., R. 21 W., WEST TO SEC. 34, T. 60 N., R. 21 W. (by H. B. Pyle in 1937)

T. 60 N., R. 21 W., near N. sixteenth cor. sec. 36 , 15 ft . N. of rd., in SE. corner of farmyard of J. W. Bledsoe, in root on S. side of 36-in. elm tree; copper nail and washer
T. 60 N., R. 21 W., in NW $1 / 4 \mathrm{sec} .36$, on SE. corner of bridge over Locust Creek; painted square
T. 60 N., R. 21 W., near W. sixteenth cor. between secs. 25 and 36, $125 \mathrm{ft} . \mathrm{E}$. of T-rd. N., on NE. pler of bridge over West Locust Creek; painted square
T. $60 \mathrm{~N} ., \mathrm{R}$. 21 W. , near W . sixteenth cor. sec. 35 , 55 ft . N. of rd., in barnyard of Emmet Palmer, on concrete base of well; painted square
T. 60 N., R. 21 W., near center sec. 34, 45 ft . N. and 25 ft . E. from T-rd. E., in top of $24_{4}-1 \mathrm{n}$. elm-tree stump; copper nail and washer
T. 60 N., R. 21 W., quarter cor. between secs. 27 and $34,50 \mathrm{ft}$. N. and 20 ft . W. from crossroads, in root on w. side of 18-in. hedge-tree stump; copper nail and washer
850.10
845.51
759.35
824.08
5. FROM SEC. $31, T .60$ N., R. 20 W., EAST AND SOUTH INTO BUCKLIN QUADRANGLE AT SEC. 2, T. 59 N., R. 19 W.
(by H. B. Pyle and F. Y. Brown in 1937)
Tps. 59 and 60 N., R. 20 W., W. sixteenth cor. between secs. 6 and 31 ,
30 ft . N. and 30 ft . W. from T-rd. N., in concrete post; standard tab-
let stamped "Prim Trav Sta No l F 1924"
825.789
742.90
bridge over creek; crossed nails
T. 60 N., R. 20 W., in $N 1 / 2 \mathrm{sec} .31$, 345 ft . S. and 35 ft . W. from T-rd. E., in root on N. side of 30-in. maple tree; copper nail and washer
821.28
T. 60 N., R. $20 \mathrm{~W} .$, in N $1 / 2 \mathrm{sec} .31,6 \mathrm{ft}$. N. and 385 ft . E. from T-rd.
E., in NW. pier of bridge over drain; crossed nails
774.18
from T-rd. W., in root on SW. side of 14 -in. hackberry tree; copper nail and washer
T. 60 N., R. 20 W., near E. sixteenth cor. between secs. 29 and 32, 12 ft . S. and 312 ft . W. from T-rd. N., in SE. abutment of wooden culvert; crossed nails
745.638
751.85
738.20
735.41
737.36
842.16
852.70
834.476

Feot 767.014
781.021
752.58
730.81
735.81
787.34
834.59
744.17
802.21
819.887
T. 60 N., R. 21 W., quarter cor. between secs. 21 and 28 , 440 ft . S. of T-rd. W., 40 ft . W. of rd., in SW. corner of farmyard of H. L. Benskin, in root on W. side of $26-1 n$. cottonwood tree; crossed nails
root on E. side of l6-in. maple tree; copper nail and washer
T. 60 N., R. 21 W., quarter cor. between secs. 27 and $28,20 \mathrm{ft}$. E. of

T-rd. W., in root on S. side of 16-1n. elm tree; copper nail and washer
T. 60 N., R. 21 W., near E. sixteenth cor. between secs. 29 and $32,25 \mathrm{ft}$. N. and 40 ft . W. from junction of private rd. S., in root on E. side of

12-in. elm tree; copper nall and washer
$2 l_{4} .08$
797.96
815.31
T. 60 N., R. 20 W., near cor. secs. $28,29,32$, and $33,25 \mathrm{ft} . \mathrm{N}$. of fence, 40 ft . N . of rd., in root on W. side of $40-\mathrm{in}$. oak tree; copper nail and washer
T. 60 N., R. 20 W., on line between secs. 28 and $33,10 \mathrm{ft}$. S. of rd., in pier on SW. end of bridge over drain; crossed nails
T. 60 N., R. 20 W., cor. secs. $27.28,33$, and $34,20 \mathrm{ft} . \mathrm{s}$. and 20 ft .
W. from crossroads, in concrete post; standard tablet stemped "Prim Trav Sta No 2 F 1924"
T. 60 N., R. 20 W., near cor. secs. 26, 27, 34 , and $35,130 \mathrm{ft}$. S. and 40 ft . W. from T-rd. W., in root on N. side of 40 -in. elm tree; copper nail and washer
T. 60 N., R. 20 W., S. sixteenth cor. between secs. 26 and 27, 175 ft. S. and 12 ft . W. from T-rd. E., in SW. corner of bridge; crossed nails
T. 60 N., R. 20 W., quarter cor. between secs. 25 and $26,25 \mathrm{ft}$. N. and 21 ft . W. from rd. corner $\mathrm{S} .-\mathrm{E}$. and abandoned rd. N., in root on S. side of $12-1 n$. maple tree; copper nail and washer
T. $60 \mathrm{N}$. , Rs. 19 and 20 W., quarter cor. between secs. 25 and 30, 530 ft . N. and 25 ft . W. from T-rd. W., in root on NE. side of $24-\mathrm{in}$. elm tree; copper nail and washer
(For balance in Milan quadrangle, see line 7.)
T. 60 N., R. 19 W., cor secs. $20,21,28$, and $29,170 \mathrm{ft}$. E. of T-rd. S., 50 ft . N. of rd., on SW. corner of concrete well platform; chiseled square
901.41
T. 60 N., R. 19 W., cor. secs. $21,22,27$, and $28,30 \mathrm{ft}$. S. and 30 ft . W. from T-rd. W., in concrete post; standard tablet stamped "Prim Trav Sta No 4 F 1924".
865.974
T. 60 N., R. 19 W., cor. secs. $27,28,33$, and $34,240 \mathrm{ft}$. S. and 80 ft . E. from crossroads, in root on w. side of large maple tree; copper nail and washer
923.79

Tps. 59 and 60 N., R. 19 W., cor. secs. 3, 4, 33, and 34, County Route V at junction of rds., on base of windmill platform; chiseled square
T. 59 N., R. 19 W., cor. secs. 3, 4, 9, and $10,700 \mathrm{ft}$. E. of junction of County Routes $C$ and $V, 25 \mathrm{ft}$. N. of rd., in root on $S$. side of 26-in. elm tree; copper nail and washer
925.94
T. 59 N., R. $19 W_{.}$cor. secs. $2,3,10$, and $11,25 \mathrm{ft} . \mathrm{S}$. and 30 ft . W. from County Route $C$ at crossroad, in concrete post; standard tablet stemped "Prim Trav Sta No 5 F 1924"
822.812
(Continued in Bucklin quadrangle; see line 4.)
6. FROM LINNEUS WEST INTO CHULA QUADRANGLE AT SEC. 4, T. 58 N., R. 21 W. (by F. Y. Brown in 1937)

Linneus, in SW. corner of courthouse jard, 10 ft . E. of sidewalk, in concrete post; atandard tablet stamped "Prim Trav Sta No $17 \mathrm{~F} 1924^{4}$
Linneus, 0.9 mi . W. of, opposite County Home, in root on S. side of 10-in. cedar tree; crossed nails
Linneus, 1.5 ml . W. of, at $E$. end of bridge, on top of bolt head on SE. pier; chiseled cross
T. 58 N., R. 21 W., N. sixteenth cor. sec. 3, 40 ft. E. of T-rd. N., in corner of farmyard, in root on N. side of $20-1 n$. locust tree; crossed nails
Tps. 58 and 59 N., R. 21 W., cor. secs. 3, 4, 33, and 34,15 ft. S. of stone; iron post stamped "Prim Trav Sta No 49 S 1921 Mo"

> 7. FROM SEC. 32, T. 59 N., R. 21 W., NORTH TO SEC. 33, T. 60 N., R. 21 W., INCLUDING THAT PART OF THE LINE IN CHULA QUADRANGLE (by F. Y. Brown in 1937) *
T. 59 N., R. 21 W., N. sixteenth cor. between secs. 32 and 33 , 300 ft. E. of N. end of $100-\mathrm{ft}$. N. -S. jog in crossroads, 20 ft . N. of ra., in root on E. side of $16-1 n$. elm tree; copper nail and washer
T. 59 N., R. 21 W., cor. secs. $27,28,33$, and $34,240 \mathrm{ft}$. W. of T-rd. $N_{0}, 20 \mathrm{ft}$. S. of rd., in farmyard, in root on N. side of twin 20-ir. black-locust tree; copper nail and washer
T. $59 \mathrm{~N} ., \mathrm{R}$. 21 W., in NE $1 / 4$ sec. $34,30 \mathrm{ft}$. N. and 15 ft . E. from E. end of bridge over Locust Creek, on $N$. side of 22-in. elm tree; bolt head (set by water-resources branch of U.S. Geol. Survey)
T. 59 N., R. 21 W., cor. secs. $21,22,27$, and $28,160 \mathrm{ft} . \mathrm{N}$. of T-rd. W., 15 ft . W. of rd., on head wall of concrete culvert; chiseled square

Church, on NW. corner of top concrete step; chiseled square
837.187
788.25
715.57
$747 \cdot 74$
801.358
786.51
715.52
762.89
T. 59 N., R. 21 W., cor. secs. $15,16,21$, and $22,15 \mathrm{ft}$. N. and 25 ft . E. from crossroads, in root on S. side of $16-1 \mathrm{n}$. elm tree; copper nail and washer
T. 59 N., R. 21 W., 380 ft . N. of quarter cor. between secs. 15 and 16 , 25 ft . E. of rd. in line with S . side of dweling; standard tablet stamped "T T I W 1936"
782.33
848.883
T. 59 N., R. 21 W., cor. secs. $9,10,15$, and $16,280 \mathrm{ft} . \mathrm{S}$. and 20 ft . W. from crossroads, in root on $N$. side of $20-i n$. maple tree; copper nail and washer
818.75
T. 59 N., R. 21 W., cor. secs. $3,4,9$, and $10,25 \mathrm{ft}$. N. and 45 ft . E. from crossroads, in root on W. side of 22-1n. walnut tree; copper nail and washer
Tps. 59 and 60 N., R. 21 W., cor. secs, $3,4,33$, and $34,240 \mathrm{ft}$. S. and 60 ft . E. from crossroads, at SW. corner of school, on concrete doorstep; chiseled square
\# Published also as line 8 of the Chula quadrangle (see Bull. 898-D, p. 464).

## 8. FROM SEC. 3, T. 58 N., R. 21 W., SOUTH TO SEC. 3, T. 57 N., R. 21 W., INCLUDING THAT PART OF THE LINE IN CHULA QUADRANGLE (by F. Y. Brown in 1937)*

T. 58 N., R. 21 W., N. sixteenth cor. sec. 3,40 ft. E. of T-rd. N., in corner of farmyard, in root on $N$. side of $20-1 n$. locust tree; crossed nails
T. 58 N., R. 21 W., cor. secs. 3, 4, 9, and $10,20 \mathrm{ft} . \mathrm{N}$. and 25 ft . E. from T-rd. W., in root on N. side of l4-in. cottonwood tree; copper nail and washer

Feet
747.74
725.23
T. 58 N ., R. 21 W ., near quarter cor. between secs. 9 and $10,60 \mathrm{ft}$. S. and 20 ft . E. from Trrd. E., in root on $W$. side of $30-1 \mathrm{n}$. mulberry tree; copper nail and washer
T-rd. S., 20 ft . S. and 20 ft . W. from, in cormer fence post, at surface of ground; spike
T. 58 N., R. 21 W., cor. secs. $15,16,21$, and $22,30 \mathrm{ft}$. N. and 3 ft . E.
from T-rd. S., in concrete post; standard tablet stamped "T T 2 W 1936"
T. 58 N., R. 21 W., near S. sixteenth cor. between secs. 21 and 22, at SW. corner of bridge, on W. end of steel cross beam; painted square
T. 58 N., R. 21 W., cor. secs. $27,28,33$, and $34,20 \mathrm{ft}$. E. of rd. corner from N.-W., in root on W. side of twin $\mathrm{l}_{4}-1 \mathrm{n}$. elm tree; copper nail and washer
754.77
T. 58 N., R. 21 W., quarter cor. between secs. 28 and $33,15 \mathrm{ft}$. S. and 20 ft . W. from T-rd. S., in root on N. side of l4-in. hedge tree; copper nail and washer
780.25
T. 58 N., R. 21 W., S. quarter cor. sec. $33,60 \mathrm{ft}$. E. of T-rd. N., on S. head wall of concrete culvert; chiseled square
T. 57 N., R. 21 W., N. cor. secs. 3 and $4,33 \mathrm{ft}$. S. and 48 ft . W. from T-rd. S., in concrete post; standard tablet stamped "T T 3 W 1936" Chicago, Eurlington \& Quincy R.R. at ra. crossing, in floor; top of spike

## 9. FROM LINNEUS EAST INTO BUCKLIN QUADRANGLE AT SEC. 2, T. 58 N., R. 19 W. (by F. Y. Brown in 193.7)

U.S.C. \&e G.S. standard disk stamped "A 11 1930"
U.S.C. \& G.S. standard disk stamped "Magnetic Station 1917"

Linneus, 0.7 mi . E. of, 400 ft . E. of $T-r d . S ., 40 \mathrm{ft} . \mathrm{N}$. of rd. at N. S .
fence, in root on W. side of $16-1 n$. hickory tree; copper nail and washer
Linneus, 1.8 ml . E. of, in $\mathrm{NE} 1 / 4 \mathrm{sec} .5, \mathrm{~T} .58 \mathrm{~N} ., \mathrm{R} .20 \mathrm{~W} ., 110 \mathrm{ft} . \mathrm{S}$. and 140 ft . W. from T-rd. W., on concrete well top; chiseled square
$T p s .58$ and $59 \mathrm{~N}_{\mathrm{H}}, \mathrm{R}_{\mathrm{T}} 20 \mathrm{~W}$. , W. sixteenth cor. between secs. 4 and 33 , 25 ft . N. and 30 ft . E. from T-rd. N., in base of corner fence post; spike
Tps. 58 and 59 N., R. 20 W., 20 ft. N. of cor. secs. 3, 4, 33, and 34 , 90 ft. S. and 20 ft . E. from school, in concrete post; standard tablet stamped "Prim Trav Sta No 18 F 1924 "
812.923

Tps. 58 and 59 N., R. 20 W., W. sixteenth cor. between secs. 3 and 34, 15 ft . N. and 15 ft . W. from T-rd. N., in base of corner fence post; spike
Tps. 58 and 59 N., R. 20 W., near cor. secs. 2, 3, 34 , and 35 , at SE. corner of small bridge, on end of steel beam; painted square
Tps. 58 and 59 N., R. 20 W., E. sixteenth cor. between secs. 2 and 35, 530 ft . E. of crossroads, 20 ft . N. of ra., in root on E. side of $26-1 \mathrm{n}$. elm tree; copper nail and washer
850.31

Tps. 58 and 59 N., R. 20 W., on line between secs. I and 36 , on S. end of brace beam at $S W$. corner of bridge over Long Branch; painted square
Tps. 58 and 59 N., Rs. 19 and 20 W., cor. of, 20 ft . N. and 20 ft . E. from crossroads, in concrete post; standard tablet stamped "Prim Trav Sta No 19 F 1924"
T. 58 N., R. 19 W., W. cor. secs. 6 and $7,15 \mathrm{ft}$. S. and 45 ft . E. from T-rd. E., in root on N. side of 10-1n. hedge tree; copper nail and washer
784.331
T. 58 N., R. 19 W., quarter cor. between secs. 5 and $8,15 \mathrm{ft}$. N. and 15 ft . W. from crossroads, on W. end of concrete culvert; chiseled square
T. 58 N., R. 19 W., near W. sixteenth cor. between secs. 4 and 9 , 590 ft . W. of T-rd. S., 105 ft . N. of rd., on SE. corner of concrete door step of farmhouse; chiseled square
T. 58 W . R R 19 W ., quarter cor between secs. 4 and $9,30 \mathrm{ft}$ s. and 50 ft. W. from T-rd. N., in concrete post; standard tablet stamped "Prim Trav Sta No 20 F í92l"
801.320
T. 58 N., R. 19 W., near quarter cor. between secs. 3 and $10,8 \mathrm{ft}$. N. of rd., on cross beam at NE. corner of bridge over Yellow Creek; chiseled cross
754.90
(Continued in Bucklin quadrangle; see line 5.)
10. FROM POINT O. 8 MILE SOUTH OF PURDIN NORTH TO PURDIN, THENCE
EAST ABOUT TWO MILES, ALONG COUNTY ROUTE C
(by F. Y. Brown in 1937)
U.S.C. \& G.S. standard disk stamped "X 10 1930"
853.049

Purdin, 12 ft . SE. of entrance to Bank of Purdin, at NW. corner of Junction of State Highway 5, on curb; chiseled square
Purdin, 0.8 ml . E. of, 60 ft . N. and 45 ft . W. from crossroad, 50 ft . E. of farmhouse, in root on W. side of 22-in. elm tree; copper nail and washer
Purdin triangulation sta.; U.S.C. \& G.S. standard disk stamped "Purdin 1928"
*Published also as line 10 of the Chula quadrangle (see Bull. 898-D, p. 464).

> TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY SECOND-ORDER LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE AT EROOKFIELD (by w. V. Kennedy in 1937)


TIE BETWEEN UNITED STATES COAST AND GEODETIC SURVEY SECOND-ORDER LINE AND UNITED STATES GEOLOGICAL SURVEY THIRD-ORDER LINE MIDWAY BETWEEN LACLEDE AND BROOKFIELD (by W. V. Kennedy in 1937)
U.S.C. \& G.S. standard disk stamped "B 120 1935"
T. 57 N., R. 20 W., in E $1 / 2 \mathrm{sec} .3,415 \mathrm{ft}$. W. of rd. bridge over Little Turkey Creek, 20 ft . S. of rd. In line with W. end of R.R. stone arch bridge over creek, in fence line; iron post stamped "Prim Trav sta No 14 F 19241920 Mo $755^{\prime \prime}$
754.313

For additional level lines along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey
first-order line, Minneapolis, Minn. to Glasgow, Mo.; and second-order line, Laclede to Macon.

ROTHVILLE QUADRANGLE
(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $93^{\circ} 00^{\prime}-93^{\circ} 15^{\prime}$ )
Chariton and Linn Counties


1. FROM HALE QUADRANGLE AT SEC. 27, T. 57 N., R. 21 W., EAST AND SOUTH BY WAY OF SUMNER INTO HALE QUADRANGLE AT SEC. 21, T. 56 N., R. 21 W. (by E. B. Perry in 1921)
T. 57 N., R. 21 W., in $S W 1 / 4$ sec. 27 , on S. side of NE. end of bridge over Locust Creek; top of bolt head
T. 57 N., R. 21 W., near cor. secs. $25,26,35$, and 36 , W. of crossroads, on $S$. end of concrete culvert; chiseled square
18 ft E. 21 ., R. 21 W , cor. secs. $1,2,35$, and $36,24 \mathrm{ft}$. $N$. and 1921 Mo"
Reference mark, 109 ft . S. of post, in root of $\mathrm{l}_{4}-\mathrm{in}$. walnut tree; copper nail and washer (reported destroyed in 1933)
(Benchmarks by B.B.Perry reported destroyed. Balance by J.M.Lawson in 1933)
T. 56 N., R. 21 W., cor. secs. $1,2,11$, and $12,27 \mathrm{ft} . \mathrm{N}$. and 20 ft . W. from crossroads, in large fence post set in concrete; rail spike
T. $56 \mathrm{~N} ., \mathrm{R}$. 21 W., about 600 ft . N. of quarter cor. between secs. 11 and 12 , about 2 mi . N. and $1.5 \mathrm{mi} . \mathrm{E}$. from Sumner, at crossing of Chicago, Burlington \& Quiney R.R.; top of S. rail
T. 56 N., R. 21 W., at cor. secs. $11,12,13$, and 14 , at junction of T-ra.
T. 56 N., R. 21 W., near SW. cor. SE $1 / 4$ sec. 11 , at junction of T-rd. S., on E. side of rd., in root of 24 -in. maple tree; copper nail and washer U.S.C. \& G.S. standard disk stamped "J 11 1930"
2. FROM SEC. 23, T. 56 N., R. 21 W., SOUTHWEST BY WAY OF SUMNER INTO HALE QUADRANGLE'AT SEC. 21, T. 56 N., R. 21 W. (by B. A. Barnes in 1936)
T. 56 N., R. 21 W., center sec. 23, 50 ft. N. and 50 ft . W. from County Route E at rd. N.; iron post stamped "Prim Trav Sta No 17 W 1921 Mo" U.S.C. \& G.S. standard disk stamped "K 11 1930"

Sumner, about 1.5 ms . SW. of, on N. end of first pier on E. end of
Chicago, Burlington \& Quincy R.R. bridge over Grand River; standard reference mark tablet (set by water-resources branch of U.S. (ieol. Survey)
3. FROM SUMNER EAST ALONG COUNTY ROUTE E TO SEC. 18, T. 56 N., R. 20 W., THENCE EAST ALONG ROADS TO STATE HIGHWAY 11, THENCE SOUTH ALONG STATE HIGHWAY 11 TO CORNER TPS. 55 AND 56 N., RS. 19 AND 20 W., THENCE EAST ALOIGG ROADS INTO MARCELINE QUADRANGLE AT SEC. 2, T. 55 N., R. 19 W. (by E. Y. Brown in 1937)

Sumner, 1 mi . E. of, 35 ft . N. and 15 ft . W. from junction of rd. N., on center of $W$. head wall of concrete culvert; chiseled square
Sumner, 1.5 mi. E. of, $20 \mathrm{ft} . \mathrm{S}$. and 10 ft . E. from junction of rd. S., on E. end of iron pipe culvert; (mark not described)
670.26
. 56 N., R. 21 W., in sec. $24,20 \mathrm{ft}$. N. of highway, 6 ft . W. of
private farm entrance, 150 ft . E. of hedge, on $W$. end of iron culvert;
689.84

## painted square

T. 56 N., Rs. 20 and 21 W., near quarter cor. between secs. 19 and 24 , 340 ft . W. of junction of rd. S., 15 ft . NW. of highway at curve N.-W., on end of iron pipe culvert; painted square
699.00
T. 56 N., Rs. 20 and 21 W., cor. secs. $13,18,19$, and $24,15 \mathrm{ft}$. N. and 25 ft . W. from highway at curve $\mathrm{S} .-\mathrm{E}$. and produced rd. N., 95 ft . SE. of farmhouse of I. H. Eisele, in fence corner, in concrete post; standard tablet stamped "17 B 1937"
T. 56 N., R. 20 W., near cor. secs. 17, 18, 19, and $20,600 \mathrm{ft}$. W. of crossroad, 15 ft . S. of Junction of County Route N , on S. head wall of concrete culvert; chiseled square
T. 56 N., R. 20 W., near W. sixteenth cor. between secs. 16 and 21 , 15 ft . S . of rd., near S . end of W . abutment of bridge over drainage ditch; chiseled square

Foet
698.02
686.688
670.162
681.544
670.693
. 56 N., R. 20 W., near cor. secs. $15,16,21$, and $22,130 \mathrm{ft}$. W. of T-rd. $\mathrm{N} ., 20 \mathrm{ft} . \mathrm{N}$. of rd., 20 ft . S. of SE. corner of farmhouse, in root on S. side of 20-in. ash tree; copper nail and washer
T. 56 N., R. 20 W., cor. secs. $14,15,22$, and $23,20 \mathrm{ft} . \mathrm{S}$. and 30 ft . W. from crossroads, in concrete post; standard tablet stamped "Prim Trav Sta No 31 F 1924"
678.403
T. 56 N., R. 20 W., near cor. secs. 22, 23,26 , and $27,85 \mathrm{ft} . \mathrm{N}$. and 40 ft . E. from T-rd. E., in root on N. side of $26-1 \mathrm{n}$. elm tree; copper nail and washer
719.68
T. 56 N., R. 20 W., near cor. secs. $23,24,25$, and $26,540 \mathrm{ft}$. E. of T -rd. S., 110 ft . S. of rd., in root on N . side of $18-1 \mathrm{n}$. elm tree; copper nail and washer
744.03
T. $56 \mathrm{~N} ., \mathrm{Rs} .19$ and 20 W ., near cor. secs. 19, 24,25 , and $30,30 \mathrm{ft}$. N. and 85 ft . W. from State Highway 11 at rd. W., in root on E. side of $28-1 \mathrm{n}$. elm tree; copper nail and washer
730.50
T. 56 N., Rs. 19 and 20 W., near N. sixteenth cor. between secs. 31 and 36, at SW. corner of bridge over Yellow Creek, on top of E. end of W. wing wall of $S$. abutment; standard tablet (set by water-resources branch of U.S.Geol. Survey)
700.346

Tps. 55 and 56 N., Rs. 19 and 20 W ., near cor. of, 165 ft . E. of cross. road, 20 ft . S. of rd., in root on W. side of $22-1 \mathrm{n}$. elm tree; copper nail and washer
741.14

Tps. 55 and $56 \mathrm{~N} ., \mathrm{R}$. 19 W. , on line between secs. 6 and $31,20 \mathrm{ft} . \mathrm{S}$. of rd., at entrance to farmhouse of B. E. Smith, on NW. corner of N. end of sidewalk; painted square
Campfield triangulation sta.; U.S.C. \& G.S. standard disk stamped "Campfield 1928"
Reference mark 1; U.S.C. \&c G.S. standard reference disk stamped "Campfield No 1 1928"
T. 56 N., R. 19 W., S. quarter cor. sec. $32,75 \mathrm{ft}$. E. of T-rd. N., $20 \mathrm{ft} . \mathrm{S}$. of rd., in root on $W$. side of 12 -in. elm tree; copper nall and washer
803.237

Farmyard, $30 \mathrm{ft} . \mathrm{S}$. of rd., in root on $N$. side of twin 10-1n. cedar tree; crossed nails
775.25
T. 56 N., R. 19 W., S. quarter cor. sec. 33, 25 ft. S. of T-rd. N., in root on E. side of 20-1n. black-oak tree; copper nail and washer
771.62
T. 55 N., R. 19 W., N. cor. secs. 3 and 4 , 15 ft . N. and 20 ft . W. from T-rd. S., on N. end of iron pipe culvert; peinted square
785.46
T. 56 N., R. 19 W., S. quarter cor. sec. 34,8 ft. S. and 80 ft . W. from T-rd. N., on center of $S$. head wall of concrete culvert; chiseled square
T. 55 N., R. 19 W., in NE $1 / 4$ sec. $3,140 \mathrm{ft}$. N. and 40 ft . E. from NE. corner of farmhouse of L. F. Pare, 15 ft . S. of rd., in fence line, in concrete post; standard tablet stamped "18 B 1937"

Tps. 55 and $56 \mathrm{~N} ., \mathrm{R}$. 19 W. , on line between secs. 2 and $35,8 \mathrm{ft}$. N. of rd., on SW. corner of $W$. end of $N$. head wall of concrete culvert; chiseled square
(Continued in Marceline quadrangle; see line 2.)
For additional level lines along Chicago, Burlington \& Quincy R.R., and Wabash Ry., refer to United States Coast and Geodetic Survey first-order line, Minneapolis, Minn. to Glasgow, Mo.; and secondorder line, Gallatin to Sumner.

HANMIBAL QUADRANGLE*<br>(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $91^{\circ} 15^{\prime}-91^{\circ} 30^{\prime}$ )<br>Marion, Pike, and Ralls Counties



1. ISOLATED BENCHMARKS (not shown on diagram) (by H. V. Rees in 1901-02)

Withers Mill, in NE. corner of Chicago, Burlington \& Quincy R.R. sta. platform; copper nail
Bear Creek, in SE. corner of Chicago, Burlington \& Quincy R.R. sta. platform; copper nail
Oakwood, in SE. corner of Chicago, Burlington \& Quincy R.R. sta. platform; copper nall
Oakwood, in SE. corner of Wabash Ry. sta. platform; copper nail U.S.C.E. B.M. designated "16"
2. FROM HANNIBAL NORTHWEST TO SEC. 19, T. 57 N., R. 4 W., THENCE NORTHWEST ALONG U.S. HIGHWAY 61 INTO MONROE CITY QUADRANGLE (by B. A. Barnes in 1935)
U.S.C. \& G.S. standard disk stamped "C 135 1935"
U.S.C.E. B.M. designated " 540 R 94 "

Hannibal, S. of intersection of North and Bridge Streets, on N. edge of sidewalk; chiseled square
Hannibal, in NE. part of, intersection of North Third Street, Mark Twain Avenue, and W. approach to bridge over Mississippi River, 10 ft . W. of SW. corner of dwelling, 2 ft . W. of sidewalk, on NE. curb; chiseled square
Mark Twain Avenue and Section Street, NE. of intersection, on curb; peinted square
Hannibal, at 1666 Mark Twain Avenue, on W. end of lower step of concrete stairway leading to brick dwelling of David L. Stewart; chiseled square
U.S. Highway 61 at entrance to Riverview Park; surface of highway

Hannibal triangulation sta.; U.S.C. \& G.S. standard disk stamped "Hannibal 1931"
Top of hill, opposite NE. corner of cemetery, on curb; painted square 707.84 E. from crossroad, on concrete curb; chiseled square
, 30 ft . S. and 12 ft . W. from function of rd. N., $10 \mathrm{ft} . \mathrm{N}$. and 12 ft . W. from cut stone driveway entrance, in concrete post; standard tablet stamped "1143 C W A 1935"
T. 57 N., R. 5 W. , near W. sixteenth cor. between secs. 13 and 24 , at junction of rd. S., on E. edge of tile culvert; painted square
Hannibal, about 4.1 mi . NW. of, 150 ft . W. of double telephone line N.-S. on NW. corner of sidewalk to dwelling of L. W. Smith; chiseled square
T. 57 N., R. 5 W., near quarter cor. between secs. $1_{4}$ and 23 , at junction of rd. SW., on E. edge of tile culvert; painted square
T. 57 N., R. 5 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec}$. 14 , at junction of rd. S.; surface of highway

[^25]Hannibal, about 5.3 mi . NW. of, near line between secs. 14 and 15 ,
T. 57 N., R. 5 W., 410 ft . W. of mail box of Dora Minor, 17 ft . S. and

45 ft . W. from junction of rd. SW., in fence corner, in root of 20-1n. wild-cherry tree; copper nail and washer

Feet
682.88

Highway at rd. N., on concrete retaining wall; painted square
661.50
T. 57 N., R. 5 W. , cor. secs. $9,10,15$, and 16 , 40 ft . S. and 30 ft . W. from N.-S. crossroad, 50 ft. N. of Mount Zion Church, in concrete post; standard tablet stamped "1442 C W A 1935"
693.123

Top of hill; surface of highway
724.3
T. 57 N., R. 5 W., near E. sixteenth cor. between secs. 8 and 17, 30 ft . S. of highway, 15 ft . E. of rd. S., on concrete base of corner fence post; chiseled square
730.92
T. $57 \mathrm{~N} .$, R. 5 W. , in $\mathrm{SW} 1 / 4 \mathrm{sec} .8,20 \mathrm{ft}$. N. of highway, on W . side of rd. N. to farmhouse of $W$. C. Stewart, on concrete retaining wall; chiseled square
719.25
(Continued in Monroe City quadrangle; see line 3.)
3. FROM MONROE CITY QUADRANGLE AT SEC. 31, T. 57 N., R. 5 W., SOUTH TO WABASH RAILWAY, THENCE EAST ALONG RAILROAD TO SEC. 33 , T. 57 N., R. 5 W., THENCE NORTH TO U.S. HICHWAY 36, THENCE EAST ALONG U.S. HÍGHWAY 36 TO HANNIBAL, THENCE SOUTH ALONG U.S. HIGHWAY 61 TO NEW LONDON, THENCE SOUTHWEST ALONG STATE HIGHWAY 19 INTO MONROE CITY QUADRANGLE (by B. A. Barnes in 1935)
(Continued from Monroe City quadrangle; see line 3.)
T. 57 N., R. 5 W., center sec. 31 , 31 ft . S. and 55 ft . E. from U.S. Highway 36 at rd. S., 36 ft . E. of fence corner, in concrete post; standard tablet stamped "1430 C W A 1934"

729.850

(For balance in Monroe City quadrangle, see line 3.)
U.S.C. \& G.S. standard disk stamped "H 135 1935"
616.495
T. 57 N., R. 5 W., near quarter cor. between secs. 32 and 33, at junction of rd. E., on NE. corner of bottom concrete step to W. door on N. side of Hill Top Inn; chiseled square
T. 57 N., R. 5 W., in $S W 1 / 4$ sec. 28 , on NW. wing wall of bridge over Bear Creek; chiseled square
T. 57 N., R. 5 W., in SW $1 / 4$ sec. 28 , in NW. abutment of bridge over
T. 57 N., R. 5 W., in $S E 1 / 4$ sec. 28, at junction of private rd. N., on W. end of culvert; painted square
612.83

Hannibal, 3 mi . W. of, in SW 174 sec. 27 , T. 57 N., R. $5 \mathrm{~W} ., 28 \mathrm{ft}$. N. and 25 ft . W. from junction of private drive $\mathrm{N} ., 2 \mathrm{ft} . \mathrm{S}$. and 17 ft . W. from concrete post, in fence corner, in concrete post; standard tablet stamped "1429 C W A 1935"
723.974
T. 57 N., R. 5 W., near S. sixteenth cor. sec. 27 , N. of crossroad, on W. end of culvert; painted square
Top of hill, N. of highway, at telephone pole; surface of ground
Hannibal, 1.5 mi . W. of, in SW $1 / 4$ sec. $26, \mathrm{~T} .57 \mathrm{~N} .$, R. 5 W., on S. head wall of concrete culvert; chiseled square
T. $57 \mathrm{~N}, \mathrm{R} .5 \mathrm{VI}$, in SE $1 / 4$ sec. 26 , at crossroad; surface of highway
720.7

Hannibal, 0.8 mi . W. of, in $\mathrm{sw} 1 / 4 \mathrm{sec}$. 25 , T. $57 \mathrm{~N} ., \mathrm{R}$. $5 \mathrm{~W} ., 200 \mathrm{ft}$. E. of crossroad, 48 ft . N. of highway, opposite red brick wali of driveway to dwelling of A. A. Suit, in root of 9-in. hickory tree; copper nail and washer
T. 57 N., R. 5 W., in SW $1 / 4 \mathrm{sec} .25$, at junction of rd. S.; surface of highway
705.60

Crossroad; surface of highway
655.5
692.2

Hannibal, at W. edge of, on U.S. Highway 61, about $140 \mathrm{ft} . \mathrm{S}$. and 180 ft . E. from Junction of U.S. Highway $36,68 \mathrm{ft}$. SW. of SW. corner of service sta., $36 \mathrm{ft} . \mathrm{E}$. of concrete driveway, in concrete post; standard tablet stainped "1428 C W A 1935"
Reference mark, 80 ft . N. of tablet, 1 ft . W. of NW. corner of service
sta., in concrete driveway; standard tablet
T. 57 N., R. 4 W., on line between secs. 30 and 31 , near gas pumping sta.,
541.355 at base of fence post, on iron pipes (mark not described)
541.334

Junction of lane W.; surface of highway
635.30
T. 57 N., R. 5 W., in $\operatorname{SE} 1 / 4 \sec .36,370 \mathrm{ft}$. S. of entrance to Hatch

State Experiment Sta., on center of concrete culvert; chiseled square
Crossroad; surface of highway
Crossroad, E. head wall of culvert; (mark not described)
Junction of optional U.S. Highway 61; surface of highway
U.S.C. \& G.S. standard disk stamped "F 135 1935"

Bridge over Bear Creek, on SE. Wing wall; (mark not described)
569.4
617.61
571.1
547.61
556.9
535.996
T. $56 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W} .$, in $S W 1 / 4 \mathrm{sec}$. $1,70 \mathrm{ft}$. S. of junction of private rd. W., on E. end of concrete culvert; (mark not described)
541.12
T. 56 N., R. 5 W., near line between secs. 11 and 12 , on top of hill, E. of highway, opposite large, brick dwelling, in root of $2 \mathrm{l}_{4}-1 \mathrm{n}$. elm tree; copper nail and washer
609.30
676.24

1. 56 N., R. 5 W. about 0.2 mi . W. of cor. secs. $11,12,13$, and 14 , fence corner, in concrete post; standard 21 ft . N. and 3 ft . W. from fence corner, in concrete post; standard tablet stamped "1427 C W A
$1935^{\prime \prime}$
T. $56 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W}$. , in SE $1 / 4$ sec. 14 , W. of highway, in root of oak tree; nail
678.30
T. $56 \mathrm{~N} ., \mathrm{R}$. $5 \mathrm{~W} .$, in NE $1 / 4 \mathrm{sec} .23$, 350 ft . N. of junction of private
rd. E., in W. head wall of concrete culvert; iron pin
T. 56 N., R. 5 W ., in $\mathrm{SW} 1 / 4 \mathrm{sec} .24$, on $N$. end of concrete base of gasoline pumps; painted square
T. 56 N., R. 5 W., near quarter cor. between secs. 25 and $36,29 \mathrm{ft}$. S. and 111 ft . W. from junction of rd. W., 560 ft . NW. of bridge over

Salt River, 55 ft . N. and 105 ft . E. from NE. corner of farmhouse of Lee Beckett, in concrete post; standard tablet stamped "1426 C W A $1934^{\prime \prime}$

Feet
503.195

New London, 2 mi . N. of, in NE $1 / 4 \mathrm{NW} 1 / 4 \mathrm{sec} .36$, T. $56 \mathrm{~N} ., \mathrm{R}$. 5 w ., at bridge over Salt River, in top of $W$. end of pier at N. end of middie steel truss; standard tablet (set by water-resaurces branch of U. S. Ceol. Survey) 506.456
New London, 1.1 mi . N. of, in $\mathrm{SE} 1 / 4 \mathrm{sec} .36, \mathrm{~T} .56 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W}$. , on ridge, 120 ft . S. of dwelling, on W. head wall of concrete culvert; (mark not described)
New London, $0.8 \mathrm{mi} . \mathrm{N}$. of, 300 ft . S. of junction of rd. E., in W. head wall of concrete culvert; iron pin
New London, near line between secs. 1 and 6, T. 55 N., Rs. 4 and 5 w., 210 ft . S. of junction of rd. E., on W. head wall of concrete culvert; painted square
New London, in front yard of courthouse, on SW. corner of concrete well platform; chiseled square
New London, 0.5 mi . S . of, 32 ft . E. of junction of State Highway 19 , 5 ft . S. and 66 ft . W. from NW. corner of farmhouse of Dick Hamiliton, 3 ft . W. of fence, in concrete post; standard tablet stamped "l425 C W A 1934"
New London, 1.2 mi . SW. of, 70 ft . SW. of R.R. crossing, on $N$. head wall of concrete culvert; (mark not described)
New London, 1.5 ml . SW. of, at junction of rd. N., on E. head wall of concrete culvert; chiseled square
New London, 2 mi . SW. of, at junction of private rd. N.; surface of highway
New London, 2.5 mi . SW. of, at junction of rd. N., opposite mail box of Roy Laird, on E. end of concrete culvert; chiseled square
T. 55 N., R. 5 W., in $N 1 / 2$ sec. 14 , at crossroad, on N. head wall of concrete culvert; painted square
T. $55 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W} .$, E. sixteenth cor. sec. 15 , 38 ft . N. and 225 ft . W. from junction of rd. W., $3 \mathrm{ft} . \mathrm{S}$. and 13 ft . W. from hedge fence corner, in concrete post; standard tablet stamped "lli24 C W A 1934"
T. 55 N., R. 5 W., cor. secs. $15,16,21$, and 22 , at crossroad, on S. head wall of concrete culvert; chiseled square
T. $55 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W} .$, in $\mathrm{W} 1 / 2 \mathrm{sec} .21,30 \mathrm{ft}$. N. of highway, 30 ft . W. of Junction of rd. N., in fence corner, in root of 12-in. maple tree; copper nail and washer
T. 55 N., R. 5 W., W. sixteenth cor. between secs. 20 and 29,32 ft. N. and 36 ft . E. from junction of rd. N., $2 \mathrm{ft} . \mathrm{N}$. and $\mathrm{I}_{+} \mathrm{ft}$. E. from fence corner, in concrete post; standard tablet stamped "1423 C W A $1934^{\prime \prime}$
(Continued in Monroe City quadrangle; see line 4.)
4. FROM SEC. 11, T. 56 N., R. 5 W., SOUTHVEST INTO MONROE CITY QUADRANGLE AT SEC. 6, T. 55 N., R. 5 W. (by B. A. Barnes in 1935)
T. 56 N., R. 5 W., on line between secs. 11 and $14,95 \mathrm{ft}$. W. of T-rd. S., on center of $S$. wing wall of smali bridge over creek; chiseled square
T. 56 N., R. 5 W., in NW $1 / 4$ sec. 14 , about half way up long slope, in yard, in fence line, in root of $36-i n$. oak tree; nail
T. 56 N., R. 5 W. , on line between secs. 14 and $23,50 \mathrm{ft}$. S. of E.-W. rá., 12 ft . E. of 8 -in. elm tree, in E.-W. fence line; copper nail and washer
Junction of private lane through field, $15 \mathrm{ft} . \mathrm{N}$. of, in root of 8-in. oak tree; crossed nails
T. 56 N., R. 5 W., in NE $1 / 4 \mathrm{SW} 1 / 4 \mathrm{sec} .22,130 \mathrm{ft}$. W. of creek, 210 ft . S. of abandoned farmhouse of Horace Jackson, 10 ft . N. of log barn, in root of 22-in. white-oak tree; copper nail and washer
Log dwelling of Charles Lavion, in front yard of, in root of 10-in. walnut tree; crossed nalls
T. 56 N.; R. 5 W., 680 ft . S. of E. sixteenth cor. between secs. 21 and $28,60 \mathrm{ft}$. S. of rd. forks, 25 ft . S. of mail box of W. E. Lennox, in NW. concrete. wing wall of smail bridge over Sanders Creek; standard tablet
T. 56 N., R. 5 W., in NE $1 / 4 \mathrm{sec} .28$, at dim lane E., N. of creek, in root on SW. side of twin maple tree; (mark not described)
09.936
502.03
581.73
in. root of $18-1 \mathrm{n}$. elm tree; crossed nails
T. 55 N. , R. 5 W ., near center of $\mathrm{NE} 1 / 4 \mathrm{sec} .5,60 \mathrm{ft}$. S. of spring branch, 25 ft . W. of N.-S. rd., in root on NE. side of $20 \dot{-1 n}$. oak tree; copper nail and washer
T. 55 N., R. 5 W., in $S 1 / 2 \mathrm{NE} 1 / 4$ sec. 5,25 (? 15) ft. E. of E. face of Bethany School, in SE. corner of concrete well platform; standard tablet
Junction of private rd. NW., at corner fence post; surface of ground
T. 55 N., R. 5 W. , center sec. 5 , at T-rd. W., in root on N. side of oak tree; (mark not described)

Feet 683.047
686.2
666.04
685.54
685.54
664.89

> 5. FROM NEW LONDON EAST ALONG COUNTY ROUTE V TO SEC. 2 , T. $55 \mathrm{~N} .$, , R, 4 W., THENCE SOUTHEAST ALONG ROADS INTO EARRY QUADRANGLE AT SEC. 4, T. $55 \mathrm{~N} .$, R. 3 W. (by B. A. Barnes in 1935)

Junction of U.S. Highway 61; surface of highway
St. Louis \& Hannibal R.R. at highway; top of W. rail
New London, 1 mi . E. of, in depression, in root on S . side of $16-\mathrm{in}$. walnut tree; copper nall and washer
Junction of rd. W., on W. head wall of concrete culvert; painted square
New London, 1.8 mi . E. of, at bridge over Salt River, at first set of piers W. of E. approach, 1 ft . upstream from guardrail, on outside rivet head of base plate; chiseled cross
New London, 2.4 mi . E. of, at junction of rd. NW., in base of telephone pole; nail
New London, 3 mi . E. of, in $\mathrm{N} 1 / 2 \mathrm{NW} 1 / 4$ sec. 4 , T. 55 N., R. 4 W., in N. head wall of concrete culvert; standard tablet stamped "B A 3 1935"

New London, 3.7 mi . E. of, at junction of rd. N., on S. end of E. stone and concrete abutment of small bridge over creek; (mark not described)
New London, 4.3 mi . E. of, 40 ft . W. of junction of rd. N., on S. end of
W. concrete abutment of small bridge; chiseled square

Junction of rd. S., at SW. corner of, in base of corner fence post; nail
New London, 5.5 ml . E. of, about 0.8 mi . S. of N . cor. secs. 2 and 3, T. $55 \mathrm{~N} ., \mathrm{R} .4$ W., 110 ft . SW. of ra. forks, on E. end of N. concrete abutment of small bridge over creek; chiseled square
T. 55 N., R. $4 \%$, near center of $N 1 / 2 \mathrm{sec} .2$, at T-rd. E., in root of 16-1n. locust tree; crossed nails
New London, $6.7 \mathrm{mi} . E$. of, about 300 ft . W. of line between secs. 1 and 2 , T. 55 N., R. 4 W., 6 ft . E. of front face of Salt River School, 1 ft . N. of S. edge, in SW. corner of front concrete platform; standard tablet stamped "B A 4 1935"
T-rd. N., in NE. corner of, at corner fence post; surface of ground
Nev London, 7.7 mi . E. of, about 1 mi . N. and 0.3 mi . E. from E. cor. secs. 1 and 12, T. 55 N., R. 4 W., on S. head wall of concrete culvert; chiseled square
T. 55 N., Rs. 3 and 4 W., about 0.1 mi . E. of line between secs. 1 and 6 , at T-rd. S., at W. gatepost; surface of ground
New London, 8.5 mi . E. of, in $\mathrm{N} 1 / 2 \mathrm{sec}$. 6, T. $55 \mathrm{~N} ., \mathrm{R} .3 \mathrm{~W}$. , at W. edge of triangle formed by T-rd. E., 25 ft . N. of rd. E., 12 ft . E. of N.-S. rd., in root of $10-1 n$. sycamore tree; copper nail and washer
T. 55 N., R. 3 W., in $S 1 / 2 \mathrm{NE} 1 / 4 \mathrm{sec} .6$, at rd. forks, in root of $12-1 \mathrm{n}$. hickory tree; crossed nails
T. 55 N., R. 3 W., in $S 1 / 2$ NE $1 / 4$ sec. 5 , in front yard, 20 ft . E. of driveway, in root of $10-1 n$. oak tree; crossed nails

> 6. FROM VANDALIA QUADRANGLE AT SEC. $35, \mathrm{~T} .55 \mathrm{~N} ., \mathrm{R} .5 \mathrm{~W} .$, WEST INTO MONROE CITY QUADRANGLE AT SEC. $30, \mathrm{~T} .55 \mathrm{N.}, \mathrm{R} 5 W.$.
> (by C. W. Williams in 1935-36)
> (Continued from Vandalia quadrangle; see line 1.)
T. 55 N., R. 5 W., in SE $1 / 4 \mathrm{NW} 1 / 4 \mathrm{sec} .35$, about 500 ft . W. of T-rd. W., on NE. corner of concrete sidewalk to fermhouse of J. B. Laird; chiseled square
T. 55 N., R. 5 W., near quarter cor. between secs. 33 and $34,58 \mathrm{ft}$. W. of T-rd. E., in root on N. side of 27-in. elm tree; copper nail and washer
T. 55 N., R. 5 W., cor. secs. $27,28,33$, and 34 , 380 ft . W. of crossroads, 33 ft . S. of E. -W . rd., 18 ft . E. of entrance to cemetery at Salem Church, in concrete post; standard tablet stamped. "1840 ERA 1935"
Reference mark, $95 \mathrm{ft} . \mathrm{N}$. and 103 ft . W. from tablet, in root on SW . side of $36-1 n$. burr-oak tree; copper nail and washer
T. 55 N., R. 5 W., cor. secs. 28, 29, 32, and $33,17 \mathrm{ft} . \mathrm{S}$. and 125 ft . W. from rd. at fence S., 108 ft . E. of E. face of farmhouse of R. W. Martin, in root on SE. side of 32-in. elm tree; copper nail and washer
T. 55 N., R. 5 W., E. sixteenth cor. between secs. 29 and $32,24 \mathrm{ft} . \mathrm{N}$. and 40 ft . E. from T-rd. S., in E. gatepost; nails
690.21
T. 55 N., R. 5 W., cor. secs. $29,30,31$, and $32,12 \mathrm{ft}$. s. and 138 ft . E. from ra. at fences N . and S., on S. head wall of concrete culvert; chiseled square
Farmhouse, 428 ft . W. of W. face of, on E. end of N. head wall of small bridge; chiseled square

For additional level lines along Mississippi River and Wabash Ry.,
refer to United States Coast and Geodetic Survey first-order line,
Savanna to Grafton, Ill.; and second-order line, Hannibal to Sallsbury.

BARRY QUADRANGLE ${ }^{*}$<br>(Latitude $39^{\circ} 30^{\prime}-39^{\circ} 45^{\prime}$; longitude $91^{\circ} 00^{\prime}-91^{\circ} 15^{\prime}$ )<br>Pike and Ralls Counties



1. FROM HANNIBAL QUADRANGLE AT SEC. 20, T. 56 N., R. 3 W., SOUTHEAST ALONG CHICAGO, BURLINGTON \& QUINGY RAILROAD TO ASHBURN, THENCE SOUTHWEST INTO BOWLING GREEN QUADRANGLE AT SEC. 31 , T. 55 N., R. 2 W. (by C. W. Williams in 1935)
U.S.C.E. B.M. designated "548 R 91" Cap on pipe

Feet. Copper bolt
Clemens, 100 ft . SE. of sta., at bridge 110.95 over Fools Creek, at W. corner of NW. pier; w. bolt
U.S.C.E. B.M. designated "550 R 91" Cap on pipe Copper bolt
G1lberts Island, $1,300 \mathrm{ft}$. NW. of upstream end of, l,000 ft. NE. of 200 ft . cliff, 87 ft . SW. of R.R.; 15 ft . NW. of semaphore; iron post (U.S.C.E. B.M. designated "90/C") Cap on pipe Copper bolt
Reference mark, 10 ft . W. of post, in root on SW . side of 40 -in. maple tree; copper nail and washer
Hope, $66 \mathrm{ft} . \mathrm{N}$. and $\mathrm{ll}_{4} \mathrm{ft}$. W. from semaphore $\mathrm{S}-108.2$, on $E$. head wall of culvert over Standard Creek; top of concrete post
471.119 467.109
463.78
466.281
466.281
462.261
462.261
480.461
476.441

Busch, about 530 ft . NE. of sta., in NW $1 / 4 \mathrm{sec} .1, T .55$ N., R. 3 W., 8 ft . W. of R.R., on NW. abutment of bridge 107.03 over Battle Creek; chiseled square
479.60
$.467 \cdot 3.6$
T. 55 N., R. 3 W., in SE $1 / 4$ sec. 1 , on $S W$. corner of signal tower N-106.1; bolt head
462.48

La Motte, at rd. crossing (?); top of W. rail
465.27
464.7

Du Pont Powder Co. pump house, $1,400 \mathrm{ft}$. SE. of, opposite first wing of dam 19 above Denmark Island, 15 ft . toward SW . bank of river from edge of field in which several large pecan trees grow, 12 ft . back of shore protection; iron post stamped " 556 R 89 " (U.S.C.E. B.M.) Cap on pipe Copper bolt (B.M. 556 R 89 is 140 ft . riverward from B.M. 89/3)
454.445
450.455
457.26

Du Pont Powder Co. pump house, $1,400 \mathrm{ft}$. SE. of, $1,700 \mathrm{ft}$. NW. of upstream end of Denmark Island, in middie of field in which several
large pecan trees grow; iron post (U.S.C.E. B.M. designated " $89 / 3$ ") Cap on pipe Copper bolt
457.675
453.625

Ashburn, about 0.7 mi . NW. of sta., 200 ft . SE. of Du Pont Powder
Company's property-ine fence, 39 ft. SW. of R.R., $3 \mathrm{ft} . \mathrm{S}$. of blazed
8-in. elm tree; iron post (U.S.C.E. B.M. designated "89/4") Cap on pipe Copper bolt
Reference mark, 3 ft . N. of post, in root on E. side of $12-1 \mathrm{n}$. elm tree; copper nail and washer
U.S.C.E. B.M. designated " 20 "

Copper bolt
Ashburn, at post office, on SE. corner of step; chiseled square
Small bridge, on SE. wing wall; painted square
T. 55 N., R. 3 W., near N. sixteenth cor. sec. 13 , on SE. wing wall of small bridge; chiseled square
T. 55 N., R. 3 W., on line between secs. 13 and $14,50 \mathrm{ft}, \mathrm{N}$. of T-rd.
S., in root on SW. side of $30-\mathrm{in}$. sycamore tree; spike
T. 55 N., R. 3 W., near line between secs. 13 and 144 , near top of hill, 20 ft . SE . of Ashburn rd., in root on NE. side of 18-in, white-oak tree; copper nail and washer
T. $55 \mathrm{~N} .$, R. $3 \mathrm{~W} .$, in $\mathrm{SE} 1 / 4 \mathrm{sec} .14,10 \mathrm{ft}$. S. of rd., in root on N . side of twin oak tree; nail
T. 55 N., R. 3 W., quarter cor. between secs. 23 and 24,5 ft. N. and 15 ft . W. from stone at rd. corner N.-E., in concrete post; standard tablet stamped "3 W 1935"
465.044
460.975
463.06
473.687
477.20
515.64
544.85
476.80
585.35
620.48
484.821
494.31

[^26]| T. 55 N., R. 10 W., near center sec. 24, on NW. Wing wall of small bridge; painted square <br> T. $55 \mathrm{~N} .$, Rs. 2 and $3 \mathrm{~W} .$, near quarter cor. between secs. 29 and $24,7 \mathrm{ft}$. |  |
| :---: | :---: |
|  |  |
| T. $55 \mathrm{~N} ., \mathrm{Rs} .2$ and $3 \mathrm{~W} .$, near quarter cor. between secs. 29 and 24, 7 ft . S. and 15 ft . E. from rd. at fence N., in root on SE. side of $50-1 \mathrm{n}$. elm treep copper nail and washer$493.99$ |  |
| T. 55 N., R. 2 W., near center sec. 19, at rd. corner from W.-S., on concrete foundation of iron fence post; painted square 517.24 |  |
| T. 55 N., R. 2 W., near quarter cor. between secs. 19 and 30, in front of church, 30 ft . S. and 120 ft . W. from rd. fork, in root on N. side of 48-1n. black-oak tree; copper nail and washer |  |
|  |  |
| Transmission line, at first tree E. of, in root on $N$. side of $40-1 n$. burr-oak tree; nail | 462 |
| T. 55 N., R. 2 W., near line between secs. 29 and $30,0.6 \mathrm{mi}$. NE. of |  |
| $27 \mathrm{ft}$. . from Ashburn rd. at private rd. through gate, $2 \mathrm{ft} . \mathrm{N}$. |  |
| Reference mark, $85 \mathrm{ft} . \mathrm{S}$. and 27 ft . W. from tablet, in root on W. side of $30-1$. water-cak tree; copper nall and washer |  |
|  |  |
| bridge over Salt River, in root on S. side of 60-in. maple tree; |  |
| (Continued in Bowling Green quadrangle; see line 5.) |  |
| 2. FROM BUSCH WEST TO SEC. 4, T. 55 N., R. 3 W. (by C. W. Williams |  |
| Vernon School, on concrete base of E. gatepost; painted square 475.85 |  |
|  |  |
| T. 55 N, , R. 3 W., 20 ft . S. and 23 ft . W. from rd. corner, in root |  |
| $55 \mathrm{~N} ., \mathrm{R} .3 \mathrm{~W} .$, in $\mathrm{NW} 1 / 4 \mathrm{sec} .3,49 \mathrm{ft}$. N. of Busch-Eannibal rd., in |  |
| walnut tree; copper nail and washer$568.34$ |  |
| T. 55 N., R. 3 W., in NW $1 / 4 \mathrm{sec}$. 3 , on N. line of farm of E. Schindler, in root on W. side of 18-1n. black-oak tree; nail <br> Gibbs triangulation sta.; U.S.C. \& G.S. standard disk stamped "Gibbs" $\quad 809.918$ |  |
|  |  |
|  |  |
| Reference mark 1; U.S.C. \& G.S. standard reference disk stamped "Gibbs No 1" | 8 |
| aference mark 2; U.S.C. \& G.S. standard reference disk stamped "Gibbs No $2^{\prime \prime}$ |  |
| 55 N., R. 3 W., in NE $1 / 4$ sec. 4, 25 ft . S. of Busch-Hannibal rd., at entrance to farm of Tom Glascock, in root on NW. side of 18-1n. elm tree; copper nall and washer |  |
| 55 N., R. 3 W., in NW $1 / 4$ sec. 4, in small valley, 150 ft . W. of rd. corner W.-NE., 15 ft . S. of rd., in root on N. side of l2-in. oak tree; copper nal. 1 and washer | 609 |
| 3. FROM BOWLING GREEN QUADRANGLE AT SEC. 27, T. 55 N., R. 3 W., NORTH TO SEC. 4, T. $55 \mathrm{~N} ., \mathrm{R} .3 \mathrm{~W}$. (by C. W. Wililams in 1935) (Continued from Bowling Green quadrangle; see line 6.) |  |
| T. 55 N., R. 3 W., 200 ft . N. of cor. secs. 27,28 , 33 , and 34 , on sw . wing wall of bridge; painted square |  |
| Haw Creek School, 0.6 ms . S. of, 30 ft . S. and 15 ft . E. from T-rd. S., in root on SW. side of triple locust tree; copper nail and washer |  |
| Haw Creek School, top of first hill S. of, 18 ft . E. of rd., in root on W. side of $24-1 n$. walnut tree; copper nail and washer$553.16$ |  |
| Haw Creek School, 96 ft . S. and 21 ft . E. from SE. corner of, 197 ft . S. and 48 ft . W. from rd. at fence E., in concrete post; standard tablet stamped "I W 2935" |  |
| Haw Creek School, top of first hill N. of schoolhouse, 8 ft . E. of rd., in root on W. side of '36-in. maple tree; copper nail and washer |  |
| Haw Creek School, 1.1 mi . N. of, near small bridge, in root on E. side of 36-1n. black-oak tree; nail |  |
| Haw Creek School, 1.5 mi . N. of, 17 ft . S. and 12 ft . W. from T-rd. S., on SW. corner of concrete culvert; chiseled square |  |
| Rd. Intersection, 25 ft . W. of, on S. head wall of concrete culvert; painted square |  |
| Matson ford, $0.7 \mathrm{mi} . \mathrm{SW}$. of, 195 ft . W. of rd., $55 \mathrm{ft} . \mathrm{s}$. and 33 ft . E. from SE. corner of dweliling of E. A. Kietley, in concrete post; |  |
| Mation ford, on SE. side of Salt River, in root on W. side of $14-1 n$. |  |
| Matson ford, on NW. dank of Salt River, in root on N. side of 50-in. |  |
| T. 55 N., R. 3 W., in NW $1 / 4 \mathrm{sec} .9,25 \mathrm{ft}$. S. and 5 ft . W. from SW. corner of dwelling of $T$. E. Stanley, in root on S. side of 48-in. maple tree; nail | 484.12 |

[^27]Savanna to Grafton, Ill.


[^0]:    *For the results of spirit leveling in Missouri previously published see Triangulation and spirit leveling-missouri: U. S. Geol. Survey 18 th Ann. Rept., pt. 1, pp. 333-337, 1897; Triangulation and spirit leveling-M1ssouri-Illinois: U. S. Geol. Survey 20 th Ann. Rept., pt. 1, pp. 412-413, 1899; Triangulation, primary traverse and spirit leveling-Missour1: ${ }^{\text {U }}$. S. Geol. Survey 21 st Ann. Rept., pt. 1, pp. 474-475, 1900; Results of spirit leveling, fiscal Jear 1900-1901-Missouri, Missouri-Kansas: T. Geol. Survey Bull. 185, pp. 107-113, 1901; Results of spirit leveling in Missourl, 1896 to 1919, inciusive: U. S. Geol. Survey Buil. 459 , $48 \mathrm{pp.}, \mathrm{1911;} \mathrm{Resuits} \mathrm{of} \mathrm{spirit}$ leveling in Missouri, 1896 to 1914, inclusive: J.S. Geol. Survey Bull. 568, 219 pp., 1915.
    ${ }^{2+1}$ See Avers, H. G., Manual of first-order leveling; J . S. Coast and Geodetic Survey Speciai Pub. $140,1929$.

[^1]:    "See Jones, E. L., Hypsometry-Use of mean sea level as the datum for elevations: J.S. Coast and Geodetic Survey Special Pub. 41, 1917. Manual of tide observations: U.S. Coast and Geodetic Surver Special Pub. 196, $1935^{\circ}$

[^2]:    *The greater part of this quadrangle lies in Illinois.

[^3]:    *The greater part of this quadrangle lies in Illinois and. Iowa.

[^4]:    For an additional level line along Atchison, Topeka \& Santa Fe Ry., refer to United States Coast and Geodetic Survey second-order line, Hurdland, Mo., to Fort Madison, Iowa.

[^5]:    *The greater part of this quadrangle lies in Iowa.

[^6]:    * A small part of this quadrangle lies in Iowa.
    ** Accuracy doubtful because of insufficient connections.

[^7]:    T. 66 N., R. 7 W., in $S 1 / 2 \mathrm{sec}$. 34, 110 ft . S. and 125 ft . E. from junction of lane N., 700 ft . N. of T-rd. E., 85 ft . E. of rd., in foundation of old barn, in top of W. concrete post; iron strip

    Feet
    Revere, 3 mi . SE. of, near W. sixteenth cor. between secs. 2 and 35, Tps. 65 and $66 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W} ., 52 \mathrm{ft}$. W. of rd. fork E., 2 ft . S. of fence, in concrete post; standard tablet stamped "T T 97 C 1936"
    Tps. 65 and 66 N., R. 7 W., on line between secs. 2 and 35, on top of $E$. end of $S$. head wall of concrete culvert; chiseled square
    Tps. 65 and $66 \mathrm{~N} ., \mathrm{R} .7 \mathrm{~W}$. , cor. secs. $1,2,35$, and $36,25 \mathrm{ft}$. N. and 20 ft . W. from T-rd. N., in root on N. side of 14 -in. wild-cherry tree; copper nail and washer
    Tps. 65 and 66 N., R. 7 W., on line between secs. .1 and 36 , in barmyard of R. D. Eogegus, 75 ft . S. of rd., on NE. corner of concrete windmill platform; chiseled. square
    698.19
    696.509
    670.02
    . 65 N., R. 7 W., near E. sixteenth cor. sec. 1 , $35 \mathrm{ft} . \mathrm{S}$. and 25 ft . E. from T-rd. E., in fence corner, in root on N. side of $8-1 n$. cherry tree; copper nail and washer
    Junction of lane N., $20 \mathrm{ft} . \mathrm{S}$. of, in base of corner fence post; spike
    St. Francisville, 2 ms . NW. of, in NE $1 / 4 \mathrm{sec} .6$, T. 65 N., R. 6 W., 70 ft . S. of T-rd. N., in concrete post; standard tablet stamped " T T 98 C 1936"
    Top of hill, 20 ft . S. of rd., in fence line at fleld gate, in root on $S$. side of l6-in. locust tree; crossed nails
    St. Francisville, at N. edge of, about $1,000 \mathrm{ft}$. S. of bridge over Des Moines River, 25 ft . N. and 40 ft . W. from County Route B at rd. W., 15 ft . SW. of fililing sta., in root on N . side of $10-1 \mathrm{n}$. walnut tree; copper nall and washer
    688.59
    689.98
    690.00
    691.11
    669.217
    650.17

    St. Francisville, 38 ft . N. and 48 ft . W. from NW. corner of schoolyard, 42 ft . S. of street, 2 ft . E. of fence corner, in concrete post; standard tablet stamped "T T 99 C 1936"
    519.94
    543.312

    St. Francisville, about 0.8 ml . E. of, near center sec. 9, T. 65 N., R. $6 \mathrm{~W} ., 40 \mathrm{ft}$. S. and ilf ft. W. from T-rd. E., in root on N . side of 30-in. locust tree; copper nail and washer
    538.44

    St. Francisville, $2 \mathrm{mi} . \mathrm{SE}$. of, in $\mathrm{N} 1 / 2 \mathrm{sec} .15, \mathrm{~T} .65 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W} .$, 540 ft . S. of rd. corner from S. -W. at levee, 400 ft . N. of power line, near creek, 40 ft . E. of rd., in root on E. side of $20-1 \mathrm{n}$. elm tree; copper nail and washer
    St. Francisville, 3 ml . SE. of, near quarter cor. between secs. 15 and 22, T. 65 N., R. 6 W., 2 ft . N. and 28 ft . E. from rd. at fences E. W., 2 f.t. N. and 8 ft . E. from fence corner, in concrete post; standard tablet stamped "T T 100 C 1936"
    503.20

    65 N stamped. in $\mathrm{SW} 1 / 4$ forks, in root on w. side of $40-1 n$. ash tree; copper nail and washer
    T. 65 N., R. 6 W. , in $\mathrm{N} 1 / 2 \mathrm{sec} .27$, 55 ft . S . and 15 ft . W. from rd. forks, in root on N. side of large, box-elder tree; copper nail and washer
    Rd. forks, 25 ft . W. of, on concrete base of corner fence post; chiseled square
    500.21

    > 6. FROM CANTON QUADRANGLE, NEAR ST. PATRICK, EAST INTO KEOKUK QUADRANGLE AT SEC. $12, \mathrm{~T} .63 \mathrm{~N} ., \mathrm{R} .6 \mathrm{~W}$. (by F. Y. Brown in 1937 )
    > (Continued from Canton quadrangle; see line 8.)

    St. Patrick, 1 mi . S . of, along County Route T , in $\mathrm{Sw} 1 / 4 \mathrm{sec} .13$, T. 63 N., R. 7 W., 160 ft . W. of rd. W., 15 ft . N. of rd., in root on N. side of 8-in. cedar tree; iron nail and washer
    (For balance in Canton quadrangle; see line 8.)
    Chicago, Burlington \& Quincy R.R. at rd. crossing, $10 \mathrm{ft} . \mathrm{N}$. and 60 ft . E. from, on top of U.S.C.E. gaging sta. 3; iron pipe
    484.575
    7. FROM WYACONDA QUADRANGLE AT SEC. 23, T. 64 N., R. 8 W., EAST THROUGH ANTIOCH TO POINT ABOUT 2.9 MILES SOUTH OF WAYLAND (by F. Y. Brown in 1937)
    (Continued from Wyaconda quadrangle; see line 6.)
    T. 64 N., R. 8 W., near cor. secs. $23,24,25$, and $26,450 \mathrm{ft}$. W. of T-rd. W., 15 ft . H. of rd., 12 ft . E. of private rd. N., in fence line, in concrete post; standard tablet stamped "16 B 1936"
    605.511

    Reference mark l, 90 ft . N. and 150 ft . E. from rd. corner S.-E., in root on S. side of $18-1 \mathrm{n}$. elm tree; crossed nails
    Reference mark $2,55 \mathrm{ft}$. NE. of reference mark 1 , in root on $W$. side of 36-1n. elm tree; crossed nails
    T. 64 N., R. 8 W., in NW. cor. sec. 25, on S. pier at W. end of bridge over Wyaconda River, on top of bolt head; chiseled square
    588.28
    T. 64 N., Rs. 7 and 8 W., near cor. secs. $19,24,25$, and 30 , $140 \mathrm{ft} . \mathrm{W}$. of County Route $T$ at rd. W., 22 ft . N. of rd., in root on N. side of twin 8-in. elm tree; copper nail and washar
    T. 64 N., R. 7 W., on line between secs. 20 and $29,140 \mathrm{ft}$. S. and 10 ft . W. from T-rd. N., in root on N. side of 12-in. wild-cherry tree; copper nafl and washer
    T. 64 N., R. 7 W., cor. secs. $20,21,28$, and $29,15 \mathrm{ft}$. S. and 130 ft . W. from T-rd. N., in root on S. side of $14-1 n$. Wild-cherry tree; copper nail and washer
    T. 64 N., R. 7 W., on line between secs. 21 and 28 , on left side of entrance gate to barm on farm of Louis Stutz, 20 ft . S. of rd., in root on N. side of $8-1 n$. hedge tree; crossed nails

[^8]:    For an additional level line along Atchison, Topeka \& Santa Fe Ry., refer to United States Coast and Geodetic Survey second-order ilne, Hurdiand, Mo. to Fort Madison, Iowa.

[^9]:    *A narrow strip along the eastern border of this quadrangle lies in Illinois.
    **Accuracy doubtful because of insufficient connections.

[^10]:    For additional level lines along Mississippi River and Quincy, Omaha \& Kansas City R.R., refer to United States Coast and Geodetic Survey first-order lines, Savanna to Grafton, Ill. and Quincy, Ill. to Milan, Mo.

[^11]:    *Accuracy doubtful because of insufficient connections.

[^12]:    ${ }^{\text {maccuracy doubtful because of insufficient connections. }}$

[^13]:    *Accuracy doubtful because of insufficient connections.

[^14]:    *accuracy doubtful because of insufficient connections.

[^15]:    *The greater part of this quadrangle lies in Iowa.

[^16]:    *Accuracy doubtful because of insufficient connections.

[^17]:    \#Accuracy doubtful because of insufficient connections.

[^18]:    *The greater part of this quadrangle lies in Iowa.

[^19]:    *The greater part of this quadrangle lies in Iowa.

[^20]:    For additional level lines along Quincy, Omaha \& Kansas City R.R. and Wabash Ry., refer to United States Coast and Geodetic Survey first-order line, Quincy, Ill. to Mlan, Mo.; and second-order line, Moulton, Iowa to Kirksville, Mo.

[^21]:    For an additional level line along Chicago, Burlington \& Quincy R.R., refer to United States Coast and Geodetic Survey second-order line, Laclede to Macon.

[^22]:    *The greater part of this quadrangle lies in Iowa.

[^23]:    T. 66 N., R. 19 W., quarter cor. between secs. 1 and 2, 12 ft . S. and 20 ft . W. from T-rd. E., in concrete post; standard tablet stamped "6 S 1936"
    T. 66 N., R. 19 W., N. cor. secs. 1 and 2, 20 ft . S. and 25 ft . E. from T-rd. S., in root on SE. side of large elm tree; copper nail and washer
    T. 67 N., R. 19 W. , in $\mathrm{S} 1 / 2 \mathrm{sec}$. 36 , on SW. wing wall of briage over creek; chiseled square
    T. 67 N., R. 19 W., N. sixteenth cor. sec. $36,15 \mathrm{ft} . \mathrm{N}$. and 15 ft . E. from T-rd. E., on NW. end of concrete head wall of culvert; chiseled square
    T. 67 N., R. 19 W., on N. Ine sec. 25 , on Iowa-Mo. State line, 35 ft . N. and 105 ft. E. from T-rd. S., in root on S. side of 18-1n. maple tree; copper nail and washer

[^24]:    * The greater part of this quadrangle lies in Iowa.
    * Line 3 of Allerton quadrangle includes a portion of this line (see Bull. 898-D, pp. 451-452).

[^25]:    *Part of this quadrangle lies in Illinois.

[^26]:    *The greater part of this quadrangle lies in Illinois.

[^27]:    For an additional level line along Mississippi River, refer to United States Coast and Geodetic Survey first-order line,

