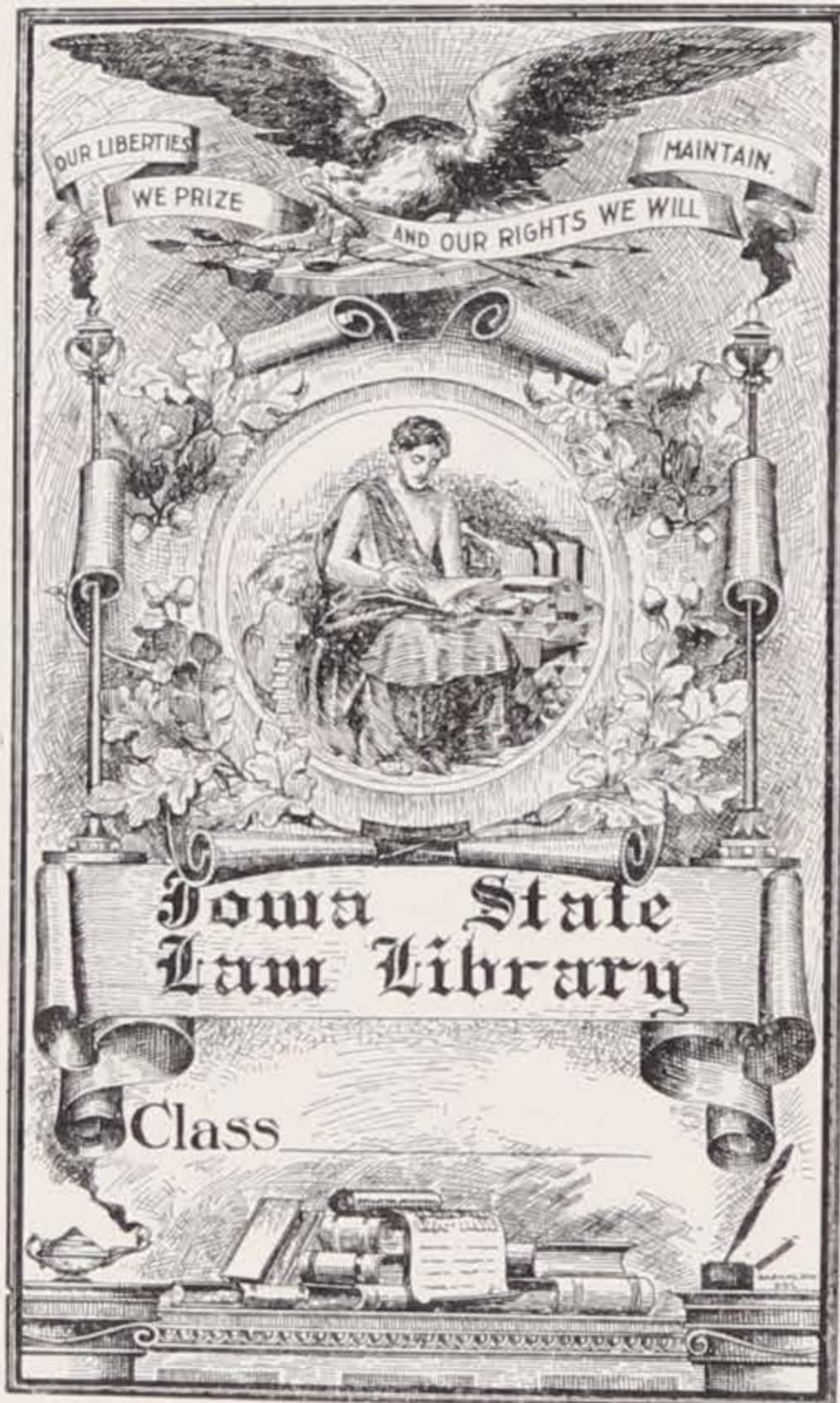


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**SPENCER LOOP  
SUPPLEMENTARY ADJUSTMENT**

**SECOND-ORDER LEVELS  
IOWA GEODETIC SURVEY**



I O W A  
LIBRARY  
PROJECT  
Des Moines, Iowa,  
WORK PROJECTS  
ADMINISTRATION

Work Projects Administration

IOWA GEODETIC SURVEY

WPA Project No. 665-72-3-79

Des Moines, Iowa

1940

This report has been prepared and published by the Iowa Geodetic Survey, as a report on Work Projects Administration Official Project No. 665-72-3-79, a state-wide project of the Work Projects Administration, under the sponsorship of the United States Coast and Geodetic Survey and the Engineering Experiment Station of Iowa State College.

All computations and results prepared by WPA Project #4485, were checked and approved for publication by the United States Coast and Geodetic Survey.

IOWA GEODETIC SURVEY

State Director . . . . .	John S. Dodds
Asst. State Director . . . . .	Gerold F. Tigges
Chief of Computations . . . . .	Richard W. Wolff

Address all communications to:

Gerold F. Tigges  
Asst. State Director  
Iowa Geodetic Survey  
219 Old Federal Building  
Des Moines, Iowa.

.....

THE SPENCER, IOWA  
SUPPLEMENTARY ADJUSTMENT

SECOND-ORDER LEVELS

IOWA GEODETIC SURVEY

W. P. A. in IOWA

.....

Leveling in Iowa

THE SPENCER, IOWA LOOP

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This publication contains the descriptions and elevations of bench marks in the following counties:

<u>IOWA:</u>		<u>MINNESOTA:</u>	<u>SOUTH DAKOTA:</u>
Buena Vista	O'Brien	Faribault	Lincoln
Calhoun	Osceola	Jackson	Minnehaha
Cherokee	Palo Alto	Martin	Moody
Clay	Plymouth	Murray	Union
Dickinson	Pocahontas	Nobles	
Emmet	Sac	Pipestone	
Humboldt	Sioux	Rock	
Ida	Webster		
Kossuth	Woodbury		
Lyon			

The elevations have been determined by First- or Second-order Leveling by the U. S. Coast & Geodetic Survey. The elevations on Line 4 were determined by First-order Leveling run by the Corps of Engineers, U. S. Army. All of the necessary re-leveling in the Spencer Loop was run by the Iowa Geodetic Survey under the direction of the U. S. Coast & Geodetic Survey.

The several lines are listed below, together with the years in which the original work was done.

#### First-order Lines

Line 4 (Part)	St. Joseph, Mo. to Sioux City, Iowa . . . . .	
Line 4A	Sioux Falls, S.D. to Sioux City, Iowa . . . . .	
Line 144 (Part)	Minneapolis, Minn. to Glasgow, Mo. . . . .	1930
Line 360 (Part)	Sioux Falls Jct., S.D. to LaCrosse, Wis. . . . .	1931
Line 928	Fort Dodge, Iowa to Sergeant Bluff, Iowa . . . . .	1933

#### Second-order Lines

Line 2809	Correctionville to Sheldon, Iowa . . . . .	1934
Line 2810	Canton, S.D. to Spencer, Iowa . . . . .	1934
Line 2812	Org, Minn. to Sioux Falls, S.D. . . . .	1934
Line 2826	Algona to Sibley, Iowa . . . . .	1934
Line 3200	Luverne to Pipestone, Minn. . . . .	1934
Line 3208	Sherburn, Minn. to Rockwell City, Iowa . . . . .	1934
Line 3214	Marathon to Waverly, Iowa . . . . .	1934
Line 3216	Fonda to LeMars, Iowa . . . . .	1934
Line 3233	Sioux City, Iowa to Miloma, Minn. . . . .	1934

At the beginning of each line will be found a short description of the route followed, the Chief of Party, and the year in which the work was performed.

## INSTRUMENTS AND FIELD METHODS

The First- and Second-order Leveling done in Iowa, by all organizations, conforms with the specifications and instructions in the U.S. Coast & Geodetic Survey Special Publication #140, "A Manual of First-order Leveling". All the instrumental equipment used in the Iowa Leveling is described in the U. S. Coast & Geodetic Special Publication #129, "Geodetic Level and Rod".

## THE 1929 GENERAL ADJUSTMENT

From time to time adjustments of the First-order Level Net of the United States have been made for the purpose of obtaining elevations which were, from a theoretical standpoint, nearer the exact truth than those derived from unadjusted observations, or the arbitrary fitting of new lines to old, adjusted values of junction points. In 1898 the first adjustment of the net was made, and in 1903 there was another general adjustment. In 1907 and 1912 adjustments of the First-order level net were made. These last two adjustments cannot be considered as strictly general adjustments for the reason that portions of the net, as adjusted in 1903, were held fixed in the adjustments of 1907 and 1912.

By 1929, so much additional leveling had been run throughout the United States, a new general adjustment was needed. It was believed the net would be considerably strengthened by the introduction of the First-order Leveling of Canada. Upon request, the Geodetic Survey of Canada kindly placed at the disposal of this Bureau, the results of some 20,000 miles of First-order Leveling in the Dominion of Canada. This leveling, combined with about 40,000 miles of leveling in the United States, was all adjusted in a single Least Squares Adjustment, in which mean sea level was held at zero, as observed at 26 tidal stations, 21 in the United States and 5 in Canada. The elevations resulting from the general adjustment are the best elevations obtainable from data available at the time of the adjustment.

## ORTHOMETRIC CORRECTION

Owing to the fact that the earth is an oblate spheroid, level surfaces at different elevations are not parallel but tend to converge slightly toward the poles of the earth. This necessitates the application of an orthometric correction to the observed differences of elevations, in order that the resulting elevations of the bench marks may represent their true heights above mean sea level. The orthometric correction, and the methods used in computing it, are discussed in detail in Special Publication #140, "A Manual of First-order Leveling".

The Orthometric correction reaches a maximum on north-and-south lines run at high elevations, and it is zero on east-and-west lines.

The orthometric correction has been applied to the leveling included in this publication. In order that persons using this publication may form an idea as to the order of size of the orthometric correction, the following example is cited:

The difference in elevation between two bench marks, at about the latitude of Sheldon, Iowa, in such locations that the geographic latitudes would differ by two minutes (approximately 12,000 feet), and the average elevation of the line of levels connecting them would be 1360 feet, would require an orthometric correction of 0.0705 foot. This correction varies directly with the average elevation, and with the difference in latitude between the marks, and depends slightly upon the latitude. Tables for use in computing the orthometric correction are given in the Special Publication No. 140.

#### COMPUTATIONS AND ADJUSTMENTS

The entire First-order Level Net covering the State of Iowa was included in the 1929 General Adjustment, as computed by the U.S. Coast & Geodetic Survey. (See Figure 1)

This report covers the Spencer Loop (See Figure 2) and has been computed and adjusted by the Iowa Geodetic Survey, in accordance with the specifications and instructions set up in the U. S. Coast & Geodetic Survey, Special Publication #140. The elevations of the bench marks on the First-order Lines were fixed by the 1929 General Adjustment; the elevations of the bench marks of the Second-order Lines within the Spencer Loop were computed by Least Square Adjustment. The computations and final elevations have been checked and approved by the Washington Office of the U.S. Coast & Geodetic Survey.

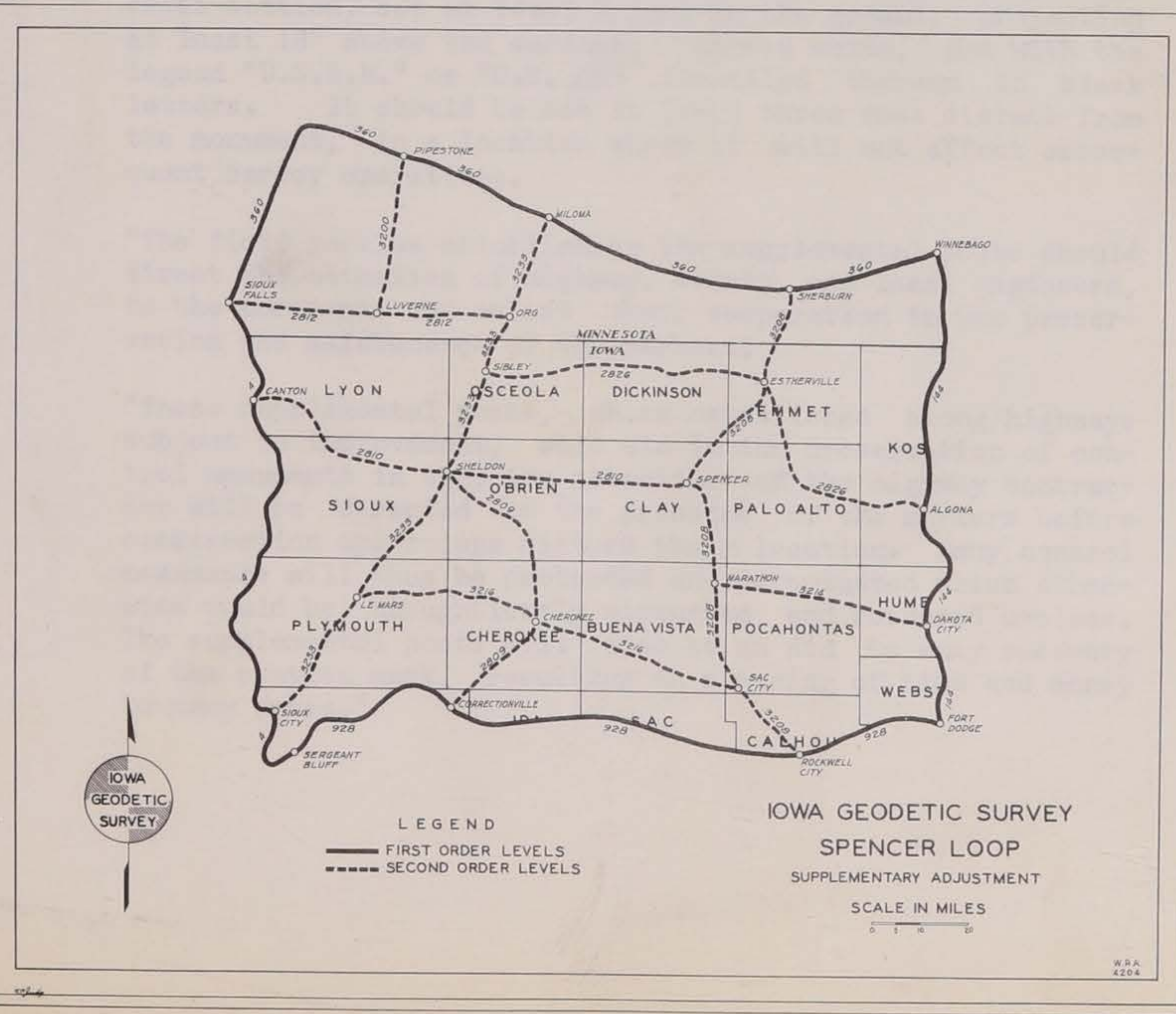
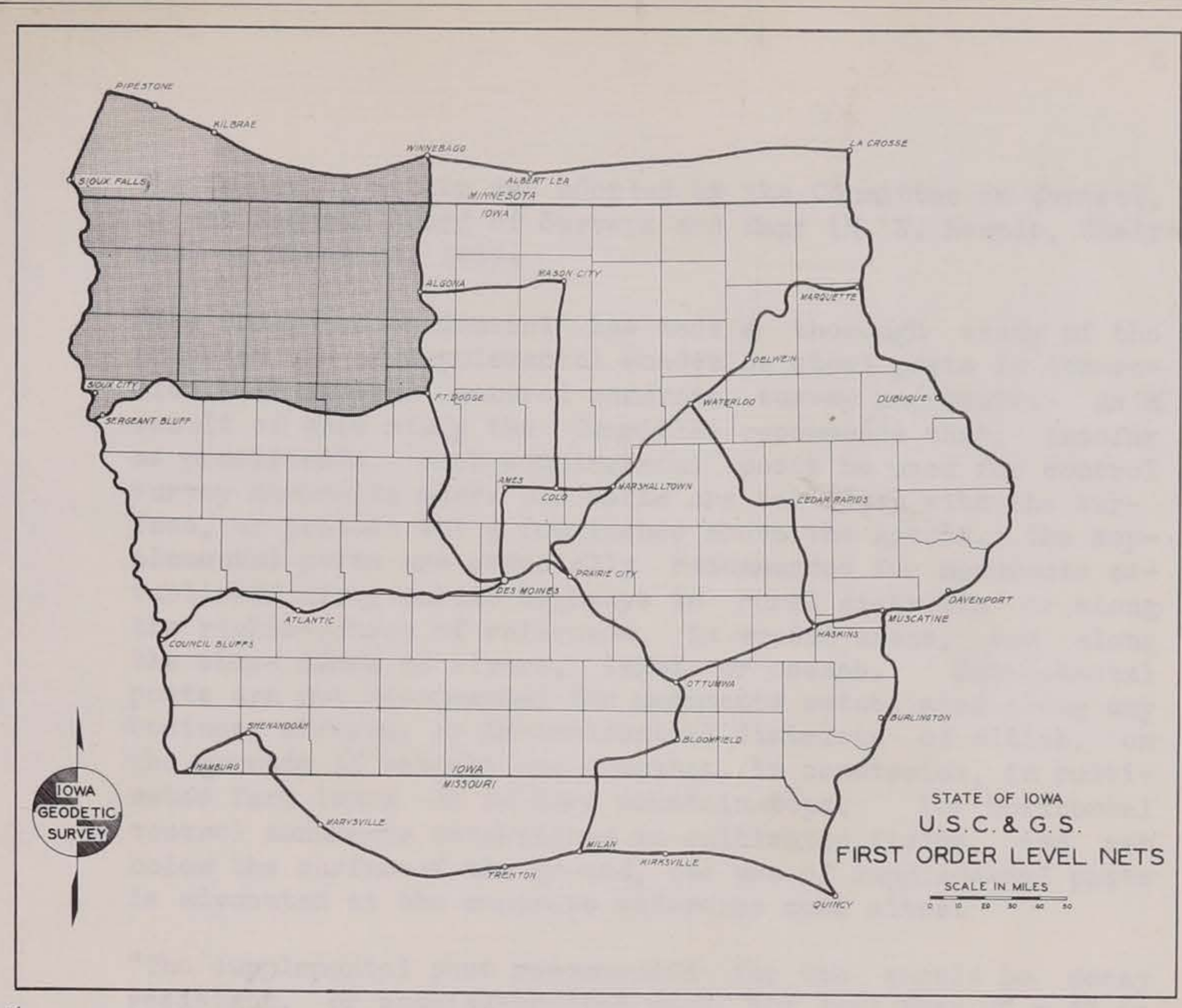
#### RAIL ELEVATIONS

Interspersed throughout the descriptions and elevations of the bench marks will be found the descriptions and elevations, in tenths of feet, of tops of rails opposite railroad stations, or at railroad and highway crossings. These elevations are approximate only, since the track does not accurately maintain a constant elevation for any great length of time.

#### COOPERATION IN THE PRESERVATION OF BENCH MARKS


A bench mark is useful only as long as it is recoverable. When changes occur, as they often do, in the surrounding natural and cultural features with relation to which the mark is described, it becomes increasingly difficult to find the mark by means of the published description. Engineers, and others, who have occasion to visit any bench marks established by this Bureau or other Government organizations, will be doing a public service if they will report the condition of the marks and make suggestions as to needed changes in the descriptions.





The following motion was adopted by the Committee on Control, of the Federal Board of Surveys and Maps (H. W. Hemple, Chairman) on March 14, 1939:

"The Committee on Control has made a thorough study of the proposed use of supplemental wooden or steel posts in connection with federal control concrete survey monuments. As a result of this study the Committee recommends that, insofar as practicable, such supplemental posts be used for control survey monuments where the marks are set flush with the surface, or project but a few inches above the ground. The supplemental posts are especially recommended for monuments established along public highways in rural districts or along the rights-of-way of railroads, in wooded areas, and along the shore lines of rivers, lakes or oceans. Supplemental posts are not recommended for monuments established along any business streets, or in residential districts of cities, on the grounds of schools and churches, in cemeteries, in cultivated farm lands or on bare mountain tops. For horizontal control monuments established in cultivated fields, and set below the surface of the ground, the use of supplemental posts is advocated at the concrete reference mark sites.

"The supplemental post recommended for use should be decay resistant, or special-treated wood, not less than 4" x 4" in cross-section, set at least 3 feet in the ground, projecting at least 18" above the surface, painted white, and with the legend "U.S.B.M." or "U.S.  " stenciled thereon in black letters. It should be set at least three feet distant from the monument, in a location where it will not affect subsequent survey operations.

"The field parties establishing the supplemental posts should direct the attention of highway, county, and local engineers, to the monuments and enlist their cooperation in the preservation and maintenance of the markers.

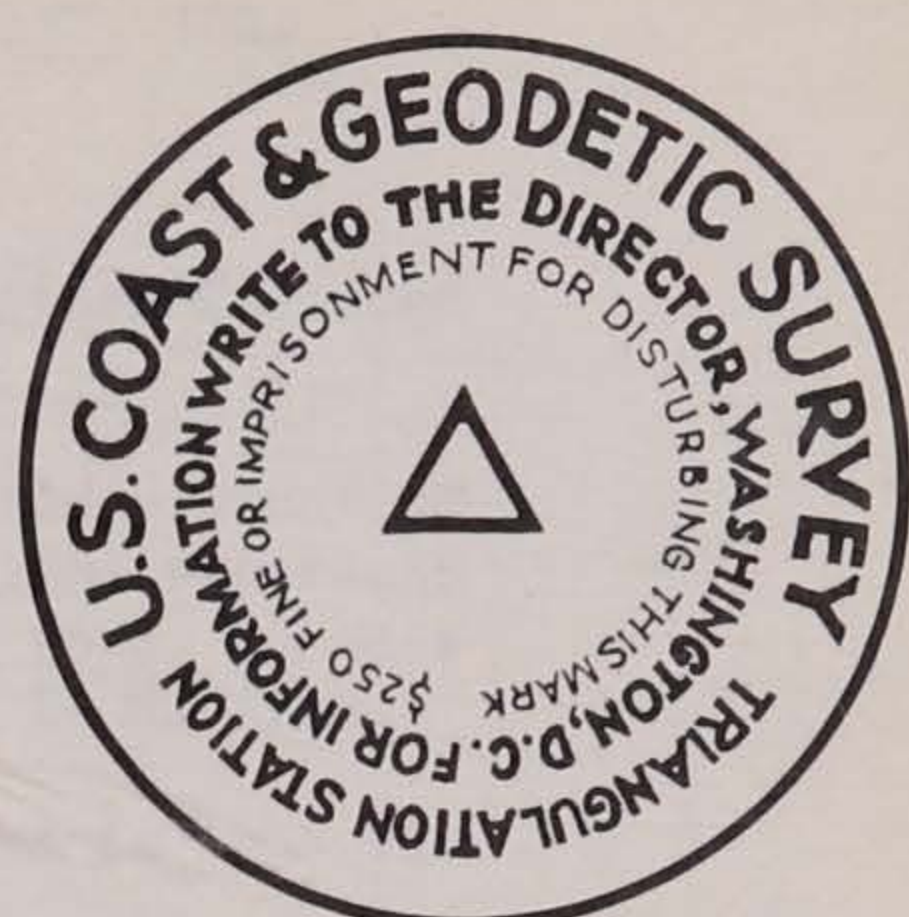
"These supplemental posts, where established along highways subject to improvement, will aid in the preservation of control monuments in that the attention of the highway contractor will be directed to the presence of the markers before construction operations disturb their location. Many control monuments will thus be protected and perpetuated which otherwise would be thoughtlessly disturbed and rendered useless. The supplemental posts will also be an aid to easy recovery of the station mark, resulting in a saving of time and money to many users."



A



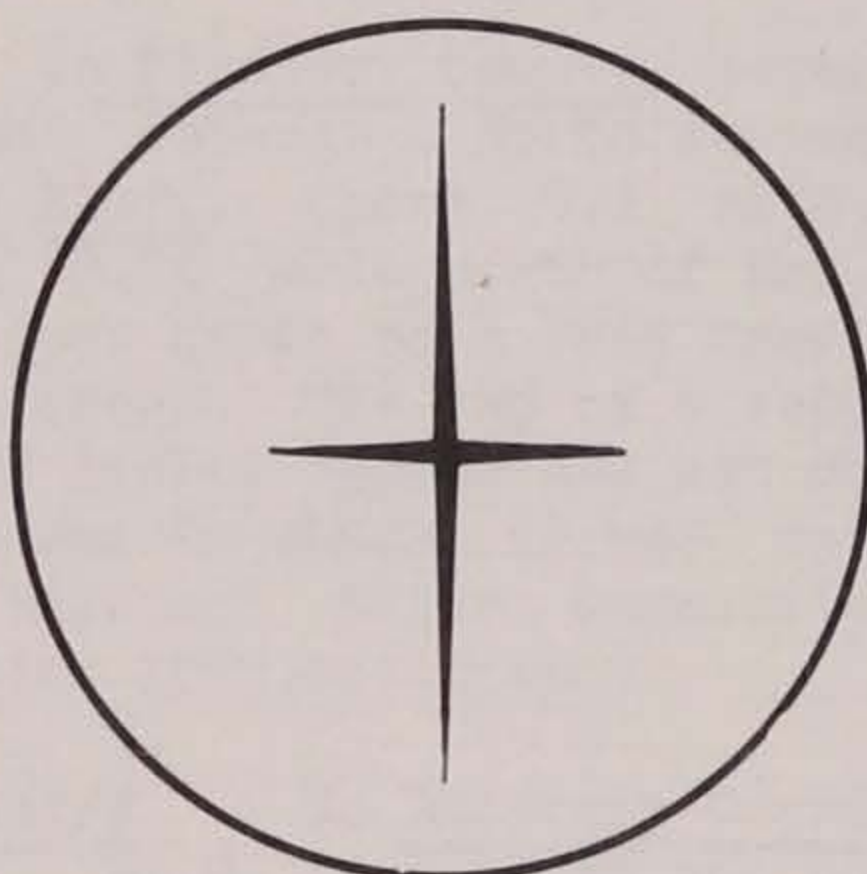
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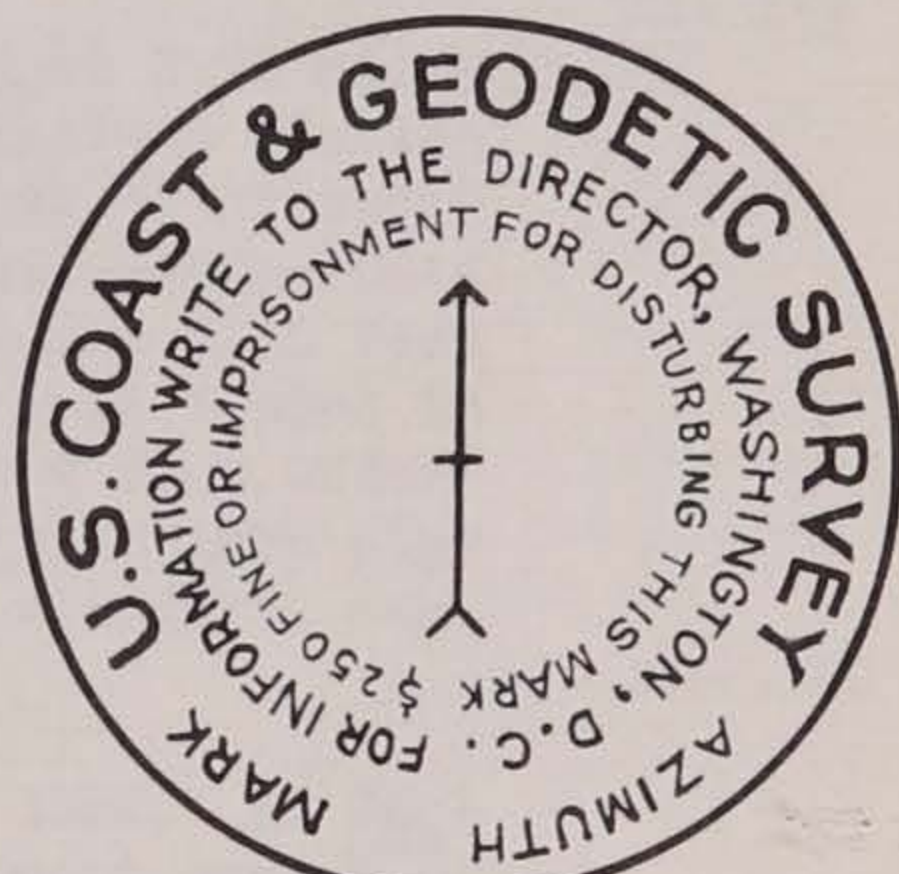
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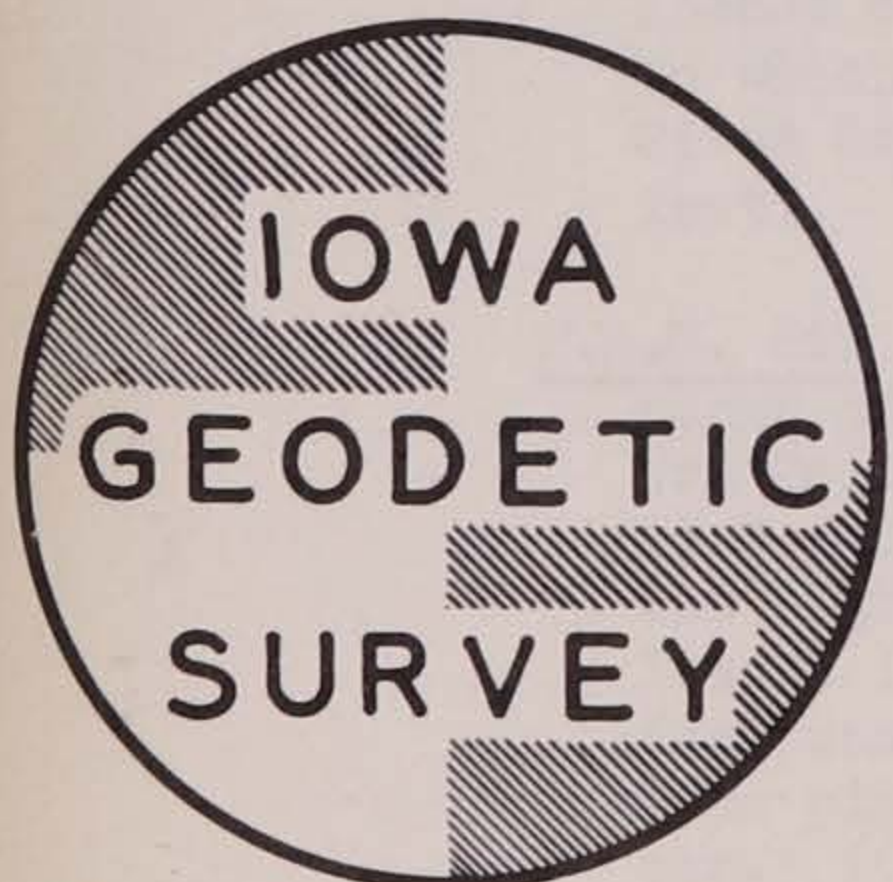
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E



F



G

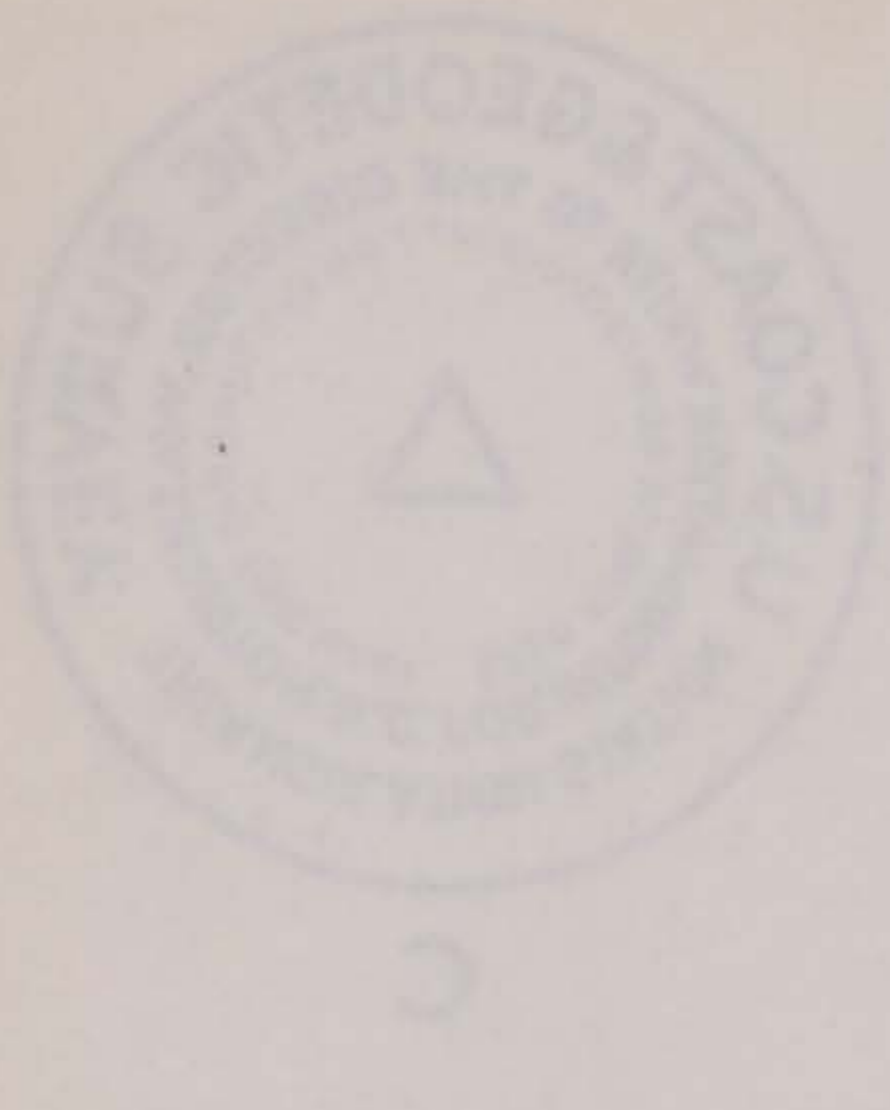
NOTE—

- A-U.S.C. & G.S. standard Reference Mark disc.
- B-U.S.C. & G.S. standard B.M. disc. (Used by precise level parties.)
- C-U.S.C. & G.S. standard Triangulation station disc.
- D-U.S.C. & G.S. and I.G.S. standard Traverse station disc.
- E-I.G.S. standard corner stone disc.
- F-U.S.C. & G.S. standard Azimuth mark disc.
- G-Standard symbol for I.G.S.

# STANDARD MARKERS

# STANDARD MARKERS

NOTE—  
 All standard markers should be  
 set in a permanent position and  
 should be clearly marked with  
 the name of the station and  
 the date of its establishment.  
 The standard marker should be  
 set in a permanent position and  
 should be clearly marked with  
 the name of the station and  
 the date of its establishment.



3 7

LINE 4. ST. JOSEPH, MO., to SIOUX CITY, IOWA  
(First-order Leveling)

This Line follows the Chicago & North Western Railroad from Sargent Bluff to Sioux City, Iowa.

Elevations are based on the 1929 General Adjustment of the First-order Level Net. These elevations supersede those previously published. The field work on this Line was done by the Corps of Engineers, U. S. Army.

For descriptions of additional bench marks in this vicinity, see page 61.

-----

- |  | El. Ft.  |
|--|----------|
| <p><u>P.B.M. 390</u> In Woodbury County, Iowa, about 2.75 miles south of the Chicago &amp; North Western Railway station at Sargents Bluff, about 0.4 mile south of milepost #66, about 0.25 mile north of Mr. Louis Godferson's house, 656 feet north of a road crossing and 46.0 feet east of the track. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1089.017 feet.)</p> | 1085.001 |
| <p><u>P.B.M. 391 - 142/3</u> In Woodbury County, Iowa, at Sargents Bluff, 52.0 feet from the northwest corner of Tenth and Walnut Streets, in lot 1, block 2, and 10.0 feet from the southwest corner of Mr. E. T. Berry's house. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1094.014 feet).</p>  | 1090.021 |
| <p><u>P.B.M. 392</u> In Woodbury County, Iowa, about 3.0 miles north of Sargents Bluff, on the Chicago &amp; North Western Railway, about 0.3 mile south of a road crossing, 47.0 feet east of the track and about 2.0 feet west of the right-of-way fence. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1096.783 feet.)</p>  | 1092.747 |
| <p><u>P.B.M. 393</u> In Woodbury County, Iowa, at Sioux City, 558 feet south of the Chicago &amp; North Western Railway bridge over the Missouri River, 148 feet north of railroad bridge No. 60 and 20.0 feet east of the track.</p>  |          |

ST. JOSEPH, MO., to SIOUX CITY, IOWA

El. Ft.

The top of a copper bolt leaded in a stone, 18 inches square and set about four feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1101.769 feet).

1097.741

P.B.M. 394 In Woodbury County, Iowa, at Sioux City, in the northwest corner of the east pier of the bridge over the Missouri River, in the seventeenth course of masonry below the coping course and 2.0 feet above the ground. The center of a copper bolt leaded horizontally into the stone.

1105.490

P.B.M. 395 - Gauge B.M. In Woodbury County, Iowa, at Sioux City; 103 feet west of the west side of the east or shore pier of the bridge over the Missouri River; almost vertically under the north truss of the east span and 69.0 feet west of the Chicago & North Western Railway tracks. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1093.879 feet).

1089.853

P.B.M. 396 - 143/3 In Woodbury County, Iowa; at Sioux City, in the southwest corner of the courthouse yard, 135 feet from the southeast corner of the courthouse and 72.0 feet from the southwest corner. The top of a copper bolt leaded in a stone, 18 inches square and set about four feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1110.004 feet). (Destroyed)

1105.985

T.B.M. 966 In Woodbury County, Iowa, at Sioux City, about 39.0 feet north of the northeast corner of Fifth and Pierce streets and in the sidewalk stone. The top of a ring bolt set vertically in the stone. (Destroyed)

1108.279

P.B.M. 397 In Woodbury County, Iowa, about 3.5 miles above Sioux City; about 0.25 miles north of the electric railway power house at Riverside Park, at the foot of a bluff, 121 feet north of the north headblock and 52.0 feet east of the Chicago, Milwaukee, St. Paul & Pacific Railroad tracks. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1104.079 feet).

1100.063

## LEVELING IN IOWA

- El. Ft.
- P. B. M. 398     In Woodbury County, Iowa, about 6.0 miles above Sioux City, 515 feet south of the south end of the railroad bridge over the Big Sioux River and 3.0 feet east of the west right-of-way fence. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1106.592 feet.)     1102.583
- P. B. M. 399     In Woodbury County, Iowa, about 6.0 miles above Sioux City, 190 feet south of the south end of the railroad bridge over the Big Sioux River, 50.0 feet west of the Chicago, Milwaukee, St. Paul & Pacific Railroad track and about 5.0 feet west of the right-of-way fence, on land belonging to Mrs. Rose Pacquette. The top of a copper bolt leaded in a stone, 18 inches square and set about 4 feet underground, access to which is had through an iron pipe bearing a Missouri River Commission standard cap. (Cap elevation 1102.137 feet.)     1098.134

For descriptions of additional bench marks in this vicinity, see pages 10, 154 and 155.

LINE 4A SIOUX FALLS, SOUTH DAKOTA to SIOUX CITY, IOWA  
(First-order Leveling)

This Line runs from Sioux Falls, South Dakota to Sioux City, Iowa. (See "Precise Leveling in the United States 1903-1907" pages 164-167).

This Line was releveled in 1934 and 1935. Elevations based on the Sea-Level Datum of 1929. These elevations SUPERSEDE those previously published.

For descriptions of additional bench marks in this vicinity, see page 92.

	El. Ft.
<u>L-3</u> In <u>Minnehaha County</u> , South Dakota, at <u>Sioux Falls</u> ; in the eastern entrance of the Cataract Hotel, the center of the most southeasterly of the 3-inch round dead-lights; 3.1 feet north of the brick wall, 1.6 feet west of the front edge of the top step, 3.9 feet above the sidewalk.	1405.348
<u>CITY #3</u> In <u>Minnehaha County</u> , South Dakota, at <u>Sioux Falls</u> ; the center of the first letter N in the word Union, east in the sill of the northeast doorway of the Masonic Temple.	1411.257
<u>U.S.G.S. Astronomic Station</u> In <u>Minnehaha County</u> , South Dakota, at <u>Sioux Falls</u> ; in the east lawn of the Federal Building; on a brick pier, 18 by 18 by 36 inches, with a sandstone cap, lettered 'Astronomical Pier U. S. Geological Survey'; a point 0.1 foot northeast of the center of the cross.	1424.567
<u>K-3</u> In <u>Minnehaha County</u> , South Dakota, at <u>Sioux Falls</u> , on the north pier (granite) of the Chicago, St. Paul, Minneapolis & Omaha Railroad bridge over the Big Sioux River; 0.4 foot east of the west edge of the capstone; 0.3 foot south of the north edge; 3.9 feet below the rails; 14.1 feet above the water.	1400.814
<u>1484 YANKTON</u> In <u>Lincoln County</u> , South Dakota, 4.6 miles north of <u>Harrisburg</u> , in the northwest corner of Section 7, T-100-N, R-49-W.	1483.219
<u>M-3</u> In <u>Lincoln County</u> , South Dakota, 4.7 miles north of <u>Harrisburg</u> ; 108.3 feet south of the road on the north line of Section 13, T-100-N, R-50-W; 49.2 feet east of the railway; 3.3 feet below the rail.	1477.963



- El. Ft.
- N-3 In Lincoln County, South Dakota, 3.1 miles north of Harrisburg, 36.1 feet north of the road on the south line of Section 13, T-100-N, R-50-W; 62.3 feet west of the railway; 3.3 feet below the rails. 1448.626
- O-3 In Lincoln County, South Dakota, at Harrisburg, 98.4 feet east of the railway; 26.2 feet north of the road on the south line of T-100-N; on the south line of a cultivated field, owned by Ole Sorenson; 49.2 feet east of the corner; 0.7 foot above the rails. 1428.344
- 1419 YANKTON In Lincoln County, South Dakota, 0.5 mile east of Harrisburg; in the northwest corner of Section 6, T-99-N, R-49-W. 1418.403
- P-3 In Lincoln County, South Dakota, 1.0 mile south of Harrisburg; 36.1 feet south of the road on the north line of Section 12, T-99-N, R-50-W; 52.5 feet west of the railway, in the northeast corner of a pasture owned by W. W. Wasem. 1385.811
- Q-3 In Lincoln County, South Dakota, 3.1 miles southeast of Harrisburg; 55.8 feet northeast of the track; 39.4 feet west of the road on the east line of Section 18, T-99-N, R-49-W; in the southeast corner of a pasture owned by F. P. Robinson; 2.0 feet below the rails. 1391.303
- R-3 In Lincoln County, South Dakota, 2.5 miles north of Canton; 29.5 feet south of the road on the north line of Section 11, T-98-N, R-49-W; 42.7 feet west of the railway; 9.8 feet south and 3.3 feet east of adjacent fences; 2.0 feet below the rails. 1339.679
- S-3 In Lincoln County, South Dakota, at Canton, at the south entrance to the County Court House, on the west wall of the steps, at the west edge of a red sandstone block, and 1.3 feet north of the south edge, 3.3 feet above ground, and 0.9 foot above the third step. 1272.862
- T-3 In Lincoln County, South Dakota, at Canton, on the jasper sill in the northwest doorway of the building occupied by the Bank of Lincoln County; 0.6 foot south of the north side of the archway; 0.9 foot east of the front edge; 0.6 foot above the sidewalk. 1267.845

For descriptions of additional bench marks in this vicinity, see page 71.

- A. In Lyon County, Iowa, at Beloit, 1377.9 feet north

El. Ft.

of the railway station; 42.7 feet west of the track; 13.1 feet south of a private road to the Orphans' Asylum; 3.3 feet east, and 6.6 feet south of the northeast corner of a garden plot owned by J. Widdy; 3.3 feet below the rails.

1245.856

B. In Lyon County, Iowa, at Beloit, 557.7 feet south of the railway station; 101.7 feet east of the tracks; 45.9 feet south of the roadway, on a jasper rock, set in a garden plot; 6.6 feet south and 3.3 feet east of the northwest corner; 1.3 feet below the rails.

1246.589

C. In Lyon County, Iowa, 1.9 miles south of Beloit, 42.7 feet west of the railway tracks; 13.1 feet north of a private road; 360.9 feet north of a trestle over a ravine; 3.3 feet east of the fence, and 1.0 foot below the rails.

1236.116

D. In Sioux County, Iowa, 3.1 miles northwest of Elm Springs; 42.7 feet west of the railway; 26.2 feet north of the road; on the south line of Section 5, T-97-N, R-48-W; 6.6 feet north and 3.3 feet east of the fences, 0.7 foot below the rails.

1279.791

U-3 In Lincoln County, South Dakota, at Fairview, on the jasper foundations at the southeast corner of the most southerly grain elevator; 45.9 feet southwest of the southwest corner of the railway station; 0.3 foot above the ground; 0.1 foot west and north of the corner of the stone.

1213.836

V-3 In Lincoln County, South Dakota, 0.5 mile south of Fairview; 45.9 feet east of the railway; 13.1 feet north of the road; 4.6 feet below the rails, and 3.3 feet west of the fence.

1208.006

W-3 In Lincoln County, South Dakota, 0.9 mile south of Fairview; 39.4 feet west of the main railway track and 108.3 feet east of the siding; 9.8 feet north of the road; 147.6 feet east of the road along the track, at the level of the rails.

1211.343

X-3 In Lincoln County, South Dakota, 1.4 miles south of Fairview; 49.2 feet east of the railway and 45.9 feet south of the road; 4.9 feet below the rails; 3.3 feet east and 26.2 feet south of the northwest corner of a cultivated field.

1204.732

E. In Sioux County, Iowa, 0.7 mile south of Austin,

- El. Ft.
- and 1.0 mile south of the railway bridge over the Big Sioux River; 42.7 feet west of the railway; 19.7 feet north of the road; 3.3 feet west of the fence; and 2.6 feet below the rails. 1200.004
- Y-3 In Lincoln County, South Dakota, at Hudson, in the west side of the entrance to Johnson & Torkelson's store; 4.3 feet west of the center of the doorway; 1.0 foot above the sidewalk; 1.3 feet south of the front edge of the sill, a square piece of yellow tiling; 0.2 foot on a side, set square with the pattern, the most northwesterly piece of that size and color in the pattern. 1222.609
- Z-3 In Lincoln County, South Dakota, at Hudson, 229.7 feet south of the railway station; 55.8 feet west of the track; on the southeast corner of the jasper foundations of the north elevator; 0.2 foot north and 0.1 foot west of the edges of the stone; and 1.5 feet above the ground. 1221.244
- A-4 In Lincoln County, South Dakota, 0.6 mile south of Hudson; 45.9 feet east of the railway; 36.1 feet west of the road; 49.2 feet south of the crossing; 3.3 feet west of the fence; 6.6 feet south of the corner of a pasture, and 1.3 feet below the rails. 1212.255
- B-4 In Lincoln County, South Dakota, 3.1 miles south of Hudson; 49.2 feet west of the railway; 767.7 feet north of the crossroads; 656.2 feet north of the school house; 36.1 feet east of the road; 6.6 feet north and 3.3 feet east of the southwest corner of a pasture owned by M. Allen. 1198.918
- F. In Sioux County, Iowa, 3.1 miles north of Hawarden, on the south (sandstone) pier of the railway bridge over the Big Sioux River; 1.4 feet north of the south edge and 6.6 feet west of the east end of the capstone; 6.6 feet east of the center of the track, and 5.6 feet below the rails. 1182.297
- G. In Sioux County, Iowa, 1.9 miles north of Hawarden, 42.7 feet west of the railway; 29.5 feet west of the road, opposite the crossing; 9.8 feet south and 3.3 feet east of the northeast corner of a field owned by M. Austin. 1177.196
- NOTE: Leveling in 1934 and 1935 indicates that the elevation is now 1177.435

El. Ft.

H. In Sioux County, Iowa, at Calliope, 19.4 feet south of the northeast corner of the McCaull-Webster elevator; 59.1 feet west of the railway and 180.4 feet south of the station; 1.3 feet above ground; 0.8 foot north of the south end of the foundation wall (pink jasper), at the east edge. 1181.274

I. In Sioux County, Iowa, at Hawarden, in a doorway of the Wood & Fleshman (1902) Block; 5.9 feet south of the center and 7.2 feet east of the front edge of the front step; a yellow circle in a blue square of tiling; 0.2 foot on each edge; the most southeasterly blue square in the design. 1180.362

CITY #1 In Sioux County, Iowa, at Hawarden, on the north side of Dakota street; 65.6 feet west of the west line of Kansas street; at the southwest corner of lot 14, block 5; on the south sidewalk line; the center of the cap upon the upper end of a piece of heavily galvanized 3-inch iron pipe, 8 feet long, resting on a rock 6 feet underground. 1177.058

N-9 In Sioux County, Iowa, about 0.6 mile northwest along the Chicago & North Western Railway from the station at Hawarden; about 0.3 mile northwest of the crossing of the Chicago, Milwaukee, St. Paul & Pacific Railroad; about 180 yards southeast of the east end of the bridge over Big Sioux River; about 125 yards northwest of the crossing of State Highway #10; 19.6 feet northeast of the northeast rail and 2.5 feet north of a pole. A standard disc, stamped "N-9, 1934" and set in the top of a concrete post projecting about six inches above the ground. 1178.032

NOTE: This elevation is based on second-order leveling and is subject to slight correction when the leveling in southeast South Dakota is adjusted.

P-9 In Sioux County, Iowa, at Hawarden, about 475 yards northwest of the Chicago & North Western Railway station; about 90.0 yards northwest of the crossing of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 49.9 feet south of the west end of a switch; 48.0 feet east of the center line of State Highway #12; 38.5 feet southwest of the southwest rail of the main track, and 41.0 feet northeast of a spur track. A standard disc, stamped "P-9, 1934" and set in the top of a concrete post projecting about four inches above the ground. 1178.196

El. Ft.

NOTE: This elevation is based on second-order leveling and is subject to slight correction when the leveling in southeast South Dakota is adjusted.

J. In Sioux County, Iowa, 0.6 mile south of Hawarden, 42.7 feet east of the railway; 32.8 feet north of the road; 3.3 feet west and 6.6 feet north of the southwest corner of a field owned by John Abbey, at the level of the rails. 1172.386

NOTE: Leveling in 1934 and 1935 indicates that the elevation is now 1172.583

K. In Sioux County, Iowa, 1.9 miles south of Hawarden, 45.9 feet west of the railway; 19.7 feet west of the road, opposite the crossing; 3.3 feet east of the west road fence, at the level of the rails. 1170.982

L. In Sioux County, Iowa, 2.8 miles south of Hawarden, 1640.4 feet north of a railway cut; and 787.4 feet by rail south of a section line; 42.7 feet northwest of the railway and 16.4 feet south of the road; 1.3 feet below the rails, marked by a boulder. 1165.076

M. In Sioux County, Iowa, 0.6 mile north of Chatsworth (Plymouth County); 65.6 feet east of the railway; 42.7 feet north of the road; 6.6 feet east and 3.3 feet north of the southwest corner of a pasture; and 5.6 feet below the rails. 1155.122

N. In Plymouth County, Iowa, at Chatsworth, 82.0 feet north of the station; 95.1 feet east of the railway; and 39.4 feet south of the road; on a jasper rock set 3.3 feet south and 1.6 feet west of the northwest corner of a meadow. 1159.551

O. In Plymouth County, Iowa, at Chatsworth, on the east pier of the north pair, under the railway water tank; 118.1 feet south of the station, and 18.0 feet west of the track, in the top bevel; 0.6 foot above the ground, at the east edge and 0.8 foot south of the north edge. 1161.474

P. In Plymouth County, Iowa, 1.4 miles south of Chatsworth, and 1082.7 feet north of a railway bridge; 9.8 feet north of a road; 42.7 feet west of the railway; 3.3 feet east of the fence, and 1.6 feet below the rails. 1154.069

El. Ft.

- Q. In Plymouth County, Iowa, 0.9 mile north of Akron, and 42.7 feet south of a railway bridge; 19.7 feet south of the road; 49.2 feet west of the railway; 1.6 feet east of a pasture fence; 5.2 feet below the rails. 1138.370
- R. In Plymouth County, Iowa, at Akron, in the front doorsill (jasper) of the Akron Savings Bank; 1.5 feet northwest of the southeast side of the doorway; 0.4 foot southwest of the front edge; 1.5 feet above the sidewalk. 1146.018
- CITY OF AKRON In Plymouth County, Iowa, at Akron, at the northeast corner of Reed and Second streets, at the north sidewalk line; 0.4 foot west of the southwest corner of the building; the north side of the top edge of a 1-inch galvanized iron pipe set solidly in cement flush with the sidewalk. 1144.866
- S. In Plymouth County, 0.9 mile south of Akron, 49.2 feet west of the railway; 131.2 feet west of the road along the track; 19.7 feet north of the road and 6.6 feet north and 1.6 feet east of the southeast corner of a cultivated field, 1.3 feet below the rails. 1136.071
- T. In Plymouth County, Iowa, 2.5 miles south of Akron, 42.7 feet west of the railway; 23.0 feet north of the road; 3.3 feet east of the fence, and 1.0 foot above the rails. 1134.571
- U. In Plymouth County, Iowa, 0.6 mile north of Westfield, 42.7 feet west of the railway; 39.4 feet south of the road; 3.3 feet west of the fence; and 1.0 foot below the rails. 1128.997
- V. In Plymouth County, Iowa, at Westfield, 49.2 feet west of the railway; 68.9 feet north of the road; 21.5 feet south of the northeast corner of the Hopkins elevator; 1.0 foot about the ground; 0.3 foot north of the south edge of the jasper rock, at the east edge. 1129.663
- W. In Plymouth County, Iowa, 1.0 mile south of Westfield; 45.9 feet east of the railway; 49.2 feet west of the road along the track; 16.4 feet north of the road; 3.3 feet south and west of the fences; 2.0 feet below the rails. 1121.674
- X. In Plymouth County, Iowa, 2.0 miles south of Westfield, 45.9 feet east of the railway, 39.4 feet west of the road along the track; 19.7 feet north of the

- road; 2.6 feet below the rails. El. Ft.  
1126.963
- Y. In Plymouth County, Iowa, 2.6 miles south of Westfield; 3.3 feet east of the bridge over the Big Sioux River; 13.1 feet east of a private road; and 45.9 feet south of the track, on a jasper rock, of quartzite, roughly squared for building purposes, about 3.3 by 1.6 by 9.8 feet, set 3.3 feet north of the fence and 0.7 foot above the rails. 1116.110
- Z. In Plymouth County, Iowa, 3.2 miles south of Westfield, at the east end of the railway bridge over the Big Sioux River, on the northeast pier of the central four under the old railway water tank; on the extreme northwest corner of the stone, at the upper bevel, 1.3 feet above the ground. 1117.826
- C-4 In Union County, South Dakota, 0.6 mile northeast of Elk Point, 3.4 feet by rail from the main line of railway at the junction; 42.7 feet northwest of the railway; 55.8 feet west of the section line; 3.3 feet southeast of the fence, and 2.0 feet below the rails. 1121.241
- P.B.M. 353/3 In Union County, South Dakota, at Elk Point, in the southeast corner of the Court House yard. 1122.859
- NOTE: Leveling in 1934 and 1935 indicates that the elevation is now 1122.632
- NOTE: The elevation of P.B.M. 353/3 given above is subject to slight correction when the adjustment of the leveling in southeast South Dakota is made.
- D-4 In Union County, South Dakota, 0.6 mile south of Elk Point, 344.5 feet west of the railway, at the north corner of the roads; 3.3 feet west and 3.3 feet north of the fences; 0.7 foot below the rails. 1125.700
- E-4 In Union County, South Dakota, 2.0 miles south of Elk Point, 59.1 feet northeast of the railway, at the northeast corner of the crossroads; 3.3 feet north and east of the southwest corner of a cultivated field; 2.0 feet below the rails. 1121.586
- F-4 In Union County, South Dakota, 4.7 miles south of Elk Point, 49.2 feet southwest of the railway; 26.2 feet north of the road; 3.3 feet north and west of the southeast corner of a cultivated field; 1.3 feet below the rails. 1115.506

El. Ft.

- G-4 In Union County, South Dakota, at Jefferson, 2624.7 feet north of the station; 49.2 feet southwest of the railway; 16.4 feet north of the road; 3.3 feet west and 1.6 feet south of the southeast corner of a garden; 2.3 feet below the rails. 1112.622
- P.B.M. 358/3 In Union County, South Dakota, at Jefferson, in the northwest corner of the school house yard, at the northeast sidewalk line. 1108.938
- H-4 In Union County, South Dakota, at Jefferson, at the front entrance to the Fontaine Block; 1.5 feet northeast of the front edge of the sill; 2.5 feet southeast of the center of the doorway; 0.5 foot west of the south wood framing; 0.3 foot above the sidewalk; a blue triangle of tiling, 0.2 foot by 0.1 foot, the most southerly such piece in the design. 1115.162
- I-4 In Union County, South Dakota, at Jefferson, 1312.3 feet south of the station; 42.7 feet north of the railway; 16.4 feet west of the private road; 3.3 feet south of the south fence of a meadow, and 2.6 feet below the rails. 1114.171
- J-4 In Union County, South Dakota, 1.0 mile southeast of Jefferson; 42.7 feet southwest of the railway; 36.1 feet south of the road; 3.3 feet southeast and 1.6 feet northeast of the northeast corner of a cultivated field, at the level of the rails. 1113.078
- NOTE: Leveling in 1934 and 1935 indicates that the elevation is now 1113.115
- K-4 In Union County, South Dakota, 2.2 miles southeast of Jefferson; 42.7 feet southwest of the railway; 39.4 feet east of the road; 59.1 feet southeast of the crossing; 6.6 feet southeast and 1.6 feet northeast of the northwest corner of a cultivated field, at the level of the rails. 1110.067
- L-4 In Union County, South Dakota, at McCook, 1476.4 feet north of the station; 49.2 feet northeast of the railway; 36.1 feet east of the road, opposite the crossing; 3.3 feet south and 1.6 feet east of the northwest corner of a cultivated field; 0.9 foot below the rails, 1107.153
- M-4 In Union County, South Dakota, 0.4 mile south of McCook; 98.4 feet southwest of the railway; 39.4 feet



southwest of the road along the tracks; 16.4 feet southeast of a private road; 3.3 feet northeast of the fence; 1.3 feet below the rails.

El. Ft.

1107.015

NOTE: Leveling in 1934 and 1935 indicates that the elevation is now

1106.917

N-4 In Union County, South Dakota, 1.7 mile south of McCook, on the west bank of the Big Sioux River, 52.5 feet from the edge; 49.2 feet south of the railway, in a wood lot, 3.3 feet south of the fence, and 3.9 feet below the rails.

1102.498

For descriptions of additional bench marks in this vicinity, see pages 9 and 154.

20 LINE 144. MINNEAPOLIS, MINN. to GLASGOW, MO.  
(First-order Leveling)

This Line follows the Chicago, St. Paul, Minneapolis & Omaha Railway from Winnebago, Minnesota to Elmore, Minnesota; from Elmore, Minnesota the Line follows the Chicago & North Western Railway to Luverne; from Luverne, Iowa the Line continues along the Minneapolis & St. Louis Railroad to Fort Dodge, Iowa.

The field work on this section of the Line was done in August and September, 1930, by a party in charge of J. D. Thurmond, Chief of Party, and H. G. Conerly, Observer on sub-party. Elevations are based on the 1929 Adjustment of the First-order Level Net.

For descriptions of additional bench marks in this vicinity, see page 43.

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	El. Ft.
<u>D-4</u> In <u>Faribault County</u> , Minn., about 4.0 miles north of <u>Winnebago</u> , on the Chicago, St. Paul, Minneapolis & Omaha Railway, about 0.3 mile north of milepost #21, and 45.0 feet west of the railroad, at the fence line. A standard disc, stamped "D-4, 1930" and set in the top of a concrete post.	1065.838
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 21.	1066.4
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 22.	1074.2
<u>E-4</u> In <u>Faribault County</u> , Minn., about 1.2 miles north of <u>Winnebago</u> , on the Chicago, St. Paul, Minneapolis & Omaha Railway, about 3 rails south of milepost #23, and 45.0 feet east of the railroad, at the fence line. A standard disc, stamped "E-4, 1930" and set in the top of a concrete post.	1069.555
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 23.	1068.3
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 24.	1092.0
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway station at Winnebago.	1095.1

El. Ft.

- F-4 In Faribault County, Minn., about 800 feet south of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Winnebago, about 500 feet north of the railroad intersection, east of culvert # L-58, about 56.0 feet north of a crossroad and about 35.0 feet northeast of the railroad, at the fence line. A standard disc, stamped "F-4, 1930" and set in the top of a concrete post. 1095.579
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 25. 1101.2
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 26. 1104.6
- G-4 In Faribault County, Minn., about 2.5 miles south of Winnebago, on the Chicago, St. Paul, Minneapolis & Omaha Railway, about 115 feet south of milepost L.C.27, 45.0 feet southwest of the railroad and about 45.0 feet south of a crossroad. A standard disc, stamped "G-4, 1930" and set in the top of a concrete post. 1096.084
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 27. 1098.4
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 28. 1090.4
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 29. 1089.9
- H-4 In Faribault County, Minn., about 5.0 miles south of Winnebago, on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 600 feet south of a crossroad, 250 feet north of culvert # L-74, and about 40.0 feet east of the railroad, at the fence line. A standard disc, stamped "H-4, 1930" and set in the top of a concrete post. 1084.486
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 30. 1088.9
- J-4 In Faribault County, Minn., about 2.0 miles north of Blue Earth, on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 120 yards southeast of culvert # L-182, east of pole #1950 and at the fence line. A standard disc, stamped "J-4, 1930" and set in the top of a concrete post. 1068.466
- Top of rail opposite the Chicago, St. Paul, Minneapolis

	El. Ft.
& Omaha Railway MP 32.	1067.9
Top of rail at intersection of Chicago, St. Paul, Minneapolis & Omaha Railway.	1079.3
<u>K-4</u> In <u>Faribault County</u> , Minn., at <u>Blue Earth</u> , on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 6.0 yards east of the platform of the freight station and on the base of the water crane. A standard disc, stamped "K-4, 1930".	1083.705
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway station at Blue Earth.	1084.3
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 34.	1089.6
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 35.	1098.0
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 36.	1090.6
<u>L-4</u> In <u>Faribault County</u> , Minn., about 2.75 miles south of <u>Blue Earth</u> , on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 55.0 feet southwest of a deserted house, about 43.0 feet east of the railroad and about 40.0 feet north of a crossroad. A standard disc, stamped "L-4, 1930" and set in the top of a concrete post.	1095.923
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 37.	1111.0
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 38.	1110.5
<u>M-4</u> In <u>Faribault County</u> , Minn., about 5.5 miles south of the Chicago, St. Paul, Minneapolis & Omaha Railway station at <u>Blue Earth</u> ; about 48.0 feet west of the railroad and about 46.0 feet south of a crossroad. A standard disc, stamped "M-4, 1930" and set in the top of a concrete post.	1104.886
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 39.	1105.5
Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 40.	1115.6

El. Ft.

- N-4 In Faribault County, Minn., about 3.5 miles north of Elmore, on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 0.5 mile south of milepost L.C.40, about 75.0 yards south of a crossroad and in culvert #L-97. A standard disc, stamped "N-4, 1930". 1111.828
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 41. 1110.0
- Top of rail opposite the Chicago, St. Paul, Minneapolis & Omaha Railway MP 42. 1116.6
- P-4 In Faribault County, Minn., about 0.5 mile north of Elmore, on the Chicago, St. Paul, Minneapolis & Omaha Railway; about 60.0 feet north of a crossroad and about 40.0 feet east of the railroad, at the fence line. A standard disc, stamped "P-4, 1930" and set in the top of a concrete post. 1124.450
- A-1 In Kossuth County, Iowa, about 1.5 miles south of the Chicago & North Western Railway station at Elmore, (Faribault County, Minnesota); about 250 yards north of bridge #876 and about 45.0 feet from the railroad, at the fence line. A standard disc, stamped "A-1, 1930" and set in the top of a concrete post. 1125.129
- B-1 In Kossuth County, Iowa, about 1.5 miles north of Ledyard, on the Chicago & North Western Railway, about 100 feet south of bridge #869, about 48.0 feet east of the railroad and about 40.0 feet north of a crossroad, in a fence corner. A standard disc, stamped "B-1, 1930" and set in the top of a concrete post. 1130.355
- C-1 In Kossuth County, Iowa, at Ledyard, on the Chicago & North Western Railway, about 16 rails south of the station, near a corner of the fence around the F. Weyerhaeuser lumber yard and about 48.0 feet west of the railroad. A standard disc, stamped "C-1, 1930" and set in the top of a concrete post. 1144.663
- Top of rail opposite the Chicago & North Western Railway station at Ledyard. 1149.1
- D-1 In Kossuth County, Iowa, about 0.9 mile north of Gerled, on the Chicago & North Western Railway, about 800 feet southwest of bridge #854 and about 45.0 feet west of the railroad. A standard disc, stamped "D-1, 1930" and set in the top of a concrete post. 1145.595

	El. Ft.
<u>E-1</u> In <u>Kossuth County</u> , Iowa, at <u>Gerled</u> , about 100 feet southeast of the Chicago & North Western Railway station, at the crossing of the Chicago, Rock Island & Pacific Railway, in the east pier of the overhead bridge, and northeast of the intersection of two railroads. A standard disc, stamped "E-1, 1930".	1156.028
<u>F-1</u> In <u>Kossuth County</u> , Iowa, about 2.2 miles south of <u>Gerled</u> , on the Chicago & North Western Railway, about 370 yards south of a crossroad, and about 14.0 yards west of the railroad. A standard disc, stamped "F-1, 1930" and set in the top of a concrete post.	1163.059
<u>G-1</u> In <u>Kossuth County</u> , Iowa, about 1.0 mile north of <u>Bancroft</u> , on the Chicago & North Western Railway, in the east end of the north abutment of a railroad bridge which is about 65.0 feet east of a highway bridge. A standard disc, stamped "G-1, 1930"	1155.221
Top of rail opposite the Chicago & North Western Railway station at <u>Bancroft</u> .	1173.1
<u>H-1</u> In <u>Kossuth County</u> , Iowa, about 0.5 mile south of <u>Bancroft</u> , on the Chicago & North Western Railway, about 13.0 yards south of the first road crossing south of <u>Bancroft</u> and about 15.0 yards west of the railroad, near the fence line. A standard disc, stamped "H-1, 1930" and set in the top of a concrete post.	1175.880
Top of rail opposite the Chicago & North Western Railway MP 147.	1172.4
<u>J-1</u> In <u>Kossuth County</u> , Iowa, about 2.5 miles south of <u>Bancroft</u> , on the Chicago & North Western Railway, about 15.0 yards north of a crossroad and about 14.0 yards west of the railroad, at the fence line. A standard disc, stamped "J-1, 1930" and set in the top of a concrete post.	1143.784
<u>K-1</u> In <u>Kossuth County</u> , Iowa, about 4.5 miles south of <u>Bancroft</u> , on the Chicago & North Western Railway, about 700 feet south of bridge #285, about 16.0 yards north of a crossroad and about 16.0 yards west of the railroad. A standard disc, stamped "K-1, 1930" and set in the top of a concrete post.	1152.134
<u>L-1</u> In <u>Kossuth County</u> , Iowa, about 0.25 mile north of the Chicago & North Western Railway station at <u>Burt</u> ,	

	El. Ft.
in the southwest corner of the foundation of a coal chute. A standard disc, stamped "L-1, 1930".	1178.849
Top of rail opposite the Chicago & North Western Railway station at Burt.	1177.3
<u>M-1</u> In <u>Kossuth County</u> , Iowa, about 2.2 miles south of the Chicago & North Western Railway station at <u>Burt</u> , about 300 feet south of a crossroad and about 13.0 yards west of the railroad, at the fence line. A standard disc, stamped "M-1, 1930" and set in the top of a concrete post.	1168.124
Top of rail opposite the Chicago & North Western Railway MP 139.	1176.1
<u>N-1</u> In <u>Kossuth County</u> , Iowa, about 3.9 miles south of the Chicago & North Western Railway station at <u>Burt</u> , about 0.88 mile south of the crossing of a power transmission line, about 13.0 yards south of the crossing of a farm road and about 15.0 yards east of the railroad, at the fence line. A standard disc, stamped "N-1, 1930" and set in the top of a concrete post.	1171.543
<u>P-1</u> In <u>Kossuth County</u> , Iowa, about 5.7 miles south of the Chicago & North Western Railway station at <u>Burt</u> , at bridge #809 and in the east end of the south abutment. A standard disc, stamped "P-1, 1930".	1140.011
<u>Q-1</u> In <u>Kossuth County</u> , Iowa, about 1.25 miles south of <u>Plum Creek</u> , on the Chicago & North Western Railway; about 200 feet north of bridge #798 and about 11.5 yards west of the railroad, 8 feet from the fence. A standard disc, stamped "Q-1, 1930" and set in the top of a concrete post.	1186.277
Top of rail opposite the Chicago & North Western Railway MP 133.	1194.4
<u>R-1</u> In <u>Kossuth County</u> , Iowa, at <u>Algona</u> , about 0.6 mile north of the Chicago & North Western Railway station at bridge #793 and on the west end of the north abutment. A standard disc, stamped "R-1, 1930".	1201.169
Top of rail opposite the Chicago & North Western Railway station at Algona.	1203.8

El. Ft.

For descriptions of additional bench marks in this vicinity, see pages 93 and 94.

- S-1 In Kossuth County, Iowa, at Algona, about 0.75 mile south of the Chicago & North Western Railway station at the grade crossing opposite the Fair Grounds, about 35.0 feet north of the road and about 35.0 feet east of the railroad, at the fence line. The mark is about 250 feet east of Highway #169. A standard disc, stamped "S-1, 1930" and set in the top of a concrete post. 1194.755
- T-1 In Kossuth County, Iowa, about 1.5 miles north of Irvington, on the Chicago & North Western Railway and in the east end of culvert #771. A standard disc, stamped "T-1, 1930". 1119.043
- Top of rail opposite the Chicago & North Western Railway station at Irvington. 1149.4
- U-1 In Kossuth County, Iowa, about 0.5 mile south of Irvington, on the Chicago & North Western Railway and at the first grade crossing south of Irvington, about 45.0 feet west of the railroad and about 50.0 feet north of the dirt road at the fence line. A standard disc, stamped "U-1, 1930" and set in the top of a concrete post. 1142.311
- V-1 In Kossuth County, Iowa, at Galbraith, on the Chicago & North Western Railway, about 90.0 feet east of the railroad, about 75.0 feet northeast of the station and about 25.0 feet south of a dirt road at a fence corner. A standard disc, stamped "V-1, 1930" and set in the top of a concrete post. 1158.023
- Top of rail opposite the Chicago & North Western Railway station at Galbraith. 1161.1
- Top of rail opposite the Chicago & North Western Railway MP 124. 1160.5
- Top of rail opposite the Chicago & North Western Railway MP 123. 1161.8
- W-1 In Kossuth County, Iowa, about 3.0 miles north of Luverne, on the Chicago & North Western Railway; about 0.25 mile north of milepost #122; about 30.0 feet south of culvert #754, about 6.0 feet west of a private road leading to a farmhouse, and about 45.0 feet east of the railroad, at the fence line. A standard disc,



	El. Ft.
stamped "W-1, 1930" and set in the top of a concrete post.	1157.284
Top of rail opposite the Chicago & North Western Railway MP 122.	1155.9
Top of rail opposite the Chicago & North Western Railway MP 121.	1156.0
Top of rail opposite the Chicago & North Western Railway MP 120.	1153.4
<u>X-1</u> In <u>Kossuth County</u> , Iowa, at <u>Luverne</u> , on the Chicago & North Western Railway, about 0.75 mile north of the crossing of the Minneapolis & St. Louis Railroad, about 40.0 feet west of the railroad and about 40.0 feet north of a dirt road which crosses the railroad. A standard disc, stamped "X-1, 1930" and set in the top of a concrete post.	1164.476
Top of rail opposite the Chicago & North Western Railway MP 119.	1170.0
Top of rail opposite the Chicago & North Western Railway station at Luverne.	1167.3
<u>Y-1</u> In <u>Kossuth County</u> , Iowa, at <u>Luverne</u> , on the Minneapolis & St. Louis Railroad, about 5 rails west of the crossing of the Chicago & North Western Railway and in the south end of a culvert. A standard disc, stamped "Y-1, 1930."	1153.367
Top of rail opposite the Minneapolis & St. Louis Railroad station at Luverne.	1168.0
Top of rail opposite the Minneapolis & St. Louis Railroad MP 188.	1151.9
<u>Z-1</u> In <u>Humboldt County</u> , Iowa, 1.3 miles southwest of Luverne ( <u>Kossuth County</u> ); on the Minneapolis & St. Louis Railroad, on the first hill west of <u>Luverne</u> , 6 poles west of the "Station One Mile" sign and 45.0 feet south of the railroad, at the fence line. A standard disc, stamped "Z-1, 1930" and set in the top of a concrete post.	1168.131
Top of rail opposite the Minneapolis & St. Louis Railroad MP 189.	1164.7

El. Ft.

Top of rail opposite the Minneapolis & St. Louis Railroad MP 190.

1139.5

A-2 In Humboldt County, Iowa, 3.0 miles northeast of Livermore, on the Minneapolis & St. Louis Railroad, 2 poles west of milepost #190 and in the north end of a stone culvert. A standard disc, stamped "A-2, 1930".

1139.397

Top of rail opposite the Minneapolis & St. Louis Railroad MP 191.

1124.4

Top of rail opposite the Minneapolis & St. Louis Railroad MP 192.

1095.6

B-2 In Humboldt County, Iowa, at Livermore, on the Minneapolis & St. Louis Railroad, at a grade crossing located about 0.13 mile east of the station, 40.0 feet south of the railroad and 40.0 feet west of the road, under a telephone line. A standard disc, stamped "B-2, 1930" and set in the top of a concrete post.

1126.976

Top of rail opposite the Minneapolis & St. Louis Railroad MP 193.

1132.1

Top of rail opposite the Minneapolis & St. Louis Railroad station at Livermore.

1132.5

C-2 In Humboldt County, Iowa, at Livermore, at the crossing of the Minneapolis & St. Louis Railroad and the Chicago, Rock Island & Pacific Railway, 15.0 feet east of the Minneapolis & St. Louis Railroad and in the north end of a culvert on the Chicago, Rock Island & Pacific Railway. A standard disc, stamped "C-2, 1930".

1129.109

Top of rail opposite the Minneapolis & St. Louis Railroad MP 194.

1144.9

Top of rail opposite the Minneapolis & St. Louis Railroad MP 195.

1130.6

D-2 In Humboldt County, Iowa, 1.5 miles north of Arnold, on the Minneapolis & St. Louis Railroad, 0.5 mile north of milepost #196, at a grade crossing, 45.0 feet west of the railroad and 25.0 feet north of the road. A standard disc, stamped "D-2, 1930" and set in the top of a concrete post.

1130.621

Top of rail opposite the Minneapolis & St. Louis Railroad MP 196.

1117.1

	El. Ft.
Top of rail opposite the Minneapolis & St. Louis Railroad station at Arnold.	1132.2
Top of rail opposite the Minneapolis & St. Louis Railroad MP 197.	1134.4
<u>E-2</u> In Humboldt County, Iowa, 1.0 mile south of Arnold, on the Minneapolis & St. Louis Railroad, 0.17 mile north of milepost #198, 0.13 mile south of a road crossing, 250 feet west of a road and in the west end of a culvert. A standard disc, stamped "E-2, 1930".	1143.010
Top of rail opposite the Minneapolis & St. Louis Railroad MP 198.	1144.2
Top of rail opposite the Minneapolis & St. Louis Railroad MP 199.	1134.9
Top of rail opposite the Minneapolis & St. Louis Railroad MP 200.	1123.1
<u>F-2</u> In Humboldt County, Iowa, 3.0 miles south of Arnold, on the Minneapolis & St. Louis Railroad, 0.25 mile south of milepost #200, 100 yards south of a crossing and in the east end of a stone culvert. A standard disc, stamped "F-2, 1930".	1120.224
<u>G-2</u> In Humboldt County, Iowa, 1.0 mile north of Humboldt, on the Minneapolis & St. Louis Railroad, at a grade crossing near milepost #202, 150 feet south of the crossing and 40.0 feet west of the railroad. A standard disc, stamped "G-2, 1930" and set in the top of a concrete post.	1123.275
Top of rail opposite the Minneapolis & St. Louis Railroad MP 202.	1122.9
Top of rail opposite the Minneapolis & St. Louis Railroad MP 203.	1088.2
<u>H-2</u> In Humboldt County, Iowa, at Humboldt, at the Minneapolis & St. Louis Railroad station and in the sill of the door to the express room. A standard disc, stamped "H-2, 1930".	1085.782
Top of rail opposite the Minneapolis & St. Louis Railroad station at Humboldt.	1085.8
Top of rail opposite the Minneapolis & St. Louis Railroad MP 204.	1084.1

El. Ft.

Top of rail opposite the Minneapolis & St. Louis Railroad MP 205.

1065.3

For descriptions of additional bench marks in this vicinity, see page 140.

J-2 In Humboldt County, Iowa, 2.4 miles south of Humboldt, on the Minneapolis & St. Louis Railroad, 0.5 mile north of the Humboldt Tile Works, 400 feet south of bridge #135, at the crossing of a private road and 10.0 feet west of the railroad. A standard disc, stamped "J-2, 1930" and set in the top of a concrete post.

1067.586

Top of rail opposite the Minneapolis & St. Louis Railroad MP 206.

1080.1

Top of rail opposite the Minneapolis & St. Louis Railroad MP 208.

1113.1

K-2 In Humboldt County, Iowa, 3.0 miles north of Badger (Webster County), at the Minneapolis & St. Louis Railroad bridge #140 over Highway #16 and in the east end of the north abutment. A standard disc, stamped "K-2, 1930".

1108.370

Top of rail opposite the Minneapolis & St. Louis Railroad MP 209.

1126.5

Top of rail opposite the Minneapolis & St. Louis Railroad MP 210.

1126.9

Top of rail opposite the Minneapolis & St. Louis Railroad MP 211.

1141.5

L-2 In Webster County, Iowa, 1.0 mile north of Badger, on the Minneapolis & St. Louis Railroad, at a grade crossing near a white schoolhouse, 80.0 yards southeast of the schoolhouse, 45.0 feet west of the railroad and 45.0 feet south of the road. A standard disc, stamped "L-2, 1930" and set in the top of a concrete post.

1134.761

Top of rail opposite the Minneapolis & St. Louis Railroad MP 212.

1138.2

Top of rail opposite the Minneapolis & St. Louis Railroad station at Badger.

1152.0

	El. Ft.
Top of rail opposite the Minneapolis & St. Louis Railroad MP 213.	1130.8
<u>M-2</u> In Webster County, Iowa, 1.0 mile south of <u>Badger</u> , on the Minneapolis & St. Louis Railroad, at the first grade crossing south of Badger, 250 yards west of a white schoolhouse, 60.0 feet north of the road and 45.0 feet east of the railroad, in a fence corner. A standard disc, stamped "M-2, 1930" and set in the top of a concrete post.	1126.674
Top of rail opposite the Minneapolis & St. Louis Railroad MP 214.	1119.8
Top of rail opposite the Minneapolis & St. Louis Railway MP 215.	1118.1
<u>N-2</u> In Webster County, Iowa, 3.0 miles south of <u>Badger</u> , on the Minneapolis & St. Louis Railroad, 0.2 mile south of milepost #216, in front of a small white schoolhouse and in the east end of a culvert. A standard disc, stamped "N-2, 1930".	1121.645
Top of rail opposite the Minneapolis & St. Louis Railroad MP 216.	1115.8
<u>P-2</u> In Webster County, Iowa, 3.5 miles north of <u>Fort Dodge</u> , on the Minneapolis & St. Louis Railroad, at a grade crossing located about 0.3 mile south of milepost #218, 60.0 feet south of the road and 45.0 feet east of the railroad, in a fence corner. A standard disc, stamped "P-2, 1930" and set in the top of a concrete post.	1117.583
Top of rail opposite the Minneapolis & St. Louis Railroad MP 218.	1105.0
Top of rail opposite the Minneapolis & St. Louis Railroad MP 219.	1067.7
<u>Q-2</u> In Webster County, Iowa, 1.5 miles north of <u>Fort Dodge</u> , on the Minneapolis & St. Louis Railroad, 0.13 mile north of milepost #220, at bridge #152 and in the west end of the north abutment. A standard disc, stamped "Q-2, 1930".	1039.972
Top of rail opposite the Minneapolis & St. Louis Railroad MP 220.	1033.3

El. Ft.

- R-2 In Webster County, Iowa, at Fort Dodge, at the plant of the Quaker Oats Company, in the northeast footing of the water tank and 25.0 feet west of the Minneapolis & St. Louis Railroad. A standard disc, stamped "R-2, 1930". 990.615
- S-2 In Webster County, Iowa, at Fort Dodge, in the Minneapolis & St. Louis Railroad yards, 300 yards south of the railroad shops, and in the northeast corner of the foundation of a coal chute. A standard disc, stamped "S-2, 1930". 995.234
- T-2 In Webster County, Iowa, 4.0 miles south of Fort Dodge, on the Minneapolis & St. Louis Railroad, at the bridge carrying the Fort Dodge, Des Moines & Southern Electric Railway over the tracks of the Minneapolis & St. Louis Railroad and in the foundation of the south pier on the west side of the railroad. A standard disc, stamped "T-2, 1930". 982.003
- Top of rail opposite the Minneapolis & St. Louis Railroad MP 227. 1038.8

For descriptions of additional bench marks in this vicinity, see page 44.

This Line follows the Chicago, Milwaukee, St. Paul & Pacific Railroad from Sioux Falls Jct., South Dakota to Winnobago, Minnesota.

The field work was done during September and October, 1931 by a party in charge of A. J. Hoskinson, Chief of Party, and H. E. Breen, J. C. Bull and A. L. Wardwell, Observers on sub-parties. Elevations are based on the 1929 General Adjustment of the First-order Level Net.

For descriptions of additional bench marks in this vicinity, see pages 10 and 92.

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El. Ft.  
R-2 In Moody County, South Dakota, 3.1 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Colman; 125 feet south of the road on the north line of the NE $\frac{1}{4}$  of Section 18, T-106-N, R-49-W; 90.0 feet south of the crossing, 45.0 feet west of the track and 1.5 feet below the level of the track. A standard cap, fastened on the top of a 3.5-inch iron pipe.

1681.293

D-18 In Moody County, South Dakota, 2.2 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Egan; at Sioux Falls Junction; between the two railroads; at the second pole west of the junction; 15.75 rails west along the branch that leads to Colman from the frog at the junction and 37.4 feet south of the south rail. A standard disc, stamped "D-18, 1931" and set in the top of a concrete post.

1515.246

E-18 In Moody County, South Dakota, at Egan, at a road crossing northeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 0.5 rail southwest of the frog at the northeast end of a switch; 58.0 feet northwest of the center line of the road and 41.4 feet southeast of the southeast rail. A standard disc, stamped "E-18, 1931" and set in the top of a concrete post.

1530.282

F-18 In Moody County, South Dakota, 2.2 miles northeast along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Egan; 69.5 rails northeast of the northeast end of the bridge over Big Sioux River, 14 rails northeast of the northeast end of a smaller bridge, 46.0 feet southeast of the southeast

El. Ft.

rail and near the right-of-way fence. A standard disc, stamped "F-18, 1931" and set in the top of a concrete post.

1524.055

G-18 In Moody County, South Dakota, at Flandreau, 3 rails west of the west end of the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 10.0 feet south of the south rail, in the north wall of the power house, 3.0 feet west of the northeast corner and 4.0 feet above the ground. A standard disc, stamped "G-18, 1931" and set vertically.

1575.902

H-18 In Moody County, South Dakota, 4.4 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Airlie (Pipestone County, Minnesota); near milepost #300; 46.0 feet south of the south rail; 43.0 feet east of the center line of a dirt road which crosses the tracks; 2.0 feet north of the right-of-way fence and at about the same level as the tracks. A standard disc, stamped "H-18, 1931" and set in the top of a concrete post.

1666.204

T-11 In Pipestone County, Minnesota, at Airlie, 325 feet west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; directly south of the east elevator; at a road crossing; 50.0 feet east of the center line of the road; 40.0 feet south of the south rail and about 1.0 foot below the level of the track. A standard disc, stamped "T-11, 1931" and set in the top of a concrete post.

1659.813

U-11 In Pipestone County, Minnesota, 2.7 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Pipestone; directly across the tracks from milepost #292; 45.0 feet south of the south rail and 2.0 feet north of the right-of-way fence. A standard disc, stamped "U-11, 1931" and set in the top of a concrete post.

1628.376

V-11 In Pipestone County, Minnesota, at Pipestone, 8.5 rails northwest of the northwest corner of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 44.9 feet north of the north rail and 2.5 feet south of the right-of-way fence. A standard disc, stamped "V-11, 1931" and set in the top of a concrete post.

1712.155

W-11 In Pipestone County, Minnesota, at Pipestone, at the corner of Olive and Hiawatha streets, 41.7 feet



Bl. Ft.

north of the center line of Olive Street, in the wall of the First National Bank Building, in the face of the west support, 3.7 feet east of the west edge of the west support, 1.25 feet west of the west corner support and about 5.0 feet above the sidewalk. A standard disc, stamped "W-11, 1931" and set vertically.

1738.067

X-11 In Pipestone County, Minnesota, at Pipestone, in the brick wall of the Great Northern Railway station, 26.3 feet northwest of the northwest rail, 2.6 feet north of the door to the men's waiting room and 5.3 feet above the platform. A standard disc, stamped "X-11, 1931" and set vertically.

1737.090

For descriptions of additional bench marks in this vicinity, see page 113.

Y-11 In Pipestone County, Minnesota, 3.0 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Pipestone; 66.6 feet west of the center line of a north-and-south road; 41.5 feet west of high-tension-line pole #21, which is on the north side of the track; 39.6 feet north of the north rail, 6.0 feet south of the right-of-way fence and 2.0 feet below the level of the track. A standard disc, stamped "Y-11, 1931" and set in the top of a concrete post.

1750.341

Z-11 In Pipestone County, Minnesota, 5.5 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Pipestone; 1.5 miles northwest of Hatfield; 43.0 feet northeast of a road crossing; 40.9 feet north of the north rail; 11.0 feet northwest of the first pole east of the road and 6.8 feet south of the right-of-way fence. A standard disc, stamped "Z-11, 1931" and set in the top of a concrete post.

1739.186

A-12 In Pipestone County, Minnesota, 9.4 miles southeast along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Pipestone; 46.5 feet southwest of the center of a road crossing; 44.6 feet west of the west rail; 4.7 feet southeast of a fence corner; 3.0 feet east of the right-of-way fence and about 1.5 feet above the level of the track. A standard disc, stamped "A-12, 1931" and set in the top of a concrete post.

1665.551

B-12 In Pipestone County, Minnesota, 13.2 miles southeast along the Chicago, Milwaukee, St. Paul & Pacific

## SIOUX FALLS JCT., S. D. to LA CROSSE, WIS.

El. Ft.

Railroad from the station at Pipestone, near a small creek which parallels the track, 79.0 feet southeast of the center of a road crossing, 41.4 feet east of the east rail, 10.0 feet south of a fence corner, 2.0 feet south of the right-of-way fence and about 5.0 feet below the level of the track. A standard disc, stamped "B-12, 1931" and set in the top of a concrete post.

1578.534

C-12 In Pipestone County, Minnesota, at Edgerton, opposite the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 62.4 feet north of the office window, 45.2 feet north of the north rail, 10.5 feet west of a small tree, 2.0 feet south of the right-of-way fence and about 2.0 feet above the level of the track. A standard disc, stamped "C-12, 1931" and set in the top of a concrete post.

1573.376

D-12 In Pipestone County, Minnesota, 4.4 miles northeast along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Edgerton, 65.0 yards north of a small creek, 220 feet northeast of a railroad bridge over a small creek, 61.4 feet southeast of milepost #271; 45.5 feet southeast of the southeast rail and 1.6 feet northwest of the right-of-way fence line. A standard disc, stamped "D-12, 1931" and set in the top of a concrete post.

1591.647

E-12 In Murray County, Minnesota, 2.6 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Chandler; at the foot of the southwest slope of a hill; 38.0 feet northeast of milepost #268; 46.3 feet north of the north rail; 30.0 feet south of the center line of a dirt road paralleling the track; 2.0 feet south of the right-of-way fence line and about level with the track. A standard disc, stamped "E-12, 1931" and set in the top of a concrete post.

1625.367

F-12 In Murray County, Minnesota, at Chandler, 57.5 feet southwest of the southwest corner of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 28.3 feet south of the south rail of the main line; 7.0 feet southwest of a 14-inch elder tree and about level with the track. A standard disc, stamped "F-12, 1931" and set in the top of a concrete post.

1650.974

G-12 In Murray County, Minnesota, 3.6 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Chandler; 56.0 feet southeast

El. Ft.

of the intersection of the south rail and the center line of a gravel road; 46.4 feet south of the south rail; 2.6 feet northeast of a corner of the right-of-way fence and about 1.5 feet above the level of the track. A standard disc, stamped "G-12, 1931" and set in the top of a concrete post.

1714.859

H-12 In Murray County, Minnesota, 3.2 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Iona; 58.0 feet southeast of the intersection of the south rail and the center line of a gravel road; 34.0 feet east of the center line of the road; 45.1 feet south of the south rail; 3.5 feet northeast of a corner of the right-of-way fence and about 3.0 feet below the level of the track. A standard disc, stamped "H-12, 1931" and set in the top of a concrete post.

1709.721

J-12 In Murray County, Minnesota, at the northeast edge of Iona, 610 feet east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 84.0 feet southwest of milepost #256; 19.0 feet southwest of the southwest corner of the section house; 40.2 feet south of the south rail and about level with the track. A standard disc, stamped "J-12, 1931" and set in the top of a concrete post.

1625.341

K-12 In Murray County, Minnesota, at Wirock, 864 feet west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 43.0 feet north of the north rail and about level with the track. A standard disc, stamped "K-12, 1931" and set in the top of a concrete post.

1572.369

L-12 In Murray County, Minnesota, 3.5 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Fulda, at a road crossing; 78.0 feet west of the center line of the road; 65.0 feet north of the north rail; 2.0 feet south of the right-of-way fence and about 3.0 feet above the level of the track. A standard disc, stamped "L-12, 1931" and set in the top of a concrete post.

1567.110

M-12 (City of Fulda) In Murray County, Minnesota, at Fulda, in the east wall of the Citizens State Bank building; 1.0 foot from the south end of the building and 4.6 feet above the sidewalk. A standard disc, stamped "M-12, 1931" and set vertically.

1532.084

N-12 In Murray County, Minnesota, 3.2 miles southeast along the Chicago, Milwaukee, St. Paul & Pacific Rail-

El. Ft.

road from Fulda; at a grade crossing; about 70.0 feet east of the road; 44.0 feet south of the south rail; 1.0 foot from the right-of-way fence and about 3.0 feet below the level of the track. A standard disc, stamped "N-12, 1931" and set in the top of a concrete post.

1479.279

P-12 In Nobles County, Minnesota, at Kinbrae, across the track from the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 215 feet west of a road which crosses the track; 97.0 feet north of the north rail and about level with the track. A standard disc, stamped "P-12, 1931" and set in the top of a concrete post.

1463.649

Q-12 In Jackson County, Minnesota, 3.9 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Miloma, at a road crossing; 65.0 feet east of the center line of the road; 43.0 feet south of the south rail; 2.0 feet north of the right-of-way fence and about 1.0 foot below the level of the track. A standard disc; stamped "Q-12, 1931" and set in the top of a concrete post.

1434.466

R-12 In Jackson County, Minnesota, 0.3 mile west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Miloma; at the first road crossing; 69.0 feet west of the center line of the road; 45.0 feet south of the south rail; 1.0 foot north of the right-of-way fence and about 1.0 foot below the level of the track. A standard disc, stamped "R-12, 1931" and set in the top of a concrete post.

1425.847

S-12 In Jackson County, Minnesota, at Miloma, across the tracks north of the railroad station; 47.0 feet east of the east rail of the Chicago, St. Paul, Minneapolis & Omaha Railway; 45.0 feet north of the north rail of the Chicago, Milwaukee, St. Paul & Pacific Railroad; at the corner of the right-of-way fence and about 2.0 feet below the level of the track. A standard disc, stamped "S-12, 1931" and set in the top of a concrete post.

1427.487

T-12 In Jackson County, Minnesota, 0.3 mile east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Miloma; at a road crossing; 100 feet east of the road; 45.0 feet north of the north rail; 2.0 feet south of the right-of-way fence and about 2.0 feet below the level of the track. A standard disc, stamped "T-12, 1931" and set in the top of a

concrete post.

El. Ft.  
1422.471

For descriptions of additional bench marks in this vicinity, see pages 171 and 172.

- U-12 In Jackson County, Minnesota, at Okabena, 185 feet east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; at a road crossing; 55.0 feet west of the center line of the road; 28.5 feet north of the north rail; 2.0 feet west of a gravel sidewalk and about level with the track. A standard disc, stamped "U-12, 1931" and set in the top of a concrete post. 1424.295
- V-12 In Jackson County, Minnesota, 4.3 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Okabena; at a road crossing; 40.0 feet west of the center line of the road; 40.0 feet south of the south rail; at a corner of the right-of-way fence; 2.0 feet north of the fence and about 1.0 foot below the level of the track. A standard disc, stamped "V-12, 1931" and set in the top of a concrete post. 1415.804
- W-12 In Jackson County, Minnesota, at Lakefield, 400 feet east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; at a road crossing; 57.0 feet west of the center line of the road; 23.0 feet north of the north rail; 3.0 feet west of the sidewalk paralleling the road; 1.0 foot south of the line of a row of trees paralleling the track and about level with the track. A standard disc, stamped "W-12, 1931" and set in the top of a concrete post. 1476.027
- X-12 In Jackson County, Minnesota, 3.0 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Lakefield; at a road crossing; 56.0 feet east of the center line of the road; 44.0 feet north of the north rail; 2.0 feet south of the right-of-way fence and about level with the track. A standard disc, stamped "X-12, 1931" and set in the top of a concrete post. 1526.158
- Y-12 In Jackson County, Minnesota, 5.7 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Jackson; on a hill, at a curve in the track; 350 feet west of milepost #115; at a road crossing; 45.0 feet west of the center line of the road; 41.0 feet north of the north rail; 3.0 feet south of the right-of-way fence and about 1.0 foot below the level of the track. A standard disc, stamped "Y-12, 1931"

El. Ft.  
1476.257

and set in the top of a concrete post.

- Z-12 In Jackson County, Minnesota, 3.4 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Jackson; 44.0 feet south of the south rail; 2.0 feet north of the right-of-way fence and about 2.0 feet below the level of the track. A standard disc, stamped "Z-12, 1931" and set in the top of a concrete post. 1361.326
- A-13 In Jackson County, Minnesota, at Jackson, across the tracks north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; at a road crossing; 59.0 feet west of the center line of the road; 92.0 feet north of the north rail of the main track; 1.0 foot south of the right-of-way fence and about level with the tracks. A standard disc, stamped "A-13, 1931" and set in the top of a concrete post. 1459.137
- B-13 In Jackson County, Minnesota, 2.7 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Jackson; 44.3 feet south of the south rail; 30.5 feet west of the corner of a field; 2.4 feet north of the right-of-way fence line and about level with the track. A standard disc, stamped "B-13, 1931" and set in the top of a concrete post. 1414.206
- C-13 In Jackson County, Minnesota, at the southwest edge of Alpha; 8 rails west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 70.3 feet southwest of a stone store which is west across the road from the station; 29.4 feet north of the north rail and 0.5 feet above the level of the track. A standard disc, stamped "C-13, 1931" and set in the top of a concrete post. 1387.192
- D-13 In Martin County, Minnesota, 4.0 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Alpha (Jackson County); about midway between the second and third poles west of a gravel road; 12.5 rails west of the road; south of the line of the poles; 46.0 feet south of the south rail; 2.0 feet north of the right-of-way fence line and about 1.0 foot below the level of the track. A standard disc, stamped "D-13, 1931" and set in the top of a concrete post. 1332.186
- E-13 In Martin County, Minnesota, 0.5 mile west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Sherburn; 10.5 feet east of the eighth pole west of the junction of the Chicago, Milwaukee, St. Paul &

## LEVELING IN IOWA

- El. Ft.
- Pacific and the Minneapolis & St. Louis Railroads; 26.7 feet north of the north rail, and about 1.0 foot below the level of the track. A standard disc, stamped "E-13, 1931" and set in the top of a concrete post. 1287.051
- F-13 In Martin County, Minnesota, at Sherburn, in the park just north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 61.5 feet northeast of the northwest corner of the station; 36.1 feet north of the north rail of the main line, 7.5 feet southwest of a 20-inch box elder tree and about level with the track. A standard disc, stamped "F-13, 1931" and set in the top of a concrete post. 1287.389
- For descriptions of additional bench marks in this vicinity, see pages 114 and 115.
- G-13 In Martin County, Minnesota, 3.0 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Sherburn, 50.0 feet southeast of a crossing, 45.0 feet south of the south rail, 2.6 feet northeast of a corner of the right-of-way fence and about level with the track. A standard disc, stamped "G-13, 1931" and set in the top of a concrete post. 1262.773
- H-13 In Martin County, Minnesota, 1.7 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Welcome, on the south end of the east abutment of a bridge, 6.5 feet north of the south edge, 1.6 feet east of the west edge, 3.4 feet south of the south edge of the south girder and about 3.0 feet below the level of the track. A standard disc, stamped "H-13, 1931". 1243.370
- J-13 In Martin County, Minnesota, at Welcome, at the foot of the main street, 115 feet west of the northwest corner of the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 22.6 feet south of the south rail and about level with the track. A standard disc, stamped "J-13, 1931" and set in the top of a concrete post. 1235.427
- K-13 In Martin County, Minnesota, 3.9 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Fairmont, 12.0 feet west-northwest of the fifth power-line pole west of a road crossing, 45.2 feet south of the south rail, 2.6 feet north of the right-of-way fence line and about level with the track. A standard disc, stamped "K-13, 1931" and set in the top of a concrete post. 1210.667

## SIOUX FALLS JCT., S. D., to LA CROSSE, WIS.

El. Ft.

- L-13 In Martin County, Minnesota, at Fairmont, on the west side of the post-office building, on the south side of the steps at the main entrance, 4.5 feet west of the wall and 2.0 feet above the level of the pavement. A standard disc, stamped "L-13, 1931". 1187.012
- M-13 In Martin County, Minnesota, 0.6 mile east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Fairmont; 156 feet west-southwest of the intersection of the Chicago, Milwaukee, St. Paul & Pacific Railroad and the Chicago, St. Paul, Minneapolis & Omaha Railway; 46.0 feet west of the first pole west of the crossing; 41.7 feet south of the south rail of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 5.0 feet north of the right-of-way fence line and about level with the track. A standard disc, stamped "M-13, 1931" and set in the top of a concrete post. 1181.776
- N-13 In Martin County, Minnesota, 1.0 mile east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Fairmont; 45.0 feet north of the north rail; 32.0 feet west-northwest of the first pole east of the yard-limit sign; 19.0 feet east-southeast of a fence corner; 2.9 feet south of the right-of-way fence line and about 3.0 feet below the level of the track. A standard disc, stamped "N-13, 1931" and set in the top of a concrete post. 1161.336
- P-13 In Martin County, Minnesota, 3.9 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Fairmont; 5 rails east of a crossing; 34.0 feet south of the south rail; 3.4 feet north of the right-of-way fence line and about 3.0 below the level of the track. A standard disc, stamped "P-13, 1931" and set in the top of a concrete post. 1141.031
- Q-13 In Martin County, Minnesota, at Granada, 330 feet west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 94.7 feet south of the south rail; 11.5 feet northwest of a fence corner; 2.7 feet north of the railroad yard fence line and about 1.0 foot below the level of the track. A standard disc, stamped "Q-13, 1931" and set in the top of a concrete post. 1124.046
- R-13 In Martin County, Minnesota, 3.9 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from the station at Granada; 54.0 feet northwest



El. Ft.

of a crossing; 44.1 feet north of the north rail; 8.5 feet west-southwest of a fence corner; 2.7 feet south of the right-of-way fence line and about 2.0 feet below the level of the track. A standard disc, stamped "R-13, 1931" and set in the top of a concrete post. 1107.498

S-13 In Faribault County, Minnesota, at Huntley, 390 feet northeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 125 feet northwest of a crossing; 77.0 feet northeast of a fence corner; 44.7 feet northwest of the northwest rail; 1.8 feet southeast of the right-of-way fence line and about 3.0 feet below the level of the track. A standard disc, stamped "S-13, 1931" and set in the top of a concrete post. 1090.572

T-13 (City of Winnebago) In Faribault County, Minnesota, at Winnebago, in the north wall of the high-school building; 1.0 foot west of the west side of the entrance and 3.8 feet above the steps. A standard disc, stamped "T-13, 1931" and set vertically in the brick wall. 1114.210

F-4 In Faribault County, Minnesota, 800 feet south of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Winnebago; 500 feet north of the railroad intersection; east of culvert L-58; 56.0 feet north of a crossroad and 35.0 feet northeast of the railroad; at the fence line. A standard disc, stamped "F-4, 1930" and set in the top of a concrete post. 1095.579

For descriptions of additional bench marks in this vicinity, see pages 20 and 21.

LINE 928. FORT DODGE to SERGEANT BLUFF, IOWA  
(First-order Leveling)

This Line follows the Illinois Central Railroad from Fort Dodge to Rockwell City; and the Chicago & North Western Railway from Rockwell City, through Sac City and Correctiville to Sergeant Bluff, Iowa.

The field work was done during the fall of 1933, by a party in charge of A. L. Wardwell. Elevations are based on the 1929 General Adjustment of the First-order Level Net.

For descriptions of additional bench marks in this vicinity, see pages 31 and 32.

- 
- |  | El. Ft.  |
|--|----------|
| 1099 (U.S.G.S.) In Webster County, at Fort Dodge, in the front wall of the post office, 12 inches south of the north edge, and 20 inches above the sidewalk. A United States Geological Survey standard disc, stamped "1919-Iowa, 1099" and set vertically.  | 1098.571 |
| A-13 In Webster County, about 2.5 miles northwest along the Illinois Central Railroad from Fort Dodge, 60.0 yards west of semaphore #377.6; at bridge #W-377.6, in the top of the southwest end of the southeast concrete abutment, and 9.5 feet southwest of the center line of the track. A standard disc, stamped "A-13, 1933".   | 1015.526 |
| 1120 (U.S.G.S.) In Webster County, about 2.5 miles northwest along a country road from Fort Dodge, at corner Sections 23, 24, 25 and 26, T-89-N, R-29-W; 75.0 yards south of a residence at the Oakdale Dairy Farm; 42.5 feet east of the southeast corner of the residence yard; 43.0 feet southeast of an 18-inch maple tree; 29.0 feet north of the center line of the road; and 21.0 feet east of the center line of a T-road. A United States Geological Survey standard cap, stamped "1919-Iowa, 1120" and riveted on the top of a 3.5-inch iron pipe. | 1119.853 |
| B-13 In Webster County, about 1.5 miles east along the Illinois Central Railroad from Tara; 0.5 mile west of milepost #379; 70.0 feet east of the center line of a county highway; 41.5 feet east of the first high tension pole north of the track; 39.9 feet north of the center line of the track; and 10.0 feet south of a   |          |

## LEVELING IN IOWA

- fence line. A standard disc, stamped "B-13, 1933" and set in the top of a concrete monument. El. Ft. 1120.815
- C-13 In Webster County, at Tara, 24.5 feet west of the east end of the Illinois Central Railroad station, in the front wall, and 19.4 feet north of the center line of the track, 4.0 feet above the platform. A standard disc, stamped "C-13, 1933" and set vertically. 1148.981
- Top of E rail at the intersection of Minneapolis & St. Louis Railroad with Illinois Central Railroad at Tara. 1148.3
- D-13 In Webster County, about 1.0 mile west along the Illinois Central Railroad from Tara, 47.0 yards west of milepost #0-382, near the west end of the railroad yards, 36.5 feet west of the west end of a switch point, 24.0 feet south of the center line of the south main track, and 21.5 feet northwest of a pole. A standard disc, stamped "D-13, 1933" and set in the top of a concrete monument. 1151.697
- E-13 In Webster County, about 5.0 miles southwest along the Illinois Central Railroad from Tara, 100 yards west of milepost #0-130-386, at bridge #WA-386.1, in the top of the east concrete abutment, and 9.2 feet southeast of the center line of the main track. A standard disc, stamped "E-13, 1933". 1170.188
- F-13 In Calhoun County, at Knierim, 111 feet west of the west end of the Illinois Central Railroad station, about 30.0 yards south of the center line of a dirt road paralleling the track, and 16.5 feet south of the center line of the main track. A standard disc, stamped "F-13, 1933" and set in the top of a concrete monument. 1175.464
- G-13 In Calhoun County, about 2.5 miles northeast along the Illinois Central Railroad from Richards, 50.0 yards north of pole #440-10 on the Chicago, Rock Island & Pacific Railway, 12.0 yards east of the bridge over the Chicago, Rock Island & Pacific Railway, in the top of the southwest concrete abutment of cattle pass #WA-391.7; 37.0 feet east of the center line of the Chicago, Rock Island & Pacific Railway, and 10.7 feet south of the center line of the Illinois Central Railroad track. A standard disc, stamped "G-13, 1933". 1202.547
- H-13 In Calhoun County, at Richards, about 120 feet east of the east end of the Illinois Central Railroad

El. Ft.

station, 11.5 feet east of the east end of the platform, and 18.0 feet south of the center line of the main track. A standard disc, stamped "H-13, 1933" and set in the top of a concrete monument.

1187.970

J-13 In Calhoun County, about 2.0 miles northeast along the Illinois Central Railroad from Rockwell City, 300 yards east of milepost #398; 47.0 feet northwest of pole #E-50; 38.0 feet north of a fence along the south side of the right-of-way, 29.5 feet east of the center of a dirt road crossing, and 11.0 feet south of the south rail. A standard disc, stamped "J-13, 1933" and set in the top of a concrete monument.

1202.553

K-13 In Calhoun County, at Rockwell City, about 300 yards east of the Illinois Central Railroad station, at a railroad junction, 42.0 feet west of the southwest corner of the junction control house, 24.6 feet north of the north rail of the Illinois Central Railroad, 21.0 feet northeast of the northeast rail of the Fort Dodge, Des Moines & Southern Railroad, and 13.3 feet west of the west rail of the Chicago, Milwaukee, St. Paul & Pacific Railroad. A standard disc, stamped "K-13, 1933" and set in the top of a concrete monument.

1217.150

L-13 In Calhoun County, at Rockwell City, 120.6 feet southeast of the southwest corner of the courthouse, at the south side of the yard, 31.0 feet north of the north curb line of a street parallel to the south side of the courthouse, 6.0 feet east of the east edge of a concrete walk leading to the courthouse, and 5.0 feet south of the flagpole. A standard disc, stamped "L-13, 1933" and set in the top of a concrete monument.

1233.990

M-13 In Calhoun County, at the north part of Rockwell City, 0.5 mile northwest of the Chicago, St. Paul & Pacific Railroad station, 92.0 feet east of the west switch point of a wye, 31.0 feet east of the center line of a north-and-south dirt road, 30.0 yards southwest of a house owned by L. A. Gochiguan, 5.5 feet east of a pole, in a garden, and 3.0 feet south of the southwest corner of the fence. A standard disc, stamped "M-13, 1933" and set in the top of a concrete monument.

1229.630

For descriptions of additional bench marks in this vicinity, see page 129.

N-13 In Calhoun County, 3.0 miles west along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Rock-

- El. Ft.
- well City, just west of a road between Sections 27 and 28, T-88-N, R-33-W; 64.6 feet west of a pole, 47.8 feet north of the center line of the main track, 41.0 feet west of the center line of a north-and-south dirt road, 12.0 feet west of a fence corner, and 1.5 feet west of the fence line. A standard disc, stamped "N-13, 1933" and set in the top of a concrete monument. 1233.029
- P-13 In Calhoun County, 5.0 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Lytton (Sac County), in the NE $\frac{1}{4}$  of Section 26, T-88-N, R-34-W, just west of a road crossing, 38.0 feet southwest of the southeast corner of a field, 30.3 feet north of the center line of the track, and 19.5 feet south of the north right-of-way fence. A standard disc, stamped "P-13, 1933" and set in the top of a concrete monument. 1218.980
- Q-13 In Calhoun County, 1.25 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Lytton (Sac County), 62.0 feet west of the crossing of a road between Sections 20 and 21, T-88-N, R-34-W, 44.0 feet northwest of a fence corner, 28.7 feet south of the center line of the track, and 15.5 feet northwest of a pole. A standard disc, stamped "Q-13, 1933" and set in the top of a concrete monument. 1207.560
- R-13 In Sac County, at Lytton, 125 yards west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 93.0 feet south of the center line of U. S. Highway #20; 82.0 feet northwest of the northwest corner of the Lytton Grain Company elevator, 32.0 feet west of the center of a road crossing, 30.8 feet north of the center line of the track, and 18.0 feet west of a power-transmission pole. A standard disc, stamped "R-13, 1933" and set in the top of a concrete monument. 1222.727
- S-13 In Sac County, 2.8 miles east along the Chicago, Milwaukee, St. Paul & Pacific Railroad from Sac City, just east of the crossing of the dirt road between Sections 20 and 21, T-88-N, R-35, W, 79.0 yards south of the center line of U. S. Highway #20; 35.2 feet north of the center line of the track, 31.0 feet east of the center line of the road, and 16.6 feet south of a fence corner. A standard disc, stamped "S-13, 1933" and set in the top of a concrete monument. 1231.297
- T-13 In Sac County, at Sac City, 98.1 feet east of the east end of the Chicago, Milwaukee, St. Paul & Pacific Railroad station, 100 feet west of the water

El. Ft.

tank; 69.6 feet north of the north curb line of Sioux Street; and 17.9 feet south of the south rail of the main track. A standard disc, stamped "T-13, 1933" and set in the top of a concrete monument.

1200.066

SAC CITY In Sac County, at Sac City, at a park about 60.0 yards south of the county courthouse; 129.3 feet east of the east curb line of West State Street; at the Union Soldiers' Memorial Monument; 39.4 feet north-east of the northwest corner of the bottom step; 37.1 feet north of the northeast corner of the bottom step; 12.1 feet south of the south curb line of Main Street; and 2.0 feet north of the north edge of the sidewalk. A standard disc, stamped "SAC CITY-1933" and set in the top of a 4-inch heavy water main embedded in concrete and projecting 16 inches above ground.

1211.261

1211.6 (City of Sac City) In Sac County, at Sac City; 50.0 yards southwest of the southwest corner of the courthouse; near the southwest corner of the yard; 28.5 feet east of the east curb line of West State Street; 17.1 feet east of a fire hydrant; 8.4 feet north of the north curb line of Main Street; and 2.6 feet south of the south edge of the sidewalk. A copper bolt, set in the top of a concrete monument, flush with the ground. (Old City B.M.)

1211.615

U-13 In Sac County, at Sac City, 27.6 feet south of the northwest corner of the Chicago & North Western Railway station; in the front or west brick wall; 31.5 feet north of the middle of the bay window; 21.6 feet east of the center line of the track; and 4.1 feet above the platform. A standard disc, stamped "U-13, 1933" and set vertically.

1279.801

1274.4 (City of Sac City) In Sac County, at Sac City, on Main Street, across from the Chicago & North Western Railway station; at the east side of the main entrance to the Wayt & Son building; and on the top of the northeast corner of a stone column base. An unmarked point. (New City B.M.)

1274.387

Depot (C. & N.W. Ry.) (709.74) In Sac County, at Sac City, 13.7 feet north of the southwest corner of the Chicago & North Western Railway station, at the ladies waiting room, and on the southwest corner of the metal doorsill. An unmarked point.

1276.759

RV 1 (C & N.W. Ry.) In Sac County, at Sac City, di-

## LEVELING IN IOWA

- rectly in front of the bay window of the Chicago & North Western Railway station; and in the top of the concrete curb along the platform. A standard monel-metal rivet. El. Ft. 1275.286
- RV 2 (C. & N.W. Ry.) In Sac County, 1.5 miles west along the Chicago & North Western Railway from the station at Sac City; 0.9 mile west of milepost #14, at the south side of Section 15, T-88-N, R-36-W, at culvert #1443; and in the center of the top of the north concrete head wall, 1.0 foot west of the east end. A standard monel-metal rivet. 1285.414
- Bridge #1443 (C & N.W. Ry.) (719.00) In Sac County, 1.5 miles west along the Chicago & North Western Railway from the station at Sac City; 0.9 mile west of milepost #14, at the south side of Section 15, T-88-N, R-36-W; at a culvert, and on the top of the northwest corner of the north concrete head wall. An unmarked point. 1285.362
- RV 3 (C. & N.W. Ry.) In Sac County, 2.9 miles west along the Chicago & North Western Railway from Sac City; about 0.33 mile west of milepost #16; at Section 16, T-88-N, R-36-W; at culvert #1450; and in the top of the east end of the north concrete head wall. A standard monel-metal rivet. 1296.818
- Bridge #1450 (C. & N.W. Ry.) (730.25) In Sac County, 2.9 miles west along the Chicago & North Western Railway from Sac City; about 0.33 mile west of milepost #16; at Section 16, T-88-N, R-36-W, at a culvert, and on the top of the northwest corner of the north concrete head wall. An unmarked point. 1296.707
- RV 4 (C. & N.W. Ry.) In Sac County, 3.8 miles west along the Chicago & North Western Railway from Sac City; about 980 feet west of milepost #17; at NW $\frac{1}{4}$  of Section 17, T-88-N, R-36-W; at bridge #1451 over drainage ditch #71; in the top of the east concrete back wall; 2.6 feet south of the north end; and 7.7 feet north of the north rail. A standard monel-metal rivet. 1299.883
- Bridge #1451 (C & N.W. Ry.) (733.40) In Sac County, 3.8 miles west along the Chicago & North Western Railway from Sac City; 980 feet west of milepost #17, in

El. Ft.

NW $\frac{1}{4}$  of Section 17, T-88-N, R-36-W; at bridge #1451 over drainage ditch #71; and in the top of the northeast corner of the west concrete bridge seat. An unmarked point.

1297.520

V-13 In Sac County, 4.0 miles west along the Chicago & North Western Railway from Sac City; 400 yards west of bridge #1451; at the NE corner of Section 18, along the road between Sections 17 and 18, T-88-N, R-36-W, 80.0 feet north of a willow tree, 16.0 feet west of the center of a road crossing; 33.6 feet south of the center line of the track; and 17.0 feet north of the south right-of-way fence line. A standard disc, stamped "V-13, 1933" and set in the top of a concrete monument.

1305.109

RV 5 (C. & N.W. Ry.) In Sac County, 4.75 miles west along the Chicago & North Western Railway from Sac City; 720 feet west of milepost #18, at culvert #1454; and in the top of the south stone head wall; 1.0 foot west of the east end. A standard monel-metal rivet.

1317.884

Bridge #1454 (C. & N.W. Ry.) (750.88) In Sac County, 4.75 miles west along the Chicago & North Western Railway from Sac City, 720 feet west of milepost #18; at SW $\frac{1}{2}$  of Section 7, T-88-N, R-36-W; at a culvert; and in the top of the northwest corner of the north stone head wall. An unmarked point.

1317.346

RV 6 (C. & N.W. Ry.) In Sac County, 3.4 miles east along the Chicago & North Western Railway from Early; about 0.4 mile west of milepost #18, at SE $\frac{1}{2}$  of Section 12, T-88-N, R-37-W, at culvert #1455, and in the top of the north head wall; 1.0 foot west of the east end. A standard monel-metal rivet.

1338.869

W-13 In Sac County, at Early, 55.0 feet southeast of the southeast corner of the Chicago & North Western Railway station; 33.0 feet west of the center of a street crossing; 13.3 feet south of the south rail of a sidetrack; 9.0 feet east of the east edge of the sidewalk; and 5.0 feet northwest of a high-tension pole. A standard disc, stamped "W-13, 1933" and set in the top of a concrete post.

1332.734

RV 7 (C. & N.W. Ry.) In Sac County, 0.75 mile west along the Chicago & North Western Railway from Early, about 0.5 mile west of milepost #22, at SW $\frac{1}{4}$  of Section 4, T-88-N, R-37-W; 60.0 yards east of the road along the west side of Section 4, at culvert #1468, and in



## LEVELING IN IOWA

- the top of the southeast corner of the south stone head wall. A standard monel-metal rivet. El. Ft. 1325.063
- Bridge #1468 (C. & N. W. Ry.) (758.65) In Sac County, 0.75 mile west along the Chicago & North Western Railway from Early, 0.5 mile west of milepost #22; at SW $\frac{1}{4}$  of Section 4, T-88-N, R-37-W; 60.0 yards east of a road along the west side of Section 4; at a culvert; and on the top of the northwest corner of the north stone head wall. An unmarked point. 1325.001
- Bridge #1471 (C. & N. W. Ry.) (740.45) In Sac County, 1.25 miles northwest along the Chicago & North Western Railway from Early; near milepost #23; at Section 5, T-88-N, R-37-W; at north end of a concrete pipe culvert; and on the top of the bell. An unmarked point. 1306.782
- RV 8 (C. & N.W. Ry.) In Sac County, 1.75 miles northwest along the Chicago & North Western Railway from Early; 0.5 mile west of milepost #23; at Section 5, T-88-N, R-37-W; at culvert #1472; and in the top of the southeast corner of the south stone head wall. A standard monel-metal rivet. 1306.612
- RV 9 (C. & N.W. Ry.) In Sac County, 2.25 miles west along the Chicago & North Western Railway from Early; 50.0 feet west of milepost #24; near the SW corner of Section 35, T-89-N, R-37-W; at bridge #1476; and in the top of the north end of the back wall of the west concrete abutment. A standard monel-metal rivet. 1309.935
- Bridge #1477 (C. & N.W. Ry.) (753.57) In Sac County, 2.75 miles west along the Chicago & North Western Railway from Early; 0.5 mile west of milepost #24; at Section 34, T-89-N, R-37-W, at the south end of a cast-iron pipe culvert; and on the top of the bell. An unmarked point. 1319.892
- RV 10 (C. & N.W. Ry.) In Sac County, 4.0 miles west along the Chicago & North Western Railway from Early; 0.8 mile west of milepost #25; at the north side of Section 33, T-89-N, R-37-W; at culvert #1479; and in the top of the northeast corner of the stone cap of the north head wall. A standard monel-metal rivet. 1355.683
- Bridge #1479 (C. & N.W. Ry.) (789.01) In Sac County, 4.0 miles west along the Chicago & North Western Railway from Early; 0.8 mile west of milepost #25; at Section 33, T-89-N, R-37-W; at a culvert; and on the top of the northwest corner of the stone cap of the north head wall. An unmarked point. 1355.575

El. Ft.

X-13 In Sac County, 3.25 miles east along the Chicago & North Western Railway from Schaller; near milepost #26; 0.33 mile west of bridge #1479; 168 yards east of bridge #1479 $\frac{1}{2}$ ; 71.0 feet south of the center line of the road along the north side of Section 33; T-89-N, R-37-W; 34.3 feet south of a 30-inch oak tree; and 25.0 feet north of the center line of the track. A standard disc, stamped "X-13, 1933" and set in the top of a concrete monument. 1373.157

Bridge #1482 (C. & N.W. Ry.) (841.93) In Sac County, 1.25 miles east along the Chicago & North Western Railway from Schaller; near milepost #28; in Section 30, T-89-N, R-37-W; at a culvert; and on the top of the southeast corner of the south head wall. An unmarked point. 1406.920

Y-13 In Sac County, at Schaller, 131.3 feet west of the west end of the Chicago & North Western Railway station; 67.3 feet northeast of the northeast corner of a concrete grain elevator; 20.5 feet south of the center line of the main track; and 15.2 feet west of the west curb line of a paved street. A standard disc, stamped "Y-13, 1933" and set in the top of a concrete monument. 1396.690

Bridge #1491 (C. & N.W. Ry.) (777.92) In Sac County, 1.6 miles west along the Chicago & North Western Railway from Schaller; 0.25 mile west of milepost #31; at the SW $\frac{1}{4}$  of Section 22, T-89-N, R-38-W; south of the track; and on the top of the bell of a cast iron culvert. An unmarked point. 1344.207

RV 11 (C. & N.W. Ry.) In Sac County, 3.75 miles west along the Chicago & North Western Railway from Schaller; 0.33 mile west of milepost #33; at Section 29, T-89-N, R-38-W; at culvert #1497; and in the top of the east end of the north concrete head wall. A standard monel-metal rivet. 1321.146

Bridge #1497 (C. & N. W. Ry.) (754.47) In Sac County, 3.75 miles west along the Chicago & North Western Railway from Schaller; 0.33 mile west of milepost #33; at Section 29, T-89-N, R-38-W; at a culvert; and on the top of the northwest corner of the concrete head wall. An unmarked point. 1321.083

Z-13 In Sac County, 4.0 miles west along the Chicago & North Western Railway from Schaller; 0.25 mile east

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- of milepost #34; at Section 30, T-89-N, R-38-W; 40.0 yards west of the center line of the road running along the east side of Section 30; 40.0 feet northeast of a fence corner; at a 6- by 6-foot concrete underpass #1498; in the top of the southwest corner of the south abutment; and 10.8 feet south of the south rail. A standard disc, stamped "Z-13, 1933". El. Ft. 1318.393
- Water Tank (C & N.W. Ry.) (722.01) In Ida County, at Galva, near the east end of the Chicago & North Western Railway station; at the water tank; and on the top of the northeast corner of the footing of the west pedestal nearest the track. An unmarked point. 1288.537
- A-14 In Ida County, at Galva, 119.4 feet west of the west end of the Chicago & North Western Railway station; 70.5 feet west of the center of a street crossing; 19.8 feet west of a high-tension pole; 15.1 feet south of the south rail of the main track. A standard disc, stamped "A-14, 1933" and set in the top of a concrete monument. 1287.327
- RV 12 (C & N.W. Ry.) In Ida County, at the west part of Galva, on the Chicago & North Western Railway, 0.5 mile west of milepost #36; at culvert #1509; and in the top of the southeast corner of the stone cap of the south head wall. A standard monel-metal rivet. 1285.043
- RV 13 (C. & N.W. Ry.) In Ida County, 3.1 miles southwest along the Chicago & North Western Railway, from Galva; 0.4 mile west of milepost #39; at Section 33, T-89-N, R-39-W; at culvert #1522; and in the top of the northwest corner of the north stone head wall; 6 inches south of the north edge. A standard monel-metal rivet. 1264.791
- B-14 In Ida County, 4.3 miles southwest along the Chicago & North Western Railway from Galva; 150 yards east of the east end of the bridge #1528; at the NE $\frac{1}{4}$  of Section 32, T-89-N, R-39-W; 46.8 feet northeast of the center line of the track; 36.0 feet west of the center line of the road running along the east side of Section 32; and 6.3 feet south of a high-tension pole. A standard disc, stamped "B-14, 1933" and set in the top of a concrete monument. 1283.252
- RV 14 (C & N.W. Ry.) In Ida County, about 3.4 miles east along the Chicago & North Western Railway from Holstein; 0.8 mile west of milepost #41; at Section 29,

El. Ft.

T-39-N, R-39-W; at culvert #1531; and in the top of the northeast corner of the north stone head wall. A standard monel-metal rivet.

1319.938

Bridge #1535 (C. & N.W. Ry.) (788.50) In Ida County, about 2.5 miles east along the Chicago & North Western Railway from Holstein; at Section 30, T-89-N, R-39-W; at a culvert; and in the top of the east end of the capstone of the north stone head wall. The top of a 1-inch iron rivet.

1354.991

RV-15 (C. & N.W. Ry.) In Ida County, about 2.2 miles east along the Chicago & North Western Railway from Holstein; 250 feet west of milepost #43; at the west side of Section 30, T-89-N, R-39-W; at culvert #1537; and in the top of the southeast corner of the south stone head wall. A standard monel-metal rivet.

1367.104

RV-16 (C. & N.W. Ry.) In Ida County, about 1.4 miles east along the Chicago & North Western Railway from Holstein, 0.9 mile west of milepost #43; at Section 29, T-89-N, R-40-W, at culvert #1542, and in the top of the southeast corner of the south stone head wall. A standard monel-metal rivet.

1408.678

C-14 In Ida County, at Holstein, 111.8 feet northeast of the northeast corner of the Chicago & North Western Railway station; 5.0 feet west of bridge #1546; 14.4 feet north of the north rail of a sidetrack; and 6.8 feet east of the east edge of the pavement. A standard disc, stamped "C-14, 1933" and set in the top of a concrete monument.

1446.060

Bridge #1558 (C. & N.W. Ry.) (870.03) In Ida County, about 3.3 miles west along the Chicago & North Western Railway from Holstein; 0.5 mile west of milepost #48; at a cast-iron pipe culvert; and on the top of the north bell. An unmarked point.

1436.316

D-14 In Ida County, about 3.4 miles west along the Chicago & North Western Railway from Holstein; 120 yards west of bridge #1559; 16.0 yards west of the brow of a small knoll; 45.4 feet south of the center line of the track; and 41.3 feet north of the center line of U. S. Highway #20. A standard disc, stamped "D-14, 1933" and set in the top of a concrete monument.

1427.543

RV 17 (C. & N.W. Ry.) In Ida County, about 1.8 miles east along the Chicago & North Western Railway from

- El. Ft.
- Cushing (Woodbury County); 0.6 mile west of milepost #50; at culvert #1571; and in the top of the northeast corner of the north stone head wall. A standard monel-metal rivet. 1323.022
- Bridge #1571 (C. & N.W. Ry.) (756.25) In Ida County, about 1.8 miles east along the Chicago & North Western Railway from Cushing (Woodbury County); 0.6 mile west of milepost #50; at a culvert; and on the top of the northwest corner of the north head wall. An unmarked point. 1323.032
- Bridge #1576 (C. & N. W. Ry.) (739.54) In Ida County, about 1.0 mile east along the Chicago & North Western Railway from Cushing (Woodbury County); 0.5 mile west of milepost #51; on the north side of the track; at a cast-iron pipe culvert, and on the top of the north bell. An unmarked point. 1306.251
- E-14 In Woodbury County, at Cushing, about 100 feet west of the west end of the Chicago & North Western Railway station; 35.0 yards northwest of the northwest corner of a grain elevator; 43.2 feet north of the north rail of the south sidetrack; and 17.4 feet south of the south rail of the main track. A standard disc, stamped "E-14, 1933" and set in the top of a concrete monument. 1276.100
- F-14 In Woodbury County, about 3.0 miles west along the Chicago & North Western Railway from Cushing, 162 yards west of milepost # WL-55; 46.7 feet north of the center line of the track; 34.0 feet east of the center line of a north-and-south dirt road; and 4.0 feet south of the right-of-way fence. A standard disc, stamped "F-14, 1933" and set in the top of a concrete monument. 1206.097
- G-14 In Woodbury County, at the east edge of Correctionville, about 0.25 mile east of the Chicago & North Western Railway station; 47.2 feet north of the center line of the track; 47.0 feet south of an 18-inch box elder tree; 43.0 feet east of the center line of a street; and 12.0 feet south of a wall. A standard disc, stamped "G-14, 1933" and set in the top of a concrete monument. 1142.816
- RV-18 (C. & N.W. Ry.) In Woodbury County, at Correctionville, at the east end of the Chicago & North Western Railway station; at the water tank, and in the top of the east stone pedestal nearest the track. A standard monel-metal rivet. 1131.428

El. Ft.

CORRECTIONVILLE In Woodbury County, at the top of the north rail at the crossing of the Chicago & North Western Railway and the Illinois Central Railroad, midway between the rails.

1127.7

H-14 In Woodbury County, at the northwest part of Correctionville, on the Chicago & North Western Railway, at the bridge over Little Sioux River; 5.4 feet north of the north edge of the bearing plate; and in the center of the top of the southeast concrete pier; 1.9 feet south of the north point. A standard disc, stamped "H-14, 1933".

1120.601

For descriptions of additional bench marks in this vicinity, see pages 62 and 63.

RV-19 (C. & N.W. Ry.) In Woodbury County, about 1.8 miles northwest along the Chicago & North Western Railway from Correctionville; 0.9 mile west of milepost #59; at bridge #1607; and in the top of the north end of the east concrete back wall. A standard monel-metal rivet.

1135.716

J-14 In Woodbury County, about 1.8 miles northwest along the Chicago & North Western Railway from Correctionville; at bridge #1607; 2.8 feet south of the south edge of the bearing plate; in the center of the top of the west concrete pier. A standard disc, stamped "J-14, 1933".

1131.366

K-14 In Woodbury County, about 4.0 miles northwest along the Chicago & North Western Railway from Correctionville; 50.0 feet north of the center line of an east-and-west county road; 48.7 feet southwest of the center line of the track; 20.0 feet south of a pole; and 3.0 feet east of a right-of-way fence corner. A standard disc, stamped "K-14, 1933" and set in the top of a concrete monument.

1195.112

L-14 In Woodbury County, at Pierson, 153.2 feet southeast of the south corner of the Chicago & North Western Railway station; 56.0 feet southeast of the center of a crossing; 19.6 feet northeast of the center line of the track; and 12.5 feet southeast of a switch point. A standard disc, stamped "L-14, 1933" and set in the top of a concrete monument.

1269.013

Depot Platform (C. & N.W. Ry.) (808.11) In Woodbury County, at Pierson, at the east end of the Chicago &

## LEVELING IN IOWA

- North Western Railway station platform, and on the top of the east end of the concrete curb along the platform. The center of a chiseled circle. El. Ft. 1269.942
- Bridge #1638 (C. & N.W. Ry.) (763.56) In Woodbury County, about 1.8 miles northwest along the Chicago & North Western Railway from Pierson; 0.25 mile west of milepost #66; at a culvert; and on the top of the northwest corner of the north stone head wall. An unmarked point. 1330.476
- RV-20 (C. & N.W. Ry.) In Plymouth County, about 2.2 miles northwest along the Chicago & North Western Railway from Pierson (Woodbury County); 0.6 mile west of milepost #66; at culvert #1640; and in the top of the south concrete head wall; 2.0 inches east of the west end. A standard monel-metal rivet. 1336.953
- M-14 In Plymouth County, about 2.8 miles northwest along the Chicago & North Western Railway from Pierson (Woodbury County); at the NW $\frac{1}{4}$  of Section 35, T-90-N, R-43-W; 175 feet southeast of the south end of bridge #1643; 45.2 feet east of the center line of the track; 39.0 feet south of the center of a road crossing; and 4.0 feet west of the right-of-way fence line. A standard disc, stamped "M-14, 1933" and set in the top of a concrete monument. 1354.666
- Bridge #1644 (C. & N. W. Ry.) (808.11) In Plymouth County, about 3.4 miles northwest along the Chicago & North Western Railway from Pierson (Woodbury County); near milepost #68; at a cast-iron culvert; and on the top of the north bell. An unmarked point. 1375.010
- Bridge #1649 (C. & N. W. Ry.) (743.04) In Plymouth County, about 2.1 miles east along the Chicago & North Western Railway from Kingsley; between mileposts #69 and #70; at a culvert; and on the top of the southeast corner of the south head wall. An unmarked point. 1309.961
- T. B. M. #98 In Plymouth County, about 2.1 miles east along the Chicago & North Western Railway from Kingsley; between mileposts #69 and #70; at culvert #1649; and in the top of the north stone head wall; 1.0 foot west of the east end. The top of a 1-inch iron rivet. 1311.096
- RV-21 (C. & N.W. Ry.) In Plymouth County, at Kingsley, on the Chicago & North Western Railway; 460 feet west

El. Ft.

of milepost #71; at the water tank, and in the top of the northwest corner of the west concrete pedestal nearest the track. A standard monel-metal rivet.

1238.216

KINGSLEY In Plymouth County, in the west part of Kingsley, at the city park, 229.5 feet south of the center line of an east-and-west street; 79.5 feet west of the center line of a north-and-south street; 19.4 feet north of a 10-inch elm tree; 18.4 feet south of a 12-inch elm tree; and in line with the third row of elm trees from the east side of the park. A standard disc, stamped "KINGSLEY-1933" and set in the top of a concrete monument.

1255.237

RV-22 (C. & N.W. Ry.) In Plymouth County, about 1.75 miles southwest along the Chicago & North Western Railway from Kingsley; 265 feet east of milepost #73; north of the track, at culvert #1660; and in the top of the east end of the stone head wall. A standard monel-metal rivet.

1219.332

Bridge #1662 (C. & N.W. Ry.) (639.34) In Plymouth County, about 2.3 miles southwest along the Chicago & North Western Railway from Kingsley; near mileage 73.6; at a culvert, and on the top of the southwest corner of the west concrete head wall. An unmarked point.

1206.297

N-14 In Plymouth County, about 3.0 miles southwest along the Chicago & North Western Railway from Kingsley; at culvert #1666; in the top of the southwest corner of the west concrete head wall; and 6.2 feet southeast of the southeast rail. A standard disc, stamped "N-14, 1933".

1202.435

RV-23 (C. & N.W. Ry.) In Plymouth County, about 3.0 miles southwest along the Chicago & North Western Railway from Kingsley; 760 feet west of milepost #74; at culvert #1666; and in the top of the northeast corner of the north concrete head wall. A standard monel-metal rivet.

1202.366

RV-24 (C. & N.W. Ry.) In Woodbury County, about 4.0 miles southwest along the Chicago & North Western Railway from Kingsley; (Plymouth County); 855 feet west of milepost #75; at culvert #1670; and in the top of the east end of the north concrete head wall. A standard monel-metal rivet.

1181.710

P-14 In Woodbury County, about 2.0 miles northeast



- El. Ft.
- along the Chicago & North Western Railway from Moville; 130 feet northeast of milepost #78; 40.5 feet northwest of the center line of the track; 25.0 feet northeast of the center of a farm road crossing; and 22.5 feet southwest of a pole. A standard disc, stamped "P-14, 1933" and set in the top of a concrete monument. 1189.250
- RV-25 (C. & N. W. Ry.) In Woodbury County, at the north part of Moville, on the Chicago & North Western Railway; about 280 feet east of milepost #80; at the water tank; and in the top of the southwest corner of the concrete footing of the west pedestal nearest the track. A standard monel-metal rivet. 1149.620
- Q-14 In Woodbury County, at Moville, 194 feet southwest of the southwest end of the Chicago & North Western Railway station; 60.0 yards northeast of the middle of the Standard Oil Company's storage tanks; 25.4 feet northwest of the center line of the south sidetrack; and 17.2 feet southeast of the center line of the main track. A standard disc, stamped "Q-14, 1933" and set in the top of a concrete post. 1148.062
- MOVILLE In Woodbury County, at Moville, on Main Street, in the front or south stone wall of the Everhart Building; 1.0 foot west of the southwest corner; 62.4 feet west of the west curb line of Second Street; 10.2 feet north of the north curb line of Main Street; and 3.0 feet above the sidewalk. A standard disc, stamped "MOVILLE-1933" and set vertically. 1179.784
- RV-26 (C. & N. W. Ry.) In Woodbury County, at the west part of Moville, on the Chicago & North Western Railway; about 0.7 mile west of milepost #80; at bridge #1688; and in the top of the south end of the west concrete back wall. A standard monel-metal rivet. 1146.940
- Bridge #1693 (C. & N. W. Ry.) (622.70) In Woodbury County, about 2.0 miles west along the Chicago & North Western Railway from Moville; near milepost #82; at the south end of a concrete pipe culvert; and on the top of the bell. An unmarked point. 1188.679
- NOTE: The pre-cast concrete pipe and bell are in poor condition.
- R-14 In Woodbury County, about 3.8 miles west along the Chicago & North Western Railway from Moville; 0.3 mile east of bridge #1701; 76.0 feet north of the center line of the track; 34.0 feet east of the center

El. Ft.

line of a north-and south dirt road; 16.0 feet east of a fence corner; and 3.0 feet south of the right-of-way fence line. A standard disc, stamped "R-14, 1933" and set in the top of a concrete monument.

1252.514

Bridge #1701 (C. & N. W. Ry.) (None) In Woodbury County, about 4.1 miles west along the Chicago & North Western Railway from Moville; at milepost #84; at a culvert; and on the top of the northwest corner of the north head wall. An unmarked point.

1263.902

S-14 In Woodbury County, at Lawton, 78.6 feet north of the north end of the Chicago & North Western Railway station; 32.0 feet northeast of the end of the station platform; 98.2 feet southeast of an 18-inch cottonwood tree; and 20.5 feet southeast of the center line of the main track. A standard disc, stamped "S-14, 1933" and set in the top of a concrete monument.

1173.206

T-14 In Woodbury County, about 3.0 miles north along the Chicago & North Western Railway from Bronson, near milepost #90; 64.0 feet north of the center line of an east-and-west road; 52.7 feet north of the north end of an 18-inch concrete culvert; 32.4 feet west of the center line of the track; 18.0 feet east of a fence corner; and 3.0 feet north of the fence. A standard disc, stamped "T-14, 1933" and set in the top of a concrete monument.

1128.200

Bridge #1725 (C. & N. W. Ry.) (558.13) In Woodbury County; about 2.2 miles north along the Chicago & North Western Railway from Bronson; at milepost #91; at the north end of an 18-inch concrete culvert; and on the top of the bell. An unmarked point.

1124.348

U-14 In Woodbury County, at Bronson, 101.8 feet west of the northwest corner of the Chicago & North Western Railway station; 86.0 feet south of the center line of a gravel road; 47.6 feet west of a pole; and 40.8 feet north of the center line of the main track. A standard disc, stamped "U-14, 1933" and set in the top of a concrete monument.

1101.937

RV-27 (C. & N. W. Ry.) In Woodbury County, about 2.6 miles west along the Chicago & North Western Railway from Bronson; about 620 feet west of milepost #95; at bridge #1742; and in the top of the north end of the east concrete back wall. A standard monel-metal rivet.

1088.364

## LEVELING IN IOWA

- El. Ft.
- Bridge #1722 (C. & N. W. Ry.) (525.03) In Woodbury County, about 2.6 miles west along the Chicago & North Western Railway from Bronson; at the west end of a bridge; in the top of the north steel girder; and on the top of the southwest rivet. The top of the rivet. 1091.592
- RV-28 (C. & N. W. Ry.) In Woodbury County, about 3.5 miles west along the Chicago & North Western Railway from Bronson; about 1940 feet west of milepost #96; at the Chicago, Milwaukee, St. Paul & Pacific Railroad westbound distant signal; and in the top of the southwest corner of the concrete base. A standard monel-metal rivet. 1086.336
- V-14 In Woodbury County, about 4.2 miles west along the Chicago & North Western Railway from Bronson; 3.0 miles east of Sergeant Bluff; at the crossing of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 80.0 feet east of the center line of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 47.6 feet north of the center line of the Chicago & North Western Railway; and 24.3 feet northeast of a pole. A standard disc, stamped "V-14, 1933" and set in the top of a concrete monument. 1085.519
- Top of the N rail at the crossing of the Chicago & North Western Railway and the Chicago, Milwaukee, St. Paul & Pacific Railroad, midway between the rails about 3.0 miles east of Sergeant Bluff. 1089.1

For descriptions of additional bench marks in this vicinity, see page 7.

LINE 2809. CORRECTIONVILLE to SHELDON, IOWA  
(Second-order Leveling)

This Line follows the Illinois Central Railroad from Correctionville to Sheldon, Iowa. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see pages 55 and 56.

	El. Ft.
<u>L-25</u> In Woodbury County, at Correctionville, 70.0 yards northwest of the Chicago & North Western Railway and the Illinois Central Railroad crossing, along the right-of-way of the Illinois Central Railroad; 92.0 feet southeast of road crossing; 58.2 feet northeast of northeast rail of track; 2.6 feet west of corner fence post. A standard disc, stamped "L-25, 1934" and set in the top of a concrete post three inches high.	1122.176
Top of rail opposite the Chicago & North Western Railway station at Correctionville.	1130.2
Top of rail opposite the Chicago & North Western Railway MP OJ-21; O-38.	1126.0
<u>M-25</u> In Woodbury County, 1.2 miles north of the crossing of the Illinois Central and the Chicago & North Western Railway at Correctionville; 39.2 feet northwest of northwest rail of track; 31.0 feet south of center line of road crossing track; 6.2 feet southeast of corner fence post. A standard disc, stamped "M-25, 1934" and set in the top of a concrete post four inches high.	1131.507
Top of rail opposite the Illinois Central Railroad MP OJ-20; O-39.	1135.1
Top of rail opposite the Illinois Central Railroad MP OJ-19; O-40.	1137.8
<u>N-25</u> In Woodbury County, 3.4 miles north of the crossing of the Chicago & North Western Railway with the Illinois Central Railroad at Correctionville, 112 yards northeast of mileposts #18 and #41; 29.2 feet southeast of southeast rail of track; 19.1 feet west of corner fence post on section line. A standard disc, stamped "N-25, 1934" and set in the top of a concrete post five inches high.	1132.865

- El. Ft.
- P-25 In Woodbury County, 5.2 miles northeast of the crossing of the Chicago & North Western Railway with the Illinois Central Railroad at Correctionville; 2.5 miles southwest of the depot at Washta; .6 telegraph poles south of milepost 16 and 43; 42.0 feet west of center line of State Highway #31; 12.4 feet east of east rail of track. A standard disc, stamped "P-25, 1934" and set in the top of a concrete post five inches high. 1138.433
- Q-25 In Cherokee County, 0.8 mile south of the Illinois Central Railroad depot at Washta; 116 feet southwest of railroad crossing; 30.5 feet west of west rail of track; 15.5 feet east of right-of-way fence; 2.1 feet north of a telegraph pole. A standard disc, stamped "Q-25, 1934" and set in the top of a concrete post five inches high. 1147.199
- R-25 In Cherokee County, at Washta, 170 yards north of the Illinois Central depot; 91.0 yards south of side track switch; 16.0 feet west of west rail of main track; 9.1 feet east of east rail of side track; across side track from stock yards. A standard disc, stamped "R-25, 1934" and set in the top of a concrete post five inches high. 1153.892
- Top of rail opposite the Illinois Central Railroad station at Washta. 1155.3
- S-25 In Cherokee County, 2.0 miles northeast of the Illinois Central depot at Washta; 40.0 yards east of trestle #T-11; 61.0 feet north of center line of State Highway #31; 30.0 feet southeast of center line of road crossing; 21.0 feet south of south rail of track. A standard disc, stamped "S-25, 1934" and set in the top of a concrete post five inches high. 1194.112
- Top of rail opposite the Illinois Central Railroad MP OJ-12. 1188.1
- Top of rail opposite the Illinois Central Railroad MP OJ-10. 1163.3
- T-25 In Cherokee County, 4.3 miles northeast of the Illinois Central depot at Washta; 1.3 miles southwest of Quimby; 90.0 feet northwest of center line of State Highway #31 at bend in road; 44.6 feet north of north rail; 7.6 feet west of gate post; 1.6 feet south of right-of-way fence. A standard disc, stamped "T-25,

	El. Ft.
1934" and set in the top of a concrete post five inches high.	1161.979
<u>U-25</u> In Cherokee County, at <u>Quimby</u> , $4\frac{1}{2}$ telegraph poles northeast of the Illinois Central depot; 85.0 yards west of side track switch; 11.5 feet north of north rail of main track; 9.0 feet south of south rail of side track; 4.8 feet east of milepost 8 and 51. A standard disc, stamped "U-25, 1934" and set in the top of a concrete post three inches high.	1187.839
Top of rail opposite the Illinois Central Railroad station at Quimby.	1186.8
Top of rail opposite the Illinois Central Railroad MP OJ-7.	1186.9
<u>V-25</u> In Cherokee County, 2.1 miles northeast of the Illinois Central depot at <u>Quimby</u> ; 0.5 mile south of bridge over Little Sioux River; 11.4 feet west of west rail of track; 4.3 feet west of milepost 6 and 53. A standard disc, stamped "V-25, 1934" and set in the top of a concrete post three inches high.	1157.908
Top of rail opposite the Illinois Central Railroad MP OJ-5.	1182.3
<u>W-25</u> In Cherokee County, 6.1 miles south of the Illinois Central depot at <u>Cherokee</u> ; 4.0 miles north of the depot at Quimby; 122 yards south of milepost 4 or 55; 46.0 feet northeast of center line of road crossing track; 44.7 feet east of east rail of track; 4.9 feet northwest of gate post. A standard disc, stamped "W-25, 1934" and set in the top of a concrete post five inches high.	1190.427
Top of rail opposite the Illinois Central Railroad MP OJ-4.	1190.6
<u>X-25</u> In Cherokee County, 3.6 miles south of the Illinois Central depot at <u>Cherokee</u> ; 40.0 feet north of center line of road crossing track; 36.4 feet north of gate post; 35.9 feet west of west rail of track; 12.1 feet east of fence; 2.7 feet south of telegraph pole. A standard disc, stamped "X-25, 1934" and set in the top of a concrete post five inches high.	1164.561

For descriptions of additional bench marks in this vicinity, see pages 147 and 148.

## LEVELING IN IOWA

- El. Ft.
- Y-25 In Cherokee County, 2.2 miles south of the Illinois Central depot at Cherokee; 0.5 mile south of Onawa Junction; 38.8 feet west of west rail of track; 9.4 feet east of east rail of track; 6.3 feet south of telegraph pole. A standard disc, stamped "Y-25, 1934" and set in the top of a concrete post five inches high. 1212.885
- Z-25 In Cherokee County, 0.6 mile northeast of the Illinois Central depot at Cherokee; 21.0 feet south of center line of road crossing track; 17.6 feet northwest of northwest rail of track; 6.4 feet southeast of telegraph pole. A standard disc, stamped "Z-25, 1934" and set in the top of a concrete post two inches high. 1214.174
- A-26 In Cherokee County, 1.9 miles northeast of the Illinois Central Railroad depot at Cherokee; 72.0 feet northwest of the center line of State Highway #73; 43.9 feet southeast of southeast rail of track; 32.0 feet north of center line of road crossing; 4.0 feet northwest of corner fence post. A standard disc, stamped "A-26, 1934" and set in the top of a concrete post two inches high. 1220.716
- B-26 In Cherokee County, 3.5 miles north of the Illinois Central Railroad depot at Cherokee; 10 telegraph poles north of milepost #3; across tracks from farmstead; 43.0 feet west of west rail of track; 2.6 feet northeast of corner fence post; 12.0 feet north of center line of road crossing track. A standard disc, stamped "B-26, 1934" and set in the top of a concrete post six inches high. 1276.228
- Top of rail opposite the Illinois Central Railroad MP CK-5. 1336.1
- C-26 In Cherokee County, 5.8 miles north of the Illinois Central depot at Cherokee; 2.4 miles south of depot at Larrabee; 34.0 feet east of east rail of track; 18.0 feet south of center line of road crossing track; 14.0 feet west of corner fence post; 2.0 feet south of right-of-way fence. A standard disc, stamped "C-26, 1934" and set in the top of a concrete post four inches high. 1344.656
- D-26 In Cherokee County, 7.7 miles north of the Illinois Central Railroad depot at Cherokee; 0.5 mile south of Larrabee; 43.9 feet northeast of northeast rail of track; 35.0 feet west of center line of road crossing track; 3.0 feet west of right-of-way fence.

El. Ft.

A standard disc, stamped "D-26, 1934" and set in the top of a concrete post five inches high. 1358.094

Top of rail opposite the Illinois Central Railroad MP CK-7. 1356.4

E-26 In Cherokee County, 9.5 miles north of the Illinois Central Railroad depot at Cherokee; 1.3 miles north of depot at Larrabee; 9 telegraph poles north of milepost #9; 70.0 yards south of trestle "9.4"; 45.4 feet west of west rail of track; 23.0 feet south of center line of road crossing track; 3.1 feet southeast of corner fence post. A standard disc, stamped "E-26, 1934" and set in the top of a concrete post four inches high. 1372.484

Top of rail opposite the Illinois Central Railroad MP CK-9. 1369.4

Top of rail opposite the Illinois Central Railroad MP CK-10. 1390.5

F-26 In O'Brien County, 11.5 miles north of the Illinois Central Railroad depot at Cherokee (Cherokee County); 3.3 miles north of depot at Larrabee; 44.1 feet west of west rail of track; 40.0 feet north of center line of road crossing track; 3.2 feet northeast of corner fence post. A standard disc, stamped "F-26, 1934" and set in the top of a concrete post four inches high. 1406.966

Top of rail opposite the Illinois Central Railroad MP CK-12. 1424.1

G-26 In O'Brien County, 0.5 mile south of the Illinois Central Railroad depot at Calumet; 13.7 miles north of Cherokee; 42.1 feet east of east rail of track; 23.0 feet north of center line of road crossing track; 6.2 feet northwest of corner fence post. A standard disc, stamped "G-26, 1934" and set in the top of a concrete post four inches high. 1441.286

Top of rail opposite the Illinois Central Railroad MP CK-13; SF-84. 1450.7

Top of rail opposite the Illinois Central Railroad MP CK-14; SF-85. 1431.9

Top of rail opposite the Illinois Central Railroad station at Calumet. 1431.8



	El. Ft.
Top of rail opposite the Illinois Central Railroad MP CK-15; SF-82.	1438.2
<u>H-26</u> In <u>O'Brien County</u> , 1.5 miles north of the Illinois Central Railroad depot at <u>Calumet</u> ; 15.7 miles north of Cherokee; 45.5 feet east of east rail of track; 33.0 feet north of center line of State Highway #73; 2.1 feet northwest of corner fence post. A standard disc, stamped "H-26, 1934" and set in the top of a concrete post four inches high.	1428.514
Top of rail opposite the Illinois Central Railroad MP CK-16; SF-81.	1457.2
<u>J-26</u> In <u>O'Brien County</u> , 2.5 miles north of the Illinois Central Railroad depot at <u>Calumet</u> ; 8.4 miles south of depot at Primghar; 4 telegraph poles north of crossing with Chicago & North Western Railway; 45.0 feet west of west rail of track; 29.0 feet north of center line of road crossing track; 2.1 feet east of corner fence post. A standard disc, stamped "J-26, 1934" and set in the top of a concrete post three inches high.	1453.239
Top of rail opposite the Illinois Central Railroad MP CK-17; SF-80.	1478.0
<u>K-26</u> In <u>O'Brien County</u> , 7.0 miles south of the Illinois Central Railroad depot at Primghar; 1.6 miles south of the depot at Gaza; 48.0 yards northwest of road crossing; 42.5 feet northeast of northeast rail of track; 32.0 feet west of center line of road crossing track; 3.1 feet northwest of corner fence post. A standard disc, stamped "K-26, 1934" and set in the top of a concrete post six inches high.	1480.342
Top of rail opposite the Illinois Central Railroad MP CK-18; SF-79.	1487.5
Top of rail opposite the Illinois Central Railroad MP CK-19; SF-78.	1481.6
Top of rail opposite the Illinois Central Railroad station at Gaza.	1505.3
Top of rail opposite the Illinois Central Railroad Mp CK-20; SF-77.	1509.0
<u>L-26</u> IN <u>O'Brien County</u> , 4.7 miles south of the Illinois Central Railroad depot at <u>Primghar</u> ; 0.7 mile	

El. Ft.

north of depot at Gaza; 51.0 yards northwest of road crossing; 43.4 feet northeast of northeast rail of track; 38.0 feet west of center line of road crossing track; 8.4 feet northwest of corner post; 2.4 feet southwest of fence. A standard disc, stamped "L-26, 1934" and set in the top of a concrete post five inches high.

1516.847

M-26 In O'Brien County, 2.4 miles south of the Illinois Central Railroad depot at Primghar; 42.9 feet southwest of southwest rail of track; 32.0 feet north of center line of road crossing track; 2.5 feet northeast of corner fence post. A standard disc, stamped "M-26, 1934" and set in the top of a concrete post five inches high.

1493.701

Top of rail opposite the Illinois Central Railroad MP CK-22; SF-75.

1475.3

Top of rail opposite the Illinois Central Railroad MP CK-23; SF-74.

1472.7

Top of rail opposite the Illinois Central Railroad MP CK-24; SF-73.

1495.4

N-26 In O'Brien County, at Primghar, 5 telegraph poles south of the Illinois Central Railroad depot; 100 yards south of side track switch; 46.7 feet northeast of northeast rail of track; 42.0 feet south of center line of road crossing track; 4.5 feet southwest of corner fence post. A standard disc, stamped "N-26, 1934" and set in the top of a concrete post four inches high.

1508.445

Top of rail opposite the Illinois Central Railroad station at Primghar.

1502.3

Top of rail opposite the Illinois Central Railroad MP CK-25; SF-72.

1501.6

P-26 In O'Brien County, 0.3 mile northwest of the Illinois Central Railroad depot at Primghar; 45.0 feet south of center line of road crossing track; 44.2 feet northeast of northeast rail of track; 6.2 feet south of corner fence post. A standard disc, stamped "P-26, 1934" and set in the top of a concrete post four inches high.

1489.856

Top of rail opposite the Illinois Central Railroad MP CK-26; SF-71.

1456.4

## LEVELING IN IOWA

	El. Ft.
Top of rail opposite the Illinois Central Railroad MP CK-27; SF-70.	1431.1
<u>Q-26</u> In O'Brien County, 2.6 miles northwest of the Illinois Central Railroad depot at <u>Primghar</u> ; 44.3 feet southwest of southwest rail of track; 32.0 feet east of center line of road crossing track; 3.0 feet north- east of corner fence post. A standard disc, stamped "Q-26, 1934" and set in the top of a concrete post five inches high.	1419.800
Top of rail opposite the Illinois Central Railroad MP CK-28; SF-69.	1420.7
Top of rail opposite the Illinois Central Railroad MP CK-29; SF-68.	1428.0
<u>R-26</u> In O'Brien County, 4.9 miles northwest of the Illinois Central Railroad depot at <u>Primghar</u> ; 1.4 miles southeast of depot at <u>Archer</u> ; 5 telegraph poles south- east of milepost #30; 125 yards southeast of road crossing; 43.5 feet southwest of southwest rail of track; 3.5 feet northeast of fence. A standard disc, stamped "R-26, 1934" and set in the top of a concrete post four inches high.	1423.517
Top of rail opposite the Illinois Central Railroad MP CK-30; SF-67.	1432.4
Top of rail opposite the Illinois Central Railroad MP CK-31; SF-66.	1466.8
<u>S-26</u> In O'Brien County, at <u>Archer</u> , 70.0 yards south- east of the Illinois Central Railroad depot; 82.0 feet southwest of center line of road crossing; 69.5 feet south of south rail of main track; 55.4 feet west of corner fence post, 1.8 feet north of fence. A stand- ard disc, stamped "S-26, 1934" and set in the top of a concrete post two inches high.	1473.537
Top of rail opposite the Illinois Central Railroad MP CK-32; SF-65.	1470.3
<u>T-26</u> In O'Brien County, 5.0 miles southeast of the Illinois Central Railroad depot at <u>Sheldon</u> ; 2.0 miles northwest of depot at <u>Archer</u> ; 46.3 feet northeast of northeast rail of track; 30.0 feet east of center line of road crossing track; 4.8 feet southeast of corner fence post. A standard disc, stamped "T-26, 1934" and set in the top of a concrete post four inches high.	1430.266

	El. Ft.
Top of rail opposite the Illinois Central Railroad MP CK-33; SF-64.	1437.7
<u>U-26</u> In <u>O'Brien County</u> , 3.9 miles southeast of the Illinois Central Railroad depot at <u>Sheldon</u> ; 42.2 feet southwest of southwest rail of track; 31.0 feet east of center line of road crossing track; 3.4 feet north- east of corner fence post. A standard disc, stamped "U-26, 1934" and set in the top of a concrete post four inches high.	1416.224
Top of rail opposite the Illinois Central Railroad MP CK-35.	1403.6
<u>V-26</u> In <u>O'Brien County</u> , 1.9 miles southeast of the Illinois Central Railroad depot at <u>Sheldon</u> ; 46.0 feet north of center line of road crossing track; 40.7 feet northeast of northeast rail of track; 17.5 feet north- west of corner fence post; 1.6 feet southwest of fence. A standard disc, stamped "V-26, 1934" and set in the top of a concrete post five inches high.	1416.680
<u>W-26</u> In <u>O'Brien County</u> , 0.6 mile southeast of the Illinois Central Railroad depot at <u>Sheldon</u> ; 0.3 mile southeast of crossing with Chicago, Milwaukee, St. Paul & Pacific Railway; 44.0 feet southwest of southwest rail of track; 30.0 feet east of center line of road crossing track; 6.3 feet southeast of corner fence post. A standard disc, stamped "W-26, 1934" and set in the top of a concrete post four inches high.	1405.726
Top of rail opposite the Illinois Central Railroad MP CK-37.	1408.3
Top of rail opposite the Illinois Central Railroad MP CK-38.	1418.3
For descriptions of additional bench marks in this vi- cinity, see pages 76, 77, 161, 162 and 163.	

LINE 2810. CANTON, SOUTH DAKOTA to SPENCER, IOWA  
(Second-order Leveling)

This Line follows the Chicago, Milwaukee, St. Paul & Pacific Railroad from Canton, South Dakota, to Spencer, Iowa. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see page 11.

	El. Ft.
<u>A-131</u> In <u>Lincoln County</u> , South Dakota, 1.7 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Canton</u> ; at the crossing of U. S. Highway #18; 85.2 feet southwest of intersection with Highway; 44.9 feet south of south rail of track; 70.0 feet west of right-of-way fence corner and 1.2 feet north of right-of-way fence. A standard disc, stamped "A-131, 1934" and set in the top of a concrete post six inches high.	1248.357
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 293.	1247.6
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 292.	1252.2
<u>B-131</u> In <u>Lincoln County</u> , South Dakota, 3.0 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Canton</u> ; 150 yards west of west end of bridge across <u>Sioux River</u> ; 45.0 feet north of north rail of track; 1.5 feet south of right-of-way fence. A standard disc, stamped "B-131, 1934" and set in the top of a concrete post six inches high.	1251.264
<u>Q-9</u> In <u>Lyon County</u> , Iowa, 3.3 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Canton</u> , South Dakota; 132 yards east of east end of the bridge across the <u>Sioux River</u> ; 45.5 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "Q-9, 1934" and set in the top of a concrete post four inches high.	1243.941
<u>R-9</u> In <u>Lyon County</u> , Iowa, 2.7 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Inwood</u> ; 0.3 mile west of milepost #289; 130 yards southwest of bridge #800; 100 yards northeast of bridge #802; 58.0 feet northwest of intersection of railroad	

El. Ft.

and section line road; 44.1 feet northwest of northwest rail of track; 38.0 feet northeast of right-of-way fence corner; 1.6 feet southeast of fence. A standard disc, stamped "R-9, 1934" and set in the top of a concrete post four inches high.

1339.092

S-9 In Lyon County, Iowa, 1.1 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Inwood; 0.3 mile east of milepost #288; 93.0 feet northwest of intersection with section line road running north and south; 46.6 feet north of north rail of track; 13.5 feet west of right-of-way fence corner; 1.2 feet south of fence. A standard disc, stamped "S-9, 1934" and set in the top of a concrete post four inches high.

1423.347

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 288.

1406.6

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Inwood.

1468.2

T-9 In Lyon County, Iowa, on the Chicago, Milwaukee St. Paul & Pacific Railroad right-of-way at Inwood; 52.4 feet southeast of southeast corner of the station; 15.8 feet northeast of northeast rail of main track; 29.9 feet northeast of northeast rail of side track; 2.0 feet northeast of railing around the lawn of the station. A standard disc, stamped "T-9, 1934" and set in the top of a concrete post one inch high.

1468.672

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 286.

1456.4

U-9 In Lyon County, Iowa, 1.8 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Inwood; 240 yards northwest of bridge on railroad; 210 yards southeast of section road crossing; 45.3 feet southwest of southwest rail of track; 1.3 feet northeast of right-of-way fence. A standard disc, stamped "U-9, 1934" and set in the top of a concrete post four inches high.

1388.022

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 284.

1351.8

V-9 In Lyon County, Iowa, 4.0 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Inwood; 210 yards northwest of bridge on railroad; 0.4 mile southeast of milepost #283; 51.5 feet west of

## LEVELING IN IOWA

	El. Ft.
intersection with section line road; 45.6 feet northwest of right-of-way fence corner; 42.4 feet southwest of southwest rail of track; 1.2 feet northeast of fence. A standard disc, stamped "V-9, 1934" and set in the top of a concrete post four inches high.	1322.940
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 282.	1312.1
<u>W-9</u> In <u>Sioux County</u> , Iowa, 4.7 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Rock Valley</u> ; 0.3 mile northwest of intersection with section line road; 300 yards northwest of a farm crossing; 44.3 feet west of west rail of track; 2.0 feet east of right-of-way fence. A standard disc, stamped "W-9, 1934" and set in the top of a concrete post four inches high.	1282.333
<u>X-9</u> In <u>Sioux County</u> , Iowa, 2.7 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Rock Valley</u> ; 0.4 mile southeast of milepost #279; 0.1 mile northwest of intersection of section line road crossing; 45.4 feet southwest of southwest rail of track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "X-9, 1934" and set in the top of a concrete post six inches high.	1283.439
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 279.	1308.6
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 277.	1246.7
<u>Y-9</u> In <u>Sioux County</u> , Iowa, 0.7 mile west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Rock Valley</u> ; 275 yards east of east end of bridge over <u>Rock River</u> ; 80.0 yards west of west end of switch; 44.8 feet north of north rail of track; 1.7 feet south of right-of-way fence. A standard disc, stamped "Y-9, 1934" and set in the top of a concrete post seven inches high.	1239.122
<u>Z-9</u> In <u>Sioux County</u> , Iowa, at <u>Rock Valley</u> , on the right-of-way of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 90.3 feet south of southeast corner of the depot; 56.5 feet west of the center line of U. S. Highway #18; 66.2 feet south of south rail of main track; 17.7 feet south of south rail of side track; 16.9 feet west of right-of-way fence corner. A stand-	

El. Ft.

ard disc, stamped "Z-9, 1934" and set in the top of a concrete post six inches high. 1249.591

ROCK VALLEY - 1934 In Sioux County, Iowa, in the foundation of the City Hall at Rock Valley, 52.0 feet east of center line of north and south Main Street; 39.0 feet north of center line of east and west street; 1.5 feet east of southwest corner of building. A standard disc, stamped "ROCK VALLEY - 1934" and set vertically in south foundation wall of City Hall. 1251.704

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Rock Valley. 1251.5

V-12 In Sioux County, Iowa, 2.2 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Rock Valley; 138 yards east of east end of railroad bridge; 115 yards east of intersection with section line road; 45.7 feet north of north rail of track; 1.6 feet south of right-of-way fence. A standard disc, stamped "V-12, 1934" and set in the top of a concrete post four inches high. 1307.127

W-12 In Sioux County, Iowa, 4.2 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Rock Valley; 1.4 miles west of crossing with Great Northern Railroad; 58.0 feet southeast of intersection with section line road; 44.5 feet south of south rail of track; 49.0 feet east of center line of north and south road; 13.5 feet east of right-of-way fence corner. A standard disc, stamped "W-12, 1934" and set in the top of a concrete post five inches high. 1373.541

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 272. 1362.5

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 271. 1389.3

X-12 In Sioux County, Iowa, 2.4 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Hull; 0.4 mile east of crossing with Great Northern Railroad; at the crossing with U. S. Highway #18; 45.5 feet northeast of northeast rail of track; 60.0 feet west of center line of U. S. Highway #18; 25.0 feet northwest of right-of-way fence corner, and 1.2 feet southwest of fence. A standard disc, stamped "X-12, 1934" and set in the top of a concrete post four inches high. 1454.613



	El. Ft.
Top of rail at crossing of Chicago, Milwaukee, St. Paul & Pacific Railroad and U. S. Highway #18, 2.4 miles west of Hull.	1456.6
<u>Y-12</u> In <u>Sioux County</u> , Iowa, at <u>Hull</u> , along the right-of-way of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 410 yards west of the depot; 135 yards west of west end of switch; 93.5 feet southwest of intersection with section line road; 45.6 feet south of south rail of track; 37.0 feet west of right-of-way fence; 1.2 feet north of right-of-way fence. A standard disc, stamped "Y-12, 1934" and set in the top of a concrete post five inches high.	1436.227
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 266.	1433.5
<u>Z-12</u> In <u>Sioux County</u> , Iowa, 1.8 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Hull</u> ; 86.5 feet northeast of intersection of railroad with section line cross road; 46.1 feet north of north rail of track; 37.0 feet east of right-of-way fence corner; 1.5 feet south of fence. A standard disc, stamped "Z-12, 1934" and set in the top of a concrete post six inches high.	1420.732
<u>C-17</u> In <u>Sioux County</u> , Iowa, 2.6 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Boyden</u> ; 121.5 feet southwest of intersection with section line cross road; 70.0 feet west of right-of-way fence corner; 44.3 feet south of south rail of track; 1.7 feet north of fence. A standard disc, stamped "C-17, 1934" and set in the top of a concrete post four inches high.	1431.539
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 264.	1431.0
<u>D-17</u> In <u>Sioux County</u> , Iowa, 0.7 mile west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Boyden</u> ; 220 yards west of intersection with section line cross road; 45.3 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "D-17, 1934" and set in the top of a concrete post four inches high.	1411.926
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 262.	1424.0

El. Ft.

E-17 In Sioux County, Iowa, on the right-of-way of the Chicago, Milwaukee, St. Paul & Pacific Railroad at Boyden; 380 yards east of the depot; 138 yards west of intersection of section line cross road; 45.1 feet south of east end of switch; 45.1 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "E-17, 1934" and set in the top of a concrete post four inches high.

1414.945

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 261.

1423.9

F-17 In Sioux County, Iowa, 2.2 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Boyden; 275 yards west of intersection with U. S. Highway #18; 45.6 feet north of north rail of track; 1.2 feet south of right-of-way fence. A standard disc, stamped "F-17, 1934" and set in the top of a concrete post five inches high.

1438.370

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 259.

1442.3

G-17 In Sioux County, Iowa, 3.3 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sheldon (O'Brien County); 80.0 feet southeast of intersection with section line road; 43.6 feet south of south rail of track; 28.0 feet east of right-of-way fence corner; 2.5 feet north of fence. A standard disc, stamped "G-17, 1934" and set in the top of a concrete post four inches high.

1393.268

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 257.

1399.2

H-17 In Sioux County, Iowa, 1.3 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sheldon (O'Brien County); 60.0 yards northwest of "Station One Mile" post; 81.0 feet northwest of intersection of railroad with section line cross road; 45.7 feet north of north rail of track; 24.5 feet west of right-of-way fence corner; 1.8 feet south of fence. A standard disc, stamped "H-17, 1934" and set in the top of a concrete post six inches high.

1401.191

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 255.

1415.7

J-17 In O'Brien County, Iowa, 0.7 mile east of the

- Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sheldon; 680 feet southeast of intersection with section line road; 46.4 feet south of south rail of track; 20.0 feet east of right-of-way fence corner; 1.5 feet north of fence (also cemetery fence). A standard disc, stamped "J-17, 1934" and set in the top of a concrete post four inches high. El. Ft. 1440.867
- K-17 In O'Brien County, Iowa, 2.5 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sheldon; 0.2 mile west of intersection with section line road; 45.1 feet north of north rail of track; 1.6 feet south of right-of-way fence. A standard disc, stamped "K-17, 1934" and set in the top of a concrete post five inches high. 1438.573
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 250. 1415.3
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 249. 1418.6
- For descriptions of additional bench marks in this vicinity, see pages 69, 70, 161, 162 and 163.
- L-17 In O'Brien County, Iowa, 4.7 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sheldon; 0.2 mile east of elevator at Evander; 70.0 yards east of east end of switch; 65.0 feet southwest of intersection with county cross road; 45.1 feet south of south rail of track; 9.0 feet west of right-of-way fence corner; 1.6 feet north of right-of-way fence. A standard disc, stamped "L-17, 1934" and set in the top of a concrete post six inches high. 1416.224
- M-17 In O'Brien County, Iowa, 3.4 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sanborn; 66.0 feet southeast of intersection with section line road (north and south); 45.1 feet south of south rail of track; 24.0 feet east of right-of-way fence corner; 1.2 feet north of fence. A standard disc, stamped "M-17, 1934" and set in the top of a concrete post four inches high. 1447.776
- N-17 In O'Brien County, Iowa, 1.4 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sanborn; 0.3 mile east of railroad water tank; 70.0 feet southeast of intersection with section line cross road; 45.0 feet south of south rail of track; 14.0

El. Ft.

feet east of right-of-way fence corner; 1.2 feet north of fence. A standard disc, stamped "N-17, 1934" and set in the top of a concrete post four inches high. 1511.723

P-17 In O'Brien County, Iowa, at Sanborn, 167 feet west of northwest corner of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot; 71.3 feet north of north rail of main track; 24.3 feet north of north rail of north siding; in right-of-way park inside of fence; 14.1 feet east of park fence corner; 2.0 feet north of park fence railing. A standard disc, stamped "P-17, 1934" and set in the top of a concrete post one inch high. 1550.627

SANBORN - 1934 In O'Brien County, Iowa, in the south side of the southeast corner of the public school; 0.9 foot west of window. A standard disc, stamped "SANBORN -1934" and set vertical in building about 1.75 feet high. 1555.499

Q-17 In O'Brien County, Iowa, 1.0 mile east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sanborn; 45.0 feet south of south rail of track; 1.5 feet north of right-of-way fence, back of milepost #242 and section post. A standard disc, stamped "Q-17, 1934" and set in the top of a concrete post six inches high. 1554.216

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 242. 1552.8

R-17 In O'Brien County, Iowa, 2.5 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sanborn; 67.0 feet northeast of intersection with section line cross road; 45.4 feet north of north rail of track; 12.5 feet east of right-of-way fence; 1.2 feet south of fence. A standard disc, stamped "R-17, 1934" and set in the top of a concrete post five inches high. 1546.723

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 240. 1557.4

S-17 In O'Brien County, Iowa, 4.0 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Sanborn; 80.0 yards west of quarter-section line north and south; 45.8 feet south of south rail of track; 1.0 foot north of right-of-way fence, back of milepost #239. A standard disc, stamped "S-17, 1934"

	El. Ft.
and set in the top of a concrete post three inches high.	1539.751
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 239.	1539.0
<u>T-17</u> In <u>O'Brien County</u> , Iowa, 3.6 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Sanborn</u> ; 145 yards west of intersection with section line cross road; 45.6 feet south of south rail of track; 1.3 feet north of right-of-way fence. A standard disc, stamped "T-17, 1934" and set in the top of a concrete post six inches high.	1484.141
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 237.	1482.3
<u>U-17</u> In <u>O'Brien County</u> , Iowa, 1.5 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Hartley</u> ; 70.0 yards northwest of intersection with section line cross road; 52.0 yards west of right-of-way fence corner; 45.9 feet north of north rail of track; 1.2 feet south of right-of-way fence. A standard disc, stamped "U-17, 1934" and set in the top of a concrete post six inches high.	1465.322
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 235.	1482.8
<u>V-17</u> In <u>O'Brien County</u> , Iowa, on the Chicago, Milwaukee, St. Paul & Pacific Railroad right-of-way at <u>Hartley</u> ; 140 feet southwest of southwest corner of the depot; 33.0 feet south of south rail of main track; 16.3 feet south of south rail of side track; 46.1 feet southeast of east end of switch on side track; 1.3 feet north of right-of-way fence. A standard disc, stamped "V-17, 1934" and set in the top of a concrete post four inches high.	1458.153
<u>W-17</u> In <u>O'Brien County</u> , Iowa, 1.4 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Hartley</u> ; 67.5 feet northeast of intersection with section line cross road; 45.7 feet north of north rail of track; 18.0 feet east of right-of-way fence corner; 1.4 feet south of fence. A standard disc, stamped "W-17, 1934" and set in the top of a concrete post six inches high.	1433.038
<u>X-17</u> In <u>O'Brien County</u> , Iowa, 2.8 miles east of the	

El. Ft.

- Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Hartley; 182 yards northwest of milepost #231; 45.3 feet southwest of southwest rail of track; 1.2 feet northeast of right-of-way fence. A standard disc, stamped "X-17, 1934" and set in the top of a concrete post four inches high. 1395.558
- Y-17 In O'Brien County, Iowa, 3.0 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Everly (Clay County); 147 feet southwest of intersection with section line cross road; 120 feet west of right-of-way fence corner; 44.9 feet southwest of southwest rail of track; 1.3 feet northeast of right-of-way fence. A standard disc, stamped "Y-17, 1934" and set in the top of a concrete post seven inches high. 1377.172
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 230. 1381.7
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 229. 1366.9
- Z-17 In Clay County, Iowa, 1.5 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Everly; 310 yards east of east end of bridge across Ocheyedan River; 45.8 feet south of south rail of track; 1.3 feet north of right-of-way fence, back of milepost #228. A standard disc, stamped "Z-17, 1934" and set in the top of a concrete post five inches high. 1356.687
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 228. 1360.6
- A-18 In Clay County, Iowa, at Everly, along the right-of-way of the Chicago, Milwaukee, St. Paul & Pacific Railroad, in parking at depot; 145 feet southwest of southwest corner of depot; 31.1 feet south of south rail of main track; 2.0 feet east of east edge of sidewalk along west side of park. A standard disc, stamped "A-18, 1934" and set in the top of a concrete post two inches high and level with the sidewalk. 1363.810
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 226. 1355.7
- B-18 In Clay County, Iowa, 1.0 mile east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at Everly; 66.0 feet northeast of intersection of rail-

	El. Ft.
road, with section line cross road; 46.1 feet north of north rail of track; 24.0 feet east of right-of-way fence, 1.0 foot south of fence. A standard disc, stamped "B-18, 1934" and set in the top of a concrete post six inches high.	1345.024
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 225.	1344.1
<u>C-18</u> In <u>Clay County</u> , Iowa, 3.0 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Everly</u> ; 66.5 feet east of section line fence; 45.6 feet south of south rail of track; 1.2 feet north of right-of-way fence. A standard disc, stamped "C-18, 1934" and set in the top of a concrete post four inches high.	1334.279
<u>D-18</u> In <u>Clay County</u> , Iowa, 4.3 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Spencer</u> ; 62.0 feet northeast of intersection with section line cross road; 45.1 feet north of north rail of track; 9.0 feet east of right-of-way fence; 1.3 feet south of fence. A standard disc, stamped "D-18, 1934" and set in the top of a concrete post five inches high.	1335.506
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 222.	1337.8
<u>E-18</u> In <u>Clay County</u> , Iowa, 2.3 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot at <u>Spencer</u> ; 64.5 feet southwest of intersection with section line cross road; 46.6 feet south of south rail of track; 16.0 feet west of right-of-way fence; 1.5 feet north of fence. A standard disc, stamped "E-18, 1934" and set in the top of a concrete post six inches high.	1330.821
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 220.	1333.0
<u>F-18</u> In <u>Clay County</u> , Iowa, at <u>Spencer</u> , 0.5 mile west of the Chicago, Milwaukee, St. Paul & Pacific Railroad depot; 11.0 yards west of street crossing; 45.1 feet south of south rail of track; 1.6 feet north of right-of-way fence. A standard disc, stamped "F-18, 1934" and set in the top of a concrete post four inches high.	1317.035
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 218.	1321.1

El. Ft.

G-18 In Clay County, Iowa, at Spencer, in the northwest corner of the park of the municipal light plant; 65.0 yards northeast of northeast corner of the station (Chicago, Milwaukee, St. Paul & Pacific Railroad station); 104.1 feet north of north rail of main track; 166.9 feet north of north rail of north side track; 135 feet west of southwest corner of power plant; 76.8 feet east of center line of main track; 27.3 feet east of east edge of sidewalk level with ground. A standard disc, stamped "G-18, 1934" and set in the top of a concrete post flush with ground. 1315.795

SPENCER - 1934 In Clay County, Iowa, on the north side of the northwest corner of the Post Office building; 1.3 feet east of northwest corner of building. A standard disc, stamped "SPENCER - 1934" and set vertical in building about two feet above ground. 1320.716

For descriptions of additional bench marks in this vicinity, see page 121.



This Line follows the Chicago, St. Paul, Minneapolis & Omaha Railway from Org, Minnesota to Sioux Falls, South Dakota. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see page 167.

- 
- |   | El. Ft.  |
|---|----------|
| <u>S-145</u> In Nobles County, Minnesota, at Org, 102 feet northwest of northeast corner of the Chicago, St. Paul, Minneapolis & Omaha Railway station, 65.0 feet northwest of junction switch post, 35.3 feet west of west rail of main track, 9.3 feet east of right-of-way fence, 9.0 feet north of telegraph pole and in line with poles. A standard disc, stamped "S-145, 1934" and set in the top of a concrete post four inches high.  | 1657.218 |
| <u>T-145</u> IN Nobles County, Minnesota, 0.4 mile northwest of the Chicago, St. Paul, Minneapolis & Omaha Railway depot at Org, 250 yards southeast of center line intersection of track and a graded section lineroad crossing track, 250 feet northwest of west switch of "Y" connecting with main line at Org; 44.9 feet northeast of northeast rail of track, 11.3 feet northeast of a telegraph pole, 1.3 feet southwest of right-of-way fence. A standard disc, stamped "T-145, 1934" and set in the top of a concrete post six inches high. | 1647.119 |
| Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 1.   | 1653.6   |
| <u>U-145</u> In Nobles County, Minnesota, 2.2 miles northwest of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Org; 85.0 feet northwest of center line intersection of track and a section line road crossing track; 47.8 feet northeast of northeast rail of track, 9.3 feet north of first telegraph pole west of road crossing, 2.3 feet southwest of right-of-way fence. A standard disc, stamped "U-145, 1934" and set in the top of a concrete post six inches high.  | 1695.745 |
| Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 3.   | 1693.2   |

El. Ft.

V-145 In Nobles County, Minnesota, 3.4 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 31.3 feet south of south rail of track; 27.0 feet west of section line road crossing track (center line of); 1.5 feet east of right-of-way fence of north and south fence; 0.2 mile east of milepost #125. A standard disc, stamped "V-145, 1934" and set in the top of a concrete post six inches high. 1661.535

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 5. 1654.1

W-145 In Nobles County, Minnesota, 1.4 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 195 feet east of center line of a section line road crossing track; 0.1 mile east of milepost #123; 46.0 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "W-145, 1934" and set in the top of a concrete post six inches high. 1678.625

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 7. 1672.6

X-145 In Nobles County, Minnesota, 0.3 mile east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 105 feet east of milepost #122; 90.0 feet west of center line of a gravel road crossing track; 34.7 feet north of north rail of track; 28.5 feet east of switch post; 4.7 feet east of a telegraph pole and in line with poles. A standard disc, stamped "X-145, 1934" and set in the top of a concrete post about four inches high. 1666.112

Y-145 In Nobles County, Minnesota, 1.7 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 100 feet southeast of milepost #120; 37.0 feet southwest of southwest rail of track; 35.0 feet west of center line of a section line road crossing track; 10.5 feet northeast of right-of-way fence. A standard disc, stamped "Y-145, 1934" and set in the top of a concrete post six inches high. 1641.791

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 10. 1641.4

Z-145 In Nobles County, Minnesota, 3.7 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 132 feet east of center line of a

## LEVELING IN IOWA

	El. Ft.
gravel road crossing track; 46.4 feet north of north rail of track; 121 feet east of milepost #118; 10.5 feet north of first telegraph pole east of crossing; 1.8 feet south of right-of-way fence. A standard disc, stamped "Z-145, 1934" and set in the top of a concrete post four inches high.	1598.842
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 12.	1602.1
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 13.	1607.3
<u>A-146</u> In Nobles County, Minnesota, 5.7 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 450 feet west of a 3-foot diameter iron culvert "P-26"; 115 yards southwest of milepost #116; 37.0 feet east of center line of a section line road crossing track; 30.8 feet south of south rail of track. A standard disc, stamped "A-146, 1934" and set in the top of a concrete post six inches high.	1589.360
<u>B-146</u> In Nobles County, Minnesota, 6.7 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Rushmore; 39.0 feet northeast of the northeast corner of the station at Adrian, 31.0 feet west of center line of State Highway #91; 17.4 feet north of north rail of main track; 2.7 feet southwest of a telegraph pole. A standard disc, stamped "B-146, 1934" and set in the top of a concrete post one inch high.	1540.788
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 16.	1514.2
<u>C-146</u> In Nobles County, Minnesota, 5.3 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Magnolia (Rock County); 0.3 mile east of section line road crossing track; 0.1 mile east of milepost #113; 600 feet east of east edge of a wood trestle under railroad; 74.0 feet east of telegraph pole; 36.0 feet north of north rail of track. A standard disc, stamped "C-146, 1934" and set in the top of a concrete post six inches high.	1534.912
<u>D-146</u> In Nobles County, Minnesota, 3.0 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Magnolia (Rock County); 0.2 miles west of milepost #111; 63.3 feet east of center line of a section line road crossing track; 45.3 feet south of south	

El. Ft.

rail of track; 2.0 feet north of a telegraph pole. A standard disc, stamped "D-146, 1934" and set in the top of a concrete post two inches high.

1535.781

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 19.

1543.8

E-146 In Rock County, Minnesota, 1.2 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Magnolia; 0.2 mile west of milepost #109; 104 feet east of center line of section line road crossing track; 68.0 feet east of southwest corner of cemetery; 1.0 foot south of right-of-way fence, which is also south fence of a cemetery. A standard disc, stamped "E-146, 1934" and set in the top of a concrete post four inches high.

1498.891

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 21.

1504.9

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 22.

1521.8

F-146 In Rock County, Minnesota, at Magnolia, 90.0 feet southwest of southwest corner of Chicago, St. Paul, Minneapolis & Omaha Railway station; 0.4 mile west of milepost #107; 30.0 feet south of south rail of main track; 24.0 feet west of center line of a graded road crossing track; 16.8 feet south of south rail of passing track; 3.0 feet north of a telegraph pole. A standard disc, stamped "F-146, 1934" and set in the top of a concrete post one inch high.

1515.886

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 24.

1476.6

G-146 In Rock County, Minnesota, 2.0 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Magnolia; 30.9 feet west of center line intersection of a gravel road crossing track; 45.5 feet southwest of southwest rail of track; 1.0 foot northeast of right-of-way fence. A standard disc, stamped "G-146, 1934" and set in the top of a concrete post three inches high.

1486.706

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 26.

1519.6

H-146 In Rock County, Minnesota, 2.4 miles east of

## LEVELING IN IOWA

- El. Ft.
- the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; 62.0 feet east of section line farm trail crossing track; 59.8 feet north of north rail of passing track; 45.6 feet north of north rail of main track; 1.5 feet south of right-of-way fence. A standard disc, stamped "H-146, 1934" and set in the top of a concrete post four inches high. 1513.193
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 28. 1450.2
- J-146 In Rock County, Minnesota, 0.5 mile east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; in southeast concrete headwall of steel and concrete bridge over Rock River; 4.5 feet southwest of northeast corner of southeast headwall of culvert; 1.0 foot northwest of east edge of wall. A standard disc, stamped "J-146, 1934" and set flush in top of concrete headwall. 1435.962
- K-146 In Rock County, Minnesota, 180 feet east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; 31.7 feet east of center line of Cedar Street crossing track; 22.2 feet north of north rail of track; 11.8 feet northeast of northeast corner of depot platform; 3.1 feet southwest of a telegraph pole. A standard disc, stamped "K-146, 1934" and set in the top of a concrete post two inches high. 1454.039
- For descriptions of additional bench marks in this vicinity, see page 110.
- L-146 In Rock County, Minnesota, 0.4 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; 44.0 feet east of center line of a road crossing track; 37.5 feet north of north rail of track; 23.5 feet east of first telegraph pole east of crossing and in line with row of poles; 15.0 feet southeast of a fence corner. A standard disc, stamped "L-146, 1934" and set in the top of a concrete post three inches high. 1456.818
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 30. 1466.6
- M-146 In Rock County, Minnesota, 2.3 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; 196 yards west of center line of a section line road crossing track; 44.5 feet north of

El. Ft.

north rail of track; 10.0 feet north of third telegraph pole west of road crossing track. A standard disc, stamped "M-146, 1934" and set in the top of a concrete post two inches high.

1497.189

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 32.

1503.9

N-146 In Rock County, Minnesota, 3.3 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Luverne; 480 feet east of center line of a graded road crossing track; 45.2 feet north of north rail of track; 9.0 feet north of third telegraph pole east of crossing. A standard disc, stamped "N-146, 1934" and set in the top of a concrete post four inches high.

1508.268

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 33.

1511.7

P-146 In Rock County, Minnesota, 3.8 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Beaver Creek; 135 feet east of center line of a graded road crossing track; 105 feet northeast of northeast corner of trestle "P-68" under railroad; 44.2 feet north of north rail of track; 3.0 feet south of right-of-way fence. A standard disc, stamped "P-146, 1934" and set in the top of a concrete post six inches high.

1509.200

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 34.

1529.0

Q-146 In Rock County, Minnesota, 2.6 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Beaver Creek; 130 feet east of center line of intersection of a road crossing track; 34.7 feet northwest of northwest rail of track; 12.0 feet southeast of right-of-way fence; 4.0 feet southeast of second telegraph pole east of crossing and in line with poles. A standard disc, stamped "Q-146, 1934" and set in the top of a concrete post two inches high.

1536.998

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 35.

1537.2

R-146 In Rock County, Minnesota, 1.2 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Beaver Creek; 58.0 feet east of center line

- of a road crossing track; 46.0 feet south of south rail of track, 4.0 feet east of a telegraph pole, 1.3 feet north of right-of-way fence. A standard disc, stamped "R-146, 1934" and set in the top of a concrete post six inches high. El. Ft. 1482.212
- S-146 In Rock County, Minnesota, at Beaver Creek, 150 feet northeast of the Chicago, St. Paul, Minneapolis & Omaha Railway station, 66.7 feet north of north rail of main track, 66.0 feet east of center line of a road crossing track, 21.0 feet east of a telegraph pole, 18.6 feet north of north rail of passing track. A standard disc, stamped "S-146, 1934" and set in the top of a concrete post four inches high. 1445.092
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 37. 1457.7
- T-146 In Rock County, Minnesota, 0.6 mile west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Beaver Creek, 34.6 feet northwest of northwest rail of track, 139 feet southeast of center line of a farm trail crossing track, 12.0 feet southeast of right-of-way fence, 8.0 feet southwest of telegraph pole and in line with poles. A standard disc, stamped "T-146, 1934" and set in the top of a concrete post six inches high. 1438.235
- U-146 In Rock County, Minnesota, 1.6 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Beaver Creek, 63.0 feet southeast of center line intersections of track and a section line road, 46.0 feet southeast of southeast rail of track, 2.0 feet northwest of right-of-way fence. A standard disc, stamped "U-146, 1934" and set in the top of a concrete post six inches high. 1412.707
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 40. 1397.4
- V-146 In Rock County, Minnesota, 2.2 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs, South Dakota, (Minnehaha County), 50.0 feet east of center line of section line road crossing track, 49.0 feet north of center line intersections of railroad with Great Northern Railroad, 47.5 feet north of north rail of main track of Chicago, St. Paul, Minneapolis & Omaha Railway; 15.0 feet north-east of telegraph pole. A standard disc, stamped

El. Ft.

"V-146, 1934" and set in the top of a concrete post six inches high.

1410.299

W-146 In Rock County, Minnesota, 1.8 miles east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs, South Dakota (Minnehaha County), 93.0 feet southwest of southwest corner of station at Manley, 56.0 feet south of center line of a road crossing track, 372 yards north of intersection of Great Northern Railroad, 33.4 feet west of west rail of track. A standard disc, stamped "W-146, 1934" and set in the top of a concrete post six inches high.

1413.143

X-146 In Rock County, Minnesota, 1.0 mile northeast of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs, South Dakota (Minnehaha County); 150 yards east of Minnesota and South Dakota State Line; 96.0 yards northeast of northeast end of wood trestle "P-88" under track; 44.6 feet northwest of northwest rail of track; 10.6 feet northwest of a telegraph pole; 0.4 mile southwest of milepost #88. A standard disc, stamped "X-146, 1934" and set in the top of a concrete post seven inches high.

1386.392

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 42.

1398.9

F-152 In Minnehaha County, South Dakota, 45.0 feet northeast of northeast corner of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs; 119 feet east of center line of a gravel road crossing track, 32.7 feet north of north rail of main track, 3.7 feet south of first telegraph pole east of road crossing. A standard disc, stamped "F-152, 1934" and set in the top of a concrete post three inches high.

1392.044

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 43.

1391.4

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 44.

1361.7

G-152 In Minnehaha County, South Dakota, 2.2 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs; 100 yards southeast of telegraph pole "45/20", 50.0 feet east of center line of a section line road crossing track, 45.0 feet south of south rail of track, 2.0 feet north of right-of-way fence. A standard disc, stamped "G-152, 1934" and set in the top of a concrete post four inches high.

1370.959



- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 46. El. Ft. 1377.2
- H-152 In Minnehaha County, South Dakota, 4.2 miles west of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Valley Springs; 100 yards southeast of telegraph pole "47/20"; 55.0 feet east of a line fence, north and south joining the right-of-way fence; 44.9 feet south of south rail of track; 2.0 feet north of right-of-way fence. A standard disc, stamped "H-152, 1934" and set in the top of a concrete post four inches high. 1350.929
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 48. 1335.1
- J-152 In Minnehaha County, South Dakota, 0.2 mile east of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Brandon; 200 yards northwest of center line of intersection of a gravel road crossing track; 100 yards east of a telegraph pole "49/20"; 43.4 feet northeast of a switch post; 20.6 feet north of north rail of main track; 7.7 feet east of fourth telegraph pole west of road crossing and in line with row of poles. A standard disc, stamped "J-152, 1934" and set in the top of a concrete post four inches high. 1318.613
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 50. 1313.4
- K-152 In Minnehaha County, South Dakota, 1.8 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Brandon; 150 yards southeast of telegraph pole "51/20"; 46.4 feet east of east rail of track; 41.0 feet north of center line of farm trail crossing track; 1.0 foot west of right-of-way fence. A standard disc, stamped "K-152, 1934" and set in the top of a concrete post six inches high. 1351.090
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 53. 1360.2
- L-152 In Minnehaha County, South Dakota, 3.8 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Brandon; 120 feet south of center line of a farm trail crossing; 81.4 feet southeast of southeast corner of a concrete and steel bridge over highway; 100 yards north of telegraph pole "53/30"; 33.0 feet west of west rail of track. A

El. Ft.

standard disc, stamped "L-152, 1934" and set in the top of a concrete post four inches high.

1335.713

M-152 In Minnehaha County, South Dakota, 2.4 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Sioux Falls; 45.0 feet north of center line of a road crossing track; 29.0 feet east of east rail of track; 3.0 feet north of right-of-way fence. A standard disc, stamped "M-152, 1934" and set in the top of a concrete post six inches high.

1337.399

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railway MP 56.

1332.8

N-152 In Minnehaha County, South Dakota, 0.4 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railway station at Sioux Falls; 55.0 yards southwest of telegraph pole "57/30"; 34.0 feet east of center line of N. Weber Avenue; 33.5 feet southeast of southeast rail of main track; 8.0 feet east of east edge of Weber Avenue curb. A standard disc, stamped "N-152, 1934" and set in the top of a concrete post four inches high.

1380.315

P-152 In Minnehaha County, South Dakota, at Sioux Falls; in northwest corner of the Great Northern Railroad depot park; 24.0 feet south of center line of Eighth Street; 1.3 feet northeast of west side rail around park. A standard disc, stamped "P-152, 1934" and set in the top of a concrete post four inches high.

1398.944

For descriptions of additional bench marks in this vicinity, see pages 10 and 33.

LINE 2826. ALGONA to SIBLEY, IOWA  
(Second-order Leveling)

93

This Line follows the Chicago, Milwaukee, St. Paul & Pacific Railroad from Algona to Emmetsburg, Iowa; and the Chicago, Rock Island & Pacific Railway from Emmetsburg to Sibley, Iowa. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see pages 25 and 26.

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- |   | El. Ft.  |
|---|----------|
| <u>N-18</u> In Kossuth County, Iowa, at Algona, 192 feet northwest of northwest corner of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 0.2 mile east of milepost #169; 52.9 feet north of north rail of main track; 30.0 feet north of steel switch post; 27.0 feet east of center line of old State Highway #18. A standard disc, stamped "N-18, 1934" and set in the top of a concrete post three inches high.  | 1194.512 |
| <u>P-18</u> In Kossuth County, Iowa, 0.6 mile west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Algona; 0.3 mile west of milepost #169; 90.0 feet east of northwest corner of a cemetery fence; 82.0 feet southeast of center line of intersection of a road crossing track; 43.5 feet east of first telephone pole east of crossing and in line with the poles; 38.8 feet south of south rail of track; 7.4 feet north of right-of-way fence. A standard disc, stamped "P-18, 1934" and set in the top of a concrete post four inches high. | 1168.685 |
| Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 170.  | 1138.4   |
| <u>Q-18</u> In Kossuth County, Iowa, 2.5 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Algona; 0.9 mile east of station at Hobarton; 0.2 mile west of milepost #171; 36.0 feet east of first telephone pole west of crossing and in line with the poles; 31.2 feet south of south rail; 25.0 feet east of center line of a farm road crossing; 13.0 feet north of right-of-way fence. A standard disc, stamped "Q-18, 1934" and set in the top of a concrete post three inches high.   | 1164.529 |

El. Ft.

R-18 In Kossuth County, Iowa, 4.8 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Algona; 1.0 mile west of the station at Hobart; 45.3 feet south of south rail of track; 43.0 feet west of center line of a section line road crossing the track; 10.6 feet south of the first telegraph pole west of crossing; 6.0 feet west of corner of section line fence; 2.0 feet north of right-of-way fence. A standard disc, stamped "R-18, 1934" and set in the top of a concrete post six inches high. 1213.324

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 173. 1209.6

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 175. 1262.7

S-18 In Kossuth County, Iowa, 4.1 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Whittemore; 6.8 miles west of the station at Algona; 55.0 feet west of center line of a section line road crossing the tracks; 46.3 feet northeast of northeast rail; 31.0 feet west of corner of section line fence; 1.6 feet southwest of right-of-way fence. A standard disc, stamped "S-18, 1934" and set in the top of a concrete post six inches high. 1257.360

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 176. 1249.0

T-18 In Kossuth County, Iowa, 2.2 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Whittemore; 69.0 feet south of the south rail; 31.0 feet west of center line of a section line road crossing tracks; 1.2 feet south of section line fence. A standard disc, stamped "T-18, 1934" and set in the top of a concrete post four inches high. 1194.286

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP-178. 1198.6

U-18 In Kossuth County, Iowa, at Whittemore, 286 yards east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 72.0 feet northeast of northeast corner of Power House; 54.0 feet east of center line of State Road #44; 36.0 feet south of south rail of main track; 14.4 feet northeast of northwest corner of Town Hall building. A standard disc, stamped "U-18, 1934" and set in the top of a concrete post six inches high. 1203.187

	El. Ft.
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Whittemore.	1204.9
<u>V-18</u> In Palo Alto County, Iowa, 0.9 mile west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Whittemore (Kossuth County); 46.0 feet north of north rail of tracks; 43.0 feet west of center line of a section line road crossing tracks; 13.1 feet west of corner of right-of-way fence; 1.8 feet south of right-of-way fence; 0.3 mile east of milepost #181. A standard disc, stamped "V-18, 1934" and set in the top of a concrete post four inches high.	1211.382
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 181.	1213.4
<u>W-18</u> In Palo Alto County, Iowa, 2.9 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Whittemore (Kossuth County); 66.0 feet east of a section line road crossing tracks; 45.0 feet south of south rail; 7.5 feet south of first telephone pole east of crossing; 1.8 feet north of right-of-way fence. A standard disc, stamped "W-18, 1934" and set in the top of a concrete post six inches high.	1207.425
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 184.	1190.8
<u>X-18</u> In Palo Alto County, Iowa, 1.6 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Cylinder; 4.7 miles west of the station at Whittemore; 363 feet east of center line of graveled road crossing the tracks; 37.5 feet south of south rail of track; 9.6 feet north of right-of-way fence; 5.9 feet east of third telephone pole east of crossing. A standard disc, stamped "X-18, 1934" and set in the top of a concrete post six inches high.	1193.511
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 186.	1193.5
<u>Y-18</u> In Palo Alto County, Iowa, at Cylinder, 246 feet west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 41.0 feet north of north rail of the main track; 13.0 feet south of right-of-way fence line; 1.6 feet west of right-of-way fence corner. A standard disc, stamped "Y-18, 1934" and set in the top of a concrete post six inches high.	1191.907

El. Ft.

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Cylinder. 1193.3

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 188. 1195.8

Z-18 In Palo Alto County, Iowa, 2.1 miles west of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Cylinder; 0.4 mile east of section line road crossing tracks; 0.4 mile west of milepost #188; 43.5 feet north of north rail of track; 1.0 foot west of a north and south right-of-way fence; 0.5 foot south of right-of-way fence. A standard disc, stamped "Z-18, 1934" and set in the top of a concrete post six inches high. 1203.662

A-19 In Palo Alto County, Iowa, 2.9 miles east of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Emmetsburg; 0.1 mile east of milepost #191; 46.4 feet west of center line of a section line road crossing tracks; 38.0 feet south of south rail of track; 7.9 feet south of first telephone pole west of crossing. A standard disc, stamped "A-19, 1934" and set in the top of a concrete post four inches high. 1222.865

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 192. 1213.8

B-19 In Palo Alto County, Iowa, 0.2 mile east of junction of Chicago, Milwaukee, St. Paul & Pacific Railroad with the Chicago, Rock Island & Pacific Railroad at Emmetsburg; 40.0 feet west of center line of a road crossing tracks; 22.5 feet north of north rail of track. A standard disc, stamped "B-19, 1934" and set in the top of a concrete post four inches high. 1226.654

EMMETSBURG - 1934 In Palo Alto County, Iowa, at Emmetsburg, in the corner of a concrete sidewalk wall at the steps to north entrance of Court House yard; 70.0 feet north of northwest corner of Court House; 59.0 feet south of center line of 10th Street. A standard disc, stamped "EMMETSBURG - 1934" and set in the top of a concrete post flush with the ground. 1251.812

C-19 In Palo Alto County, Iowa, at Emmetsburg, 260 yards north of the Chicago, Rock Island & Pacific Railway; 24.0 feet east of east rail of main track; 16.0 feet south of center line of 8th Street crossing tracks; 10.0 feet northwest of a telephone pole. A standard

	El. Ft.
disc, stamped "C-19, 1934" and set in the top of a concrete post one inch high.	1230.700
Top of rail opposite Chicago, Rock Island & Pacific Railway station at Emmetsburg:	1233.9
<u>D-19</u> In Palo Alto County, Iowa, 0.6 mile north of the Chicago, Rock Island & Pacific Railway station at Emmetsburg; 201 yards south of railroad water tank; 165 feet south of center line of road crossing track; 48.0 feet east of a fence line; 31.4 feet west of west rail of track; 16.6 feet south of a power line pole; 0.1 mile north of milepost #185. A standard disc, stamped "D-19, 1934" and set in the top of a concrete post six inches high.	1224.624
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 186.	1235.1
<u>E-19</u> In Palo Alto County, Iowa, 2.75 miles north of the Chicago, Rock Island & Pacific Railway station at Emmetsburg; 270 feet north of milepost #187; 60.0 feet south of center of gate; 55.5 feet southeast of southeast end of terra cotta culvert; 46.9 feet east of east rail of main track; 1.5 feet west of right-of-way fence. A standard disc, stamped "E-19, 1934" and set in the top of a concrete post six inches high.	1216.914
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 188.	1219.6
<u>F-19</u> In Palo Alto County, 4.75 miles north of the Chicago, Rock Island & Pacific Railway station at Emmetsburg; 570 feet south of a farm road crossing the railroad; 114 feet north of milepost #189; 46.6 feet east of east rail of main track; 1.0 foot west of right-of-way fence. A standard disc, stamped "F-19, 1934" and set in the top of a concrete post five inches high.	1226.782
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 190.	1230.0
<u>G-19</u> In Palo Alto County, Iowa, 6.7 miles northwest of the Chicago, Rock Island & Pacific Railway station at Emmetsburg; 0.5 mile northwest of the Chicago, Rock Island & Pacific Railway station at Osgood; 0.15 mile northwest of wooden trestle #1909; 45.9 feet northeast of northeast rail of main track; 26.0 feet northwest	

El. Ft.

- of milepost #191; 1.5 feet southwest of right-of-way fence. A standard disc, stamped "G-19, 1934" and set in the top of a concrete post four inches high. 1230.326
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 192. 1232.1
- H-19 In Palo Alto County, Iowa, 1.7 miles southeast of the Chicago, Rock Island & Pacific Railway station at Graettinger; 2.4 miles northwest of the Chicago, Rock Island & Pacific Railway station at Osgood; 330 feet southeast of milepost #193; 51.0 feet west of center line of section line road; 47.7 feet northeast of northeast rail of main track; 14.8 feet northwest of fence corner; 1.5 feet southwest of right-of-way fence. A standard disc, stamped "H-19, 1934" and set in the top of a concrete post four inches high. 1234.213
- J-19 In Palo Alto County, Iowa, at Graettinger, 0.1 mile northwest of the Chicago, Rock Island & Pacific Railway station; 65.1 feet northeast of northeast rail of main track; 62.8 feet northwest of northwest end of dead end side track; 31.0 feet northeast of northeast rail of side track; 8.2 feet northwest of milepost #194-20. A standard disc, stamped "J-19, 1934" and set in the top of a concrete post seven inches high. 1243.912
- Top of rail opposite Chicago, Rock Island & Pacific Railway station at Graettinger. 1247.6
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 196. 1251.9
- K-19 In Emmet County, Iowa, 2.2 miles northwest of the Chicago, Rock Island & Pacific Railway station at Graettinger (Palo Alto County); 330 feet northwest of milepost #196-20; 46.3 feet northeast of northeast rail of main track; 34.3 feet southwest of right-of-way fence; 15.0 feet west of center line of old highway. A standard disc, stamped "K-19, 1934" and set in the top of a concrete post five inches high. 1254.062
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 197. 1249.2
- L-19 In Emmet County, Iowa, 3.55 miles northwest of the Chicago, Rock Island & Pacific Railway station at Graettinger (Palo Alto County); 43.0 feet southeast of center line of farm road; 45.6 feet southwest of south-



	El. Ft.
west rail of main track; 37.6 feet southeast of fence corner; 1.5 feet northeast of right-of-way fence, opposite milepost #198. A standard disc, stamped "L-19, 1934" and set in the top of a concrete post five inches high.	1248.738
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 199.	1257.5
<u>M-19</u> In Emmet County, Iowa, 5.75 miles northwest of the Chicago, Rock Island & Pacific Railway station at Graettinger (Palo Alto County), 0.55 mile southeast of Chicago, Rock Island & Pacific Railway station at Wallingford; 134 feet southwest of milepost #200; 99.0 feet southwest of yard limit sign; 45.0 feet southwest of southwest rail of main track; 29.0 feet northeast of center line of State Highway #17; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "M-19, 1934" and set in the top of a concrete post three inches high.	1271.891
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 200.	1273.5
<u>N-19</u> In Emmet County, Iowa, at Wallingford, 294 feet southeast of the Chicago, Rock Island & Pacific Railway station; 264 feet southeast of center line of street crossing; 58.4 feet southeast of southeast corner of section tool house; 37.5 feet northeast of northeast rail of main track; 6.5 feet southwest of right-of-way fence; 5.4 feet southeast of milepost #200-20. A standard disc, stamped "N-19, 1934" and set in the top of a concrete post three inches high.	1276.182
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 202.	1270.1
<u>P-19</u> In Emmet County, Iowa, 1.95 miles northwest of the Chicago, Rock Island & Pacific Railway station at Wallingford; 0.6 mile southwest of farm house; 46.6 feet northeast of northeast rail of main track; 19.5 feet northeast of milepost #202-20; 1.5 feet southwest of right-of-way fence. A standard disc, stamped "P-19, 1934" and set in the top of a concrete post six inches high.	1270.972
<u>Q-19</u> In Emmet County, Iowa, 3.75 miles northwest of the Chicago, Rock Island & Pacific Railway station at Wallingford; 1.1 miles southeast of junction of Minne-	

El. Ft.

apolis & St. Louis Railroad and Chicago, Rock Island & Pacific Railway; 390 feet northwest of milepost #204-10; 96.0 feet north of center line of section road; 46.8 feet northeast of northeast rail of main track; 10.0 feet north of fence intersection; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "Q-19, 1934" and set in the top of a concrete post three inches high.

1278.193

Top of rail opposite Chicago, Rock Island & Pacific MP 204.

1277.1

R-19 In Emmet County, Iowa, 1.8 miles southeast of the Chicago, Rock Island & Pacific Railway station at Estherville; 107 feet northwest of junction of Chicago, Rock Island & Pacific Railway and the Minneapolis & St. Louis Railroad; 117 feet southeast of center line of farm road; 37.5 feet southeast of milepost #205-20; 33.0 feet southwest of southwest end of a 36-inch concrete culvert; 30.0 feet northeast of center line of old highway; 24.3 feet southwest of southwest rail of Rock Island Line. A standard disc, stamped "R-19, 1934" and set in the top of a concrete post six inches high.

1287.885

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 205.

1288.6

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 206.

1277.9

ESTHERVILLE - 1934 In Emmet County, Iowa, at Estherville, in the corner of the City Hall Yard; 35.3 feet southeast of southeast corner of City Hall; 2.3 feet west of west edge of sidewalk parallel to South 7th Street; 2.3 feet north of north edge of sidewalk parallel to East Howard Street. A standard disc, stamped "ESTHERVILLE - 1934" and set in the top of a concrete post four inches high.

1298.911

S-19 In Emmet County, Iowa, at the Chicago, Rock Island & Pacific Railway station at Estherville; 168 feet south of center line of Lincoln Street; 127.6 feet northeast of northeast rail of main track; 14.5 feet northeast of northeast corner of the station; 6.3 feet southwest and 11.4 feet northwest of curb around station building. A standard disc, stamped "S-19, 1934" and set in the top of a concrete post one inch high.

1289.499

El. Ft.

For descriptions of additional bench marks in this vicinity, see pages 116, 117 and 118.

- T-19 In Emmet County, Iowa, 1.0 mile northwest of the Chicago, Rock Island & Pacific Railway station at Estherville; 97.0 yards northwest of the center line of section road; 45.8 feet northeast of northeast rail of main track; 37.0 feet southeast of the third telephone pole northwest of milepost #208; 1.5 feet southwest of right-of-way fence. A standard disc, stamped "T-19, 1934" and set in the top of a concrete post four inches high. 1328.820
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 208. 1329.3
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 209. 1386.4
- U-19 In Emmet County, Iowa, 3.0 miles northwest of the Chicago, Rock Island & Pacific Railway station at Estherville; 85.0 yards west of center line of section road; 39.0 feet northwest of northwest rail of main track; 8.5 feet west of milepost #210. A standard disc, stamped "U-19, 1934" and set in the top of a concrete post three inches high. 1442.612
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 211. 1437.2
- V-19 In Emmet County, Iowa, 4.8 miles northwest of the Chicago, Rock Island & Pacific Railway station at Estherville; 221 yards southeast of milepost #212; 118 yards southeast of center line of section road; 45.1 feet southwest of southwest rail of main track; 34.5 feet northeast of center line of State Highway #9; 11.5 feet west of first telephone pole northwest of milepost #211-30; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "V-19, 1934" and set in the top of a concrete post four inches high. 1482.933
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 213 $\frac{1}{4}$ . 1518.9
- W-19 In Dickinson County, Iowa, at Superior, 26.9 feet southeast of southeast corner of the Chicago, Rock Island & Pacific Railway station in the station park; 59.7 feet southwest of southwest rail of main track; 5.3 feet northwest of northwest edge of sidewalk. A

	El. Ft.
standard disc, stamped "W-19, 1934" and set in the top of a concrete post two inches high.	1499.275
Top of rail opposite Chicago, Rock Island & Pacific Railway station at Superior.	1498.3
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 215.	1476.1
<u>X-19</u> In <u>Dickinson County</u> , Iowa, 1.9 miles west of <u>Superior</u> , along the Chicago, Rock Island & Pacific Railway; 115 yards southeast of milepost #215-30; 65.5 feet northwest of center line of farm road crossing railroad; 45.2 feet north of north rail of main track; 1.5 feet south of right-of-way fence. A standard disc, stamped "X-19, 1934" and set in the top of a concrete post four inches high.	1514.620
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 217.	1545.8
<u>Y-19</u> In <u>Dickinson County</u> , Iowa, 3.7 miles west of the Chicago, Rock Island & Pacific Railway station at <u>Superior</u> ; 95.0 yards northwest of milepost #217-20; 55.5 feet southeast of fence intersection; 46.2 feet southwest of southwest rail of main track; 32.2 feet southwest of southwest rail of side track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "Y-19, 1934" and set in the top of a concrete post four inches high.	1545.437
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 219.	1507.4
<u>Z-19</u> In <u>Dickinson County</u> , Iowa, 5.8 miles west of the Chicago, Rock Island & Pacific Railway station at <u>Superior</u> ; 1.8 miles southeast of the Chicago, Rock Island & Pacific Railway station at Orleans; 0.1 mile west of milepost #219-20; 62.5 feet southeast of center line of a farm road crossing the track; 45.7 feet southwest of southwest rail; 25.5 feet east of center of gate of farm road; 1.0 foot northeast of right-of-way fence. A standard disc, stamped "Z-19, 1934" and set in the top of a concrete post three inches high.	1470.128
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 221.	1434.5
<u>A-20</u> In <u>Dickinson County</u> , Iowa, 7.6 miles west of the	

El. Ft.

- Chicago, Rock Island & Pacific Railway station at Superior; 93.0 feet southeast of southeast end of station at Orleans; 50.0 feet south of center line of U. S. Highway #71; 35.5 feet east of center line of street; 16.2 feet northeast of northeast rail of main track. A standard disc, stamped "A-20, 1934" and set in the top of a concrete post five inches high. 1412.920
- B-20 In Dickinson County, Iowa, at Spirit Lake, 0.3 mile southeast of the Chicago, Rock Island & Pacific Railway station; 165 feet northwest of road crossing; 90.0 feet north of milepost #223; 60.0 feet east of fence intersection; 45.5 feet north of north rail of main track; 1.5 feet south of right-of-way fence. A standard disc, stamped "B-20, 1934" and set in the top of a concrete post four inches high. 1451.998
- SPIRIT LAKE - 1934 In Dickinson County, Iowa, at Spirit Lake, 312 feet east of east side of the Court House, 176 feet east of center line of Hill Street; 133.5 feet south of center line of Court Street; 49.6 feet southeast of southeast corner of Carnegie Library; in the northeast corner of the shoulder of the concrete anchor of northeast leg of the City Water Tank. A standard disc, stamped "SPIRIT LAKE - 1934" and set in concrete four inches above the ground. 1470.433
- C-20 In Dickinson County, Iowa, at Spirit Lake, 176.5 feet southeast of southeast end of the Chicago, Rock Island & Pacific Railway station; 103 feet southeast of street crossing; 75.6 feet southeast of crossing signal post; 33.0 feet southeast of power line pole #883; 23.3 feet south of south rail of main track; 16.8 feet north of north rail of inside side track. A standard disc, stamped "C-20, 1934" and set in the top of a concrete post three inches high. 1461.798
- Top of rail opposite Chicago, Rock Island & Pacific Railway station at Spirit Lake. 1461.3
- D-20 In Dickinson County, Iowa, 1.7 miles west of the Chicago, Rock Island & Pacific Railway station at Spirit Lake; 50.0 yards southeast of milepost #225-10; 139 feet northwest of west side of concrete drain trough on State Highway #9; 58.0 feet northeast of center line of State Highway #9; 45.5 feet south of southwest rail of main track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "D-20, 1934" and set in the top of a concrete post five inches high. 1437.530

El. Ft.

Top of rail opposite Chicago, Rock Island & Pacific  
Railway MP 225. 1426.1

Top of rail opposite Chicago, Rock Island & Pacific  
Railway MP 227. 1429.3

E-20 In Dickinson County, Iowa, 3.7 miles west of the  
Chicago, Rock Island & Pacific Railway station at  
Spirit Lake; 70.0 yards northwest of milepost #227-10;  
50.0 feet northwest of railroad crossing sign; 49.5  
feet west of center line of county road; 45.3 feet  
northeast of northeast rail of main track; 17.0 feet  
west of fence corner; 1.5 feet southwest of right-of-  
way fence. A standard disc, stamped "E-20, 1934" and  
set in the top of a concrete post three inches high. 1440.771

Top of rail opposite Chicago, Rock Island & Pacific  
Railway station at Montgomery. 1447.3

F-20 In Dickinson County, Iowa, 5.6 miles west of the  
Chicago, Rock Island & Pacific Railway station at  
Spirit Lake; 0.75 mile northwest of Montgomery; 0.2  
mile southeast of where county road crosses railroad;  
190 yards southeast of milepost #229-10; 45.4 feet  
northeast of northeast rail of main track; 1.5 feet  
southwest of right-of-way fence. A standard disc,  
stamped "F-20, 1934" and set in the top of a concrete  
post four inches above the ground. 1428.931

G-20 In Dickinson County, Iowa, 7.7 miles west of the  
Chicago, Rock Island & Pacific Railway station at  
Spirit Lake; 0.15 mile southeast of milepost #231-10;  
0.15 mile southeast of where county road crosses rail-  
road; 44.9 feet northeast of northeast rail of main  
track; 1.5 feet southwest of right-of-way fence. A  
standard disc, stamped "G-20, 1934" and set in the top  
of a concrete post five inches high. 1448.865

H-20 In Dickinson County, Iowa, 2.8 miles southeast of  
the Chicago, Rock Island & Pacific Railway station at  
Lake Park;  $2\frac{1}{4}$  telephone poles east of milepost #232;  
70.0 yards east of east end of concrete and steel tres-  
tle #2320; 64.0 feet southeast of intersection of center  
line of railroad and section road; 53.0 feet east  
of center line of section road; 45.2 feet south of  
south rail; 26.0 feet east of corner of wire fence;  
1.5 feet north of right-of-way fence. A standard disc,  
stamped "H-20, 1934" and set in the top of a concrete  
post three inches high. 1435.630

- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 233. El. Ft. 1452.9
- J-20 In Dickinson County, Iowa, 0.7 mile southeast of the Chicago, Rock Island & Pacific Railway station at Lake Park; 117 yards southeast of milepost #234; 58.0 feet southwest of intersection of center line of track and a gravel road that crosses the tracks; 45.6 feet south of south rail of track; 50.7 feet northwest of center line of gravel road; 10.1 feet northwest of corner of fence; 1.5 feet north of right-of-way fence. A standard disc, stamped "J-20, 1934" and set in the top of a concrete post three inches high. 1476.841
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 254. 1475.7
- K-20 In Dickinson County, Iowa, at Lake Park, 183 feet southeast of southeast corner of Chicago, Rock Island & Pacific Railway station; 105.8 feet south of south rail of main track; 42.9 feet east of center line of road that crosses tracks; 20.0 feet east of center line of a concrete headwall of an 18-inch terra cotta pipe; 14.7 feet south of south rail of south side track; 5.0 feet east of corner of wire fence; 1.3 feet north of right-of-way fence line. A standard disc, stamped "K-20, 1934" and set in the top of a concrete post four inches high. 1462.438
- Top of rail opposite Chicago, Rock Island & Pacific Railway MP 235. 1473.4
- L-20 In Dickinson County, Iowa, 0.8 mile northwest of the Chicago, Rock Island & Pacific Railway station at Lake Park; at a point where a track turns north to Worthington from parallel with the track to Sibley; 75.0 yards east of milepost #235-20; 64.0 yards northwest of the northwest switch of connecting track between the two lines; 28.0 yards northeast of center line of gate in right-of-way fence; 48.6 feet northeast of north rail of track to Sibley; 31.0 feet northeast of track that runs north. A standard disc, stamped "L-20, 1934" and set in the top of a concrete post two inches high. 1479.328
- M-20 In Dickinson County, Iowa, 3.2 miles east of the Chicago, Rock Island & Pacific Railway station at Harris (Osceola County); 10 $\frac{1}{4}$  telephone poles west of milepost #337; 130 yards west of center line of a section line road; 90.0 yards west of concrete culvert

under track; 48.5 feet south of south rail of track; 49.0 feet southwest of milepost #237-10; 1.0 foot north of right-of-way fence. A standard disc, stamped "M-20, 1934" and set in the top of a concrete post five inches high. 1493.964

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 237. 1512.9

N-20 In Osceola County, Iowa, 1.3 miles east of the Chicago, Rock Island & Pacific Railway station at Harris; 96.0 yards west of milepost #239-5; 72.0 feet northeast of center line of crossing of section road and a railroad; 50.0 feet east of center line of section road; 45.0 feet north of north rail of main track; 16.0 feet east of fence corner; 1.5 feet south of right-of-way fence. A standard disc, stamped "N-20, 1934" and set in the top of a concrete post four inches high. 1533.324

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 239. 1527.5

P-20 In Osceola County, Iowa, at Harris, 147.4 feet east of east side of Chicago, Rock Island & Pacific Railway station; 88.4 feet east of center line of main north-and-south street; 29.6 feet north of north rail of main track; 28.0 feet south of center line of street that is parallel to the track. A standard disc, stamped "P-20, 1934" and set in the top of a concrete post three inches high. 1547.835

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 241. 1540.4

Q-20 In Osceola County, Iowa, 1.5 miles west of the Chicago, Rock Island & Pacific Railway station at Harris; 1 telephone pole west of milepost #242; 61.0 feet east of center line of a section line road; 49.3 feet south of south rail of track; 26.0 feet east of corner of fence; 1.5 feet north of right-of-way fence. A standard disc, stamped "Q-20, 1934" and set in the top of a concrete post three inches high. 1561.532

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 243. 1562.7

R-20 In Osceola County, Iowa, 2.3 miles east of the



	El. Ft.
Chicago, Rock Island & Pacific Railway station at <u>Ocheyedan</u> ; 0.6 mile east of the crossing of railroad and State Highway #9; $6\frac{1}{2}$ telephone poles east of milepost #243; $1\frac{1}{2}$ telephone poles east of milepost #243-20; 70.0 feet northwest of intersection of center lines of grade crossing; 67.0 feet west of center line of a graded cross road; 45.4 feet north of north rail; 31.7 feet west of corner of wire fence; 1.5 feet south of right-of-way fence line. A standard disc, stamped "R-20, 1934" and set in the top of a concrete post three inches high.	1566.880
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 244.	1571.6
<u>S-20</u> In <u>Osceola County</u> , Iowa, at <u>Ocheyedan</u> , 0.3 mile east of Chicago, Rock Island & Pacific Railway station; 12 telephone poles east of milepost #246; 85.0 yards east of east end of side track; 46.1 feet south of south rail of track; 53.0 feet south of intersection of center line of a dirt road and track; 24.0 feet east of corner of wire fence; 1.5 feet north of right-of-way fence line. A standard disc, stamped "S-20, 1934" and set in the top of a concrete post five inches high.	1551.030
Top of N Rail opposite Chicago, Rock Island & Pacific Railway station at Ocheyedan.	1551.6
<u>T-20</u> In <u>Osceola County</u> , Iowa, 0.5 mile west of the Chicago, Rock Island & Pacific Railway station at <u>Ocheyedan</u> ; 1 telegraph pole west of pole marked 246-20; 41.0 feet west of center line of a section road that crosses the track; 45.3 feet south of south rail of track; 14.0 feet west of corner of wire fence; 1.5 feet north of right-of-way fence. A standard disc, stamped "T-20, 1934" and set in the top of a concrete post four inches high.	1535.397
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 247.	1511.1
<u>U-20</u> In <u>Osceola County</u> , Iowa, 3.0 miles east of the Chicago, Rock Island & Pacific Railway station at <u>Alenderf</u> ; 60.0 yards southeast of milepost #248-25; 90.0 feet southeast of center line of section road and track; 47.8 feet southwest of southwest rail of main track; 37.0 feet east of center line of section road; 14.5 feet southeast of fence corner; 2.0 feet east of right-of-way fence. A standard disc, stamped "U-20, 1934" and set in the top of a concrete post five inches high.	1512.221

	El. Ft.
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 250.	1579.6
<u>V-20</u> In Osceola County, Iowa, 1.0 mile east of the Chicago, Rock Island & Pacific Railway station at Allendorf; 35.0 yards northwest of milepost #250-25; 70.0 feet northeast of crossing of section road and railroad; 48.5 feet east of center line of section road; 45.8 feet north of north rail of main track; 13.5 feet east of fence corner; 1.5 feet south of right-of-way fence. A standard disc, stamped "V-20, 1934" and set in the top of a concrete post five inches high.	1604.649
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 251.	1587.9
<u>W-20</u> In Osceola County, Iowa, at Allendorf, 5.7 miles east of Sibley; 140 yards west of milepost #251-25; 79.4 feet southwest of southwest corner of Chicago, Rock Island & Pacific Railway station; 60.0 yards west of center line of State Road #73; 58.0 feet north of right-of-way fence; 39.3 feet south of south rail of main track. A standard disc, stamped "W-20, 1934" and set in the top of a concrete post four inches high.	1594.498
Top of rail opposite Chicago, Rock Island & Pacific Railway station at Allendorf.	1594.2
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 252.	1602.1
<u>X-20</u> In Osceola County, Iowa, 4.2 miles northeast of Sibley, along the Chicago, Rock Island & Pacific Railway; 150 yards southwest of milepost #253; 112 yards northeast of milepost #253-10; 183.5 feet southwest of southwest side of 30-inch concrete culvert under railroad; 44.8 feet southeast of southeast rail of main track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "X-20, 1934" and set in the top of a concrete post four inches high.	1618.993
<u>Y-20</u> In Osceola County, Iowa, 2.3 miles northeast of the Chicago, Rock Island & Pacific Railway station at Sibley; 50.0 yards northeast of milepost #255; 54.0 feet south of center line of county road; 52.0 feet southwest of center line of tracks and county road; 45.3 feet southeast of southeast rail of main track; 22.0 feet southwest of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped	

"Y-20, 1934" and set in the top of a concrete post four inches high.

El. Ft.

1551.096

Z-20 In Osceola County, Iowa, at Sibley, 0.3 mile northeast of Chicago, Rock Island & Pacific Railway station; 230 yards northeast of junction with Minneapolis & Omaha Railroad; 115 feet northeast of milepost #257; 68.0 feet northwest of center line of road crossing railroad; 46.0 feet north of north rail of main track; 35.3 feet west of west curb of road; 17.0 feet west of fence corner. A standard disc, stamped "Z-20, 1934" and set in the top of a concrete post four inches high.

1501.651

SIBLEY - 1934 #1 In Osceola County, Iowa, in west corner of Court House yard at Sibley; 129.5 feet southwest of southwest corner of Court House; 63.6 feet east of edge of curb on west side of Court House; 41.6 feet north of edge of curb on south side of Court House. A standard disc, stamped "SIBLEY - 1934" and set in the top of a concrete post four inches high.

1531.152

SIBLEY - 1934 #2 In Osceola County, Iowa, in the northwest corner of the Minnesota Power Plant Park. A standard disc, stamped "SIBLEY - 1934" and set in the top of a concrete post eight inches high.

1508.983

Top of rail opposite Chicago, Rock Island & Pacific Railway station at Sibley.

1505.2

For descriptions of additional bench marks, in this vicinity, see page 165.

LINE 3200. LUVERNE to PIPESTONE, MINNESOTA  
(Second-order Leveling)

This Line follows the Chicago, Rock Island & Pacific Railway from Luverne to Pipestone, Minnesota. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see pages 87 and 88.

El. Ft.

Y-146 In Rock County, Minnesota, at Luverne, 120 yards south of the Chicago, Rock Island & Pacific Railway station; 87.0 feet north of center line of Main Street, which is also U. S. Highway #16; 20.2 feet west of west rail of main line of track; 17.8 feet northwest of a switch post; 13.3 feet north of a telegraph pole. A standard disc, stamped "Y-146, 1934" and set in the top of a concrete post three inches high.

1451.900

Z-146 In Rock County, Minnesota, 0.7 mile north of the Chicago, Rock Island & Pacific Railway station at Luverne; 46.5 feet east of east rail of track; 35.0 feet south of center line of a farm road that crosses the track; 3.4 feet east of first telegraph pole south of crossing; 1.7 feet west of right-of-way fence; 3.0 feet east of milepost #288. A standard disc, stamped "Z-146, 1934" and set in the top of a concrete post four inches high.

1472.441

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 288.

1472.7

A-147 In Rock County, Minnesota, 2.7 miles northeast of the Chicago, Rock Island & Pacific Railway station at Luverne; 210 feet northeast of intersection of center lines of track and highway; 46.0 feet southeast of the east rail of track; 9.6 feet northeast of the first telegraph pole northeast of the road crossing; 2.0 feet northwest of the right-of-way fence; 42.0 yards southwest of milepost #290. A standard disc, stamped "A-147, 1934" and set in the top of a concrete post four inches high.

1506.224

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 290.

1508.8

	El. Ft.
<p><u>B-147</u> In <u>Rock County</u>, <u>Minnesota</u>, 4.3 miles southeast of the <u>Chicago, Rock Island &amp; Pacific Railway</u> station of <u>Hardwick</u>; 50.0 yards southwest of milepost 292; 200 feet southwest of a two by two-foot rock culvert under the track; 58.0 feet northwest of center line of a gravel road; 44.0 feet southeast of east rail of the track; 4.5 feet southeast of a telegraph pole; 3.9 feet northwest of the right-of-way fence. A standard disc, stamped "B-147, 1934" and set in the top of a concrete post six inches high.</p>	1512.592
<p>Top of rail opposite <u>Chicago, Rock Island &amp; Pacific Railway</u> MP 292.</p>	1516.7
<p><u>C-147</u> In <u>Rock County</u>, <u>Minnesota</u>, 2.0 miles southeast of the <u>Chicago, Rock Island &amp; Pacific Railway</u> station at <u>Hardwick</u>; 0.3 mile north of milepost #294; 48.0 feet north of center line of a gravel road that crosses the track; 45.4 feet west of west rail of track; 13.0 feet north of fence corner; 1.0 foot east of right-of-way fence line. A standard disc, stamped "C-147, 1934" and set in the top of a concrete post six inches high.</p>	1593.835
<p><u>D-147</u> In <u>Rock County</u>, <u>Minnesota</u>, at <u>Hardwick</u>, 132 feet southeast of the southeast corner of the <u>Chicago, Rock Island &amp; Pacific Railway</u> station; 64.0 feet south of center line of road crossing track; 30.8 feet east of east rail of main track; 3.4 feet north of a telegraph pole and in line with poles. A standard disc, stamped "D-147, 1934" and set in the top of a concrete post four inches high.</p>	1607.146
<p>Top of rail opposite <u>Chicago, Rock Island &amp; Pacific Railway</u> MP 296.</p>	1608.3
<p><u>E-147</u> In <u>Rock County</u>, <u>Minnesota</u>, 2.0 miles north of the <u>Chicago, Rock Island &amp; Pacific Railway</u> station at <u>Hardwick</u>; 78.0 feet south of center line of a section line road that crosses the tracks; 40.3 feet east of east rail of track; 9.5 feet west of right-of-way fence line; 6.0 feet south of second telegraph pole south of crossing and in line with poles. A standard disc, stamped "E-147, 1934" and set in the top of a concrete post six inches high.</p>	1656.808
<p>Top of rail opposite <u>Chicago, Rock Island &amp; Pacific Railway</u> MP 298.</p>	1643.9

El. Ft.

F-147 In Rock County, Minnesota, 4.3 miles north of the Chicago, Rock Island & Pacific Railway station at Hardwick; 56.0 feet south of center line of a section line road that crosses the tracks; 44.7 feet northwest of west rail of track; 18.0 feet south of fence corner; 2.5 feet southeast of right-of-way fence. A standard disc, stamped "F-147, 1934" and set in the top of a concrete post four inches high. 1700.118

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 300. 1697.5

G-147 In Pipestone County, Minnesota, 2.0 miles south of the Chicago, Rock Island & Pacific Railway station at Trosky; 59.0 feet west of center line of a graded road that crosses track; 40.6 feet northeast of the east rail of track; 4.7 feet northwest of telegraph pole #302/45. A standard disc, stamped "G-147, 1934" and set in the top of a concrete post four inches high. 1676.988

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 303. 1646.9

H-147 In Pipestone County, Minnesota, 0.10 mile south of the Chicago, Rock Island & Pacific Railway station at Trosky; 63.0 yards south of the southeast corner of the section crew's tool house; 52.4 feet east of east rail of track; 6.0 feet south of the first telegraph pole south of milepost #305, and in line with telegraph poles. A standard disc, stamped "H-147, 1934" and set in the top of a concrete post five inches high. 1697.871

Top of rail opposite Chicago, Rock Island & Pacific Railway MP 305. 1701.2

J-147 In Pipestone County, Minnesota, 2.1 miles north of the Chicago, Rock Island & Pacific Railway station at Trosky; 12 telegraph poles south of a gravel road that crosses the track; 45.6 feet southwest of the west rail of the track; 41.0 feet southeast of center line of a farm trail crossing track; 2.0 feet northeast of right-of-way fence line. A standard disc, stamped "J-147, 1934" and set in the top of a concrete post six inches high. 1733.825

K-147 In Pipestone County, Minnesota, 4.1 miles north of the Chicago, Rock Island & Pacific Railway station at Trosky; 71.0 feet south of center line of a farm trail that crosses track; 45.5 feet east of east rail

	El. Ft.
of the track; 2.0 feet west of right-of-way fence. A standard disc, stamped "K-147, 1934" and set in the top of a concrete post six inches high.	1775.689
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 309.	1768.8
<u>L-147</u> In <u>Pipestone County</u> , Minnesota, 3.1 miles southeast of the Chicago, Rock Island & Pacific Railway station at <u>Pipestone</u> ; 29.0 yards southwest of milepost #311; 44.4 feet southwest of west rail of track; 32.0 feet southeast of a farm road that crosses the track; 2.4 feet northeast of right-of-way fence. A standard disc, stamped "L-147, 1934" and set in the top of a concrete post four inches high.	1752.470
Top of rail opposite Chicago, Rock Island & Pacific Railway MP 311.	1753.8
<u>M-147</u> In <u>Pipestone County</u> , Minnesota, 0.7 mile southeast of the Chicago, Rock Island & Pacific Railway station at <u>Pipestone</u> ; 330 feet south of intersection of the Chicago, Rock Island & Pacific Railway and the Chicago, Milwaukee, St. Paul & Pacific Railroad tracks; 45.0 feet east of the east rail of the Chicago, Rock Island & Pacific Railway tracks; 4.0 feet east of a telegraph pole; 3.0 feet west of right-of-way fence. A standard disc, stamped "M-147, 1934" and set in the top of a concrete post four inches high.	1726.949
<u>N-147</u> In <u>Pipestone County</u> , Minnesota, 123 feet southeast of the southeast corner of the Chicago, Rock Island & Pacific Railway station at <u>Pipestone</u> ; in a triangular plot; 24.7 feet southwest of west rail of main line track; 17.4 feet north of north edge of sidewalk of '4th Street NW'; 13.6 feet east of east curb of Hiawatha Avenue. A standard disc, stamped "N-147, 1934" and set in the top of a concrete post four inches high.	1725.476
For descriptions of additional bench marks in this vicinity, see pages 34, 35 and 36.	

LINE 3208. SHERBURN, MINN. TO ROCKWELL CITY, IOWA  
(Second-order Leveling)

This Line follows the Minneapolis & St. Louis Railroad through Estherville to Spencer. From Spencer this Line follows the Chicago, Milwaukee, St. Paul & Pacific Railroad through Marathon and Fonda to Rockwell City, Iowa.

The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see pages 40 and 41.

	El. Ft.
<u>P-147</u> In Martin County, Minnesota, at Sherburn, 244 yards south of the Minneapolis & St. Louis Railroad station; 336 feet south of milepost #150; 162 feet north of U. S. Highway #16; 249 feet south of street crossing; 28.5 feet west of west rail of main track; 19.2 feet west of west rail of side track. A standard disc, stamped "P-147, 1934" and set in the top of a concrete post five inches high.	1288.784
Top of rail at crossing of U. S. Highway #16 and the Minneapolis & St. Louis Railroad at Sherburn.	1288.2
Top of rail at crossing of Chicago, Milwaukee, St. Paul & Pacific Railway and Minneapolis & St. Louis Railroad at Sherburn.	1288.2
Top of rail opposite Minneapolis & St. Louis Railroad MP 151.	1291.0
<u>Q-147</u> In Martin County, Minnesota, 2.0 miles southwest of the Minneapolis & St. Louis Railroad station at Sherburn; 390 feet southwest of milepost #152; 69.5 feet northwest of northwest rail of main track; 5.0 feet northeast of fence intersection; 2.0 feet southeast of right-of-way fence. A standard disc, stamped "Q-147, 1934" and set in the top of a concrete post five inches high.	1285.070
Top of rail opposite Minneapolis & St. Louis Railroad MP 153.	1302.8
<u>R-147</u> In Martin County, Minnesota, 3.9 miles southwest of the Minneapolis & St. Louis Railroad station at	



## LEVELING IN IOWA

	El. Ft.
<p><u>Sherburn</u>; 690 feet northeast of milepost #154; 360 feet southeast of section road crossing track; 68.8 feet southeast of southeast rail of main track; 54.0 feet west of center line of section road; 1.5 feet west of right-of-way fence. A standard disc, stamped "R-147, 1934" and set in the top of a concrete post five inches high.</p>	1292.947
<p>Top of rail opposite Minneapolis &amp; St. Louis Railroad MP 155.</p>	1305.3
<p><u>S-147</u> In <u>Martin County</u>, Minnesota, 5.9 miles southwest of the Minneapolis &amp; St. Louis Railroad station at <u>Sherburn</u>; 0.9 mile northeast of <u>Dunnell</u>; 1005 feet northeast of milepost #156; 61.0 feet south of center line of section road; 46.2 feet southeast of southeast rail of main track; 32.5 feet southwest of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "S-147, 1934" and set in the top of a concrete post five inches high.</p>	1303.997
<p><u>T-147</u> In <u>Martin County</u>, Minnesota, at <u>Dunnell</u>; 6.8 miles southwest of <u>Sherburn</u>; 0.3 mile northeast of milepost #147; 228 feet northeast of Minneapolis &amp; St. Louis Railroad; 115 feet southwest of road crossing; 16.0 feet northwest of northwest rail; 27.0 feet southwest of northeast end of northwest rail of switch. A standard disc, stamped "T-147, 1934" and set in the top of a concrete post four inches high.</p>	1314.577
<p>Top of rail opposite Minneapolis &amp; St. Louis Railroad station at <u>Dunnell</u>.</p>	1314.2
<p>Top of rail opposite Minneapolis &amp; St. Louis Railroad MP 158.</p>	1330.5
<p><u>U-147</u> In <u>Martin County</u>, Minnesota, 2.0 miles southwest of Minneapolis &amp; St. Louis Railroad station at <u>Dunnell</u>; 340 yards northeast of milepost #159; 59.5 feet south of center line of section road; 45.7 feet southeast of southeast rail of main track; 39.0 feet southwest of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "U-147, 1934" and set in the top of a concrete post five inches high.</p>	1334.161
<p>Top of rail opposite Minneapolis &amp; St. Louis Railroad MP 160.</p>	1356.5
<p><u>A-21</u> In <u>Emmet County</u>, Iowa, 4.0 miles south of the Min-</p>	

El. Ft.

neapolis & St. Louis Railroad station at Dunnell (Martin County, Minnesota); 0.7 mile northeast of Huntington, on the State Line; 440 yards northeast of milepost #161; 76.5 feet south of intersection of center line of State Highway #17 and track; 72.9 feet southwest of center line of State Highway #17; 45.9 feet southeast of east rail of track; 45.0 feet southwest of corner of right-of-way fence; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "A-21, 1934" and set in the top of a concrete post three inches high.

1350.512

Top of rail opposite Minneapolis & St. Louis Railroad MP 161.

1349.7

B-21 In Emmet County, Iowa, at Huntington, 0.3 mile southwest of Minneapolis & St. Louis Railway station; 1.0 mile southwest of State Line; 47.0 feet north of center line of section road; 22.3 feet northwest of northwest rail of main track; 13.0 feet northeast of fence corner. A standard disc, stamped "B-21, 1934" and set in the top of a concrete post four inches high.

1343.997

C-21 In Emmet County, Iowa, 2.4 miles southwest of the Minneapolis & St. Louis Railroad station at Huntington; 3.1 miles southwest of State Line; 0.1 mile northeast of milepost #164; 69.0 feet north of center line of section road; 45.6 feet southeast of southeast rail of main track; 32.5 feet northeast of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "C-21, 1934" and set in the top of a concrete post five inches high.

1363.918

Top of rail opposite Minneapolis & St. Louis Railroad MP 165.

1354.8

D-21 In Emmet County, Iowa, 2.0 miles northeast of the Minneapolis & St. Louis Railroad station at Estherville; 5.15 miles southwest of State Line; 310 feet north of centerline of section road; 120 feet northeast of milepost #166; 46.0 feet southeast of southeast rail of main track; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "D-21, 1934" and set in the top of a concrete post five inches high.

1348.816

Top of rail opposite Minneapolis & St. Louis Railroad MP 167.

1328.5

E-21 In Emmet County, Iowa, at Estherville, 165 feet north of Minneapolis & St. Louis Railroad station;

El. Ft.

51.0 feet north of center line of street; 31.9 feet northwest of northwest rail of side track; 15.7 feet northwest of northwest rail of main track; 14.0 feet north of north edge of sidewalk. A standard disc, stamped "E-21, 1934" and set in the top of a concrete post five inches high.

1298.081

NORTH MAGNETIC STATION (1934) In Emmet County, Iowa, at Estherville, northeast of County Court House in the north triangle of Court House Park; 140.2 feet east of east edge of sidewalk paralleling Des Moines Street; 131.1 feet southeast of monument; 164.4 feet northeast of northeast corner of County Court House; 72.3 feet southeast of southeast edge of park sidewalk; 52.3 feet northeast of northeast edge of park walk; 34.1 feet west of west edge of sidewalk paralleling North 7th street. A U.S.C. & G. Magnetic Station standard disc, stamped "North" and set in a concrete post.

1299.518

For descriptions of additional bench marks in this vicinity, see pages 100 and 101.

F-21 In Emmet County, Iowa, 1.9 miles south of the Minneapolis & St. Louis Railroad station at Estherville; 420 feet north of milepost #170; 59.6 feet northwest of north end of a 2-foot galvanized iron culvert; 56.0 feet north of center line of road crossing railroad; 46.5 feet west of west rail of main track; 1.5 feet east of right-of-way fence. A standard disc, stamped "F-21, 1934" and set in the top of a concrete post six inches high.

1298.505

Top of rail opposite Minneapolis & St. Louis Railroad MP 171.

1322.5

G-21 In Emmet County, Iowa, 3.55 miles southwest of the Minneapolis & St. Louis Railroad station at Estherville; 0.65 mile southwest of milepost #171; 480 feet southwest of southwest end of wooden trestle; #87; 18.5 feet north of center line of farm road; 17.9 feet west of west rail of main track; 5.0 feet northeast of "R. R. Crossing" sign. A standard disc, stamped "G-21, 1934" and set in the top of a concrete post five inches high.

1338.239

H-21 In Emmet County, Iowa, 5.3 miles southwest of the Minneapolis & St. Louis Railroad station at Estherville; 0.3 mile southwest of milepost #173; 130 yards northeast of northeast end of wooden trestle that forms under-pass for county road; 44.0 feet southeast

El. Ft.

of southeast rail of main track; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "H-21, 1934" and set in the top of a concrete post six inches high.

1373.711

Top of rail opposite Minneapolis & St. Louis Railroad MP 173.

1370.1

Top of rail opposite Minneapolis & St. Louis Railroad MP 175.

1414.5

J-21 In Emmet County, Iowa, 7.15 miles southwest of the Minneapolis & St. Louis Railroad station at Estherville; 1.5 miles northeast of the 'Raleigh' station; 165 feet north of center line of a section line road; 44.5 feet northwest of west rail of the track; 1.5 feet southeast of right-of-way fence line. A standard disc, stamped "J-21, 1934" and set in the top of a concrete post five inches high.

1418.124

K-21 In Emmet County, Iowa, 5.8 miles northeast of the Minneapolis & St. Louis Railroad station at Terril (Dickinson County); 0.3 mile southwest of station at 'Raleigh'; 330 feet southwest of milepost #177; 44.8 feet southeast of east rail of track; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "K-21, 1934" and set in the top of a concrete post four inches high.

1447.507

Top of rail opposite Minneapolis & St. Louis Railroad MP 178.

1472.6

L-21 In Dickinson County, Iowa, 3.9 miles northeast of the Minneapolis & St. Louis Railroad station at Terril; 67.0 feet southeast of center line of road that crosses track; 47.0 feet east of center line of road; 44.0 feet southeast of east rail of track; 8.0 feet north of right-of-way fence line; 160 yards northeast of milepost #179. A standard disc, stamped "L-21, 1934" and set in the top of a concrete post five inches high.

1453.508

Top of rail opposite Minneapolis & St. Louis Railroad MP 180.

1440.5

M-21 In Dickinson County, Iowa, 1.8 miles northeast of the Minneapolis & St. Louis Railroad station at Terril; 90.0 feet southwest of milepost #181; 52.0 feet east of fence intersection; 45.0 feet southeast of

	El. Ft.
east rail of track; 2.0 feet north of right-of-way fence. A standard disc, stamped "M-21, 1934" and set in the top of a concrete post four inches high.	1421.949
Top of rail opposite Minneapolis & St. Louis Railroad MP 182.	1415.4
<u>N-21</u> In <u>Dickinson County</u> , Iowa, at <u>Terril</u> , 180 feet northeast of Minneapolis & St. Louis Railroad station; 45.0 feet west of west corner of section tool house; 39.0 feet northwest of northwest rail of main track; 18.9 feet southeast of southeast rail of side track. A standard disc, stamped "N-21, 1934" and set in the top of a concrete post five inches high.	1418.685
Top of rail opposite Minneapolis & St. Louis Railroad station at Terril.	1419.5
<u>P-21</u> In <u>Dickinson County</u> , Iowa, 0.2 mile southwest of the Minneapolis & St. Louis Railroad station at <u>Terril</u> ; 420 feet southwest of milepost #183; 46.5 feet southeast of southeast rail of main track; 51.0 feet east of center line of street; 34.0 feet northeast of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "P-21, 1934" and set in the top of a concrete post three inches high.	1422.786
Top of rail opposite Minneapolis & St. Louis Railroad MP 184.	1417.6
<u>Q-21</u> In <u>Dickinson County</u> , Iowa, 2.4 miles southwest of the Minneapolis & St. Louis Railroad station at <u>Terril</u> ; 376 yards southwest of milepost #185; 65.0 feet southwest of center line of crossing of farm road with the railroad; 46.3 feet northwest of northwest rail of track; 43.5 feet southwest of center of gate to farm road; 1.0 foot southeast of right-of-way fence. A standard disc, stamped "Q-21, 1934" and set in the top of a concrete post three inches above the ground.	1392.474
Top of rail opposite Minneapolis & St. Louis Railroad MP 186.	1387.9
<u>R-21</u> In <u>Clay County</u> , Iowa, 4.5 miles southwest of the Minneapolis & St. Louis Railroad station at <u>Terril</u> (Dickinson County); 448 yards southwest of milepost #187; 70.0 feet southeast of center line of section road crossing the railroad; 60.0 feet east of center	

	El. Ft.
line of section road; 46.0 feet southeast of southeast rail of main track; 43.0 feet northeast of fence corner; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "R-21, 1934" and set in the top of a concrete post four inches high.	1418.855
Top of rail opposite Minneapolis & St. Louis Railroad MP 188.	1406.3
<u>S-21</u> In <u>Clay County</u> , Iowa, 2.2 miles northeast of the Minneapolis & St. Louis Railroad station at <u>Langdon</u> ; 142 yards northeast of center line of section road and road crossing; 89.0 yards southwest of milepost #189; 100 feet north of center line of section road; 45.0 feet southeast of southeast rail of main track; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "S-21, 1934" and set in the top of a concrete post three inches high.	1397.172
Top of rail opposite Minneapolis & St. Louis Railroad MP 190.	1392.2
<u>T-21</u> In <u>Clay County</u> , Iowa, at <u>Langdon</u> ; 102 feet northeast of northeast corner of Minneapolis & St. Louis Railroad station; 35.6 feet northwest of northwest rail of main track; 10.4 feet southeast of southeast rail of side track. A standard disc, stamped "T-21, 1934" and set in the top of a concrete post three inches high.	1372.005
Top of rail opposite Minneapolis & St. Louis Railroad station at Langdon.	1373.3
Top of rail opposite Minneapolis & St. Louis Railroad MP 192.	1363.1
<u>U-21</u> In <u>Clay County</u> , Iowa, 2.0 miles southwest of the Minneapolis & St. Louis Railroad station at <u>Langdon</u> ; 9 telegraph poles southwest of milepost #193; 46.2 feet northwest of west rail of track; 59.0 feet northeast of center line of the southwest gate of a farm road; 51.0 feet northeast of the corner of a wire fence. A standard disc, stamped "U-21, 1934" and set in the top of a concrete post two inches high.	1353.816
Top of rail opposite Minneapolis & St. Louis Railroad MP 194.	1336.8
<u>V-21</u> In <u>Clay County</u> , Iowa, 1.8 miles northeast of the	

Minneapolis & St. Louis Railroad station at Spencer; 11 telegraph poles southwest of milepost #195 and a section line road that crosses the track; 93.0 feet north of a whistle post and on opposite side of track; 42.8 feet northwest of west rail; 1.5 feet southeast of right-of-way fence. A standard disc, stamped "V-21, 1934" and set in the top of a concrete post three inches high.

El. Ft.

1329.837

Top of rail opposite Minneapolis & St. Louis Railroad MP 196.

1330.1

W-21 In Clay County, Iowa, 1.6 miles east of the Minneapolis & St. Louis Railroad station at Spencer; 616 yards west of milepost #156; 70.0 feet east of center line of section road; 58.0 feet north of north rail of south track; 45.3 feet north of north rail of north main track; 37.5 feet east of fence corner; 1.5 feet south of right-of-way fence. A standard disc, stamped "W-21, 1934" and set in the top of a concrete post seven inches high.

1309.997

For descriptions of additional bench marks in this vicinity, see pages 81 and 82.

X-21 In Clay County, Iowa, 4.0 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Spencer; 120 feet west of center line of crossing of U. S. Highway #18 and railroad; in northeast wingwall of concrete bridge on U. S. Highway #18; 94.5 feet southwest of southwest rail of main track; 86.5 feet southwest of milepost #154; 14.7 feet north of center line of bridge; 1.2 feet north of north side of guard wall of bridge. A standard disc, stamped "X-21, 1934" and set in the wingwall of bridge.

1301.887

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 154.

1301.6

Y-21 In Clay County, Iowa, 6.0 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Spencer; 89.0 feet north of milepost #152, and on the opposite side of track; 46.3 feet east of east rail of track; 25.0 feet north of center line of gate in right-of-way fence; 1.5 feet west of right-of-way fence, about 5.0 feet below top of rail. A standard disc, stamped "Y-21, 1934" and set in the top of a concrete post six inches high.

1291.831

	El. Ft.
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 152.	1295.6
<u>Z-21</u> In Clay County, Iowa, 3.8 miles north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Gillette Grove; 10 telegraph poles south of milepost #150; 45.8 feet east of east rail of tracks; 23.0 feet south of center line of gate in right-of-way fence; 14.0 feet south of corner of wire fence; 1.5 feet west of right-of-way fence. A standard disc, stamped "Z-21, 1934" and set in the top of a concrete post five inches high.	1296.024
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 150.	1295.5
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 148.	1292.7
<u>A-22</u> In Clay County, Iowa, 1.8 miles north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Gillette Grove; 11 telegraph poles south of milepost #148; 45.3 feet east of east rail of track; 60.0 feet north of intersection of center lines of track and road; 41.5 feet north of corner of wire fence; 1.5 feet west of right-of-way fence, at point where creek comes in and parallels the track for about 300 yards. A standard disc, stamped "A-22, 1934" and set in the top of a concrete post five inches high.	1297.127
<u>B-22</u> In Clay County, Iowa, at Gillette Grove; 160 yards south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 17.7 feet west of west rail of main track; 15.0 feet east of east rail of side track; 7.0 feet northeast of the south telegraph pole in between the side and main track; 0.3 mile south of milepost #146. A standard disc, stamped "B-22, 1934" and set in the top of a concrete post three inches high.	1294.774
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Gillette Grove.	1296.9
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 145.	1316.9
<u>C-22</u> In Clay County, Iowa, 1.6 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Gillette Grove; 9 telegraph poles north of milepost #144; 121 yards north of north end of a 10 by 10-foot	



	El. Ft.
concrete culvert #Y-236; 46.0 feet south of center line of a section line road; 45.4 feet east of east rail of track; 16.6 feet south of corner of wire fence; 1.5 feet west of right-of-way fence. A standard disc, stamped "C-22, 1934" and set in the top of a concrete post six inches high.	1331.894
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 143.	1371.0
<u>D-22</u> In Clay County, Iowa, 1.5 miles north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Webb; 10 telegraph poles north of milepost #142; 54.0 feet northeast of center line of a section road; 46.5 feet west of west rail of tracks; 89.0 feet northwest of intersection of center line of track and section road; 2.0 feet east of right-of-way fence. A standard disc, stamped "D-22, 1934" and set in the top of a concrete post five inches high.	1390.125
<u>E-22</u> In Clay County, Iowa, at Webb, 6 telegraph poles north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 3 telegraph poles north of milepost #141; 88.0 feet north of corner of fence; 46.0 feet west of west rail of track; 125 yards southeast of southeast corner of Webb Consolidated High School. A standard disc, stamped "E-22, 1934" and set in the top of a concrete post seven inches high.	1369.328
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Webb.	1367.5
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 140.	1363.6
<u>F-22</u> In Clay County, Iowa, 1.8 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Webb; $4\frac{1}{2}$ telegraph poles northwest of milepost #139 and on the opposite side of the tracks; 630 yards southeast of the crossing of the Chicago, Milwaukee, St. Paul & Pacific Railroad with the Chicago, Rock Island & Pacific Railroad; 56.0 feet south of center line of section line road that crosses the track; 44.8 feet northeast of the east rail of the track; 22.0 feet southeast of corner of right-of-way fence. A standard disc, stamped "F-22, 1934" and set in the top of a concrete post six inches high.	1382.628
Top of rail at crossing of the Chicago, Milwaukee, St.	

El. Ft.

Paul & Pacific Railroad and the Chicago, Rock Island & Pacific Railroad, 1.4 miles southeast of the Railroad station at Webb.

1377.2

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 138.

1378.3

G-22 In Buena Vista County, Iowa, 2.3 miles north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon; 90.0 yards north of milepost #137; 112 feet south of center line of a section line road that crosses the tracks; 81.5 feet south of north end of snow fence; 43.8 feet west of west rail of track; 1.5 feet east of a snow fence. A standard disc, stamped "G-22, 1934" and set in the top of a concrete post five inches high.

1363.632

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 136.

1392.4

H-22 In Buena Vista County, Iowa, 0.3 mile north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon; 232 yards north of a county road that crosses the tracks; 120 yards north of milepost #135 and on the opposite side of the tracks; 45.6 feet east of east rail of tracks; 1.5 feet west of right-of-way fence line. A standard disc, stamped "H-22, 1934" and set in the top of a concrete post four inches high.

1386.031

J-22 In Buena Vista County, Iowa, at Marathon, 335 yards north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 44.4 feet north of north rail of main track of Chicago & Northwestern Railway; 32.0 feet west of west rail of Chicago, Milwaukee, St. Paul & Pacific Railroad; 29.5 feet north of north rail of side track. A standard disc, stamped "J-22, 1934" and set in the top of a concrete post eight inches high.

1387.228

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon.

1390.1

For descriptions of additional bench marks in this vicinity, see page 131.

K-22 In Buena Vista County, Iowa, 0.5 mile south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon; 147 yards south of milepost #134; 46.0 feet east of east rail of track; 27.0 yards north of intersection with State Highway #10; 1.7 feet west

- of right-of-way fence. A standard disc, stamped "K-22, 1934" and set in the top of a concrete monument seven inches high. El. Ft. 1382.481
- L-22 In Buena Vista County, Iowa; 1.6 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon; 320 yards south of milepost #133; 45.7 feet west of west rail of track; 42.0 yards north of intersection of section road and railroad. A standard disc, stamped "L-22, 1934" and set in the top of a concrete post five inches high. 1352.094
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 133. 1351.5
- M-22 In Buena Vista County, Iowa; 2.9 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Marathon; 8 telephone poles south of milepost #132; 45.4 feet east of east rail of tracks; 2.0 feet west of right-of-way fence. A standard disc, stamped "M-22, 1934" and set in the top of a concrete post seven inches high. 1334.784
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 131. 1335.3
- N-22 In Buena Vista County, Iowa, 0.6 mile north of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Albert City; 35.0 yards northwest of intersection of section road and railroad; 44.9 feet west of west rail of track; 2.5 feet east of right-of-way fence. A standard disc, stamped "N-22, 1934" and set in the top of a concrete post six inches high. 1326.933
- P-22 In Buena Vista County, Iowa, at Albert City, 135 yards south of Chicago, Milwaukee, St. Paul & Pacific Railroad station; 58.0 feet west of west rail of side track; 48.6 feet west of west rail of another side track, in line with a row of telephone poles. A standard disc, stamped "P-22, 1934" and set in the top of a concrete post four inches high. 1318.669
- Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Albert City. 1320.5
- Q-22 In Buena Vista County, Iowa, 2.0 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Albert City; 3 telephone poles south of milepost #127; 45.4 feet east of east rail of track;

El. Ft.

2.0 feet west of right-of-way fence. A standard disc, stamped "Q-22, 1934" and set in the top of a concrete post four inches high. 1298.177

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 127. 1303.5

R-22 In Buena Vista County, Iowa, 4.0 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Albert City; 3 telephone poles south of milepost #125; 44.6 feet west of west rail of tracks; 3.0 feet east of right-of-way fence. A standard disc, stamped "R-22, 1934" and set in the top of a concrete post three inches high. 1286.375

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 125. 1285.5

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 123. 1262.6

S-22 In Pocahontas County, Iowa, 6.5 miles south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Albert City (Buena Vista County); 46.0 feet east of east rail of tracks; 1.7 feet west of right-of-way fence. A standard disc, stamped "S-22, 1934" and set in the top of a concrete post five inches high. 1265.322

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 121. 1257.7

T-22 In Pocahontas County, Iowa, at Varina, 81 yards south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 27.0 yards south of intersection of main road and railroad; 45.5 feet west of west rail of track, near milepost #120. A standard disc, stamped "T-22, 1934" and set in the top of a concrete post four inches high. 1254.564

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 119. 1259.3

U-22 In Pocahontas County, Iowa, 2.0 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Varina; 45.5 feet southwest of southwest rail of track; 2.2 feet northeast of right-of-way fence; 1 telegraph pole northwest of milepost #118. A standard disc, stamped "U-22, 1934" and set in the top of a concrete post six inches high. 1238.964

## LEVELING IN IOWA

	El. Ft.
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 117.	1242.9
<u>V-22</u> In Pocahontas County, Iowa, 1.5 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda; 63.0 feet north of intersection of State Highway #5 with tracks; 45.5 feet northeast of northeast rail of tracks; 2.0 feet southwest of right-of-way fence; 130 yards southeast of milepost #116. A standard disc, stamped "V-22, 1934" and set in the top of a concrete post seven inches high.	1235.805
<u>W-22</u> In Pocahontas County, Iowa, 0.4 mile northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda; 45.4 feet northeast of northeast rail of tracks; 2.2 feet southwest of right-of-way fence. A standard disc, stamped "W-22, 1934" and set in the top of a concrete post seven inches high.	1225.270
<u>X-22</u> In Pocahontas County, Iowa, at Fonda, 114 yards south of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; at the intersection of the Illinois Central Railroad and the Chicago, Milwaukee, St. Paul & Pacific Railroad; 110 feet west of intersection of the two railroads; 23.5 feet southwest of southwest rail of Illinois Central Railroad; 54.3 feet southwest of west corner of switch house. A standard disc, stamped "X-22, 1934" and set in the top of a concrete post four inches high.	1228.885
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda.	1228.2
For descriptions of additional bench marks in this vicinity, see page 141.	
<u>Y-22</u> In Pocahontas County, Iowa, 1.0 mile southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda; 47.0 yards northwest of intersection of section road and railroad; 45.1 feet northeast of northeast rail of track; 2.3 feet southwest of right-of-way fence, near milepost #113. A standard disc, stamped "Y-22, 1934" and set in the top of a concrete post four inches high.	1214.781
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 113.	1216.0
<u>Z-22</u> In Calhoun County, Iowa, 3.0 miles southeast of	

El. Ft.

the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda (Pocahontas County); 1 telephone pole southeast of milepost #111; 44.6 feet southwest of southwest rail of track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "Z-22, 1934" and set in the top of a concrete post six inches high.

1216.894

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 110.

1224.8

A-23 In Calhoun County, Iowa, 5.1 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Fonda (Pocahontas County); 1.0 mile northwest of station at Knoke; 4 telephone poles southeast of milepost #109; 44.6 feet northeast of northeast rail of tracks; 17.0 feet southwest of center line of road running parallel to tracks; 2.0 feet southwest of right-of-way fence. A standard disc, stamped "A-23, 1934" and set in the top of a concrete post three inches high.

1221.205

B-23 In Calhoun County, Iowa, at Knoke, 109 yards southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 73.0 feet west of intersection of railroad and highway; 40.4 feet northwest of a switch on southeast end of a side track; 25.9 feet northwest of northwest rail. A standard disc, stamped "B-23, 1934" and set in the top of a concrete post six inches high.

1230.942

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Knoke.

1237.2

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 107.

1230.9

C-23 In Calhoun County, Iowa, 2.0 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at Knoke; 27.0 yards southeast of milepost #106; 45.0 feet northeast of northeast rail of tracks; 2.0 feet southwest of right-of-way fence. A standard disc, stamped "C-23, 1934" and set in the top of a concrete post seven inches high.

1215.959

D-23 In Calhoun County, Iowa, at Jolley, 266 yards southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 32.2 feet northeast of switch at southeast end of side track in line with telephone poles; 31.7 feet northeast of northeast rail of tracks.

## LEVELING IN IOWA

	El. Ft.
A standard disc, stamped "D-23, 1934" and set in the top of a concrete post six inches high.	1226.927
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Jolley.	1226.3
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 104.	1218.3
<u>E-23</u> In <u>Calhoun County</u> , Iowa, 1.4 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at <u>Jolley</u> ; 5 telephone poles northwest of milepost #103; 145.3 feet southwest of southwest rail of track; 2.2 feet northeast of right-of-way fence. A standard disc, stamped "E-23, 1934" and set in the top of a concrete post seven inches high.	1221.736
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 102.	1224.1
<u>F-23</u> In <u>Calhoun County</u> , Iowa, 3.5 miles southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at <u>Jolley</u> ; 98.0 yards southeast of wooden trestle; 45.1 feet southwest of southwest rail of the tracks; 1.5 feet northeast of snow fence and opposite milepost #101. A standard disc, stamped "F-23, 1934" and set in the top of a concrete post six inches high.	1222.229
<u>G-23</u> In <u>Calhoun County</u> , Iowa, 2.0 miles northwest of the Chicago, Milwaukee, St. Paul & Pacific Railroad station at <u>Rockwell City</u> ; 1 telephone pole southeast of milepost #99; 46.5 feet southwest of southwest rail of track; 1.3 feet northeast of right-of-way fence. A standard disc, stamped "G-23, 1934" and set in the top of a concrete post five inches high.	1226.110
Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad MP 99.	1226.1
<u>H-23</u> In <u>Calhoun County</u> , Iowa, at <u>Rockwell City</u> , 89.0 yards southeast of the Chicago, Milwaukee, St. Paul & Pacific Railroad station; 44.5 feet southeast of intersection of Lake Street and tracks; 40.4 feet northeast of northeast rail of side track; 16.5 feet northeast of northeast rail of main track; 11.8 feet northeast of a switch and northwest of a side track. A standard disc, stamped "H-23, 1934" and set in the top of a concrete post two inches high.	1226.077

El. Ft.

Top of rail opposite Chicago, Milwaukee, St. Paul & Pacific Railroad station at Rockwell City.

1226.4

For descriptions of additional bench marks in this vicinity, see page 46.



LINE 3214. MARATHON to WAVERLY, IOWA  
(Second-order Leveling)

Only the part of the Line from Marathon to Dakota City is included in this report. The Line follows the Chicago and North Western Railroad from Marathon to Dakota City. The field work was done during 1934 by a party in charge of W. R. Tucker.

For descriptions of additional bench marks in this vicinity, see pages 124 and 125.

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	El. Ft.
<u>R.V.-MARATHON</u> In Buena Vista County, 118 yards east of the northeast corner of the Chicago & North Western depot at <u>Marathon</u> ; on northeast corner of concrete base of relay box at east bound signal; 7.5 feet south of south rail of track, opposite milepost #157. A standard monel metal rivet, not stamped, set in the top of base for relay box about 1.1 feet high.	1392.464
<u>R.V. - 2630<math>\frac{1}{2}</math></u> In Buena Vista County, 1.15 miles east of the Chicago & North Western depot at <u>Marathon</u> ; 100 yards east of milepost #156; 25.0 yards east of "Crossing, One Mile" post, on east end of north headwall of culvert #2630 $\frac{1}{2}$ ; 12.8 feet north of north rail of track. A standard monel metal rivet, not stamped, set in concrete headwall.	1368.048
Top of rail opposite Chicago & North Western Railroad MP 156.	1370.4
<u>X-26</u> In Buena Vista County, Iowa, 1.3 miles east of the Chicago & North Western depot at <u>Marathon</u> ; 1.2 miles east of crossing of the Chicago, Milwaukee, St. Paul & Pacific Railroad; 90.0 yards east of intersection of railroad with north and south section line cross road; 45.7 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "X-26, 1934" and set in the top of a concrete post five inches high.	1369.554
Top of rail opposite Chicago & North Western Railroad MP 154.	1353.8
<u>Y-26</u> In Pocahontas County, Iowa, 3.3 miles east of the Chicago & North Western depot at <u>Marathon</u> (Buena Vista County); 165 yards east of east end of bridge #2626; 71.0 feet northeast of intersection with sec-	

El. Ft.

tion line road; 46.1 feet north of north rail of track; 27.0 feet east of right-of-way fence, 1.3 feet south of fence. A standard disc, stamped "Y-26, 1934" and set in the top of a concrete post four inches high. 1339.820

Z-26 In Pocahontas County, Iowa, 1.2 miles west of the Chicago & North Western depot at Laurens; 0.7 mile west of crossing of Rock Island Railroad; 55.0 yards east of section line fence, north and south; 45.6 feet south of south rail of track; 1.6 feet north of right-of-way fence. A standard disc, stamped "Z-26, 1934" and set in the top of a concrete post four inches high. 1313.633

Top of rail opposite Chicago & North Western Railroad MP 152. 1317.3

R.V. - LAURENS In Pocahontas County, Iowa, 1.0 mile west of the Chicago & North Western depot at Laurens; 30.0 yards west of "Station One Mile" post; on the northwest corner of concrete base of eastbound distant signal; 8.3 feet south of south rail of track. A standard monel metal rivet, not stamped, set in concrete base of distant signal. 1309.869

R.V. - LAURENS (31) In Pocahontas County, Iowa, at Laurens; on the Chicago & North Western Railroad right-of-way; 42.0 yards west of northwest corner of the station; on the south corner of concrete base of southeast pedestal of steel water tank; 8.9 feet north of north rail of track. A standard monel metal rivet, not stamped, set in concrete base of water tank. 1314.865

Top of rail at crossing of Rock Island Railroad and the Chicago & North Western Railroad, 0.4 mile west of Laurens. 1304.3

LAURENS - 1934 In Pocahontas County, Iowa, on the wall of the south basement steps of the public library at Laurens; in the City Park, south of the Chicago, Milwaukee, St. Paul & Pacific depot; 14.6 feet north of southeast corner of building; 1.5 feet south of south side of east entrance. A standard disc, stamped "LAURENS - 1934" and set horizontal in concrete wall about 0.8 feet above level of ground. 1311.999

A-27 In Pocahontas County, Iowa, 0.5 mile east of the Chicago & North Western depot at Laurens; 40 yards west of a fence line running north and south; 45.2 feet south of south rail of track; 1.5 feet north of

- right-of-way fence. . . A standard disc, stamped "A-27, 1934" and set in the top of a concrete post four inches high. El. Ft. 1293.846
- R.V.-2615 In Pocahontas County, Iowa, 1.1 miles east of the Chicago & North Western depot at Laurens; 87.0 yards east of "Station One Mile" post; on east end of north stone headwall of culvert #2615; 13.3 feet north of north rail of track. A standard monel metal rivet, not stamped, set in stone headwall. 1287.278
- Top of rail opposite Chicago & North Western Railroad MP 149. 1299.6
- B-27 In Pocahontas County, Iowa, 2.5 miles east of the Chicago & North Western depot at Laurens; 80.0 yards east of section line fence; 44.9 feet north of north rail of track; 1.5 feet south of right-of-way fence; at west end of a cut in east end of a fill. A standard disc, stamped "B-27, 1934" and set in the top of a concrete post three inches high. 1298.022
- C-27 In Pocahontas County, Iowa, 3.2 miles west of the Chicago & North Western depot at Havelock; 140 yards west of milepost #146; 40.0 yards east of east end of bridge #2608; 60.0 feet southwest of intersection of section line cross road; 44.0 feet south of south rail of track; 8.5 feet west of right-of-way fence corner, 2.0 feet north of fence. A standard disc, stamped "C-27, 1934" and set in the top of a concrete post four inches high. 1284.666
- R.V.-2607 In Pocahontas County, Iowa, 3.0 miles west of the Chicago & North Western depot at Havelock; 260 yards east of milepost #146; on culvert #2607; on east end of north stone headwall; 14.3 feet north of north rail of track. A standard monel metal rivet, not stamped, set in stone headwall below level of track. 1277.087
- Top of rail opposite Chicago & North Western Railroad MP 145. 1285.5
- D-27 In Pocahontas County, Iowa, 1.2 miles west of the Chicago & North Western depot at Havelock; 35.0 yards southwest of milepost #144; 44.9 feet south of south rail of track; 1.5 feet north of right-of-way fence. A standard disc, stamped "D-27, 1934" and set in the top of a concrete post five inches high. 1261.083

El. Ft.

- R.V.-2604 In Pocahontas County, Iowa, 1.0 mile west of the Chicago & North Western depot at Havelock; 340 yards east of milepost #144; 110 yards west of "Station One Mile" post; on east end of north stone headwall of culvert #2604; 14.1 feet north of north rail of track. A standard monel metal rivet, not stamped, set in stone headwall of culvert. 1249.568
- E-27 In Pocahontas County, Iowa, 290 yards east of southeast corner of Chicago & North Western Railroad station at Havelock; 69.0 feet northwest of intersection with section line north and south cross road; 43.2 feet north of north rail of track; 5.5 feet west of right-of-way fence corner, 1.5 feet south of fence. A standard disc, stamped "E-27, 1934" and set in the top of a concrete post three inches high. 1224.899
- Top of rail opposite Chicago & North Western Railroad station at Havelock. 1230.3
- Top of rail opposite Chicago & North Western Railroad MP 141. 1217.5
- F-27 In Pocahontas County, Iowa, 2.1 miles east of the Chicago & North Western depot at Havelock; 42.0 yards southeast of culvert #2 598; 72.0 feet southeast of intersection with section line cross road; 45.0 feet south of south rail of track; 15.0 feet east of right-of-way fence corner, 1.7 feet north of fence. A standard disc, stamped "F-27, 1934" and set in the top of a concrete post five inches high. 1214.125
- R.V.-2597 In Pocahontas County, Iowa, 2.9 miles east of the Chicago & North Western Railroad depot at Havelock; 0.2 mile west of intersection with section line road; on the south stone headwall of culvert #2597; on east end of culvert; 9.9 feet south of south rail of track. A standard monel metal rivet, not stamped, set in stone headwall. 1204.610
- Top of rail opposite Chicago & North Western Railroad MP 139. 1203.0
- G-27 In Pocahontas County, Iowa, 3.9 miles east of the Chicago & North Western depot at Havelock; 0.2 mile west of intersection of section line cross road; 46.5 feet north of north rail of track; 1.4 feet south of right-of-way fence. A standard disc, stamped "G-27, 1934" and set in the top of a concrete post four

## LEVELING IN IOWA

inches high.	El. Ft.
	1208.561
Top of rail opposite Chicago & North Western Railroad MP 137.	1200.3
<u>H-27</u> In Pocahontas County, Iowa, 2.7 miles west of the Chicago & North Western depot at Rolfe; 50.0 feet southwest of south end of culvert #2592; 67.0 feet southeast of intersection of section line cross road; 45.1 feet south of south rail of track; 9.5 feet east of right-of-way fence corner; 2.4 feet north of right- of-way fence. A standard disc, stamped "H-27, 1934" and set in the top of a concrete post four inches high.	1187.888
<u>R.V.-2590</u> In Pocahontas County, Iowa, 1.6 miles west of the Chicago & North Western depot at Rolfe; 0.1 mile east of section line cross road; on the east end of north stone headwall of culvert #2590; 9.2 feet north of north rail of track. A standard monel metal rivet, not stamped, set in stone headwall of culvert.	1192.232
Top of rail opposite Chicago & North Western Railroad MP 135.	1198.2
<u>R.V.-ROLFE(25)</u> In Pocahontas County, Iowa, 0.6 mile west of the Chicago & North Western depot at Rolfe; on the northeast corner of concrete base of east bound signal; 79.0 feet south of south rail of track. A standard monel metal rivet, not stamped, set in con- crete signal base about 1.0 foot above the ground.	1190.280
<u>J-27</u> In Pocahontas County, Iowa, at Rolfe, 0.7 mile west of the Chicago & North Western depot; 58.0 feet northeast of intersection of State Highway #44; 44.8 feet north of north rail of track; 5.0 feet southeast of right-of-way fence corner. A standard disc, stamp- ed "J-27, 1934" and set in the top of a concrete post four inches high.	1187.301
<u>R.V.-ROLFE (24)</u> In Pocahontas County, Iowa, at Rolfe, in front of the Chicago & North Western depot; on con- crete curb of depot platform, opposite bay-window; 2.6 feet north of north rail of track; 1.0 foot above the ground. A standard monel metal rivet, not stamped, set in concrete about 1 foot above the ground.	1185.588
Top of rail opposite Chicago & North Western Railroad MP 134.	1185.7

El. Ft.

- K-27 In Pocahontas County, Iowa, 0.3 mile east of the Chicago & North Western depot at Rolfe; 37.0 yards northwest of east end of side track; 82.5 feet northeast of intersection with county cross road; 45.0 feet north of north rail of track; 41.0 feet east of right-of-way fence corner, 1.5 feet south of fence. A standard disc, stamped "K-27, 1934" and set in the top of a concrete post four inches high. 1180.172
- R.V.-ROLFE (23) In Pocahontas County, Iowa, 0.5 mile east of the Chicago & North Western depot at Rolfe; on the right-of-way; on southeast corner of concrete base of west bound signal stand; 7.6 feet north of north rail of track. A standard monel metal rivet, not stamped, set in concrete signal base about one foot above the ground. 1167.937
- Top of rail opposite Chicago & North Western Railroad MP 133. 1159.4
- L-27 In Pocahontas County, Iowa, 2.3 miles east of the Chicago & North Western depot at Rolfe; 150 yards east of east end of bridge #2579; 48.7 feet north of north rail of track; 1.2 feet south of right-of-way fence. A standard disc, stamped "L-27, 1934" and set in the top of a concrete post six inches high. 1137.931
- R.V.-2576 In Pocahontas County, Iowa, 2.4 miles west of the Bradgate (Humboldt County) depot, on right-of-way of the Chicago & North Western Railroad; on south end of west backwall of Bridge #2576; 6.8 feet south of south rail of track. A standard monel metal rivet, not stamped, set in concrete backwall of bridge. 1136.645
- M-27 In Pocahontas County, Iowa, 1.5 miles west of the Chicago & North Western depot at Bradgate (Humboldt County); 57.0 feet southeast of intersection with township cross road; 43.5 feet south of south rail of track; 4.0 feet northeast of right-of-way fence corner. A standard disc, stamped "M-27, 1934" and set in the top of a concrete post six inches high. 1125.204
- R.V.-2570 In Pocahontas County, Iowa, 0.8 mile west of the Chicago & North Western depot at Bradgate (Humboldt County); on north end of east backwall of bridge #2570; 0.2 mile east of milepost #129; 7.1 feet north of north rail of track. A standard monel metal rivet, not stamped, set in concrete bridge backwall. 1127.809

## LEVELING IN IOWA

- Top of rail opposite Chicago & North Western Railroad  
Mp 129. El. Ft.  
1127.9
- N-27 In Humboldt County, Iowa, at Bradgate, on the right-of-way of the Chicago & North Western Railroad; 80.0 yards west of milepost #128; 37.6 feet east of southeast corner of station; 33.8 feet north of north rail of main track; 57.0 feet northwest of intersection with county cross road; 4.2 feet southwest of corner of fence. A standard disc, stamped "N-27, 1934" and set in the top of a concrete post five inches high. 1121.008
- R.V.-BRADGATE In Humboldt County, Iowa, at Bradgate, along the right-of-way of the Chicago & North Western Railroad; 70.0 yards east of southeast corner of depot; 120 feet west of milepost #128; on the northwest corner of the hog sprinkler pit; 10.8 feet north of north rail of track. A standard monel metal rivet, not stamped, set in concrete hog sprinkler pit, about two inches above the ground. 1121.645
- Top of rail opposite Chicago & North Western Railroad  
MP 128. 1120.8
- P-27 In Humboldt County, Iowa, 1.0 mile southeast of the Chicago & North Western depot at Bradgate; 120 yards northwest of milepost #127; 100 yards southeast of culvert #2565 $\frac{1}{2}$ ; 115 yards southeast of intersection with county cross road; 45.3 feet southwest of southwest rail of track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "P-27, 1934" and set in the top of a concrete post six inches high. 1117.294
- R.V.-2565 In Humboldt County, Iowa, 1.5 miles southeast of the Chicago & North Western depot at Bradgate; on the north end of the west backwall of bridge #2565; 7.7 feet northeast of northeast rail of track; 12.4 feet southwest of end of backwall. A standard monel metal rivet, not stamped, set in concrete bridge backwall, below level of track. 1119.827
- Top of rail opposite Chicago & North Western Railroad  
MP 126. 1120.2
- Q-27 In Humboldt County, Iowa, 3.0 miles southeast of the Chicago & North Western Railroad station at Bradgate; 0.25 mile southeast of a farm crossing; 160 yards northwest of milepost #125; 44.8 feet northeast of northeast rail of track; 1.8 feet southwest of

El. Ft.

right-of-way fence, at northwest end of a long fill. A standard disc, stamped "Q-27, 1934" and set in the top of a concrete post six inches high.

1114.985

R-27 In Humboldt County, Iowa, 2.0 miles northwest of the Chicago & North Western depot at Rutland; 275 yards northwest of county cross road; 110 yards northwest of culvert #2559; 75.0 yards southeast of milepost #123; 45.3 feet southwest of southwest rail of track; 1.5 feet northeast of right-of-way fence. A standard disc, stamped "R-27, 1934" and set in the top of a concrete post four inches high.

1132.419

Top of rail opposite Chicago & North Western Railroad MP 123.

1135.7

R.V.-2557 In Humboldt County, Iowa, 0.4 mile northwest of the Chicago & North Western depot at Rutland; 34.0 yards northwest of intersection of railroad with county road running east and west; on east end of north stone headwall of culvert #2557; 13.9 feet northeast of northeast rail. A standard monel metal rivet, not stamped, set in concrete bridge headwall.

1124.922

S-27 In Humboldt County, Iowa, at Rutland, along the Chicago & North Western Railroad right-of-way; 240 yards east of southeast corner of the station; 75.0 yards east of intersection with county cross road; 93.0 feet southwest of east end of switch; 45.5 feet south of south rail of main track; 31.4 feet south of south rail of south side track; 1.5 feet north of right-of-way fence. A standard disc, stamped "S-27, 1934" and set in the top of a concrete post six inches high.

1116.202

Top of rail opposite Chicago & North Western Railroad station at Rutland.

1121.3

Top of rail opposite Chicago & North Western Railroad MP 120.

1132.3

T-27 In Humboldt County, Iowa, 2.0 miles southeast of the Chicago & North Western depot at Rutland; 110 yards northwest of culvert #2551; 75.0 feet northwest of intersection with county cross road; 44.2 feet northeast of northeast rail of track; 4.5 feet southwest of right-of-way fence corner. A standard disc, stamped "T-27, 1934" and set in the top of a concrete post four inches high.

1128.452



- El. Ft.
- R.V.-2551 In Humboldt County, Iowa, 2.0 miles south-east of the Chicago & North Western depot at Rutland; on the east end of north stone headwall of culvert #2551; 12.4 feet northeast of northeast rail of track. A standard monel metal rivet, not stamped, set in stone headwall about level with the track. 1128.262
- R.V.-2548 In Humboldt County, Iowa, 2.75 miles south-east of the Chicago & North Western depot at Rutland; on east end of north stone headwall of culvert #2548; 16.1 feet northeast of northeast rail of track. A standard monel metal rivet, not stamped, set in stone bridge headwall. 1122.153
- Top of rail opposite Chicago & North Western Railroad MP 118. 1126.2
- R.V.-2545 In Humboldt County, Iowa, 1.6 miles north-west of the Chicago & North Western Railroad depot at Dakota City; on the east end of north stone headwall of culvert #2545; 13.8 feet northeast of northeast rail of track. A standard monel metal rivet, not stamped, set in stone headwall of culvert, about level with the track. 1115.017
- U-27 In Humboldt County, Iowa, 1.3 miles northwest of the Chicago & North Western depot at Dakota City; 145 feet west of intersection of county cross road; 44.6 feet southwest of southwest rail of track; 150 feet west of milepost #117; 2.3 feet north of right-of-way fence corner. A standard disc, stamped "U-27, 1934" and set in the top of a concrete post four inches high. 1123.674
- R.V.-2543 In Humboldt County, Iowa, 0.4 mile north-west of the Chicago & North Western depot at Dakota City; on the north end of the west abutment of bridge #2543; 4.4 feet northeast of northeast rail of track; 6.2 feet southwest of corner of abutment with wing wall; 20.0 feet inside north girder. A standard monel metal rivet, not stamped, set in concrete bridge abutment. 1133.846
- V-27 In Humboldt County, Iowa, 0.2 mile southeast of the Chicago & North Western depot at Dakota City; 85.0 yards southeast of east end of switch; 111 feet southeast of intersection with county cross road, north and south; 44.2 feet southwest of southwest rail of track; 16.5 feet southeast of right-of-way fence corner; 2.0 feet northeast of right-of-way fence. A standard disc, stamped "V-27, 1934" and set in the top of a concrete

post four inches high.

El. Ft.  
1122.114

Top of rail opposite Chicago & North Western Railroad station at Dakota City.

1123.1

R.V.-2540 In Humboldt County, Iowa, 0.4 mile southeast of the Chicago & North Western depot at Dakota City; on north end of west backwall of bridge #2540; 9.4 feet northeast of northeast rail of track; 0.7 foot southwest of northeast edge of top course of the wall. A standard monel metal rivet, not stamped, set in bridge backwall.

1109.486

For descriptions of additional bench marks in this vicinity, see page 30.

LINE 3216. FONDA to LE MARS, IOWA  
(Second-order Leveling)

This Line follows the Illinois Central Railroad from Fonda through Cherokee to Le Mars. The original field work was done during September 1934 by a party in charge of W. R. Tucker, and the section of the Line from Fonda to Cherokee was releveled in September 1936 by a party of the Iowa Geodetic Survey in charge of George Havens, and certain sections of this Line were releveled in September 1939 by the same organization.

For descriptions of additional bench marks in this vicinity, see pages 127 and 128.

	El. Ft.
<u>J-23</u> In Pocahontas County, Iowa, 1.7 miles west of the Illinois Central depot at Fonda; 44.4 feet south of south rail of track; 31.0 feet east of center line of road crossing track; 2.8 feet northeast of corner fence post. A standard disc, stamped "J-23, 1934" and set in the top of a concrete post four inches high.	1234.158
Top of rail opposite Illinois Central Railroad MP 411.	1233.9
Top of L rail opposite Illinois Central Railroad MP 412.	1247.1
<u>K-23</u> In Pocahontas County, Iowa, 3.9 miles west of the Illinois Central depot at Fonda; 4.5 miles east of Newell; 51.0 feet east of center line of road crossing; 47.1 feet north of north rail of track; 28.0 feet east of corner fence post, 1.5 feet south of fence. A standard disc, stamped "K-23, 1934" and set in the top of a concrete post five inches high.	1257.353
Top of rail opposite Illinois Central Railroad MP 413.	1255.8
Top of L rail opposite Illinois Central Railroad MP 414.	1244.1
<u>L-23</u> In Buena Vista County, Iowa, 6.1 miles west of the Illinois Central depot at Fonda; 55.0 yards east of railroad crossing; 43.9 feet south of south rail of track; 6.4 feet southeast of telegraph pole; 1.7 feet north of fence. A standard disc, stamped "L-23, 1934" and set in the top of a concrete post four inches high.	1261.038

	El. Ft.
Top of L rail opposite Illinois Central Railroad MP 415.	1252.3
Top of rail opposite Illinois Central Railroad MP 416.	1264.6
Top of rail opposite Illinois Central Railroad MP 417.	1258.1
<u>M-23</u> In Buena Vista County, Iowa, at Newell, 0.5 mile east of Illinois Central depot; 91.0 feet west of center line of railroad crossing; 31.0 feet south of center line of road running parallel to track; 3.0 feet south of telegraph pole. A standard disc, stamped "M-23, 1934" and set in the top of a concrete post five inches high.	1257.360
Top of rail opposite Illinois Central Railroad MP 418.	1264.9
<u>N-23</u> In Buena Vista County, Iowa, at Newell, 135 yards west of the Illinois Central depot; 46.0 feet north of north rail of main track; 6.5 feet west of corner fence post in southeast corner of pasture fence; 1.4 feet south of fence. A standard disc, stamped "N-23, 1934" and set in the top of a concrete post five inches high.	1263.567
Top of rail opposite Illinois Central Railroad station at Newell.	1265.3
Top of rail opposite Illinois Central Railroad MP 419.	1270.3
<u>P-23</u> In Buena Vista County, Iowa, 1.6 miles west of the Illinois Central depot at Newell; 101 yards west of trestle "419.5"; 53.0 feet southwest of center line of road running parallel to track; 39.5 feet southeast of corner fence post; 31.9 feet north of north rail of track. A standard disc, stamped "P-23, 1934" and set in the top of a concrete post three inches high.	1282.235
Top of rail opposite Illinois Central Railroad MP 420.	1274.0
Top of rail opposite Illinois Central Railroad MP 421.	1287.6
Top of R rail opposite Illinois Central Railroad MP 422.	1301.6
Top of rail opposite Illinois Central Railroad MP 424.	1346.4
Top of rail opposite Illinois Central Railroad MP 425.	1391.0

- Top of rail opposite Illinois Central Railroad MP 426. El. Ft.  
1427.6
- Q-23 In Buena Vista County, Iowa, 3.7 miles west of the Illinois Central depot at Newell; 1.3 miles east of Sulphur Springs depot; 92.0 feet northeast of center line of State Highway #5; 54.0 feet east of center line of section line cross road; 31.8 feet south of south rail of track; 19.4 feet northwest of telegraph pole. A standard disc, stamped "Q-23, 1934" and set in the top of a concrete post three inches high. 1302.425  
NOTE: This bench mark was reported broken in 1939.
- R-23 In Buena Vista County, Iowa, at Sulphur Springs, 55.0 yards west of the Illinois Central depot; 23.4 feet north of north rail of main track; 2.6 feet northwest of milepost #423. A standard disc, stamped "R-23, 1934" and set in the top of a concrete post one inch high. 1310.893  
NOTE: This bench mark was reported broken in 1939.
- S-23 In Buena Vista County, Iowa, 1.8 miles west of the Illinois Central depot at Sulphur Springs; 3.5 miles east of Storm Lake; 62.0 feet southeast of center line of road crossing; 36.3 feet south of south rail; 8.4 feet northeast of corner fence post; 3.0 feet west of telegraph pole. A standard disc, stamped "S-23, 1934" and set in the top of a concrete post four inches high. 1386.982  
NOTE: This bench mark was reported broken in 1939.
- T-23 In Buena Vista County, Iowa, 1.3 miles east of the Illinois Central depot at Storm Lake; 53.4 feet northeast of milepost #427; 49.0 feet north of north rail of track, and across from northeast corner of Storm Lake Cemetery; 3.1 feet northwest of corner fence post. A standard disc, stamped "T-23, 1934" and set in the top of a concrete post four inches high. 1433.271
- Top of rail opposite Illinois Central Railroad MP 428. 1439.2
- U-23 In Buena Vista County, Iowa, at Storm Lake, 0.2 mile east of the Illinois Central depot; 60.0 yards west of railroad wye; 60.0 feet northwest of center line of railroad crossing with Chicago, Milwaukee, St. Paul & Pacific Railroad; 40.5 feet southwest of southwest rail of track; 5.4 feet south-southeast of a telegraph pole. A standard disc, stamped "U-23, 1934" and set in the top of a concrete post four inches high. 1436.142

El. Ft.

- STORM LAKE - 1934 In Buena Vista County, Iowa, at Storm Lake, on the center foundation of city water tank; 1.4 feet southwest of northeast corner of foundation; 65.0 yards southwest of southwest corner of Illinois Central Railroad passenger station. A standard disc, stamped "Storm Lake - 1934" set flush with surface of foundation. 1433.964
- Top of rail opposite Illinois Central Railroad station at Storm Lake. 1434.7
- V-23 In Buena Vista County, Iowa, at Storm Lake, 0.6 mile northwest of the Illinois Central depot; 67.0 yards southeast of milepost #429; 41.0 yards southwest of center line of State Highway #5; 47.0 feet southwest of center line of road crossing; 27.9 feet southwest of southwest rail of track. A standard disc, stamped "V-23, 1934" and set in the top of a concrete post five inches high. 1438.478
- Top of rail opposite Illinois Central Railroad MP 429. 1440.0
- Top of R rail opposite Illinois Central Railroad MP 430. 1443.3
- W-23 In Buena Vista County, Iowa, 2.7 miles west of the Illinois Central depot at Storm Lake; 40.5 feet north of the north rail of track; 40.0 feet northwest of milepost #431; 36.0 feet south of center line of State Highway #5. A standard disc, stamped "W-23, 1934" and set in the top of a concrete post five inches high. 1426.145
- NOTE: This bench mark was reported destroyed in 1939.
- Top of rail opposite Illinois Central Railroad MP 432. 1433.2
- X-23 In Buena Vista County, Iowa, 1.1 miles east of the Illinois Central depot at Alta; 50.0 yards east of milepost #433; 41.7 feet north of north rail of track; 35.0 feet south of center line of State Highway #5; 10.8 feet southeast of telegraph pole. A standard disc, stamped "X-23, 1934" and set in the top of a concrete post five inches high. 1461.975
- NOTE: This bench mark was reported destroyed in 1939.
- Top of rail opposite Illinois Central Railroad MP 433. 1464.3
- Y-23 In Buena Vista County, Iowa, 0.2 mile east of the Illinois Central depot at Alta; 35.0 feet east of

## LEVELING IN IOWA

	El. Ft.
center line of road crossing track; 24.5 feet north of corner fence post; 18.6 feet south of south rail; 4.1 feet northwest of telegraph pole. A standard disc, stamped "Y-23, 1934" and set in the top of a concrete post five inches high.	1509.433
Top of rail opposite Illinois Central Railroad MP 434.	1512.9
Top of rail opposite Illinois Central Railroad station at Alta.	1513.8
<u>Z-23</u> In Buena Vista County, Iowa, at Alta, 160 yards west of the Illinois Central depot; 47.5 feet west of northwest corner of a long granary; 37.6 feet south of south rail of main track; 3.8 feet west of a telegraph pole. A standard disc, stamped "Z-23, 1934" and set in the top of a concrete post two inches high.	1512.005
Top of rail opposite Illinois Central Railroad MP 435.	1477.5
Top of rail opposite Paving Station #268.	1422.3
<u>I.H.C. B.M.</u> In Buena Vista County, Iowa, 3.1 miles west of the Illinois Central depot at Alta (Buena Vista County); opposite paving station #268 on State Highway #5; approximately 300 feet west of highway crossing. A copper bolt set in south headwall of a 9x9 concrete box culvert.	1423.107
<u>A-24</u> In Buena Vista County, Iowa, 1.4 miles northwest of the Illinois Central depot at Alta; 5 telegraph poles west of road crossing; 48.0 feet north of north rail of track; 30.0 feet south of center line of road running parallel to track; 7.6 feet west of a telegraph pole. A standard disc, stamped "A-24, 1934" and set in the top of a concrete post six inches high. <u>NOTE:</u> This bench mark was reported destroyed in 1939.	1453.967
Top of rail opposite Illinois Central Railroad MP 436.	1433.5
Top of rail opposite Illinois Central Railroad MP 437.	1432.6
<u>B-24</u> In Buena Vista County, Iowa, 3.2 miles northwest of the Illinois Central depot at Alta; 4.3 miles southeast of Aurelia; 73.0 feet northwest of center line of road crossing track; 36.6 feet northeast of north rail of track; 35.0 feet west of center line of road crossing track; 11.8 feet south of board snow fence. A standard disc, stamped "B-24, 1934" and set in the top of a concrete post five inches high.	1441.483

	El. Ft.
Top of rail opposite Illinois Central Railroad MP 438.	1439.8
Top of rail opposite Illinois Central Railroad MP 439.	1458.7
<u>C-24</u> In Cherokee County, Iowa, 1.5 miles east of the Illinois Central depot at Aurelia; 240 feet east of center line of State Highway #5; 42.6 feet south of south rail of track; 5.0 feet south of third telegraph pole east of highway; 1.0 foot north of right-of-way fence. A standard disc, stamped "C-24, 1934" and set in the top of a concrete post four inches high.	1430.909
Top of R rail opposite Illinois Central Railroad MP 440.	1427.0
Top of N rail opposite Illinois Central Railroad MP 441.	1389.9
Top of rail opposite Illinois Central Railroad station at Aurelia.	1386.5
<u>D-24</u> In Cherokee County, Iowa, 70.0 feet southeast of southwest corner of the Illinois Central Railroad station at Aurelia; 67.0 feet east of center line of a road crossing track; 33.0 feet south of south rail of main track; 11.0 feet east of first telegraph pole east of crossing and in line with row of poles. A standard disc, stamped "D-24, 1934" and set in the top of a concrete post four inches high. <u>NOTE:</u> This bench mark was reported destroyed in 1939.	1386.021
Top of rail opposite Illinois Central Railroad MP 442.	1386.8
<u>E-24</u> In Cherokee County, Iowa, 0.6 mile west of the Illinois Central depot at Aurelia; 150 feet west of center line of a road crossing track; 41.9 feet southwest of southwest rail of track; 6.6 feet southwest of second telegraph pole west of road crossing; 2.0 feet northeast of right-of-way fence. A standard disc, stamped "E-24, 1934" and set in the top of a concrete post six inches high.	1376.497
Top of R rail opposite Illinois Central Railroad MP 443.	1348.4
Top of R rail opposite Illinois Central Railroad MP 444.	1344.7
<u>F-24</u> In Cherokee County, Iowa, 2.7 miles west of the Illinois Central depot at Aurelia; 7 telegraph poles	



## LEVELING IN IOWA

	El. Ft.
east of road crossing; 41.4 feet south of south rail of track; 17.6 feet southeast of telegraph pole; 5.4 feet north of right-of-way fence. A standard disc, stamped "F-24, 1934" and set in the top of a concrete post six inches high.	1356.477
Top of rail opposite Illinois Central Railroad MP 445.	1345.7
<u>G-24</u> In Cherokee County, Iowa, 3.9 miles west of the Illinois Central depot at Aurelia; 44.7 feet north of the north rail of track; 32.0 feet east of center line of road crossing track; 2.4 feet southeast of corner fence post. A standard disc, stamped "G-24, 1934" and set in the top of a concrete post five inches high.	1320.745
<u>NOTE:</u> This bench mark was reported destroyed in 1939.	
Top of rail opposite Illinois Central Railroad MP 446.	1304.2
<u>H-24</u> In Cherokee County, Iowa, 4.2 miles southeast of the Illinois Central depot at Cherokee; 91.0 yards southwest of southwest end of trestle "446.7"; 32.5 feet southeast of southeast rail of track; 29.0 feet east of center line of road crossing; 17.4 feet northeast of corner fence post; 5.4 feet northwest of telegraph pole. A standard disc, stamped "H-24, 1934" and set in the top of a concrete post five inches high.	1264.423
<u>NOTE:</u> This bench mark was reported destroyed in 1939.	
Top of rail opposite Illinois Central Railroad MP 447.	1250.7
<u>J-24</u> In Cherokee County, Iowa, 3.0 miles southeast of the Illinois Central depot at Cherokee; $4\frac{1}{2}$ telegraph poles east of milepost #448; 30.0 feet north of north rail of track; 17.9 feet south of right-of-way fence. A standard disc, stamped "J-24, 1934" and set in the top of a concrete post four inches high.	1220.509
Top of R rail opposite Illinois Central Railroad MP 448.	1226.1
<u>K-24</u> In Cherokee County, Iowa, 2.4 miles south of the Illinois Central depot at Cherokee; 0.9 mile southeast of Onawa Junction; 7.6 feet south of northeast corner of east pier on railroad bridge over State Highway #73. A standard disc, stamped "K-24, 1934" and set in the top of a concrete post flush with the ground.	1227.566
Top of rail opposite Illinois Central Railroad MP 449.	1213.8

- Top of rail opposite Illinois Central Railroad MP 450. El. Ft.  
1197.4
- L-24 In Cherokee County, Iowa, 0.6 mile south of the Illinois Central depot at Cherokee; on east end of south concrete pier of railroad bridge over Little Sioux River; 8.5 feet west of east end. A standard disc, stamped "L-24, 1934" and set in the top of concrete pier, about 1.8 feet north of south side. 1182.731
- M-24 In Cherokee County, Iowa, 148.2 feet south of southwest corner of Illinois Central depot at Cherokee; 69.2 feet east of east rail of east track; 31.1 feet north of southeast corner of south passenger depot park; 1.5 feet west of east park fence. A standard disc, stamped "M-24, 1934" and set in the top of a concrete post two inches high. 1194.758
- CHEROKEE - 1934 In Cherokee County, Iowa, at Cherokee; in the northeast corner of City Library yard; 36.1 feet northeast of northeast corner of Library. A standard disc, stamped "CHEROKEE - 1934" and set in the top of a concrete post three inches high. 1193.547
- For descriptions of additional bench marks in this vicinity, see pages 64, 65 and 66.
- N-24 In Cherokee County, Iowa, 0.8 mile northwest of the Illinois Central depot at Cherokee; 351 feet east of east edge of trestle "W-451.7"; 23.2 feet south of south rail of track; 29.0 feet east of third telegraph pole east of culvert #351.7; 110 yards northwest of #2 Cherokee Country Club Golf Course. A standard disc, stamped "N-24, 1934" and set in the top of a concrete post six inches high. 1210.749
- Top of rail opposite Illinois Central Railroad MP C-453. 1271.0
- P-24 In Cherokee County, Iowa, 2.3 miles northwest of the Illinois Central depot at Cherokee; 0.3 mile north of milepost #353; 320 feet south of center line of a graded road crossing track; 28.7 feet west of west rail of track; 18.4 feet east of right-of-way fence; 9.0 feet south of third telegraph pole south of road crossing. A standard disc, stamped "P-24, 1934" and set in the top of a concrete post six inches high. 1274.725
- Q-24 In Cherokee County, Iowa, 3.3 miles northwest of the Illinois Central depot at Cherokee; 55.0 feet west

	El. Ft.
of center line of a section line cross road; 45.8 feet northeast of northeast rail of track; 50.0 feet northwest of northwest corner of wood culvert "454.3"; 20.0 feet northwest of fence corner; 2.0 feet southwest of right-of-way fence. A standard disc, stamped "Q-24, 1934" and set in the top of a concrete post four inches high.	1328.419
Top of rail opposite Illinois Central Railroad MP C-454.	1313.8
Top of rail opposite Illinois Central Railroad MP C-455.	1356.3
<u>R-24</u> In <u>Cherokee County</u> , Iowa, 1.1 miles east of the Illinois Central depot at <u>Meriden</u> ; 4.8 miles northwest of the station at Cherokee; 0.2 mile east of milepost #456; 50.0 feet west of center line of a quarter section line road crossing track; 35.8 feet south of south rail of track; 10.7 feet north of right-of-way fence; 6.0 feet east of first telegraph pole west of road crossing, and in line with row of poles. A standard disc, stamped "R-24, 1934" and set in the top of a concrete post seven inches high.	1401.890
<u>S-24</u> In <u>Cherokee County</u> , Iowa, 0.4 mile west of the Illinois Central depot at <u>Meriden</u> ; 0.2 mile west of milepost #457; 38.0 feet east of center line of a road crossing track; 46.0 feet north of north rail of main track; 2.8 feet south of right-of-way fence. A standard disc, stamped "S-24, 1934" and set in the top of a concrete post six inches high.	1412.674
Top of rail opposite Illinois Central Railroad station at Meriden.	1404.1
<u>T-24</u> In <u>Cherokee County</u> , Iowa, 1.5 miles west of the Illinois Central depot at <u>Meriden</u> ; in northwest supporting pier of concrete highway over-pass (State Highway #5 over Illinois Central Railroad); 29.0 feet south of south rail of track; 6.0 feet west of east side of pier; 1.5 feet above track level. A standard disc, stamped "T-24, 1934" and set in concrete pier flush with side of pier.	1441.615
Top of rail opposite Illinois Central Railroad MP C-458.	1421.9
<u>U-24</u> In <u>Cherokee County</u> , Iowa, 2.0 miles east of the	

El. Ft.

Illinois Central depot at Cleghorn; 1.9 miles west of Meriden; at east end of a railroad cut; 0.4 mile west of a concrete highway over-pass; 195 yards west of west edge of a wood trestle under track; 30.0 feet south of south rail of track; 6.0 feet north of a telegraph pole. A standard disc, stamped "U-24, 1934" and set in the top of a concrete post seven inches high. 1444.269

Top of rail opposite Illinois Central Railroad MP C-460. 1426.4

V-24 In Cherokee County, Iowa, 0.5 mile east of the Illinois Central depot at Cleghorn; 120 feet west of center line of a section line road crossing track; 34.0 feet south of south rail of track; 8.0 feet east of second telegraph pole west of road crossing and in line with poles; 0.5 mile east of milepost #461. A standard disc, stamped "V-24, 1934" and set in the top of a concrete post two inches high. 1441.969

Top of rail opposite Illinois Central Railroad MP C-463. 1431.5

W-24 In Cherokee County, Iowa, 2.9 miles east of the Illinois Central depot at Marcus; 260 yards west of center line of a cross road; 44.0 feet north of north rail of track; 2.5 feet south of right-of-way fence. A standard disc, stamped "W-24, 1934" and set in the top of a concrete post six inches high. 1399.682

Top of rail opposite Illinois Central Railroad MP C-464. 1388.9

X-24 In Cherokee County, Iowa, 1.0 mile east of the Illinois Central Railroad depot at Marcus; 75.0 feet west of center line of a section line road crossing track; 44.7 feet south of south rail of track; 8.5 feet south of first telegraph pole west of road crossing; 1.5 feet north of right-of-way fence. A standard disc, stamped "X-24, 1934" and set in the top of a concrete post four inches high. 1416.103

Top of N Rail opposite Illinois Central Railroad MP C-465. 1429.2

MARCUS - 1934 In Cherokee County, Iowa, at Marcus, in the southwest corner of the High School yard; 127 feet southwest of southwest corner of High School building; 19.0 feet northeast of a water hydrant; 1 block south

## LEVELING IN IOWA

- of State Highway #143. A standard disc, stamped "Marcus - 1934" and set in the top of a concrete post 2.5 feet high, 4 inches square at the top and six inches square at the base. El. Ft. 1473.137
- Y-24 In Cherokee County, Iowa, at Marcus, on east wall of Illinois Central depot; 17.6 feet south of south rail of main track; 1.9 feet south of northeast corner. A standard disc, in east wall of depot, stamped "Y-24, 1934", and set vertical about 0.8 foot above depot platform. 1455.447
- Top of rail opposite Illinois Central Railroad station at Marcus. 1454.2
- Z-24 In Cherokee County, Iowa, 0.5 mile west of the Illinois Central depot at Marcus; 33.0 feet west of center line of road crossing track; 27.2 feet north of corner fence post; 22.1 feet south of south rail of track. A standard disc, stamped "Z-24, 1934" and set in the top of a concrete post two inches high. 1451.592
- Top of rail opposite Illinois Central Railroad MP C-467. 1448.6
- A-25 In Cherokee County, Iowa, 1.6 miles west of the Illinois Central depot at Marcus; 80.0 yards west of road crossing; 44.3 feet south of south rail of track; 43.2 feet southeast of third telegraph pole west of crossing; 3.1 feet north of right-of-way fence. A standard disc, stamped "A-25, 1934" and set in the top of a concrete post six inches high. 1440.752
- Top of rail opposite Illinois Central Railroad MP C-469. 1428.6
- B-25 In Plymouth County, Iowa, 3.6 miles west of the Illinois Central depot at Marcus (Cherokee County); 71.0 yards east of road crossing; 48.7 feet south of south rail of track; 37.0 feet north of center line of road running parallel to track. A standard disc, stamped "B-25, 1934" and set in the top of a concrete post four inches high. 1410.424
- Top of rail opposite Illinois Central Railroad MP C-471. 1423.1
- C-25 In Plymouth County, Iowa, 3.0 miles east of the Illinois Central depot at Remsen; 150 yards west of

El. Ft.

trestle "471.6"; 38.0 feet west of center line of road crossing track; 45.0 feet south of south rail of track; 5.8 feet west of corner fence post. A standard disc, stamped "C-25, 1934" and set in the top of a concrete post four inches high.

1430.666

Top of rail opposite Illinois Central Railroad MP C-472.

1430.7

D-25 In Plymouth County, Iowa, 1.0 mile east of the Illinois Central depot at Remsen; 90.0 yards east of railroad trestle "473.8"; 74.0 feet east of center line of road crossing track; 44.9 feet north of north rail of track; 2.0 feet south of right-of-way fence. A standard disc, stamped "D-25, 1934" and set in the top of a concrete post five inches high.

1334.942

Top of rail opposite Illinois Central Railroad MP C-474.

1333.9

REMSEN - 1934 In Plymouth County, Iowa, 172 yards east of the Illinois Central depot at Remsen; 54.7 feet south of south rail of main track. A standard disc, stamped "REMSEN - 1934" and set vertical in first row of brick on west wall of Light & Power Plant building, 3.6 feet above ground and 1.0 foot south of northwest corner.

1330.089

Top of rail opposite Illinois Central Railroad station at Remsen.

1325.9

E-25 In Plymouth County, Iowa, 9 telegraph poles west of the Illinois Central depot at Remsen; 33.0 feet west of center line of road crossing track; 26.0 feet south of south rail of main track; 11.1 feet west of corner fence post. A standard disc, stamped "E-25, 1934" and set in the top of a concrete post one inch high.

1323.528

Top of rail opposite Illinois Central Railroad MP C-476.

1304.4

F-25 In Plymouth County, Iowa, 0.9 mile west of the Illinois Central depot at Remsen; 55.0 feet west of center line of road crossing; 45.2 feet north of north rail of track; 22.0 feet west of corner fence post; 2.0 feet south of fence. A standard disc, stamped "F-25, 1934" and set in the top of a concrete post five inches high.

1297.517

## LEVELING IN IOWA

	El. Ft.
<u>G-25</u> In <u>Plymouth County</u> , Iowa, at <u>Oyens</u> ; 2.9 miles west of <u>Remsen</u> ; 190 yards east of Illinois Central depot; 65.0 feet southeast of center line of road crossing track; 48.1 feet south of south rail of main track; 1.3 feet northeast of iron corner fence post. A standard disc, stamped "G-25, 1934" and set in the top of a concrete post four inches high.	1269.656
Top of rail opposite Illinois Central Railroad MP C-478.	1272.9
Top of rail opposite Illinois Central Railroad station at <u>Oyens</u> .	1271.0
<u>H-25</u> In <u>Plymouth County</u> , Iowa, 5.1 miles east of the Illinois Central depot at <u>Le Mars</u> ; 2.0 miles west of <u>Oyens</u> ; 61.0 feet west of trestle "479.8"; 50.0 feet west of center line of road crossing track; 31.0 feet northwest of corner fence post; 22.0 feet south of south rail of track. A standard disc, stamped "H-25, 1934" and set in the top of a concrete post five inches high.	1259.833
Top of rail opposite Illinois Central Railroad MP C-480.	1253.9
<u>J-25</u> In <u>Plymouth County</u> , Iowa, 3.0 miles northeast of the Illinois Central depot at <u>Le Mars</u> ; 44.2 feet northwest of northwest rail of track; 20.0 feet west of center line of road crossing track; 6.5 feet southwest of corner fence post; 2.0 feet southeast of fence. A standard disc, stamped "J-25, 1934" and set in the top of a concrete post four inches high.	1253.449
Top of rail opposite Illinois Central Railroad MP C-482.	1247.6
<u>K-25</u> In <u>Plymouth County</u> , Iowa, 1.2 miles northeast of the Illinois Central depot at <u>Le Mars</u> ; 48.0 feet northwest of center line of road crossing track; 46.1 feet north of north rail of track; 13.0 feet west of gate post; 1.6 feet south of right-of-way fence. A standard disc, stamped "K-25, 1934" and set in the top of a concrete post five inches high.	1222.983
Top of rail opposite Illinois Central Railroad MP C-484.	1230.5
For descriptions of additional bench marks in this vicinity, see pages 157 and 158.	

LINE 3233. SIOUX CITY, IOWA to MILOMA, MINNESOTA  
(Second-order Leveling)

This Line follows the Chicago, St. Paul, Minneapolis & Omaha Railroad from Sioux City, Iowa to Miloma, Minn. The original field work was done in August and September 1934, by a party in charge of W. R. Tucker. The section of the Line from Sibley, Iowa to Org, Minn. was rerun in September 1936, by a party of the Iowa Geodetic Survey in charge of George Havens; and certain sections were rerun in July 1939 by a party of the Iowa Geodetic Survey in charge of Glen Powers. The section of the Line from Org to Miloma, Minnesota was releveled in September 1938 by a party of the Minnesota State Highway Commission in charge of Carl I. Aslakson.

For descriptions of additional bench marks in this vicinity, see pages 8, 9 and 19.

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- |   | El. Ft.  |
|---|----------|
| <p><u>A-15</u> In <u>Woodbury County</u>, Iowa, at <u>Sioux City</u>, 3.5 blocks east of the Chicago, St. Paul, Minneapolis &amp; Omaha Railroad station; 120 yards west of overhead highway bridge; 70.0 yards east of center line of Court Street; 54.0 feet south of south rail of side track; 43.7 feet northwest of switch at west end of side track; 40.6 feet north of north rail of south main track; 37.6 feet north of north rail of north main track. A standard disc, stamped "A-15, 1934" and set in the top of a concrete post six inches high.</p> | 1102.550 |
| <p><u>B-15</u> In <u>Woodbury County</u>, Iowa, at <u>Sioux City</u>, 0.9 mile north of the Chicago, St. Paul, Minneapolis &amp; Omaha Railroad station; 48.0 yards northwest of intersection of Clark and Sixth streets; 90.0 feet west of center line of Clark street in Illinois Central Railroad yards; 20.5 feet north of a switch on north end of a side track; 15.0 feet east of east rail of east side track. A standard disc, stamped "B-15, 1934" and set in the top of a concrete post four inches high.</p>   | 1102.780 |
| <p><u>C-15</u> In <u>Woodbury County</u>, Iowa, at <u>Sioux City</u>, 1.9 miles north of the Chicago, St. Paul, Minneapolis &amp; Omaha Railroad station; 50.0 yards north of intersection of 19th street and the railroad; 43.4 feet west of center line of Hawkeye Drive; 38.0 feet east of east rail of main track. A standard disc, stamped</p>   |          |



## LEVELING IN IOWA

	El. Ft.
"C-15, 1934" and set in the top of a concrete post four inches high.	1103.088
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 508.	1108.3
<u>D-15</u> In <u>Woodbury County</u> , Iowa, 4.0 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Sioux City</u> ; 186 yards northeast of semiphore #506.1; 75.0 feet east of intersection of railroad and Jefferson street; 39.0 feet southeast of southeast rail of main track, in line with row of telegraph poles. A standard disc, stamped "D-15, 1934" and set in the top of a concrete post five inches high.	1112.557
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 505.	1114.6
<u>E-15</u> In <u>Plymouth County</u> , Iowa, 6.0 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Sioux City</u> (Woodbury County); 98.0 yards south of signal #504.2; 59.3 feet east of east rail of Illinois Central Railroad tracks; 37.0 feet west of west rail of Great Northern Railroad tracks. A standard disc, stamped "E-15, 1934" and set in the top of a concrete post six inches high.	1113.502
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP C-504.	1120.4
<u>F-15</u> In <u>Plymouth County</u> , Iowa, at <u>James</u> , 8.0 miles northeast of <u>Sioux City</u> (Woodbury County); 54.0 yards northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station; 38.0 yards northwest of U. S. Highway #75; 36.0 feet southeast of southeast rail of main track; 22.0 feet southeast of southeast rail of side track. A standard disc, stamped "F-15, 1934" and set in the top of a concrete post two inches high.	1125.336
<u>G-15</u> In <u>Plymouth County</u> , Iowa, 1.7 miles south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Hinton</u> ; 10.0 miles north of the station at <u>Sioux City</u> ; 51.0 feet west of west rail of Great Northern Railroad tracks; 45.0 feet east of east rail of Illinois Central Railroad, opposite milepost #500. A standard disc, stamped "G-15, 1934" and set in the top of a concrete post three inches high.	1130.165
Top of rail opposite Chicago, St. Paul, Minneapolis &	

El. Ft.

Omaha Railroad MP 500.

1135.8

H-15 In Plymouth County, Iowa, at Hinton, 125 yards north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station; 48.6 feet west of west rail of Great Northern Railroad tracks; 46.0 feet east of east rail of Illinois Central Railroad tracks; 31.7 feet east of east rail of east side tracks; 2.0 feet west of right-of-way fence. A standard disc, stamped "H-15, 1934" and set in the top of a concrete post three inches high.

1145.828

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 498.

1143.9

J-15 In Plymouth County, Iowa, 2.0 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Hinton; 54.0 yards southwest of signal #496.2; 169 yards northeast of intersection of railroad and road; 48.6 feet southeast of southeast rail of main track; 39.1 feet southeast of southeast rail of side track. A standard disc, stamped "J-15, 1934" and set in the top of a concrete post five inches high.

1147.691

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 495.

1159.4

K-15 In Plymouth County, Iowa, 4.0 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Hinton; 82.0 yards north of crossing of a road and railroad; 52.5 feet east of east rail of Great Northern Railroad; 39.8 feet west of west rail of Illinois Central Railroad. A standard disc, stamped "K-15, 1934" and set in the top of a concrete post eight inches high.

1157.294

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 493.

1166.8

L-15 In Plymouth County, Iowa, 0.7 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Merrill; 60.0 yards south of signal tower #492.2; 38.0 yards north of intersection of road and railroad; 49.0 feet east of east rail of main track; 1.0 foot east of right-of-way fence. A standard disc, stamped "L-16, 1934" and set in the top of a concrete post six inches high.

1164.171

M-15 In Plymouth County, Iowa, at Merrill, 56.0

## LEVELING IN IOWA

	El. Ft.
yards north of north end of Chicago, St. Paul, Minneapolis & Omaha Railroad station; 116.3 feet northeast of intersection of Main Street and railroad; 66.2 feet east of east rail of side track; 49.6 feet east of east rail of main track; 4.5 feet west of right-of-way fence. A standard disc, stamped "M-15, 1934" and set in the top of a concrete post six inches high.	1174.043
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 491.	1175.0
<u>N-15</u> In <u>Plymouth County</u> , Iowa, 1.9 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Merrill</u> ; 47.0 feet west of west rail of track; 35.0 feet east of center line of U. S. Highway #75; in line with telephone poles. A standard disc, stamped "N-15, 1934" and set in the top of a concrete post four inches high.	1187.711
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 490.	1185.2
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 489.	1188.9
<u>P-15</u> In <u>Plymouth County</u> , Iowa, 3.9 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Merrill</u> ; 83.0 yards north of a wooden trestle; 45.0 feet east of east rail of main track; 2.0 feet west of right-of-way fence. A standard disc, stamped "P-15, 1934" and set in the top of a concrete post five inches high.	1186.107
<u>Q-15</u> In <u>Plymouth County</u> , Iowa, 0.7 mile southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Le Mars</u> ; 40.0 yards southeast of center line of U. S. Highway #75; 57.0 feet southeast of southeast rail of track; 36.0 feet east of intersection of street and railroad. A standard disc, stamped "Q-15, 1934" and set in the top of a concrete post six inches high.	1223.203
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 486.	1221.8
<u>R-15</u> In <u>Plymouth County</u> , Iowa, at <u>Le Mars</u> , at a point where the Chicago, St. Paul, Minneapolis & Omaha Railroad goes north and the Illinois Central Railroad goes northeast to Fonda; 171 yards northeast of intersec-	

El. Ft.

tion of State Highway #5 and railroad; 110 yards southwest of Le Mars station; 42.0 feet southeast of southeast rail of Chicago, St. Paul, Minneapolis & Omaha Railroad tracks; 40.5 feet south of switch on southwest end of side track on Illinois Central Railroad; 36.0 feet southeast of southeast rail of Illinois Central Railroad main track. A standard disc, stamped "R-15, 1934" and set in the top of a concrete post one inch high.

1232.261

LE MARS - 1934 In Plymouth County, Iowa, at Le Mars, in the east corner of the Post Office building; 32.8 feet east of east side of front steps; 17.5 feet north of north edge of sidewalk on south side of building; 1.9 feet above the ground; 0.7 foot north of east corner of building. A standard disc, stamped "LE MARS, 1934" and set in the side of building level with the concrete.

1231.257

LE MARS - 1934 Triangulation Station In Plymouth County, Iowa, at Le Mars, 38.0 yards east of center line of Fourth street southeast; 27.7 feet southwest of northwest foundation of water tank; 12.2 feet northwest of west foundation. A standard triangulation mark, stamped "LE MARS, 1934" and set level with the ground.

NOTE: This bench mark through oversight was not tied into by the Level Party.

For descriptions of additional bench marks in this vicinity, see page 153.

S-15 In Plymouth County, Iowa, 0.8 mile north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Le Mars; 142 yards north of wooden trestle; 53.5 feet east of east rail of tracks; 6.0 feet southeast of corner of fence, opposite milepost #243. A standard disc, stamped "S-15, 1934" and set in the top of a concrete post six inches high.

1204.597

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 243.

1211.3

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 242.

1215.5

T-15 In Plymouth County, Iowa, 3.8 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Le Mars; 6.9 feet west of west rail of track;

	El. Ft.
2.0 feet northwest of end of west girder of bridge; 0.8 inch east of end of concrete. A standard disc, stamped "T-15, 1934" and set in the concrete headwall of steel bridge #797, set level with the concrete.	1219.502
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 240.	1222.8
<u>U-15</u> In <u>Plymouth County</u> , Iowa, at <u>Seney</u> , 5.8 miles northeast of station at <u>LeMars</u> ; 114 yards northeast of switch on the southwest end of side track; 73.0 yards southwest of Chicago, St. Paul, Minneapolis & Omaha Railroad; 67.0 feet southwest of intersection of road and railroad; 23.1 feet northwest of northwest rail of main track. A standard disc, stamped "U-15, 1934" and set in the top of a concrete post seven inches high.	1226.818
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 238.	1231.3
<u>V-15</u> In <u>Plymouth County</u> , Iowa, 2.0 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Seney</u> ; 63.0 feet southeast of center line of State Highway #33; 33.8 feet northwest of northwest rail of track; by milepost # St.P.233; in line with the telegraph poles. A standard disc, stamped "V-15, 1934" and set in the top of a concrete post four inches high.	1233.967
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 236.	1244.1
<u>W-15</u> In <u>Sioux County</u> , Iowa, 4.0 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad sta- tion at <u>Seney</u> (Plymouth County); 119 yards south of milepost #235; 20.0 yards southeast of iron culvert #786 $\frac{1}{2}$ ; 46.6 feet east of east rail of tracks; 1.7 feet west of right-of-way fence. A standard disc, stamped "W-15, 1934" and set in the top of a concrete post six inches high.	1248.337
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 235.	1251.9
<u>X-15</u> In <u>Sioux County</u> , Iowa, at <u>Cames</u> , 0.2 mile south- west of the Chicago, St. Paul, Minneapolis & Omaha Railroad station; 68.0 feet southeast of center line of State Highway #33; 30.1 feet northwest of northwest	

	El. Ft.
rail of track; 40.6 feet northwest of northwest rail of side track. A standard disc, stamped "X-15, 1934" and set in the top of concrete post five inches high.	1272.025
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 232.	1277.2
<u>Y-15</u> In <u>Sioux County</u> , Iowa, 1.6 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Cames</u> ; 176 yards northeast of wooden trestle; 45.5 feet southeast of southeast rail of track; 2.0 feet northwest of right-of-way fence. A standard disc, set in top of concrete post three inches high.	1283.852
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 231.	1285.5
<u>Z-15</u> In <u>Sioux County</u> , Iowa, 1.4 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Alton</u> ; 200 yards northeast of wooden trestle #771; 130 yards northeast of milepost #229; 59.0 feet southeast of center line of State Highway #33; 37.6 feet northwest of northwest rail of tracks. A standard disc, stamped "Z-15, 1934" and set in the top of a concrete post five inches high.	1299.082
<u>A-16</u> In <u>Sioux County</u> , Iowa, at <u>Alton</u> , 400 yards southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station; 111 yards southwest of intersection of State Highway #10 and railroad; 77.7 feet southeast of southeast rail of track; 73.0 feet south of switch and northeast end of side track; 60.3 feet southeast of southeast rail of side track; 19.5 feet northwest of right-of-way fence and in line with telephone poles. A standard disc, stamped "A-16, 1934" and set in the top of a concrete post five inches high.	1305.614
<u>B-16</u> In <u>Sioux County</u> , Iowa, 0.6 mile northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Alton</u> ; 119 yards northeast of milepost #227; 42.0 yards east of intersection of State Highway #33; 43.0 feet southeast of southeast rail of tracks; 5.5 feet northwest of the right-of-way fence. A standard disc, stamped "B-16, 1934" and set in the top of a concrete post six inches high.	1310.916
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha MP 227.	1310.1

## LEVELING IN IOWA

	El. Ft.
<u>C-16</u> In <u>Sioux County</u> , Iowa, 2.6 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Alton</u> ; 44.0 yards southwest of milepost #225; 31.0 yards southwest of iron culvert #763; 39.0 yards north of intersection of road and railroad; 47.1 feet northwest of northwest rail of track; 1.7 feet southeast of right-of-way fence. A standard disc, stamped "C-16, 1934" and set in the top of a concrete post four inches high.	1315.778
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha MP 224.	1329.5
<u>D-16</u> In <u>Sioux County</u> , Iowa, 4.6 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Alton</u> ; 47.0 feet southeast of southeast rail of track; 2.0 feet northwest of right-of-way fence. A standard disc, stamped "D-16, 1934" and set in the top of a concrete post four inches high.	1328.272
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 222.	1331.3
<u>E-16</u> In <u>Sioux County</u> , Iowa, 1.5 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Hospers</u> ; 110 yards southwest of milepost #221; 48.0 yards northeast of intersection of railroad and section line road; 45.6 feet northwest of northwest rail of tracks; 1.8 feet southeast of right-of-way fence. A standard disc, stamped "E-16, 1934" and set in the top of a concrete post two inches high.	1340.316
<u>F-16</u> In <u>Sioux County</u> , Iowa, 65.0 yards south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Hospers</u> ; 57.0 yards north of switch on south end of side track; 56.0 feet west of west rail of main track; 43.0 feet west of west rail of side track; in line with telephone poles. A standard disc, stamped "F-16, 1934" and set in the top of a concrete post six inches high.	1341.808
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 220.	1336.2
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 219.	1340.7
<u>G-16</u> In <u>Sioux County</u> , Iowa, 1.5 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad sta-	

El. Ft.

tion at Hospers; 94.0 yards south of milepost #218; 43.5 feet east of east rail of track; 3.8 feet west of right-of-way fence. A standard disc, stamped "G-16, 1934" and set in the top of a concrete post one inch high.

1349.207

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 218.

1349.7

H-16 In Sioux County, Iowa, 3.5 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Hospers; 58.0 yards southwest of milepost #216; 44.0 feet southeast of southeast rail of track; 3.5 feet northwest of right-of-way fence. A standard disc, stamped "H-16, 1934" and set in the top of a concrete post four inches high.

1356.073

J-16 In Sioux County, Iowa, 2.3 miles south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Sheldon (O'Brien County); 25.0 yards north of milepost #214; 43.3 feet west of west rail of tracks; 3.2 feet east of right-of-way fence. A standard disc, stamped "J-16, 1934" and set in the top of a concrete post four inches high.

1372.793

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 214.

1375.5

K-16 In Sioux County, Iowa, 0.3 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Sheldon (O'Brien County); 40.0 yards north of milepost #212; 79.0 feet northwest of intersection of a road and railroad; 45.5 feet west of west rail of track; 38.6 feet north of corner of fence; 2.0 feet east of right-of-way fence. A standard disc, stamped "K-16, 1934" and set in the top of a concrete post five inches high.

1398.721

Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 212.

1398.5

L-16 In O'Brien County, Iowa, 63.6 feet west of west corner of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Sheldon; 30.8 feet north of north rail of tracks; 25.7 feet west of west rail of Omaha line; in line with telephone poles. A standard disc, stamped "L-16, 1934" and set in the top of a concrete post one inch high.

1413.347



## LEVELING IN IOWA

El. Ft.

For descriptions of additional bench marks in this vicinity, see pages 69, 70, 76 and 77.

- M-16 IN O'Brien County, Iowa, 0.6 mile north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Sheldon; 128 yards north of milepost #211; 44.0 yards south of switch on north end of side track; 33.0 yards north of intersection of U. S. Highway #18 and railroad; 45.7 feet west of west rail of main track; 37.0 feet west of west rail of side track; 1.2 feet east of right-of-way fence. A standard disc, stamped "M-16, 1934" and set in the top of a concrete post four inches high. 1406.464
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 211. 1408.6
- SHELDON - 1934 IN O'Brien County, Iowa, at Sheldon, 112 feet north of east and west street along south side of park; 88.0 feet northeast of flag pole; 19.2 feet southwest of southwest edge of drive through park. A standard disc, stamped "SHELDON - 1934" and set in the top of southwest corner of an old gun mounting, five inches from southwest and northwest edge, six inches above the ground. 1440.351
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 210. 1389.5
- N-16 IN O'Brien County, Iowa, 2.6 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Sheldon; 118 yards south of milepost #209; 44.8 feet east of east rail of tracks; 2.6 feet west of right-of-way fence. A standard disc, stamped "N-16, 1934" and set in the top of a concrete post four inches high. 1414.108
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 209. 1417.6
- P-16 In O'Brien County, Iowa, 0.4 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Richter; 45.4 feet west of west rail of main track; 25.0 feet south of milepost #207; 18.8 feet west of west rail of side track; 1.2 feet east of right-of-way fence. A standard disc, stamped "P-16, 1934" and set in the top of a concrete post eight inches high. 1436.926

El. Ft.

- Q-16 In O'Brien County, Iowa, at Ritter, 84.0 yards north of north end of Chicago, St. Paul, Minneapolis & Omaha Railroad station; 50.0 yards north of intersection of road and railroad; 70.8 feet east of east rail of east side track; 45.8 feet east of east rail of main track; 1.4 feet west of right-of-way fence. A standard disc, stamped "Q-16, 1934" and set in the top of a concrete post. 1427.884
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad station at Ritter. 1429.9
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 206. 1430.0
- R-16 In Osceola County, Iowa, 2.0 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Ritter (O'Brien County); 30.0 yards south of intersection of section road and railroad; 45.3 feet west of west rail of tracks; 1.3 feet east of right-of-way fence. A standard disc, stamped "R-16, 1934" and set in the top of a concrete post two inches high. 1439.436
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 204. 1434.3
- S-16 In Osceola County, Iowa, 0.7 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Ashton; 4.5 feet east of east rail of track; 2.2 feet west of east end of concrete; 1.5 feet southwest of south end of steel wing wall level with concrete headwall. A standard disc, stamped "S-16, 1934" and set in the concrete headwall of bridge #718. 1446.395
- T-16 In Osceola County, Iowa, at Ashton, 117 yards south of south end of Chicago, St. Paul, Minneapolis & Omaha Railroad station; 41.5 feet northwest of switch on south end of side track; 27.4 feet west of west rail of main track; 19.2 feet east of east rail of west side track; in line with row of telegraph poles. A standard disc, stamped "T-16, 1934" and set in the top of a concrete post seven inches high. 1446.677
- Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 202. 1446.3
- U-16 In Osceola County, Iowa, 1.0 mile north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Ashton; 88.0 yards south of wood trestle #714;

## LEVELING IN IOWA

	El. Ft.
45.0 feet east of east rail of tracks; 2.7 feet west of right-of-way fence. A standard disc, stamped "U-16, 1934" and set in the top of a concrete post seven inches high.	1452.425
Top of rail opposite Chicago, St. Paul; Minneapolis & Omaha Railroad MP 201.	1450.7
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 200.	1467.4
<u>V-16</u> In <u>Osceola County</u> , Iowa, 3.2 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Ashton</u> ; 45.8 feet west of west rail of track; 1.8 feet east of right-of-way fence. A standard disc, stamped "V-16, 1934" and set in the top of a concrete post four inches high.	1488.445
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 197.	1539.0
<u>W-16</u> In <u>Osceola County</u> , Iowa, 1.0 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Sibley</u> ; 54.0 feet west of center line of State Highway #33; 44.7 feet east of east rail of tracks. A standard disc, stamped "W-16, 1934" and set in the top of a concrete post six inches high.	1521.076
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 196.	1513.5
<u>X-16</u> In <u>Osceola County</u> , Iowa, at junction of the Chicago, St. Paul, Minneapolis & Omaha Railroad and the Rock Island Railroad at <u>Sibley</u> ; 67.2 feet north of north rail of Rock Island Railroad; 23.0 feet west of west rail of Omaha Railroad; 20.0 feet west of switch on south end of side track. A standard disc, stamped "X-16, 1934" and set in the top of a concrete post four inches high.	1504.511
For descriptions of additional bench marks in this vicinity, see pages 108 and 109.	
<u>Y-16</u> In <u>Osceola County</u> , Iowa, 1.2 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Sibley</u> ; 181 yards southwest of milepost #194; 44.0 feet southeast of southeast rail of tracks; 39.4 feet northwest of center line of State Highway #33. A standard disc, stamped "Y-16, 1934" and set in the top of a concrete post six inches high.	1529.902

	El. Ft.
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 194.	1534.8
<u>Z-16</u> In <u>Osceola County</u> , Iowa, 3.3 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Sibley</u> ; 52.0 feet northwest of northwest rail of track; 5.5 feet northwest of corner of right-of-way fence. A standard disc, stamped "Z-16, 1934" and set in the top of a concrete post four inches high.	1585.689
Top of R rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 191.	1622.2
Top of R rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 190.	1643.8
<u>A-17</u> In <u>Osceola County</u> , Iowa, 2.5 miles south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Bigelow</u> (Nobles County, Minnesota); 46.5 feet west of west rail of track; 2.2 feet east of right-of-way fence. A standard disc, stamped "A-17, 1934" and set in the top of a concrete post seven inches high.	1641.959
Top of R rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 189.	1650.6
Top of R rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 188.	1649.8
<u>B-17</u> In <u>Osceola County</u> , Iowa, 0.5 mile south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at <u>Bigelow</u> (Nobles County, Minnesota); 116 yards south of <u>State Line</u> ; 45.0 feet east of east rail of main track; 1.9 feet west of right-of-way fence. A standard disc, stamped "B-17, 1934" and set in the top of a concrete post ten inches high.	1647.707
<u>A-145</u> In <u>Nobles County</u> , Minnesota, at <u>Bigelow</u> , 97.0 yards north of north end of Chicago, St. Paul, Minneapolis & Omaha Railroad station; 96.5 feet west of west rail of main track; 51.4 feet west of west rail of side track; 1.3 feet east of right-of-way fence. A standard disc, stamped "A-145, 1934" and set in the top of a concrete post six inches high.	1629.455
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad station at Bigelow.	1636.3
Top of R rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 186.	1630.3

## LEVELING IN IOWA

	El. Ft.
<u>B-145</u> In Nobles County, Minnesota, 2.0 miles north of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Bigelow; 95.0 feet east of east rail of tracks; 67.0 feet south of center line of section road; 39.0 feet south of corner of fence; 2.5 feet west of right-of-way fence. A standard disc, stamped "B-145, 1934" and set in the top of a concrete post two inches high.	1620.256
Top of L Rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 184.	1657.0
<u>C-145</u> In Nobles County, Minnesota, 1.4 miles south of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Org; 44.4 feet east of east rail of track; 2.8 feet west of right-of-way fence. A standard disc, stamped "C-145, 1934" and set in the top of a concrete post four inches high.	1634.373
<u>D-145</u> In Nobles County, Minnesota, at Org, 0.5 mile north of Chicago, St. Paul, Minneapolis & Omaha Railroad station; at a point where a spur branches off to the west; 13.0 feet east of east rail of track to Luverne; 12.6 feet west of west rail of track to Sioux City. A standard disc, stamped "D-145, 1934" and set in the top of a concrete post six inches high.	1638.786
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad station sign at Agate.	1637.8
Top of SE rail at crossing of east and west dirt road 0.2 mile northeast of Org.	1636.4
For descriptions of additional bench marks in this vicinity, see page 83.	
<u>E-145</u> In Nobles County, Minnesota, 2.9 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Worthington; 46.0 feet southeast of southeast rail of tracks; 1.5 feet northwest of right-of-way fence. A standard disc, stamped "E-145, 1934" and set in the top of a concrete post four inches high. Reported in 1938: 87.0 feet northwest of center line of U. S. Highway #59; 165 feet west of sign "Station One Mile". The right-of-way fence referred to in original description has been removed.	1616.230
Top of rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP. 180.	1601.8

El. Ft.

Top of SE rail at crossing under overpass of road leading to Sanitarium, 1.7 miles northeast of Org. 1601.1

F-145 In Nobles County, Minnesota, 1.3 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Worthington; 54.4 feet northwest of northwest rail of Chicago, St. Paul, Minneapolis & Omaha Railroad tracks; 31.0 feet northwest of northwest rail of track of Chicago, Rock Island & Pacific Railroad; 2.4 feet southeast of right-of-way fence. A standard disc, stamped "F-145, 1934" and set in the top of a concrete post seven inches high. Reported in 1938: 50.0 feet southwest of dirt road crossing leading to Ludlow's Greenhouse. 1600.358

Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 179. 1601.2

Top of SE rail at crossing of northwest and southeast dirt road, 2.4 miles northeast of Org. 1599.3

Top of SE rail at crossing of State Road #60 and U. S. Highway #59 at overhead bridge, 3.1 miles northwest of Org. 1593.5

Top of SE rail at crossing of bridge #676 over Railroad, 3.1 miles northeast of Org. 1593.4

Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 170. 1592.8

G-145 (RESET-1936) In Nobles County, Minnesota, at Worthington, 225 feet southeast of ticket office in the Chicago, St. Paul, Minneapolis & Omaha Railroad depot; 175 feet southeast of center line of main track; 20.0 feet south of center line of dirt street. A standard disc, stamped "G-145 (RESET) - 1936" and set horizontally in the northeast side of the solid round concrete footing of the Chicago, St. Paul, Minneapolis & Omaha Railroad's steel water tank, one foot above the level of the ground. 1592.822

Top of SE rail at crossing of U. S. Highway #16, 3.8 miles northeast of Org. 1593.6

H-145 In Nobles County, Minnesota, 1.1 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Worthington; 22.0 yards southwest

	El. Ft.
of intersection of State Highway #60 and railroad; 47.0 feet southeast of center line of State Highway #60; 34.9 feet northwest of northwest rail of main track; in line with row of telegraph poles. A standard disc, stamped "H-145, 1934" and set in the top of a concrete post one inch high.	
<u>Reported in 1938:</u> 1.1 miles northeast of Worthington, along the Chicago, St. Paul, Minneapolis & Omaha Railroad; 390 feet southwest of county road crossing (this road was originally State Highway #60); 39.0 feet southeast of the southeast shoulder of State Highway #60; 34.6 feet northwest of the northwest rail; 4.6 feet southeast of a telephone pole.	1586.286
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 177.	1587.4
Top of SE rail at crossing of east and west dirt road, 4.5 miles northeast of Org.	1592.3
Top of SE rail at crossing of east and west dirt road, 4.9 miles northeast of Org.	1586.5
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 176.	1588.6
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 175.	1554.9
<u>J-145</u> In Nobles County, Minnesota, 3.1 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Worthington; 146 yards northeast of steel trestle #672; 74.8 feet southeast of southeast rail of track; 2.5 feet northwest of right-of-way fence. A standard disc, stamped "J-145, 1934" and set in the top of a concrete post five inches high.	1553.527
Top of SE rail at crossing of center line of north and south dirt road, 7.7 miles northeast of Org.	1555.2
Top of SE rail at crossing of center line of east and west dirt road, 7.9 miles northeast of Org.	1547.4
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 173.	1531.0
<u>K-145</u> In Nobles County, Minnesota, 5.2 miles northeast of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Worthington; 44.0 feet southeast of southeast rail of track; 2.5 feet northwest of	

	El. Ft.
right-of-way fence. A standard disc, stamped "K-145, 1934" and set in the top of a concrete post five inches high. <u>Reported later:</u> About 71.0 feet south-east of telephone pole #172-20.	1530.263
Top of SE rail at crossing of north and south dirt road, 9.1 miles northeast of Org.	1524.6
Top of W rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 172.	1519.8
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 171.	1503.2
<u>L-145 (RESET) - 1936</u> In <u>Nobles County</u> , Minnesota, 1.4 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Brewster; 0.4 mile northeast of milepost #St.P. 171; 0.1 mile southwest of a dirt cross road; 80.0 feet southwest of State Highway #60; 41.5 feet northwest of northwest rail; 36.0 feet northeast of telephone pole; about 1.0 foot above the top of rail and set in line with telephone poles. A standard disc, stamped "L-145 (RESET) - 1936".	1496.391
Top of SE rail at crossing of center line of northwest and southeast dirt road, 1.1 miles southwest of Brewster.	1503.7
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 170.	1495.4
<u>M-145</u> In <u>Nobles County</u> , Minnesota, at <u>Brewster</u> , southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station; 34.0 feet northwest of northwest rail of main track; 19.1 feet northwest of side track; 31.0 feet southeast of center line of State Highway #16. A standard disc, stamped "M-145, 1934" and set in the top of a concrete post four inches high. <u>Reported in 1938:</u> 75.0 feet east of State Highway #60 instead of 31.0 feet southeast of center line of State Highway #16. 200 feet southwest of county road into Brewster, 6.0 feet south of a telephone pole.	1489.466
Top of SE rail at crossing of northwest and southeast dirt road at Brewster.	1491.0
Top of SE rail in front of Operator's window in the Chicago, St. Paul, Minneapolis & Omaha Railroad station in Brewster.	1491.1



## LEVELING IN IOWA

	El. Ft.
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 169.	1486.4
Top of SE rail at crossing of north and south dirt road, 1.4 miles northeast of Brewster.	1465.2
<u>N-145</u> In Jackson County, Minnesota, 2.0 miles northeast of Chicago, St. Paul, Minneapolis & Omaha Railroad station at Brewster (Nobles County); 65.0 feet south of intersection of section road and railroad; 44.6 feet southeast of southeast rail of track; 2.5 feet northwest of right-of-way fence. A standard disc, stamped "N-145, 1934" and set in the top of a concrete post two inches high.	1449.830
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 168.	1464.1
Top of SE rail at crossing of east and west dirt road, 1.9 miles northeast of Brewster.	1453.1
Top of SE rail at crossing of north and south dirt road, 2.3 miles northeast of Brewster.	1452.3
<u>P-145</u> In Jackson County, Minnesota, 3.2 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Miloma; 47.0 yards northeast of intersection of section road and railroad; 45.0 feet northwest of northwest rail of tracks; 1.8 feet southeast of right-of-way fence. A standard disc, stamped "P-145, 1934" and set in the top of a concrete post seven inches high.	1436.467
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 166.	1443.6
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 165.	1439.8
<u>Q-145</u> In Jackson County, Minnesota, 1.2 miles southwest of the Chicago, St. Paul, Minneapolis & Omaha Railroad station at Miloma; 44.5 feet northeast of northeast rail of track; 2.5 feet southwest of right-of-way fence, opposite milepost #164. A standard disc, stamped "Q-145, 1934" and set in the top of a concrete post three inches high. <u>Reported in 1938:</u> 165 feet and across track from milepost #164 instead of opposite of same.	1426.100

	El. Ft.
Top of SE rail at crossing of east and west dirt road, 1.5 miles southwest of Miloma.	1433.7
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 164.	1430.5
<u>R-145</u> In Jackson County, Minnesota, at Miloma, oppo- site the Chicago, St. Paul, Minneapolis & Omaha Rail- road station; 87.0 feet northwest of northwest rail of tracks; 42.5 feet southwest of southwest rail of Chi- cago, Milwaukee & St. Paul Railroad tracks; at the in- tersection of the two lines. A standard disc, stamped "R-145, 1934" and set in the top of a concrete post eight inches high.	1427.258
Top of SE rail opposite Chicago, St. Paul, Minneapolis & Omaha Railroad MP 163.	1426.2
Top of SE rail at crossing of north and south gravel road, 0.4 mile southwest of Miloma.	1425.9
Top of SE rail in front of Operator's window at the Chicago, St. Paul, Minneapolis & Omaha Railroad sta- tion at Miloma.	1430.0

For descriptions of additional bench marks in this vi-  
cinity, see page 38.

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