

OFFICE COPY HOLD

THIRD-ORDER LEVELS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

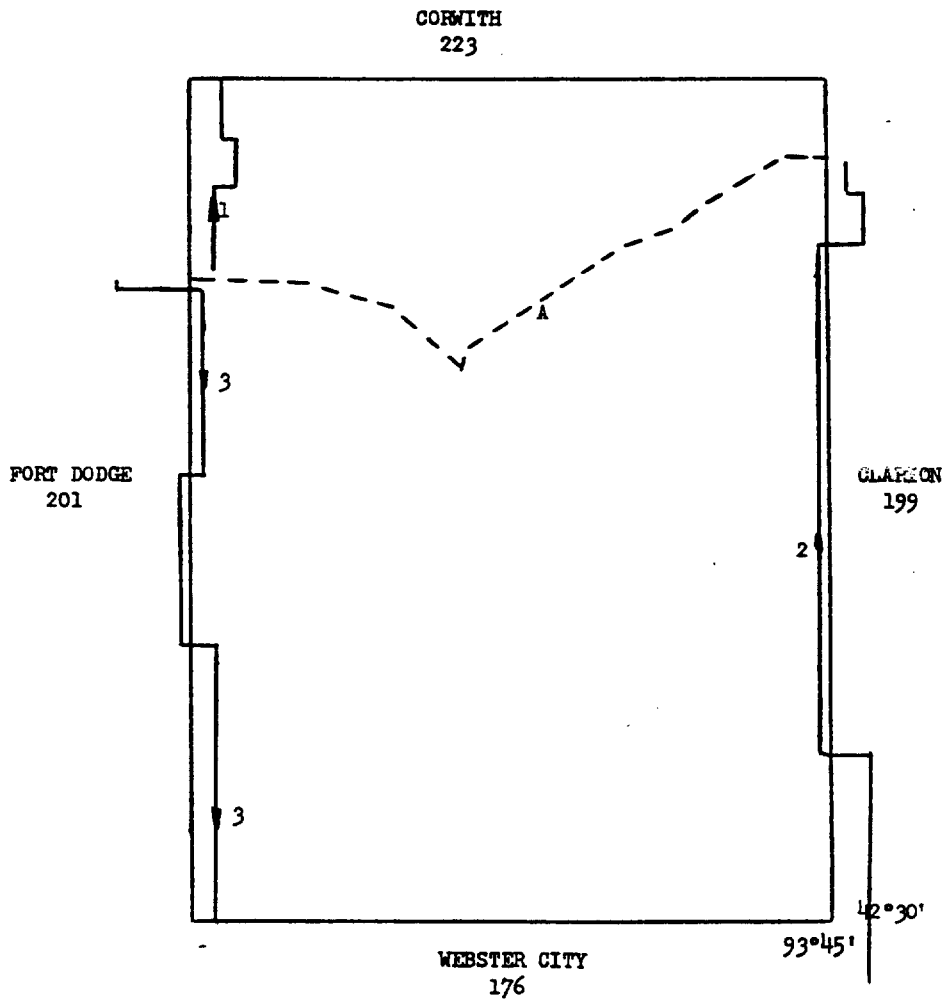
Hamilton, Humboldt, Webster
and Wright Counties

Edition of: 3-14-75

PR: ADP/ob

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

42-093-43
EAGLE GROVE QUADRANGLE
200 - IOWA
N4230-W9345/15
DIAGRAM NK 15-5
WATERLOO



N.G.S. (USC&GS) VERTICAL CONTROL DATA

Quadrangle 420934

200A

2
42-093-43
EAGLE GROVE QUADRANGLE
200 - IOWA

LINE 1

FEET

W.E. Knouse, 1972; Book CV-2870

EAGLE GROVE QUAD. - 200

- | | | | | |
|----|-----|---|--|----------|
| 3 | 2 | 0.0 | 3.1 mi E. along the Chicago & North Western RR. from the station at Thor, Humbolt County, 77.0 ft SE. of the S. end of culvert 2571, 62.0 ft SE. of a N.-S. section road crossing, 46.2 ft S. of the S. rail, 5.1 ft E. of a right of way fence cor., 2.0 ft N. of the fence, a standard USC&GS disk stamped "C 28 1934" and set in the top of a concrete post projecting 4-in. above ground | 1131.904 |
| 2 | 0.4 | UE C 28 A, T. 91 N., R. 27 W., near quarter cor. secs. 13, and 14, T-rd. S., top of RR. spike set vertically in gravel T-rd. | 1141.3 | |
| 3 | 0.9 | UE C 28 B, T. 91 N., R. 27 W., near center of sec. 14; 24.5 ft S. and 2 ft E. of T-rd. N., on top of W. end of concrete pipe culvert (under field entrance S.); chiseled square | 1140.89 | |
| 5 | 1.4 | UE C 28 C, T. 91 N., R. 27 W., near quarter cor. secs. 11 and 14; centerline of rd. at E.-W. fence; top of RR. spike set vertically in gravel rd. | 1136.7 | |
| 6 | 2.3 | RM 10 WEK, T. 91 N., R. 27 W., near quarter cor. secs. 2 and 11, 294 ft S. and 28 ft W. of crossroads, on top and near S. end of concrete pipe culvert, under field entrance W.; chiseled square | 1130.02 | |
| 7 | 2.3 | BM 10 WEK, Thor, 2.5 mi E. and 2.0 mi N. of along dirt rds., 7.5 mi S. and 1.0 mi W. from Renwick, T. 91 N., R. 27 W., near quarter cor. secs. 2 and 11; 225 ft S. and 32 ft W. of crossroads; on top of S. concrete wingwall of a small spillway; standard cap stamped "10 WEK 1972" | 1127.949 | |
| 9 | 2.9 | UE 10 A, T. 91 N., R. 27 W., near center of sec. 2; centerline of rd. at fence E.; top RR. spike in gravel rd. | 1143.0 | |
| 10 | 3.4 | UE 10 B, T. 91 and 92 N., R. 27 W.; near quarter cor. secs. 2 and 35; centerline of T-rd. S. (Hwy. State gravel road S.); chiseled square | 1149.6 | |
| 11 | 3.9 | UE 10 C, T. 91 and 92 N., R. 27 W., near cor. secs. 35, 36, 1 and 2, centerline of State Hwy. 3 at gravel rd. N. (T-rd. N.); chiseled square | 1145.8 | |
| 12 | 4.4 | UE 10 D, T. 92 N., R. 27 W., near quarter cor. secs. 35 and 36, centerline of rd. at E.-W. fence; top of RR. spike in gravel road | 1150.7 | |
| 13 | 4.9 | UE 10 E, T. 92 N., R. 27 W., near cor. secs. 25, 26, 35 and 36; on top of W. end of N. wheel guard of bridge and 0.2 ft higher than center of bridge and 18.3 ft higher than water level (06-24-72); copper nail and washer | 1126.10 | |

CORWITH QUAD. - 223

- | | | | |
|----|-----|--|----------|
| 14 | 5.3 | RM 11 WEK, T. 92 N., R. 27 W., about 0.1 mi S. of quarter cor. secs. 25 and 26, 34 ft E.; 8 ft N. of rd. at field entrance E.; in base of N. gate post and in W. side; a 60d nail | 1126.13 |
| 15 | 5.3 | Renwick, 5.0 mi S. and 0.5 mi W. from, 3.0 mi E. and 4.5 mi N. of Thor; T. 92 N., R. 27 W., about 0.1 mi S. of quarter cor. secs. 25 and 26, 34 ft E. and 15 ft N. of centerline of rd. at field entrance E.; 1 ft W. of E. right-of-way fence, a standard cap on top of copper rod and encased in 6-in. by 1.0 ft piece of well casing; stamped "11 WEK 1972" | 1125.630 |

LINE 2

FEET

C.D. Lien, 1974; Book CV-3142

JEWELL QUAD. - 175

- | | | | | |
|----|-----|-----|---|----------|
| 1 | 9 | 2.2 | UE W 31 D, 1 mi E. along RR. tracks, then 0.75 mi N. along road from tablet, 24 ft S., 54 ft W. of; and 2.5 ft lower than crossroads and 11 ft W. of centerline of a field entrance S., a chiseled square on a rock | 1153.79 |
| 12 | 3.2 | | Reference mark, 15.5 ft S., 34 ft W. of centerline of road at field entrance W., 0.8 ft S., of a telephone pole, 1.5 ft N. of a telephone pole and 42.2 ft S. and 48.2 ft E. of tablet a chiseled on rock which sits between two telephone poles | 1157.55 |
| 13 | 3.3 | | Clarion at courthouse, 16 mi S. of; T. 89 N., R. 24 and 25 W. sec. cors. 19, 24, 25 and 30, 27 ft N., 82.2 ft W. of; and 2.3 ft lower than centerline of road at field entrance W. cemented in the NE. cor. of a concrete foundation for corn crib, the most northerly and smallest one is a group of three cribs, a standard tablet stamped "8 CDL 1974" | 1156.938 |

CLARION QUAD. - 199

- | | | | |
|----|-----|--|----------|
| 16 | 3.8 | UE 8 A, 0.58 mi N. along road from tablet, 12 ft N., 12 ft W. of; and 0.1 ft lower than centerline of bridge, a chiseled square in the NW. cor. of headwall of a concrete bridge | 1154.02 |
| 19 | 4.8 | UE 8 B, 1.51 mi N. along road from tablet, 21 ft N., 48 ft E. of; and 1.7 ft lower than crossroads, 10 ft E. of centerline of a field entrance N.; a chiseled square on a rock | 1151.73 |
| 21 | 5.6 | Clarion at courthouse, 13.5 mi S. of; T. 89 N., R. 24 and 25 W., near the quarter cor. between secs. 7 and 12, 12 ft E. of and 0.2 ft higher than centerline of bridge, 169.2 ft S. of centerline of road at field entrance E. and 0.17 mi S. of centerline of road at T-rd. W. cemented in the E. headwall of a 8 ft concrete culvert, standard tablet stamped "9 CDL 1974" | 1151.015 |
| 22 | 5.6 | Reference mark, 154.2 ft N., 7 ft E. of tablet and 33 ft S., 15.3 ft E. of centerline of road at field entrance E., a chiseled square on a rock | 1153.45 |
| 26 | 6.6 | UE 9 A, 1 mi N. along road from tablet, 11 ft N., 12 ft E. of; and 0.5 ft lower than centerline of bridge, a chiseled square in the NE. cor. of a concrete bridge | 1146.55 |

EAGLE ROCK QUAD. - 200

- | | | | |
|----|------|---|----------|
| 30 | 7.8 | UE 9 B, 1.16 mi N. and 1 mi W. along road from tablet, 36.1 ft N., 32.8 ft E. of, and 2.6 ft lower than centerline of T-rd. N., a RR. spike in a corner fence post | 1137.42 |
| 32 | 8.5 | UE 9 C, 1.88 mi N., 1 mi W. along road from tablet, 17 ft S., 26 ft E. and 38 ft lower than centerline of road at field road crossing, a chiseled square on a concrete culvert | 1141.46 |
| 35 | 9.3 | Reference mark, 65.6 ft S., 59 ft E. of tablet and 23 ft S., 45 ft E. of crossroads, a chiseled square on a concrete culvert | 1144.16 |
| 36 | 9.3 | Clarion at courthouse, 11 mi S., 1 mi W. of; T. 90 N., R. 25 W., sec. cors. 25, 26, 35 and 36, 44 ft N., 17 ft W. of; and 3.3 ft lower than crossroads and 3.2 ft SE. of a stop sign, cemented in the top of a 3 ft round concrete culvert, a standard tablet stamped "10 CDL 1974" | 1144.303 |
| 41 | 10.3 | UE 10 A, 1 mi N. along road from tablet, 24 ft N., 57 ft W. of; and 3.1 ft lower than crossroads and 10 ft W. of centerline of a field entrance N., a punched hole in a metal culvert | 1142.96 |
| 44 | 11.3 | UE 10 B, 2 mi N. along road from tablet, 26.3 ft N., 29.5 ft W. of; and 2.1 ft higher than crossroads, a chiseled square on a concrete culvert | 1136.53 |
| 46 | 12.2 | Reference mark, 17 ft N., 18 ft W. of centerline of road at field entrance W. and 262.5 ft S., 30 ft W. of tablet, a chiseled square on a rock | 1121.60 |

LINE 2 (Cont'd)

EAGLE ROCK QUAD. - 200

FEET

1 47	12.2	Clarion at courthouse, 8 mi S., 1 mi W. of; T. 90 N., R. 25 W., near sec. cors. 11, 12, 13 and 14, 10 ft N., 9.6 ft E. of centerline of bridge and 459.3 ft S. of crossroads, cemented in the NE. cor. of concrete floor of bridge with a wooden railing, a standard tablet stamped "11 CDL 1974"	1121.156
51	13.3	UE 11 A, 1.1 mi N. along road from tablet, 33 ft N., 18 ft W. of; and 2.3 ft lower than crossroads, a punched hole in a metal culvert	1129.49
54	14.4	UE 11 B, 2.2 mi N. along road from tablet, 443 ft N., 14 ft W. of; and 9.0 ft lower than crossroads, a chiseled square on headwall of a 3 ft box culvert	1136.15
57	15.3	Clarion at courthouse, 5 mi S., 1 mi W. of; T. 91 N., R. 25 W., sec. cors. 25, 26, 35 and 36, 26.3 ft S., 26.4 ft W. of; and 4.2 ft lower than crossroads, cemented in the top of a 4 ft round concrete culvert, a standard tablet stamped "12 CDL 1974"	1145.269
58	15.3	Reference mark, 37.7 ft N., 32.4 ft W. of crossroads, 64 ft N., 6 ft W. of tablet and 17.2 ft E. of centerline of a field entrance N., a chiseled square on a concrete culvert	1144.37
61	16.4	UE 12 A, 1.13 mi N. along road from tablet, 10.3 ft S., 26 ft W. of; and 1.3 ft lower than centerline of road at a private drive W., a punched hole in a metal culvert	1157.63
64	17.4	UE 12 B, 32.8 ft S., 32.8 ft E. of; and 3.8 ft lower than crossroads, a chiseled square on concrete footing for a corner fence post	1153.33
69	18.5	Clarion at courthouse, 2 mi S., 1 mi W. of; T. 91 N., R. 25 W., near sec. cors. 11, 12, 13 and 14, 11.4 ft N., 14 ft E. of; and 0.7 ft lower than centerline of bridge and 896 ft (0.17 mi) E. of T-rd. S., cemented in the center of the NE. wingwall of a concrete bridge, a standard tablet stamped "13 CDL 1974"	1156.751
70	18.5	Reference mark, 34.6 ft N., 46.4 ft E. of centerline of bridge, 23 ft N., 32.4 ft E. of tablet and 15.6 ft E. of the centerline of a field entrance N., a punched hole in a metal culvert	1152.90

CLARION QUAD. - 199

72	19.4	UE 13 A, 0.84 mi E. along road from tablet, a chiseled square in the centerline of crossroads	1169.31
74	20.4	UE 13 B, 1 mi N., 0.84 mi E. of tablet, a chiseled square in centerline of crossroads	1167.85
77	21.5	UE 13 C, 0.16 mi E. of BM (USC&GS L 28 1934) on top of a bolt in centerline of road at RR. crossing	1167.10
78	21.7	Clarion, 0.75 mi SW. along the Chicago Great Western RR., from station at, near center of NW 1/4 of sec. 1, T. 91 N., R. 25 W., about 275 yards W. along RR. from crossing, of N.-S. county road, 44.9 ft N. of the N. rail of the main track, 8.3 ft ENE. of the fifth pole on N. side of track W. of road crossing, 1.7 ft S. of a right-of-way fence and 302 ft E. along main track from a switch, set in top of a concrete post projecting about 1-in., a standard USC&GS disk stamped "L 28 1934"	1160.332

LINE 3

FEET

M.L. Kennedy, 1974; Book CV-3134

FORT DODGE QUAD. - 201

- | | | | | |
|--------------------------------|-----|-------------------------|---|----------|
| 1 | 2 | 0.0 | BM, 1.1 mi E. along the Chicago & North Western RR. from the station at Thor, Humboldt County, about 165 yards E. of "Station one mile sign", 61 ft NW. of a section-road crossing, 44.8 ft N. of the N. rail, 6 ft W. of a right-of-way fence corner, and 2 ft S. of the fence, a standard US&GS disk, stamped "B 28 1934" and set in the top of a concrete post projecting about 4-in. above ground | 1135.227 |
| 5 | 1.1 | UE B 28 A, 1.2 mi | along roads from tablet (E.) near the corners of secs. 14, 15, 22 and 23, R. 27 W., T. 91 N., 39 ft N. and 22 ft W. from the center of crossroads on the W. end of a concrete culvert; a chiseled square; painted | 1142.70 |
| <u>EAGLE GROVE QUAD. - 200</u> | | | | |
| 8 | 2.2 | UE B 28 B, 2.2 mi | E. along roads from tablet near the cor. of secs. 13, 14, 23 and 24, T. 91 N., R. 27 W., 40 ft S. and 22 ft W. from the centerline of crossroads on the W. end of a concrete culvert; a chiseled square | 1133.81 |
| 10 | 3.0 | Vincent, 5.5 mi | N. and 1.5 mi E. from, 0.2 mi N. from cor. of secs. 23, 24, 25 and 26, T. 91 N., R. 27 W., 17 ft S. and 12 ft W. of and 0.3 ft higher than centerline of small bridge near the S. end of the W. concrete curb, a standard tablet embedded in the concrete curb stamped "1 MK 1974" | 1127.146 |
| 11 | 3.0 | Reference mark, 35.4 ft | ESE. of tablet, 40 ft S. and 12 ft E. of centerline of bridge, a chiseled square on curb | 1127.17 |
| 15 | 4.6 | UE 1 MK A, 1.6 mi | S. from tablet, 8 ft S. and 10 ft W. and 0.9 ft higher than centerline of bridge at the S. end of the W. bridge curb, a chiseled square | 1129.85 |
| 17 | 5.2 | UE 1 MK B, 2.2 mi | S. along road from tablet at the cor. of secs. 1, 2, 35 and 36, T. 90 and 91 N., R. 27 W., 36 ft N., 23 ft E. and 2.5 ft lower than center of crossroads; on the S. end of a concrete culvert, a chiseled square | 1123.82 |
| 19 | 6.2 | UE 1 MK C, 3.2 mi | S. along road from tablet, 83 ft W., 26 ft N. and 1.8 ft lower than T-rd. N., on the N. end of a concrete culvert; a chiseled square | 1131.63 |

FORT DODGE QUAD. - 201

- | | | | | |
|----|-----|-----------------------|--|----------|
| 21 | 7.7 | Reference mark, 31 ft | E. and 12 ft S. of road at drive on S. end of concrete culvert, a chiseled square, 117 ft NNE. of tablet | 1143.54 |
| 22 | 7.7 | Vincent, 1.5 mi | N. and 1 mi E. from near the quarter cor. of secs. 11 and 14, T. 90 N., R. 27 W., 45 ft N., 38 ft W. and 1.6 ft lower than centerline of T-rd. W., 2 ft SSE., of a utility pole, a standard tablet, affixed by solder, to a copper-weld rod driven to a depth of refusal of 10 ft, stamped "2 MK 1974" | 1141.908 |
| 26 | 8.7 | UE 2 MK A, 1 mi | along road from tablet, near the quarter cor. between secs. 14 and 23, T. 90 N., R. 27 W., 32 ft N. and 36 ft E. from centerline of crossroads on the S. end of a concrete culvert, a chiseled square | 1146.32 |
| 28 | 9.7 | UE 2 MK B, 2 mi | S. along road from tablet, near the quarter cor. between secs. 23 and 26, T. 90 N., R. 27 W., 61 ft S. and 16 ft W. of centerline of crossroads on the W. end of a concrete culvert; a chiseled square | 1135.26 |

EAGLE GROVE QUAD. - 200

- | | | | | |
|----|------|-------------------|--|---------|
| 31 | 11.2 | UE 2 MK C, 3.5 mi | S. from tablet, along road near the cor. of secs. 25, 26, 35 and 36, T. 90 N., R. 27 W., 32 ft E. and 18 ft S. and 2.4 ft lower than centerline of crossroads on the S. end of a concrete culvert; a chiseled square | 1142.64 |
|----|------|-------------------|--|---------|

6
42-093-43
EAGLE GROVE QUADRANGLE
200 - IOWA

LINE 3 (Cont'd)

EAGLE GROVE QUAD. - 200

FEET

1 33	12.2	Vincent, 2.5 mi S. and 1.5 mi E. from, near the cor. of secs. 1, 2, 35 and 36, T. 89 and 90 N., R. 27 W., 13 ft N. and 13 ft W. from the centerline of the road and a large diagonal culvert on the NW. banister of the culvert, embedded in concrete, a standard tablet stamped "3 MK 1974"	1130.447
34	12.2	Reference mark, 63 ft S. and 29 ft E. of centerline of road at culvert, on the N. end of a small concrete culvert, a chiseled square, 76 ft SSE. of tablet	1126.58
36	13.2	UE 3 MK A, 1 mi S. of tablet on road, near the cor. of secs. 1, 2, 11 and 12, T. 89 N., R. 27 W., 29 ft S., 24 ft W. and 3.2 ft lower than centerline of crossroads, on the W. end of a concrete culvert; a chiseled square	1117.63
39	14.3	Reference mark, 48 ft W. of tablet, 49 ft W. and 20 ft S. of centerline of bridge on the W. end of corrugated metal pipe culvert, a punched hole	1107.86
40	14.3	Vincent, 4.5 mi S. and 1.5 mi E. from approx. 410 ft W. of cor. of secs. 11, 12, 13 and 14, R. 27 W., T. 89 N., 10 ft S. of centerline of bridge on center of S. bridge banister, a standard tablet embedded in concrete stamped "4 MK 1974"	1112.479
42	15.4	UE 4 MK A, 1.2 mi S. along road from tablet, near the cor. of secs. 13, 14, 23 and 24, T. 89 N., R. 27 W., 47 ft S., 23 ft W. and 1.5 ft lower than centerline of crossroads on the W. end of a large concrete culvert; a chiseled square	1109.07

WEBSTER CITY QUAD. - 176

45	16.5	UE 4 MK B, 610 ft W. from crossroads, 27 ft N. of centerline of road at a culvert on the N. end of a concrete culvert, a chiseled square	1103.81
----	------	--	---------

LEHIGH QUAD. - 177

47	17.4	Duncombe, 2 mi N. and 1 mi W. of; T. 89 N., R. 27 W., cor. secs. 22, 23, 26 and 27, 62 ft N., 50 ft E. of and 2.2 ft lower than center of hwy. at T-rd. S.; 2.5 ft S. of N. right-of-way fence; in top of concrete post; standard tablet stamped "31 WMC 1964 1101" painted "EM 1100.9"	1100.874
----	------	---	----------

ISOLATED BENCH MARKS

T. 90 N., R. 27 W., quarter corner N. side of sec. 23, 40 ft SW. of crossroads; iron post stamped "IOWA 1919 1,148"	1147.414
Tps. 89 and 90 N., R. 27 W., corner of secs. 1, 2, 35 and 36, 50 ft SW. of crossroads, iron post stamped "IOWA 1919 1131"	1130.552
T. 89 N., R. 27 W., corner of secs. 13, 14, 23 and 24, 50 ft NW. of center of crossroads, 2 ft S. of fence corner; standard iron post with brass cap stamped "PRIM TRAV STA NO 6 1919 IOWA 1107"	1107.255
T. 90 N., R. 27 W., near cor. of secs. 1, 2, 11 and 12, at schoolyard, NE. corner of road intersection standard iron post stamped "PRIM TRAV STA NO 13 1919" (Not found 9-74 CDL)	1131.606
T. 91 N., R. 27 W., at corner of secs. 13, 14, 23 and 24, in SW. corner of schoolyard at crossroads; iron post, stamped "IOWA 1921"	1134.173
T. 92 N., R. 27 W., near cor. secs. 25, 26, 35 and 36, on N. side of road about 50 ft W. of drain ditch; standard iron post stamped "PRIM TRAV STA NO 12 1919" (Not found 9-74 CDL)	1123.624